SDG COVER PAGE

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

Lab Code: ACE Case No.: 51952 MA No.: SDG No.: A6313

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
A6313	Q1246-01	X	X	X	
A6314	Q1246-02	X	X	X	
A6325	Q1246-03	X	X	X	
A6326	Q1246-04	X	X	X	
A6331	Q1246-05	X	X	X	
A6332	Q1246-06	X	X	X	
A6333	Q1246-07	X	X	X	
A6334	Q1246-08	X	X	X	
A6342	Q1246-09	X	X	X	
A6342D	Q1246-10	X	X	X	
A6342S	Q1246-11	X	X	X	
A6343	Q1246-12	X	X	X	
A6344	Q1246-13	X	X	X	
A6345	Q1246-14	X	X	X	
A6346	Q1246-15	X	X	X	
A6347	Q1246-16	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 # A6313

USEPA CLP COC (LAB COPY)

DateShipped: 1/30/2025

CarrierName: FedEx

AirbillNo: 771783263096

CHAIN OF CUSTODY RECORD

Case #: 51952

Cooler #: 5

No: 1-013025-152400-0013

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 9087898900

2

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
R01092501-1	A6311	PE Water/ ERA	PE	Metals ICP-MS(21)	A (4 C) (1)	PE	01/09/2025 12:00	✓ heated
R01092501-2	A6312	PE Water/ ERA	PE	Metals ICP-MS(21)	A (4 C) (1)	PE	01/09/2025 12:00	✓
R01092501-3	A6313	PE Soil/ ERA	PE	Metals ICP-MS, ICP-AES, Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	
R01092501-4	A6314	PE Soil/ ERA	PE	Metals ICP-MS, ICP-AES, Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	
R01092501-5	A6315	PE Water/ ERA	PE	Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	✓
R01092501-6	A6316	PE Water/ ERA	PE	Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	✓
R01092501-7	A6317	PE Water/ ERA	PE	PAH/PCP SIM(21)	A (4 C) (1)	PE	01/09/2025 12:00	
R01092501-8	A6318	PE Soil/ ERA	PE	PAH/PCP SIM(21)	A (4 C) (2)	PE	01/09/2025 12:00	
R01092501-9	A6319	PE Soil/ ERA	PE	PAH/PCP SIM(21)	A (4 C) (2)	PE	01/09/2025 12:00	
SD-026-012925	A6325	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	R (4 C), S (4 C) (2)	SD/SW/PW-026	01/29/2025 09:35	
SD-REF-10-012925	A6326	Sediment/ B.Fortier	Grab	Metals + Hg(21), PAH SIM(21)	T (4 C), U (4 C) (2)	REF-10	01/29/2025 09:00	
SW-REF-03-012925	A6327	Surface Water/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	V (HNO3), W (4 C) (4)	REF-03	01/29/2025 10:20	✓
SW-REF-02-012925	A6328	Surface Water/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	X (HNO3), Y (4 C) (4)	REF-02	01/29/2025 11:20	✓

Special Instructions: Sediment samples require 72 hour preliminary results.
Sediment ICP-MS: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn
ICP-AES: Al, Ca, Fe, K, Mg, Na
Surface Water ICP-MS Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn
Analysis Key

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	NOBIS	1/30/25 1700		9:35 1-31-25	IR-Gun #1 1.9; 2.9; 2.4; 2.1; 2.0 C Custody Seal Intact Temp Blank present

68HERH20D0011

SDG # A6313

USEPA CLP COC (LAB COPY)
DateShipped: 1/30/2025
CarrierName: FedEx
AirbillNo: 771783263096

CHAIN OF CUSTODY RECORD

Case #: 51952
Cooler #: 5

No: 1-013025-152400-0013
Lab: Alliance Technical Group LLC
Lab Contact: Mohammad Ahmed
Lab Phone: 9087898900

3

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
R01092501-1	A6311	PE Water/ ERA	PE	Metals ICP-MS(21)	A (4 C) (1)	PE	01/09/2025 12:00	5
R01092501-2	A6312	PE Water/ ERA	PE	Metals ICP-MS(21)	A (4 C) (1)	PE	01/09/2025 12:00	5
R01092501-3	A6313	PE Soil/ ERA	PE	Metals ICP-MS, ICP-AES, Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	✓5 sediment
R01092501-4	A6314	PE Soil/ ERA	PE	Metals ICP-MS, ICP-AES, Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	✓5
R01092501-5	A6315	PE Water/ ERA	PE	Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	5
R01092501-6	A6316	PE Water/ ERA	PE	Hg(21)	A (4 C) (1)	PE	01/09/2025 12:00	5
R01092501-7	A6317	PE Water/ ERA	PE	PAH/PCP SIM(21)	A (4 C) (1)	PE	01/09/2025 12:00	5
R01092501-8	A6318	PE Soil/ ERA	PE	PAH/PCP SIM(21)	A (4 C) (2)	PE	01/09/2025 12:00	5
R01092501-9	A6319	PE Soil/ ERA	PE	PAH/PCP SIM(21)	A (4 C) (2)	PE	01/09/2025 12:00	5
SD-026-012925	A6325	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	R (4 C), S (4 C) (2)	SD/SW/PW-026	01/29/2025 09:35	✓5
SD-REF-10-012925	A6326	Sediment/ B.Fortier	Grab	Metals + Hg(21), PAH SIM(21)	T (4 C), U (4 C) (2)	REF-10	01/29/2025 09:00	✓5
SW-REF-03-012925	A6327	Surface Water/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	V (HNO3), W (4 C) (4)	REF-03	01/29/2025 10:20	3
SW-REF-02-012925	A6328	Surface Water/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	X (HNO3), Y (4 C) (4)	REF-02	01/29/2025 11:20	4

Special Instructions: Sediment samples require 72 hour preliminary results.
Sediment ICP-MS: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn
ICP-AES: Al, Ca, Fe, K, Mg, Na
Surface Water ICP-MS Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn
Analysis Key

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	NOBIS	1/30/25 1700		9:35 1-31-25	IR-Gun #1 1.9; 2.9; 2.4; 2.1; 2.0 C Custody Seal Intact Temp Blank present

68HERH20D0011

SDG # A6313

USEPA CLP COC (LAB COPY)

DateShipped: 1/30/2025

CarrierName: FedEx

AirbillNo: 771783263096

CHAIN OF CUSTODY RECORD

Case #: 51952

Cooler #: 5

No: 1-013025-152400-0013

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 9087898900

4

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
SW-FD01-012925	A6329	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (4)	FD-01	01/29/2025 12:00	4
SW-REF-01-012925	A6330	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (4)	REF-01	01/29/2025 12:15	3
SD-REF-03-012925	A6331	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	N (4 C), O (4 C) (2)	REF-03	01/29/2025 11:30	✓ 5
SD-REF-02-012925	A6332	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	P (4 C), Q (4 C) (2)	REF-02	01/29/2025 12:55	✓ 5
SD-REF-01-012925	A6333	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	R (4 C), S (4 C) (2)	REF-01	01/29/2025 13:15	✓ 5
SD-FD02-012925	A6334	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	T (4 C), U (4 C) (2)	FD-02	01/29/2025 13:00	✓ 5
SW-REF-07-012925	A6335	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (12)	REF-07	01/29/2025 15:00	3
SW-REF-08-012925	A6336	Surface Water/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	X (HNO3), Y (4 C) (4)	REF-08	01/29/2025 15:30	4
SD-EB-012925	A6337	Equipment Blank/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	N (HNO3), O (4 C) (4)	Equipment Blank	01/29/2025 17:00	3
SW-REF-09-013025	A6338	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (4)	REF-09	01/30/2025 08:10	2

Sample(s) to be used for Lab QC: SW-REF-07-012925 Tag A, SW-REF-07-012925 Tag Z - Special Instructions: Sediment samples require 72 hour preliminary results. Sediment ICP-MS: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn ICP-AES: Al, Ca, Fe, K, Mg, Na Surface Water ICP-MS Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn	**Shipment for Case Complete? Y** **Samples Transferred From Chain of Custody #**
Analysis Key	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	NOBIS	1/30/25 1700		9:35 1-31-25	IR Gun # 1c 1.9, 2.9, 2.4, 2.1, 2.0 -
					Custody Seal Intact
					Temp Blank present

68HERH20D0011

SDG # A6313

USEPA CLP COC (LAB COPY)

DateShipped: 1/30/2025

CarrierName: FedEx

AirbillNo: 771783263096

CHAIN OF CUSTODY RECORD

Case #: 51952

Cooler #: 5

No: 1-013025-152400-0013

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 9087898900

5

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
SW-REF-06-013025	A6339	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (4)	REF-06	01/30/2025 08:45	2
SW-REF-05-013025	A6340	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (4)	REF-05	01/30/2025 09:05	2
SW-REF-04-013025	A6341	Surface Water/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (HNO3) (4)	REF-04	01/30/2025 09:40	2
SD-REF-07-013025	A6342	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	V (4 C), W (4 C) (6)	REF-07	01/30/2025 08:15	✓ 10
SD-REF-09-013025	A6343	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	R (4 C), S (4 C) (2)	REF-09	01/30/2025 09:10	✓ 5
SD-REF-06-013025	A6344	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	T (4 C), U (4 C) (2)	REF-06	01/30/2025 09:35	✓ 1
SD-REF-05-013025	A6345	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	V (4 C), W (4 C) (2)	REF-05	01/30/2025 11:40	✓ 1
SD-REF-11-013025	A6346	Sediment/ T.Furtado	Grab	Metals + Hg(21), PAH SIM(21)	X (4 C), Y (4 C) (2)	REF-11	01/30/2025 12:35	✓ 1
SD-REF-08-013025	A6347	Sediment/ T.Furtado	Grab	PAH SIM(21), Metals + Hg(21)	A (4 C), Z (4 C) (2)	REF-08	01/30/2025 10:50	✓ 1

Sample(s) to be used for Lab QC: SD-REF-07-013025 Tag V, SD-REF-07-013025 Tag W - Special Instructions: Sediment samples require 72 hour preliminary results.

Sediment ICP-MS: Ag, As, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, V, Zn

ICP-AES: Al, Ca, Fe, K, Mg, Na

Surface Water ICP-MS Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn

Analysis Key

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	NOBIS	1/30/25 1700		9:35 1-31-25	TR Cont # 1 1.9, 2.9, 2.4, 2.1, 2.0

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 2
Received By (Print Name) Casanova Rina		Log-in Date 1/31/2025
Received By (Signature)		
Case Number 51952	SDG No. A6313	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	n/a
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	771783265331 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.0 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	01/31/2025
12.Time Received	09:35

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	A6313	N/A	A	Q1246-01	Intact
2	A6314	N/A	A	Q1246-02	Intact
3	A6325	N/A	R	Q1246-03	Intact
4	A6326	N/A	T	Q1246-04	Intact
5	A6331	N/A	N	Q1246-05	Intact
6	A6332	N/A	P	Q1246-06	Intact
7	A6333	N/A	R	Q1246-07	Intact
8	A6334	N/A	T	Q1246-08	Intact
9	A6343	N/A	R	Q1246-12	Intact
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By	Logbook No. N/A
Date 1/31/25	Logbook Page No. N/A

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 2 of 2
Received By (Print Name) Cassandra Ruiz		Log-in Date 1/31/2025
Received By (Signature)		
Case Number 51952	SDG No. A6313	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	n/a
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	771783263096 2
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	1.9 Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	01/31/2025
12.Time Received	09:35

	EPA Sample #	Aqueous Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	A6342	N/A	V	Q1246-09	Intact
2	A6342D	N/A	V	Q1246-10	Intact
3	A6342S	N/A	V	Q1246-11	Intact
4	A6344	N/A	T	Q1246-13	Intact
5	A6345	N/A	V	Q1246-14	Intact
6	A6346	N/A	X	Q1246-15	Intact
7	A6347	N/A	A	Q1246-16	Intact
8	N/A	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A
11	N/A	N/A	N/A	N/A	N/A
12	N/A	N/A	N/A	N/A	N/A
13	N/A	N/A	N/A	N/A	N/A
14	N/A	N/A	N/A	N/A	N/A
15	N/A	N/A	N/A	N/A	N/A
16	N/A	N/A	N/A	N/A	N/A
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By	Logbook No. N/A
Date 1/31/25	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.	**51952**	SDG NO.	**A6313**
MA NO.		SOW NO.	**SFAM01.1**

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

	PAGE NOs: FROM	PAGE NOs: TO	CHECK LAB	CHECK REGION
1 . SDG Cover Page	1	1	✓	
2 . Traffic Report/Chain of Custody Record(s)	2	5	✓	
3 . Sample Log-In Sheet (DC-1)	6	7	✓	
4 . CSF Inventory Sheet (DC-2)	8	10	✓	
5 . SDG Narrative	11	15	✓	
6 . Communication Logs	16	21	✓	
7 . Percent Solids Log	22	23	✓	
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	24	37	✓	
9 . Instrument raw data by instrument in analysis order	38	181	✓	
Other Data				
10 . Standard and Reagent Preparation Logs	182	323	✓	
11 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	324	325	✓	
12 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	326	328	✓	
13 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	329	329	✓	
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	330	343	✓	
18 . Instrument raw data by instrument in analysis order	344	814	✓	
Other Data				
19 . Standard and Reagent Preparation Logs	815	961	✓	
20 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	962	963	✓	
21 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	964	967	✓	
22 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	968	968	✓	

	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	969	982	✓	
27. Instrument raw data by instrument in analysis order	983	984	✓	
Other Data				
28. Standard and Reagent Preparation Logs	985	1009	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	1010	1011	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	1012	1013	✓	
31. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	1014	1014	✓	
32. Extraction Logs for TCLP and SPLP	NA	NA	✓	
33. Raw GPC Data	NA	NA	✓	
34. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (Cyanide)				
35. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
36. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
37. Standard and Reagent Preparation Logs	NA	NA	✓	
38. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
39. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
40. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
41. Extraction Logs for TCLP and SPLP	NA	NA	✓	
42. Raw GPC Data	NA	NA	✓	
43. Raw Florisil Data	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
Additional				
44. EPA Shipping/Receiving Documents				
Airbill (No. of Shipments 2)	1015	1016	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	1017	1019	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	1020	1022	✓	
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 # A6313
CASE # 51952
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # Q1246

A. Number of Samples and Date of Receipt

14 Soil samples were delivered to the laboratory intact on 01/31/2025.

B. Parameter

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

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

C. Cooler Temp

Indicator Bottle**: Presence/**Absence

Cooler: 2.0^{o}C, 1.9^{o}C

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

Issue 1: The laboratory is missing instructions for all PT samples for this Case; the laboratory would also like confirmation if the PT samples require PRs.

E. Corrective Action taken for above:

Resolution 1: Per Region 1, the PT samples do not require preliminary results (PRs). The PT instructions are attached. Please note the issue in the SDG narrative and proceed with analysis of the samples.

F. Analytical Techniques:

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

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

G. Calculation:

Calculation for ICP-AES Soil Sample:

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

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

Where,

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

Example Calculation For Sample A6313 For Aluminum:

If C = 52.67088 ppm
Vf = 100 ml
W = 1.27 g
S = 1.0 (100/100)
DF = 1

$$\text{Concentration (mg/kg)} = 52.67088 \times \frac{100}{1.27 \times 1.0} \times 1$$

$$= 4147.3133 \text{ mg/kg}$$

= 4200 mg/kg (Reported Result with Signification)

Calculation for ICP-MS Soil Sample:

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

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

Where,

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

Example Calculation For Sample A6313 For Antimony:

If C = 62.03 ppb
Vf = 500 ml
W = 1.23 g
S = 1.0 (100/100)
DF = 1

$$\text{Concentration (mg/kg)} = 62.03 \times \frac{500}{1.23 \times 1.0} \times 1 / 1000$$

$$= 25.2154 \text{ mg/kg}$$

$$= 25 \text{ mg/kg (Reported Result with Signification)}$$

Calculation for Hg Soil Sample:

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

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

Where,

C = Instrument response in µg/L from the calibration curve.
Vf = Final prepared (absorbing solution) volume (mL)
W = Initial aliquot amount (g) (Fraction of Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

Example Calculation For Sample A6347:

If C = 0.2007 ppb
Vf = 100 mL
W = 0.58g
S = 0.524 (52.4/100)
DF = 1

$$\text{Concentration (mg/kg)} = 0.2007 \times \frac{100}{0.58 \times 0.524} \times 1 / 1000$$

= 0.06603 mg/kg

= 0.066 mg/kg (Reported Result with Signification)

H. QA/ QC

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

Some samples have % solids results less than 50% but more than 30%. Some samples have % solids results less than 30%. Please see below table for detail. Laboratory has processed these samples according to the SFAM01.1 SOW, Exhibit D, sections 10.1.1.8., 10.1.1.7 and 10.1.1.7.1.

EPA Sample ID	% Solid
A6325	28.7
A6326	37.5
A6331	15.5
A6332	35.9
A6333	23.3
A6334	21.3
A6344	38.1
A6345	33.4

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

Internal Standard Association for ICP-MS analysis.

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

284 Sheffield Street
Mountainside, NJ 07092

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

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

Signature_____ Name: Nimisha Pandya

Date _____ Title: Document Control Officer

From: DeBerry, Eric <Eric.Deberry@gdit.com>
Sent: Friday, January 31, 2025 2:30 PM
To: Deepak Parmar; Sohil Jodhani; Mohammad Ahmed
Cc: Johnson, Matthew; Bauer, Heather E; Iverson, Jessica
Subject: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Multiple | FINAL
Attachments: PE Instructions 01.31.25 (003).pdf; SKM_95825013110190.pdf; 51952-TR COC.pdf

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

Secured by Check Point

Good afternoon ACE,

Non-Standard Matrix

Issue 1: The laboratory received sediment samples on 1/30/2025. The laboratory began SVOA analysis upon receipt and found that Samples A6301, A6302, A6305, A6307, A6322, A6323, and A6324 contain less than 30% solids. Because PRs are scheduled, the laboratory proceeded with analysis using 30g of sample volume. Please note that the samples do not have any standing water, and the sample matrix is very light textured soil. Please confirm that the laboratory should proceed with reporting the results for these samples.

Resolution 1: Per Region 1, the laboratory should proceed with reporting the results for these samples. Please note the issue in the SDG narrative and proceed with analysis of the samples.

Incorrect/missing PT instructions

Issue 2: The laboratory is missing instructions for all PT samples for this Case; the laboratory would also like confirmation if the PT samples require PRs.

Resolution 2: Per Region 1, the PT samples do not require preliminary results (PRs). The PT instructions are attached. Please note the issue in the SDG narrative and proceed with 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.

Thanks,

Eric DeBerry

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 1 & 3

Under contract to the EPA

T: (571) 833-5166
Eric.DeBerry@GDIT.com

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

GENERAL DYNAMICS
information technology

From: Iverson, Jessica <iverson.jessica@epa.gov>
Sent: Friday, January 31, 2025 1:18 PM
To: DeBerry, Eric <Eric.Deberry@gdit.com>
Subject: FW: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Multiple

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Non-Standard Matrix

Issue 1: The laboratory received sediment samples on 1/30/2025. The laboratory began SVOA analysis upon receipt and found that Samples A6301, A6302, A6305, A6307, A6322, A6323, and A6324 contain less than 30% solids. Because PRs are scheduled, the laboratory proceeded with analysis using 30g of sample volume. Please note that the samples do not have any standing water, and the sample matrix is very light textured soil. Please confirm that the laboratory should proceed with reporting the results for these samples.
Yes, the laboratory should proceed with reporting the results for these samples.

Incorrect/missing PT instructions

Issue 2: The laboratory is missing instructions for all PT samples for this Case; the laboratory would also like confirmation if the PT samples require PRs.
The PT samples do not require preliminary results (PRs). The PT instructions are attached.

Jessica Iverson
QA Chemist|Regional Sample Coordinator
Quality Assurance Branch
Laboratory Services and Applied Science Division
EPA Region 1 – New England
Phone: 617-918-8630

From: Gary Glennon <gglennon@nobis-group.com>
Sent: Friday, January 31, 2025 12:40 PM
To: Iverson, Jessica <iverson.jessica@epa.gov>
Cc: Alyssa Epstein <aepstein@nobis-group.com>
Subject: RE: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Multiple

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

Hi Jessica,

Please see my responses in red below.
Thanks!

Gary Glennon *he/him/his*
Data Integration Specialist

Nobis Group® - 100% Employee-Owned
engineering & environmental **solutions**
55 Technology Drive Suite 101, Lowell, MA 01851
p (978) 703-6007 • c (617) 943-3361

From: Iverson, Jessica <iverson.jessica@epa.gov>
Sent: Friday, January 31, 2025 11:56 AM
To: Gary Glennon <gglennon@nobis-group.com>
Subject: FW: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Multiple

EXTERNAL

Hello,

Please advise on the following issues from ACE.

Non-Standard Matrix

Issue 1: The laboratory received sediment samples on 1/30/2025. The laboratory began SVOA analysis upon receipt and found that Samples A6301, A6302, A6305, A6307, A6322, A6323, and A6324 contain less than 30% solids. Because PRs are scheduled, the laboratory proceeded with analysis using 30g of sample volume. Please note that the samples do not have any standing water, and the sample matrix is very light textured soil. Please confirm that the laboratory should proceed with reporting the results for these samples.
Yes, the laboratory should proceed with reporting the results for these samples.

Incorrect/missing PT instructions

Issue 2: The laboratory is missing instructions for all PT samples for this Case; the laboratory would also like confirmation if the PT samples require PRs.
The PT samples do not require preliminary results (PRs). The PT instructions are attached.

Jessica Iverson
QA Chemist|Regional Sample Coordinator
Quality Assurance Branch
Laboratory Services and Applied Science Division
EPA Region 1 – New England
Phone: 617-918-8630

From: Iverson, Jessica
Sent: Friday, January 31, 2025 11:55 AM

To: DeBerry, Eric <Eric.Deberry@gdit.com>
Cc: Bauer, Heather E <Heather.Bauer@gdit.com>; Johnson, Matthew <Matthew.Johnson32@gdit.com>
Subject: RE: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Multiple

Hello,

On the last communication the sampler stated that PT instructions were provided to the laboratory when the samples were dropped off. I will inquire about both issues and ask for additional copies of the instructions to be sent.

Jessica Iverson
QA Chemist|Regional Sample Coordinator
Quality Assurance Branch
Laboratory Services and Applied Science Division
EPA Region 1 – New England
Phone: 617-918-8630

From: DeBerry, Eric <Eric.Deberry@gdit.com>
Sent: Friday, January 31, 2025 11:44 AM
To: Iverson, Jessica <iverson.jessica@epa.gov>
Cc: Bauer, Heather E <Heather.Bauer@gdit.com>; Johnson, Matthew <Matthew.Johnson32@gdit.com>
Subject: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Multiple

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

Good morning Jessica,

Please advise on the following issues from ACE.

Non-Standard Matrix

Issue 1: The laboratory received sediment samples on 1/30/2025. The laboratory began SVOA analysis upon receipt and found that Samples A6301, A6302, A6305, A6307, A6322, A6323, and A6324 contain less than 30% solids. Because PRs are scheduled, the laboratory proceeded with analysis using 30g of sample volume. Please note that the samples do not have any standing water, and the sample matrix is very light textured soil. Please confirm that the laboratory should proceed with reporting the results for these samples.

Incorrect/missing PT instructions

Issue 2: The laboratory is missing instructions for all PT samples for this Case; the laboratory would also like confirmation if the PT samples require PRs.

Thanks,

Eric DeBerry

Associate Environmental Analyst
CLP QSS Coordinator – EPA Regions 1 & 3

Under contract to the EPA

T: (571) 833-5166
Eric.DeBerry@GDIT.com
15036 Conference Center Drive
Chantilly, VA 20151
www.gdit.com

From: Deepak Parmar Deepak.Parmar@alliancetg.com
Sent: Friday, January 31, 2025 11:23 AM
To: DeBerry, Eric Eric.Deberry@gdit.com
Cc: Sohil Jodhani Sohil.Jodhani@AllianceTG.com
Subject: Region 01 | Case 51952 | Lab ACE | Issue Discrepancies with COC /PE Instruction.

This Message Is From an External Sender

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

Good morning,

PE Instruction missing for all PE sample received for this Case. PE samples required PR ?

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

From: Sohil Jodhani <Sohil.Jodhani@alliancetg.com>
Sent: Friday, January 31, 2025 10:23 AM
To: DeBerry, Eric <Eric.Deberry@gdit.com>
Cc: Mohammad Ahmed <mohammad.ahmed@alliancetg.com>
Subject: Task Area SST | Region 01 | Case 51952 | Lab ACE | Issue Percent Solids

This Message Is From an External Sender

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

Hi,

Lab has received sediments samples for this case and samples required PR as per scheduling. Lab has proceeded with the analysis for SVOA upon receipt of the samples. Lab did the percent solids for the samples under this case and found that the samples A6301, A6302, A6305, A6307, A6322, A6323 & A6324 has less than 30% solids. In this case, lab has already processed the samples with 30g sample volume due to Preliminary results required for the samples and Lab will report final data as processed. Please note that samples do not have any standing water received in the container and sample matrix is very light textured soil. Please confirm that the resolution will be applied for this case.

Please see attached.

Thanks & Regards,

Sohil Jodhani
QA/QC Director
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3152
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 2/3/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 14:40
In Date: 01/31/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:00
Out Date: 02/01/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134503

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1246-01	A6313	1	1.00	1.00	2.00	2.00	100.0	P.T. SAMPLE
Q1246-02	A6314	2	1.00	1.00	2.00	2.00	100.0	P.T. SAMPLE
Q1246-03	A6325	3	1.15	8.82	9.97	3.68	28.7	
Q1246-04	A6326	4	1.16	8.53	9.69	4.36	37.5	
Q1246-05	A6331	5	1.16	8.82	9.98	2.53	15.5	
Q1246-06	A6332	6	1.15	8.58	9.73	4.23	35.9	
Q1246-07	A6333	7	1.17	8.80	9.97	3.22	23.3	
Q1246-08	A6334	8	1.16	8.63	9.79	3.00	21.3	
Q1246-09	A6342	9	1.18	8.54	9.72	6.47	61.9	
Q1246-10	A6342D	10	1.18	8.54	9.72	6.47	61.9	
Q1246-11	A6342S	11	1.18	8.54	9.72	6.47	61.9	
Q1246-12	A6343	12	1.15	8.81	9.96	5.83	53.1	
Q1246-13	A6344	13	1.13	8.64	9.77	4.42	38.1	
Q1246-14	A6345	14	1.13	8.57	9.7	3.99	33.4	
Q1246-15	A6346	15	1.13	8.86	9.99	7.12	67.6	
Q1246-16	A6347	16	1.14	8.84	9.98	5.77	52.4	

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

WORKLIST(Hardcopy Internal Chain)

VB 134503

WorkList Name : %1-q1246 **WorkList ID :** 187361 **Department :** Wet-Chemistry **Date :** 01-31-2025 13:32:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1246-01	A6313	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/09/2025	Chemtech -SO
Q1246-02	A6314	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/09/2025	Chemtech -SO
Q1246-03	A6325	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/29/2025	Chemtech -SO
Q1246-04	A6326	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/29/2025	Chemtech -SO
Q1246-05	A6331	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/29/2025	Chemtech -SO
Q1246-06	A6332	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/29/2025	Chemtech -SO
Q1246-07	A6333	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/29/2025	Chemtech -SO
Q1246-08	A6334	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/29/2025	Chemtech -SO
Q1246-09	A6342	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-10	A6342D	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-11	A6342S	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-12	A6343	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-13	A6344	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-14	A6345	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-15	A6346	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO
Q1246-16	A6347	Solid	Percent Solids	Cool 4 deg C	USEP01	C11	01/30/2025	Chemtech -SO

23

Date/Time 01/31/25 13:45
Raw Sample Received by: JR WC
Raw Sample Relinquished by: SM

Date/Time 01/31/25 14:45
Raw Sample Received by: SM
Raw Sample Relinquished by: JR WC

EPA SAMPLE NO.

A6313

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-01

% Solids: 100 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	4200		02/02/2025	1406
7440-70-2	Calcium	4600		02/02/2025	1406
7439-89-6	Iron	6000		02/02/2025	1406
7439-95-4	Magnesium	1300		02/02/2025	1406
7440-09-7	Potassium	1000		02/02/2025	1406
7440-23-5	Sodium	330	J	02/02/2025	1406

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

Comments:

EPA SAMPLE NO.

A6314

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-02

% Solids: 100 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	4300		02/02/2025	1410
7440-70-2	Calcium	4300		02/02/2025	1410
7439-89-6	Iron	6400		02/02/2025	1410
7439-95-4	Magnesium	1400		02/02/2025	1410
7440-09-7	Potassium	1000		02/02/2025	1410
7440-23-5	Sodium	370	J	02/02/2025	1410

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

Comments:

EPA SAMPLE NO.

A6325

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-03

% Solids: 28.7 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6300		02/02/2025	1421
7440-70-2	Calcium	4900		02/02/2025	1421
7439-89-6	Iron	4100		02/02/2025	1421
7439-95-4	Magnesium	620		02/02/2025	1421
7440-09-7	Potassium	290	J	02/02/2025	1421
7440-23-5	Sodium	97	J	02/02/2025	1421

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

Comments:

EPA SAMPLE NO.

A6326

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-04

% Solids: 37.5 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	9600		02/02/2025	1425
7440-70-2	Calcium	3000		02/02/2025	1425
7439-89-6	Iron	4600		02/02/2025	1425
7439-95-4	Magnesium	1000	J	02/02/2025	1425
7440-09-7	Potassium	590	J	02/02/2025	1425
7440-23-5	Sodium	1200	U	02/02/2025	1425

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

Comments:

EPA SAMPLE NO.

A6331

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-05

% Solids: 15.5 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	8000		02/02/2025	1429
7440-70-2	Calcium	11000		02/02/2025	1429
7439-89-6	Iron	13000		02/02/2025	1429
7439-95-4	Magnesium	2600		02/02/2025	1429
7440-09-7	Potassium	570		02/02/2025	1429
7440-23-5	Sodium	68	J	02/02/2025	1429

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

Comments:

EPA SAMPLE NO.

A6332

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-06

% Solids: 35.9 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	18000		02/02/2025	1433
7440-70-2	Calcium	4700		02/02/2025	1433
7439-89-6	Iron	33000		02/02/2025	1433
7439-95-4	Magnesium	5800		02/02/2025	1433
7440-09-7	Potassium	440	J	02/02/2025	1433
7440-23-5	Sodium	1100	U	02/02/2025	1433

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

Comments:

EPA SAMPLE NO.

A6333

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-07

% Solids: 23.3 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	14000		02/02/2025	1437
7440-70-2	Calcium	6000		02/02/2025	1437
7439-89-6	Iron	22000		02/02/2025	1437
7439-95-4	Magnesium	3700		02/02/2025	1437
7440-09-7	Potassium	340	J	02/02/2025	1437
7440-23-5	Sodium	140	J	02/02/2025	1437

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

Comments:

EPA SAMPLE NO.

A6334

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-08

% Solids: 21.3 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	13000		02/02/2025	1441
7440-70-2	Calcium	5400		02/02/2025	1441
7439-89-6	Iron	21000		02/02/2025	1441
7439-95-4	Magnesium	3400		02/02/2025	1441
7440-09-7	Potassium	290	J	02/02/2025	1441
7440-23-5	Sodium	120	J	02/02/2025	1441

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

Comments:

EPA SAMPLE NO.

A6342

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-09

% Solids: 61.9 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6300		02/02/2025	1250
7440-70-2	Calcium	850		02/02/2025	1250
7439-89-6	Iron	6000		02/02/2025	1250
7439-95-4	Magnesium	1700		02/02/2025	1250
7440-09-7	Potassium	420	J	02/02/2025	1250
7440-23-5	Sodium	160	J	02/02/2025	1250

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

Comments:

EPA SAMPLE NO.

A6343

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-12

% Solids: 53.1 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	11000		02/02/2025	1445
7440-70-2	Calcium	810		02/02/2025	1445
7439-89-6	Iron	8200		02/02/2025	1445
7439-95-4	Magnesium	1800		02/02/2025	1445
7440-09-7	Potassium	320	J	02/02/2025	1445
7440-23-5	Sodium	210	J	02/02/2025	1445

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

Comments:

EPA SAMPLE NO.

A6344

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-13

% Solids: 38.1 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	8100		02/02/2025	1449
7440-70-2	Calcium	2500		02/02/2025	1449
7439-89-6	Iron	9200		02/02/2025	1449
7439-95-4	Magnesium	2200		02/02/2025	1449
7440-09-7	Potassium	590	J	02/02/2025	1449
7440-23-5	Sodium	1100	U	02/02/2025	1449

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

Comments:

EPA SAMPLE NO.

A6345

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-14

% Solids: 33.4 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	16000		02/02/2025	1453
7440-70-2	Calcium	3100		02/02/2025	1453
7439-89-6	Iron	16000		02/02/2025	1453
7439-95-4	Magnesium	4100		02/02/2025	1453
7440-09-7	Potassium	990	J	02/02/2025	1453
7440-23-5	Sodium	1300	U	02/02/2025	1453

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

Comments:

EPA SAMPLE NO.

A6346

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-15

% Solids: 67.6 Date Received: 01/31/2025

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5600		02/02/2025	1457
7440-70-2	Calcium	1200		02/02/2025	1457
7439-89-6	Iron	7300		02/02/2025	1457
7439-95-4	Magnesium	1800		02/02/2025	1457
7440-09-7	Potassium	750		02/02/2025	1457
7440-23-5	Sodium	600	U	02/02/2025	1457

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

Comments:

EPA SAMPLE NO.

A6347

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-16

% Solids: 52.4 Date Received: 01/31/2025

Analytical Method: ICP_AES

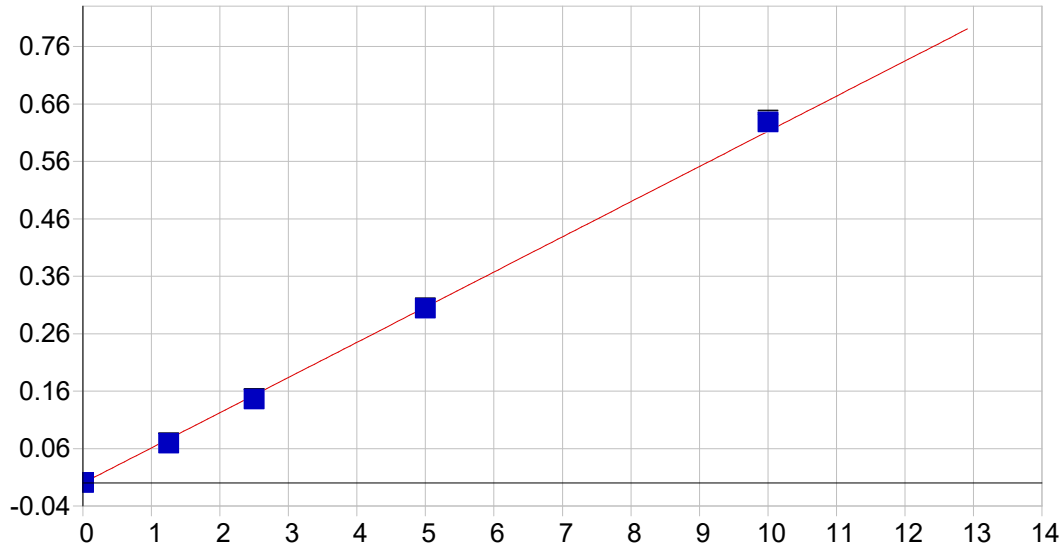
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	13000		02/02/2025	1501
7440-70-2	Calcium	980		02/02/2025	1501
7439-89-6	Iron	13000		02/02/2025	1501
7439-95-4	Magnesium	3200		02/02/2025	1501
7440-09-7	Potassium	400	J	02/02/2025	1501
7440-23-5	Sodium	120	J	02/02/2025	1501

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

Comments:

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



As 189.042 {479}

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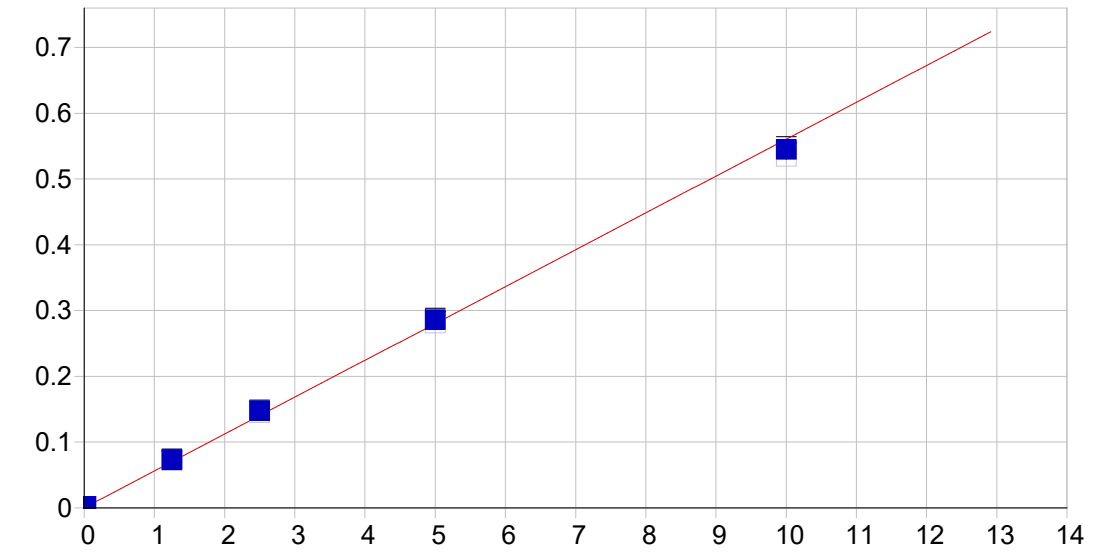
A0 (Offset):	-0.000067	Re-Slope:	1.000000
A1 (Gain):	0.061239	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999348	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.002470		
Predicted MQL:	0.008234		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00007	.000	1
S1	.01000	.00782	-.002	-21.8	.00041	.000	1
S3	2.5000	2.3830	-.117	-4.68	.14559	.001	1
S4	5.0000	4.9679	-.032	-.642	.30361	.001	1
S5	10.000	10.269	.269	2.69	.62768	.003	1
S2	1.2500	1.1327	-.117	-9.38	.06916	.000	1



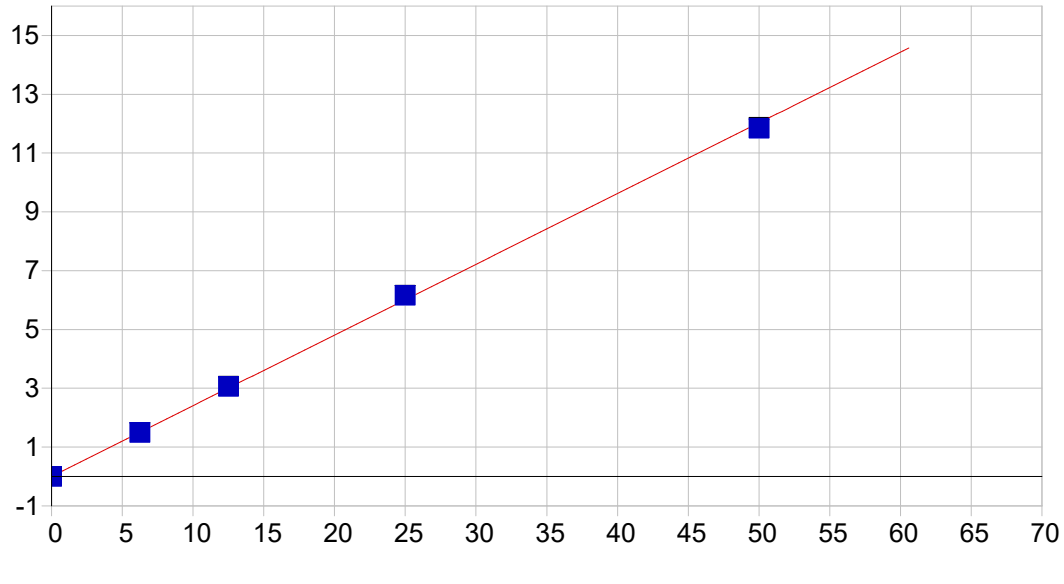
Tl 190.856 {477}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000268	Re-Slope:	1.000000
A1 (Gain):	0.056027	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999510	Status:	OK.
Std Error of Est:	0.000046		
Predicted MDL:	0.002329		
Predicted MQL:	0.007763		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00027	.000	1
S1	.02500	.02629	.001	5.16	.00168	.000	1
S3	2.5000	2.6223	.122	4.89	.14448	.002	1
S4	5.0000	5.1022	.102	2.04	.28071	.002	1
S5	10.000	9.7244	-.276	-2.76	.53426	.004	1
S2	1.2500	1.2999	.050	3.99	.07174	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



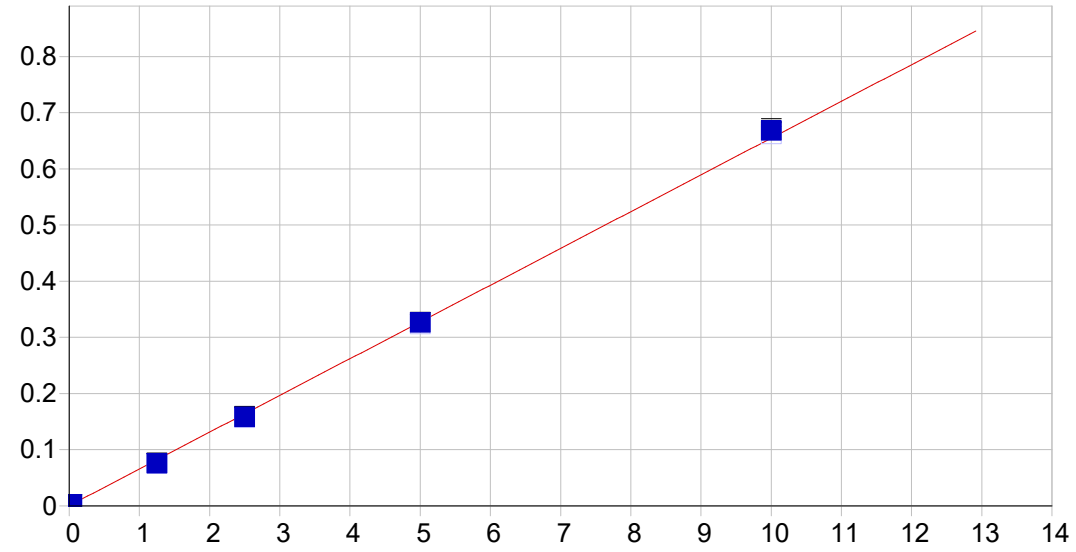
Pb 220.353 {453}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000022	Re-Slope:	1.000000
A1 (Gain):	0.240571	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999837	Status:	OK.
Std Error of Est:	0.000163		
Predicted MDL:	0.001441		
Predicted MQL:	0.004802		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00002	.000	1
S1	.01000	.00957	-.000	-4.30	.00226	.000	1
S3	12.500	12.721	.221	1.77	3.0577	.005	1
S4	25.000	25.599	.599	2.40	6.1533	.006	1
S5	50.000	49.228	-.772	-1.54	11.833	.033	1
S2	6.2500	6.2024	-.048	-.761	1.4908	.004	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



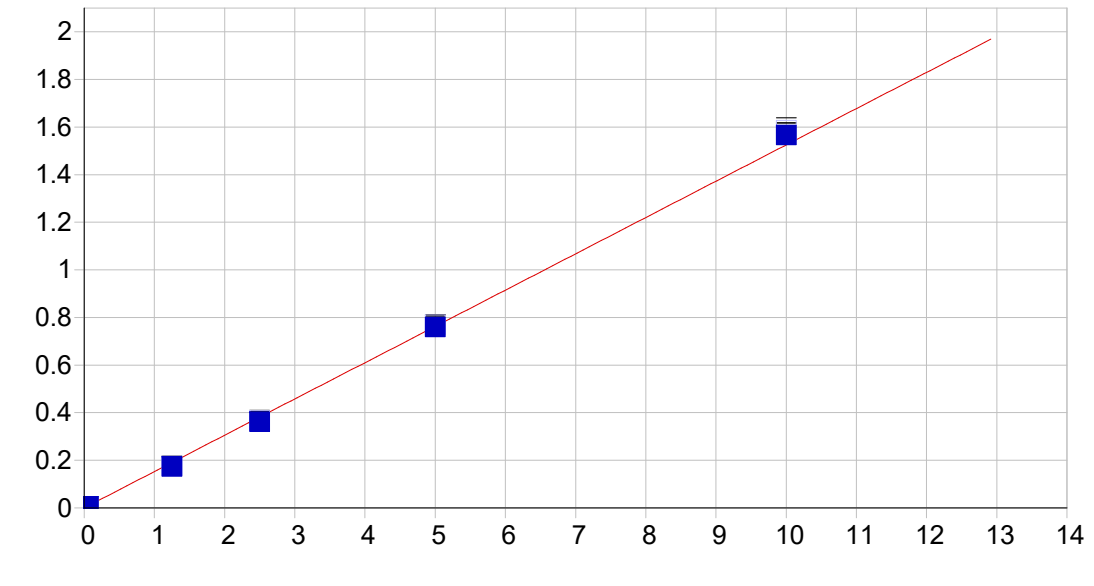
Se 196.090 {472}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000390	Re-Slope:	1.000000
A1 (Gain):	0.065440	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999598	Status:	OK.
Std Error of Est:	0.000058		
Predicted MDL:	0.002880		
Predicted MQL:	0.009600		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00039	.000	1
S1	.03500	.03135	-.004	-10.4	.00244	.000	1
S3	2.5000	2.4116	-.088	-3.54	.15670	.001	1
S4	5.0000	4.9828	-.017	-.343	.32345	.000	1
S5	10.000	10.204	.204	2.04	.66209	.004	1
S2	1.2500	1.1556	-.094	-7.55	.07526	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



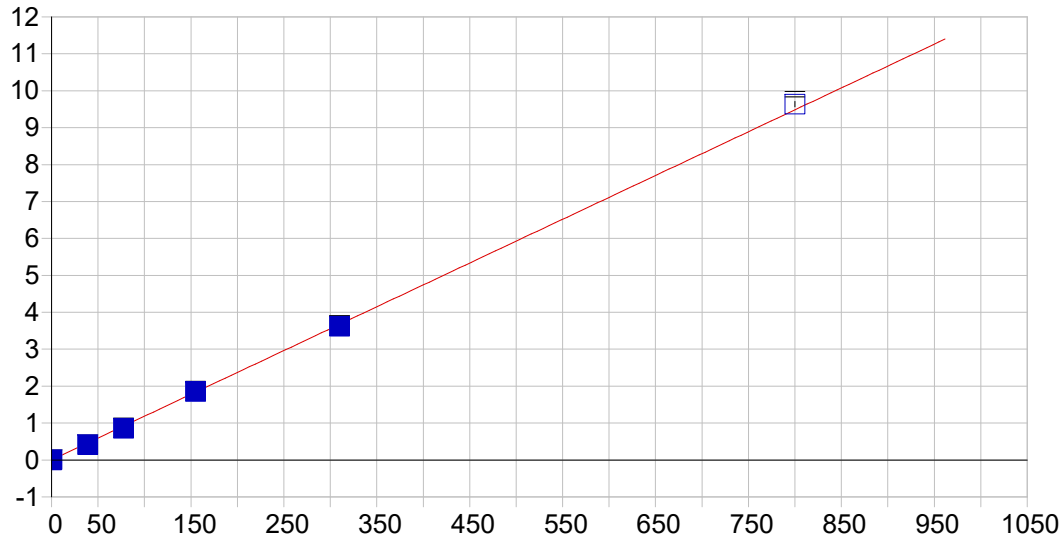
Sb 206.833 {463}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000223	Re-Slope:	1.000000
A1 (Gain):	0.152468	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999354	Status:	OK.
Std Error of Est:	0.000229		
Predicted MDL:	0.001565		
Predicted MQL:	0.005218		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00023	.000	1
S1	.06000	.05395	-.006	-10.1	.00843	.000	1
S3	2.5000	2.3745	-.125	-5.02	.36735	.001	1
S4	5.0000	4.9777	-.022	-.447	.76933	.001	1
S5	10.000	10.270	.270	2.70	1.5863	.010	1
S2	1.2500	1.1342	-.116	-9.26	.17570	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



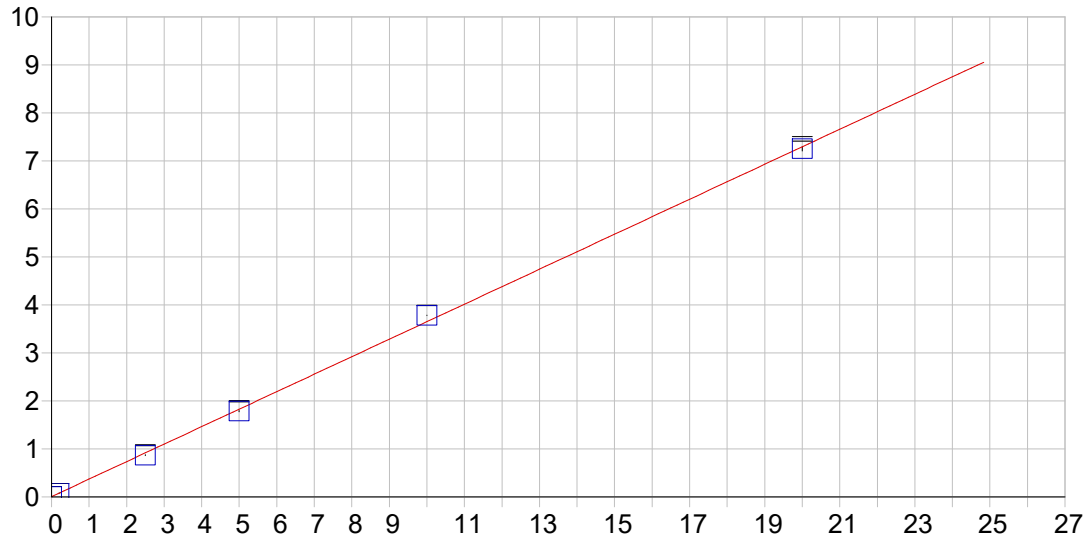
Al 396.152 { 85}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000021	Re-Slope:	1.000000
A1 (Gain):	0.011854	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999645	Status:	OK.
Std Error of Est:	0.000196		
Predicted MDL:	0.008613		
Predicted MQL:	0.028710		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00005	.000	.000	-.00002	.000	1
S1	.20000	.18308	-.017	-8.46	.00215	.000	1
S3	77.500	72.417	-5.08	-6.56	.85950	.007	1
S4	155.00	155.84	.845	.545	1.8495	.009	1
S5	310.00	305.16	-4.84	-1.56	3.6217	.016	1
S2	38.750	35.015	-3.73	-9.64	.41559	.003	1
S6	800.00	812.85	12.8	1.61	9.6355	.074	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



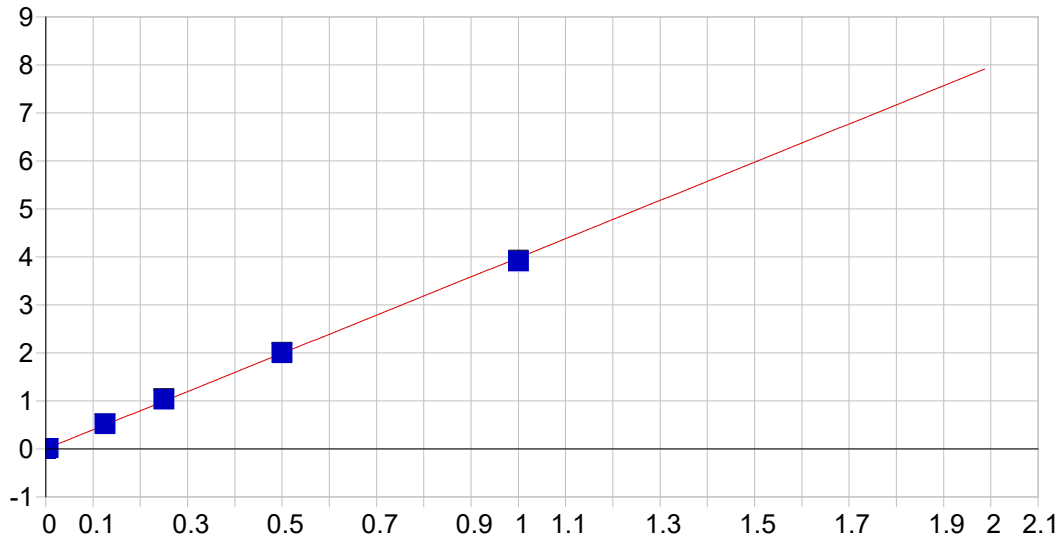
Ba 493.409 { 68}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006408	Re-Slope:	1.000000
A1 (Gain):	0.364421	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999684	Status:	OK.
Std Error of Est:	0.000974		
Predicted MDL:	0.000952		
Predicted MQL:	0.003173		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00641	.000	1
S1	.20000	.19819	-.002	-.903	.07863	.000	1
S3	5.0000	4.8818	-.118	-2.36	1.7854	.014	1
S4	10.000	10.364	.364	3.64	3.7831	.004	1
S5	20.000	19.891	-.109	-.547	7.2549	.047	1
S2	2.5000	2.3659	-.134	-5.36	.86859	.008	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



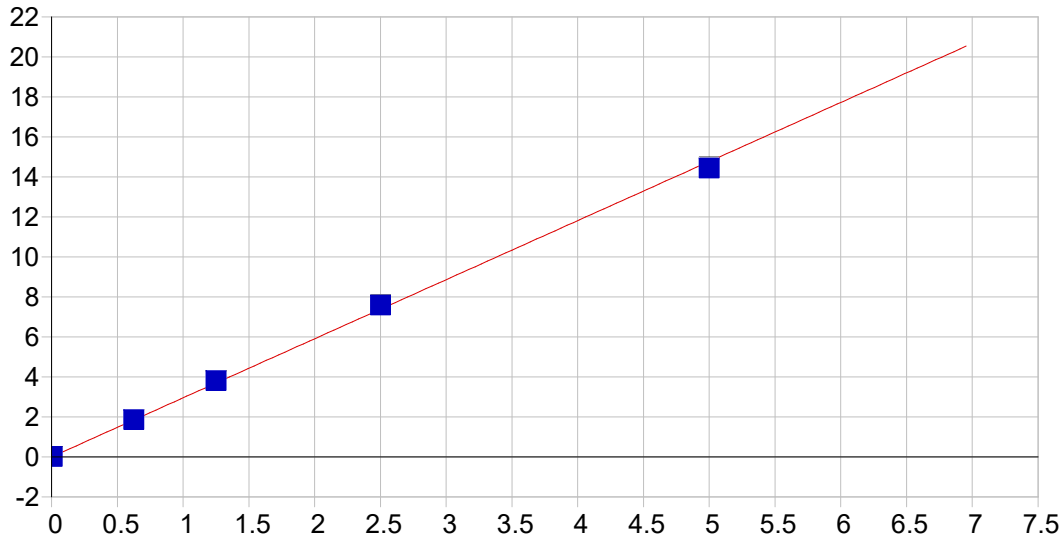
Be 234.861 {144}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000054	Re-Slope:	1.000000
A1 (Gain):	3.982281	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999731	Status:	OK.
Std Error of Est:	0.000345		
Predicted MDL:	0.000087		
Predicted MQL:	0.000290		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00006	.000	1
S1	.00500	.00539	.000	7.77	.02138	.000	1
S3	.25000	.26000	.010	4.00	1.0308	.010	1
S4	.50000	.50219	.002	.437	1.9908	.013	1
S5	1.0000	.98198	-.018	-1.80	3.8925	.022	1
S2	.12500	.13045	.005	4.36	.51721	.002	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



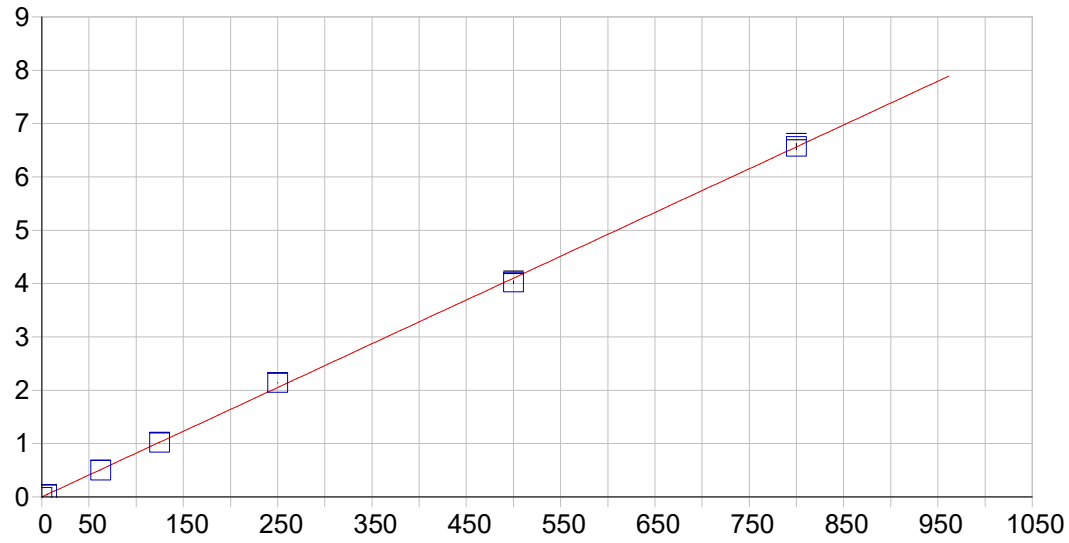
Cd 214.438 {457}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000063	Re-Slope:	1.000000
A1 (Gain):	2.953844	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999701	Status:	OK.
Std Error of Est:	0.000607		
Predicted MDL:	0.000076		
Predicted MQL:	0.000252		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.00500	.00509	.000	1.71	.01509	.000	1
S3	1.2500	1.2896	.040	3.17	3.8166	.011	1
S4	2.5000	2.5669	.067	2.68	7.5970	.003	1
S5	5.0000	4.8874	-.113	-2.25	14.466	.030	1
S2	.62500	.63100	.006	.959	1.8676	.009	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



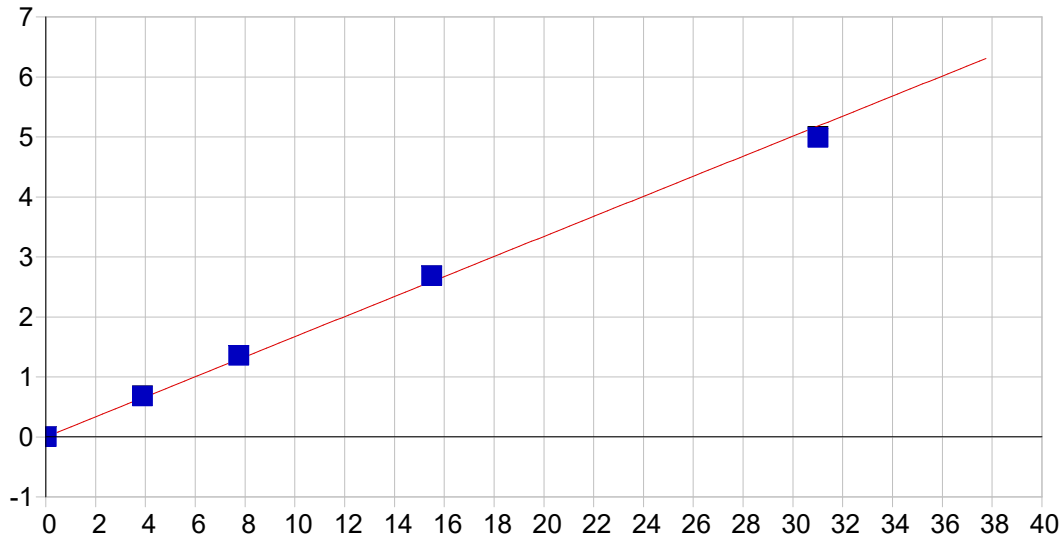
Ca 373.690 { 90}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000065	Re-Slope:	1.000000
A1 (Gain):	0.008204	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999802	Status:	OK.
Std Error of Est:	0.000570		
Predicted MDL:	0.009557		
Predicted MQL:	0.031858		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00008	.000	.000	.00007	.000	1
S2	62.500	60.794	-1.71	-2.73	.49884	.003	1
S3	125.00	124.29	-.711	-.569	1.0198	.005	1
S4	250.00	260.76	10.8	4.31	2.1394	.004	1
S5	500.00	490.68	-9.32	-1.86	4.0257	.024	1
S1	5.0000	4.9588	-.041	-.825	.04075	.000	1
S6	800.00	801.02	1.02	.127	6.5718	.059	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



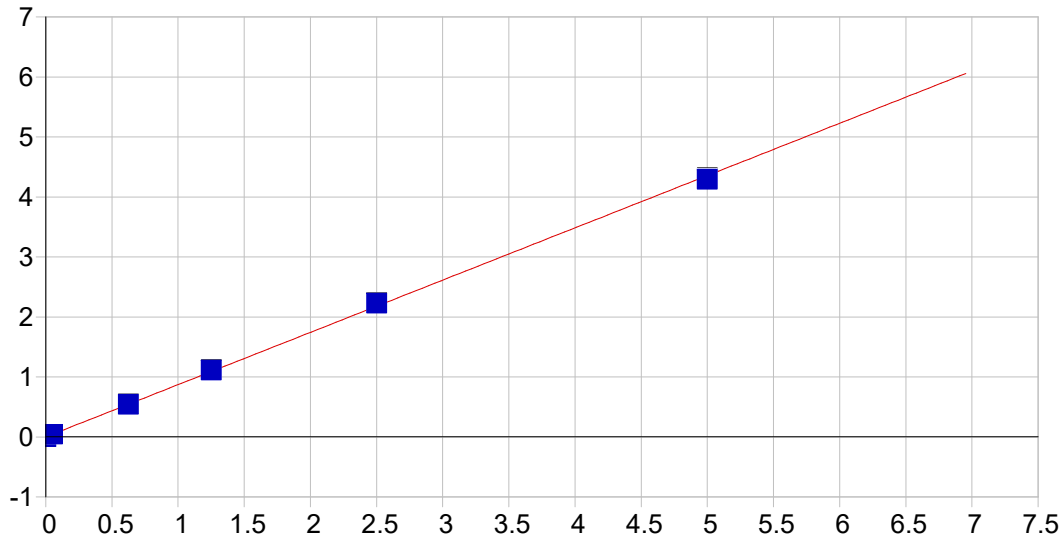
Cr 267.716 {126}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000036	Re-Slope:	1.000000
A1 (Gain):	0.167061	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999236	Status:	OK.
Std Error of Est:	0.000193		
Predicted MDL:	0.000440		
Predicted MQL:	0.001466		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00004	.000	1
S1	.01000	.01107	.001	10.7	.00181	.000	1
S3	7.7500	8.1120	.362	4.67	1.3555	.001	1
S4	15.500	16.069	.569	3.67	2.6851	.004	1
S5	31.000	29.871	-1.13	-3.64	4.9916	.013	1
S2	3.8750	4.0715	.196	5.07	.68031	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



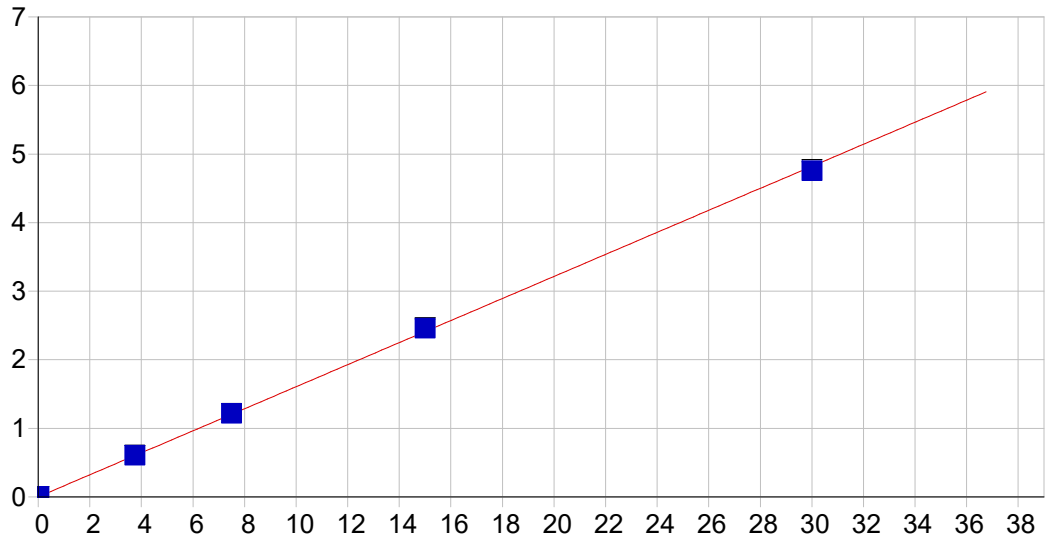
Co 228.616 {448}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000158	Re-Slope:	1.000000
A1 (Gain):	0.871145	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999851	Status:	OK.
Std Error of Est:	0.000401		
Predicted MDL:	0.000276		
Predicted MQL:	0.000919		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00016	.000	1
S1	.05000	.05034	.000	.688	.04386	.000	1
S3	1.2500	1.2736	.024	1.89	1.1135	.002	1
S4	2.5000	2.5546	.055	2.18	2.2335	.004	1
S5	5.0000	4.9230	-.077	-1.54	4.3050	.010	1
S2	.62500	.62351	-.001	-.239	.54508	.002	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



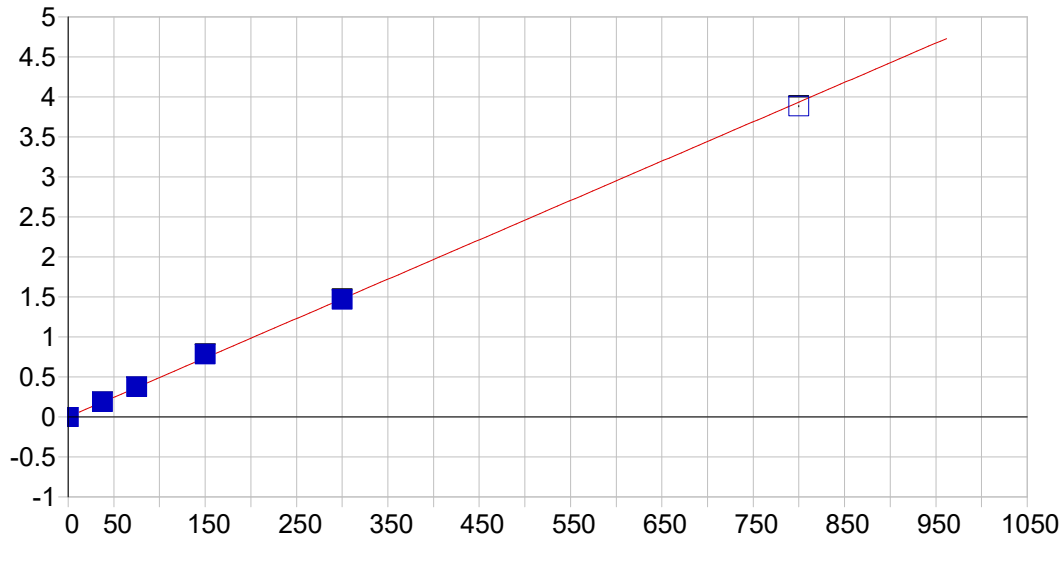
Cu 324.754 {104}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000438	Re-Slope:	1.000000
A1 (Gain):	0.160711	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999886	Status:	OK.
Std Error of Est:	0.000111		
Predicted MDL:	0.002465		
Predicted MQL:	0.008217		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00044	.000	1
S1	.02500	.02894	.004	15.8	.00509	.000	1
S3	7.5000	7.5691	.069	.922	1.2168	.003	1
S4	15.000	15.300	.300	2.00	2.4590	.011	1
S5	30.000	29.600	-.400	-1.33	4.7570	.015	1
S2	3.7500	3.7778	.028	.743	.60752	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



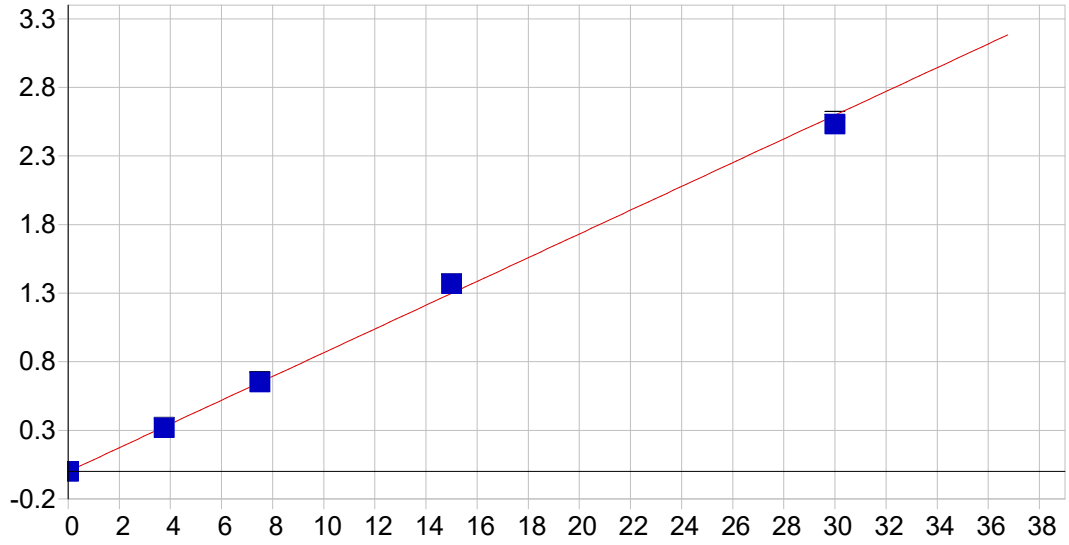
Fe 259.837 {130}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000012	Re-Slope:	1.000000
A1 (Gain):	0.004919	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999711	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.006885		
Predicted MQL:	0.022949		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	-.00001	.000	1
S1	.10000	.10825	.008	8.25	.00051	.000	1
S3	75.000	76.825	1.82	2.43	.37750	.002	1
S4	150.00	159.47	9.47	6.32	.78367	.003	1
S5	300.00	298.59	-1.41	-.471	1.4672	.006	1
S2	37.500	37.897	.397	1.06	.18621	.001	1
S6	800.00	789.72	-10.3	-1.29	3.8845	.009	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



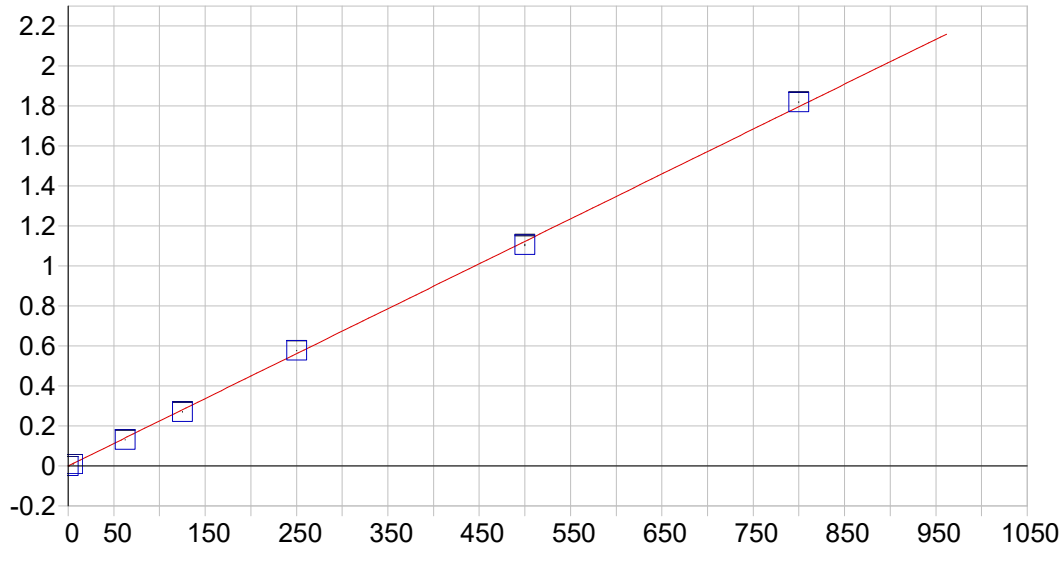
Mn 257.610 {131}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000016	Re-Slope:	1.000000
A1 (Gain):	0.086598	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999440	Status:	OK.
Std Error of Est:	0.000103		
Predicted MDL:	0.000369		
Predicted MQL:	0.001230		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00002	.000	1
S1	.01500	.01547	.000	3.16	.00132	.000	1
S3	7.5000	7.5147	.015	.196	.65029	.003	1
S4	15.000	15.803	.803	5.35	1.3676	.002	1
S5	30.000	29.249	-.751	-2.50	2.5311	.021	1
S2	3.7500	3.6835	-.067	-1.77	.31874	.003	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



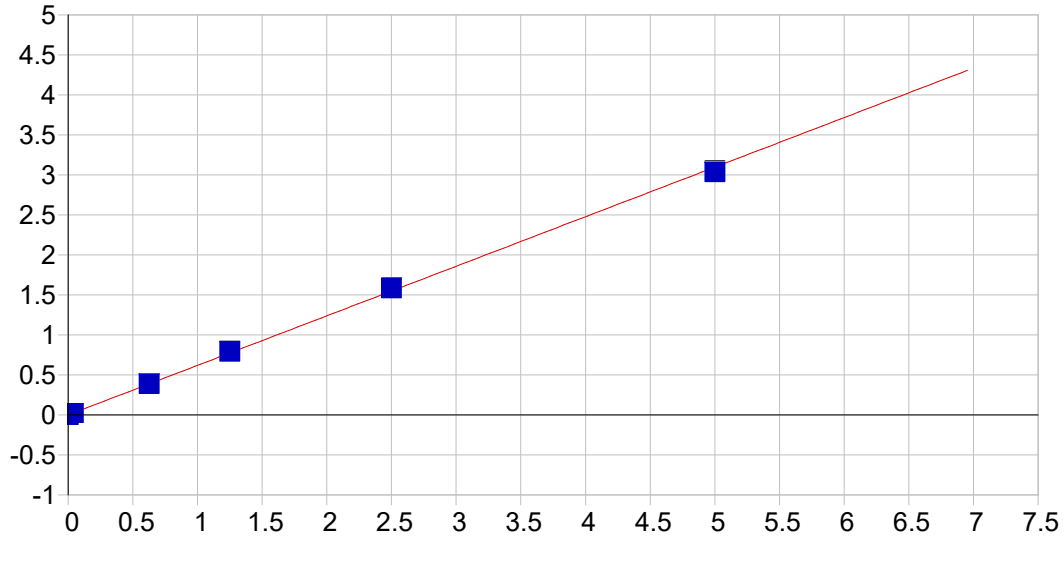
Mg 279.079 {121}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000010	Re-Slope:	1.000000
A1 (Gain):	0.002246	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.000184		
Predicted MDL:	0.018267		
Predicted MQL:	0.060889		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00089	.001	.000	-.00001	.000	1
S2	62.500	58.187	-4.31	-6.90	.13070	.000	1
S3	125.00	120.49	-4.51	-3.61	.27065	.001	1
S4	250.00	257.07	7.07	2.83	.57746	.001	1
S5	500.00	492.11	-7.89	-1.58	1.1054	.004	1
S1	5.0000	4.5058	-.494	-9.88	.01011	.000	1
S6	800.00	810.13	10.1	1.27	1.8198	.002	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



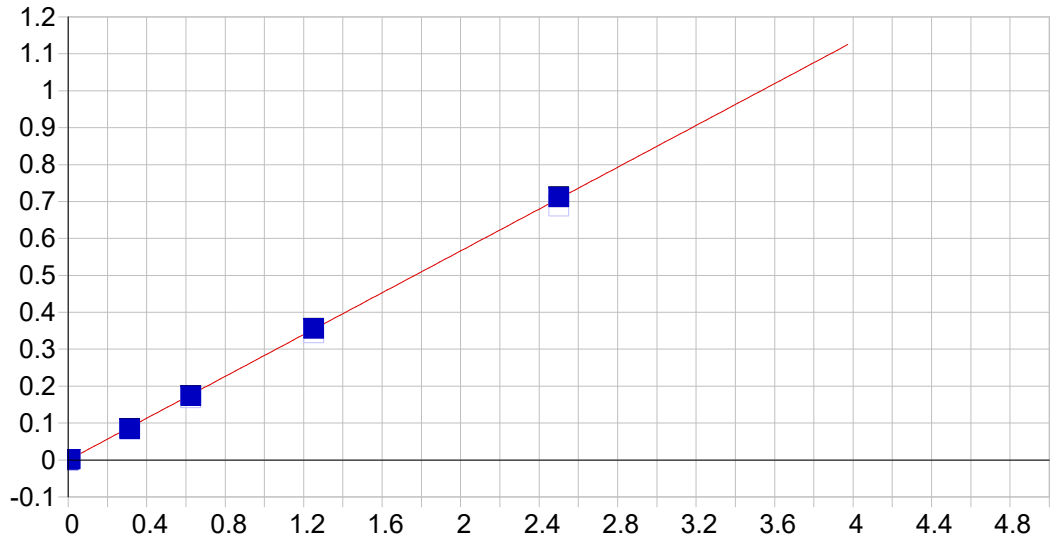
Ni 231.604 {446}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000172	Re-Slope:	1.000000
A1 (Gain):	0.619398	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999783	Status:	OK.
Std Error of Est:	0.000307		
Predicted MDL:	0.000433		
Predicted MQL:	0.001442		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00017	.000	1
S1	.04000	.04055	.001	1.37	.02497	.000	1
S3	1.2500	1.2818	.032	2.54	.79558	.002	1
S4	2.5000	2.5594	.059	2.38	1.5887	.002	1
S5	5.0000	4.9039	-.096	-1.92	3.0445	.008	1
S2	.62500	.62938	.004	.701	.39057	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



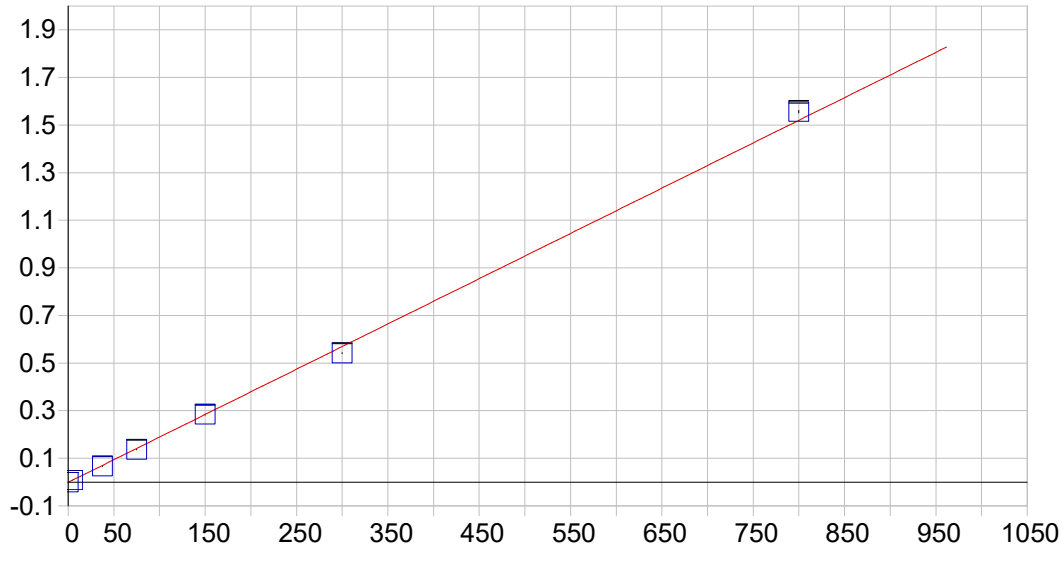
Ag 328.068 {103}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000268	Re-Slope:	1.000000
A1 (Gain):	0.283222	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.000416		
Predicted MQL:	0.001386		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00027	.000	1
S1	.01000	.01018	.000	1.76	.00259	.000	1
S3	.62500	.61447	-.011	-1.69	.16753	.000	1
S4	1.2500	1.2574	.007	.589	.34337	.001	1
S5	2.5000	2.5146	.015	.586	.68698	.001	1
S2	.31250	.30086	-.012	-3.73	.08182	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

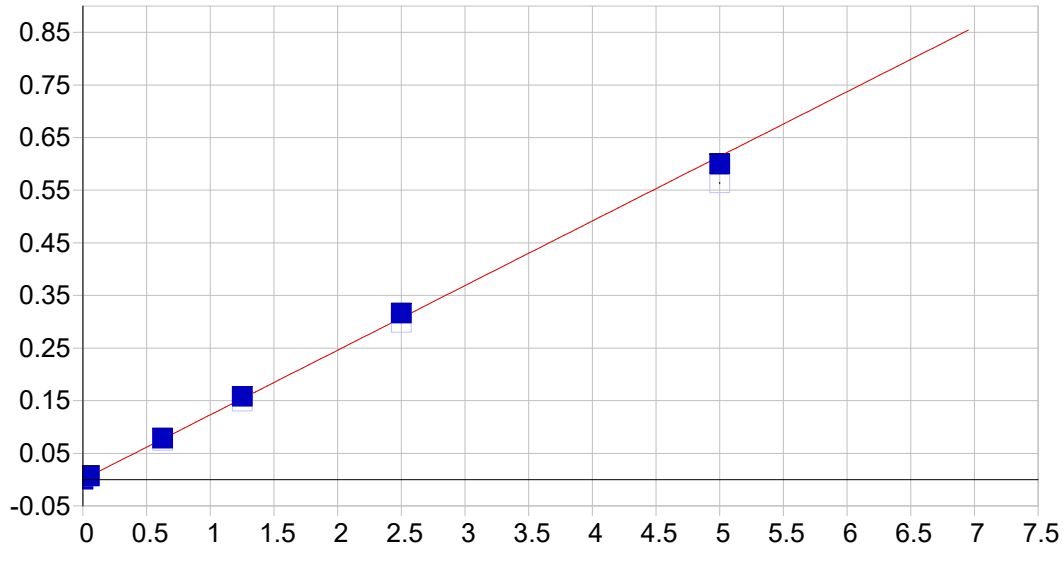


Na 818.326 { 41}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000984	Re-Slope:	1.000000
A1 (Gain):	0.001902	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999508	Status:	OK.
Std Error of Est:	0.000185		
Predicted MDL:	0.510804		
Predicted MQL:	1.702679		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00065	.001	.000	-.00098	.001	1
S2	37.500	35.654	-1.85	-4.92	.06681	.001	1
S3	75.000	72.371	-2.63	-3.51	.13663	.001	1
S4	150.00	150.05	.054	.036	.28435	.002	1
S5	300.00	285.44	-14.6	-4.85	.54179	.002	1
S1	5.0000	4.8923	-.108	-2.15	.00832	.001	1
S6	800.00	819.09	19.1	2.39	1.5565	.005	1



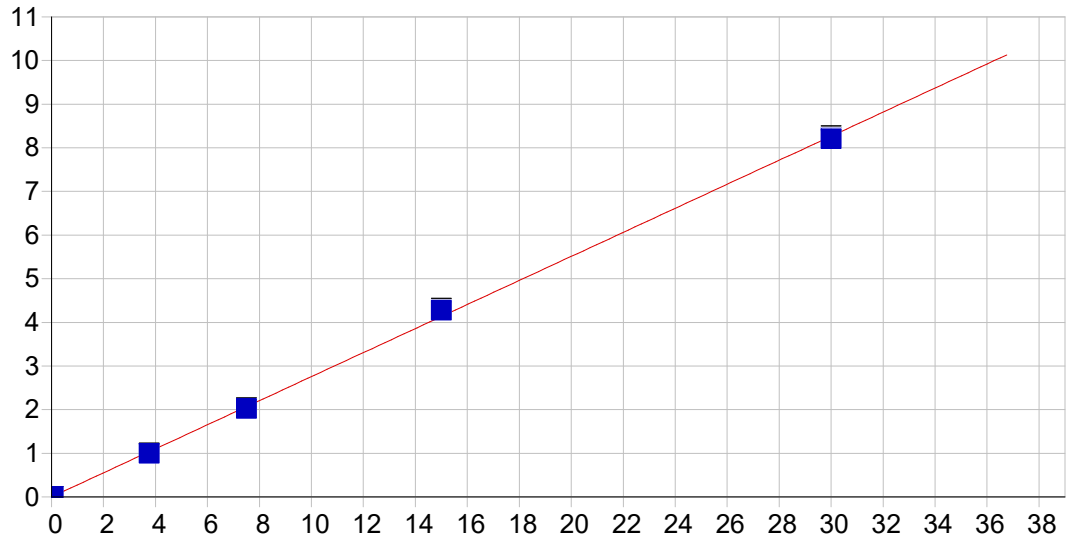
V 292.402 {115}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000262	Re-Slope:	1.000000
A1 (Gain):	0.122831	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999624	Status:	OK.
Std Error of Est:	0.000084		
Predicted MDL:	0.002404		
Predicted MQL:	0.008013		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00026	.001	1
S1	.05000	.05293	.003	5.85	.00675	.000	1
S3	1.2500	1.2826	.033	2.60	.14882	.000	1
S4	2.5000	2.5723	.072	2.89	.29827	.000	1
S5	5.0000	4.8793	-.121	-2.41	.56367	.001	1
S2	.62500	.63770	.013	2.03	.07410	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



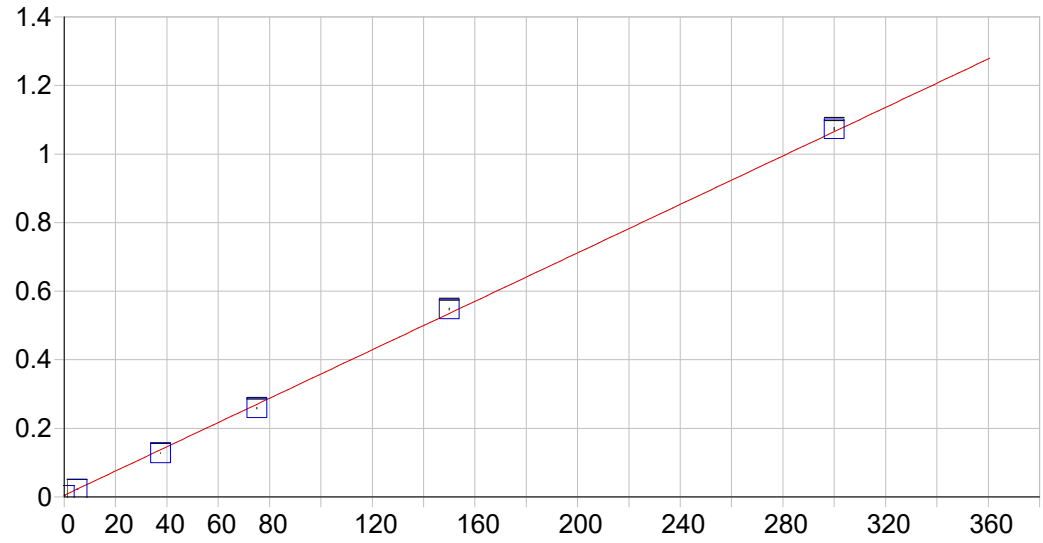
Zn 213.856 {158}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000409	Re-Slope:	1.000000
A1 (Gain):	0.275555	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999757	Status:	OK.
Std Error of Est:	0.000434		
Predicted MDL:	0.001852		
Predicted MQL:	0.006175		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00041	.000	1
S1	.06000	.06007	.000	.116	.01706	.000	1
S3	7.5000	7.3529	-.147	-1.96	2.0343	.009	1
S4	15.000	15.514	.514	3.43	4.2909	.034	1
S5	30.000	29.776	-.224	-.746	8.2365	.042	1
S2	3.7500	3.6069	-.143	-3.82	.99819	.010	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



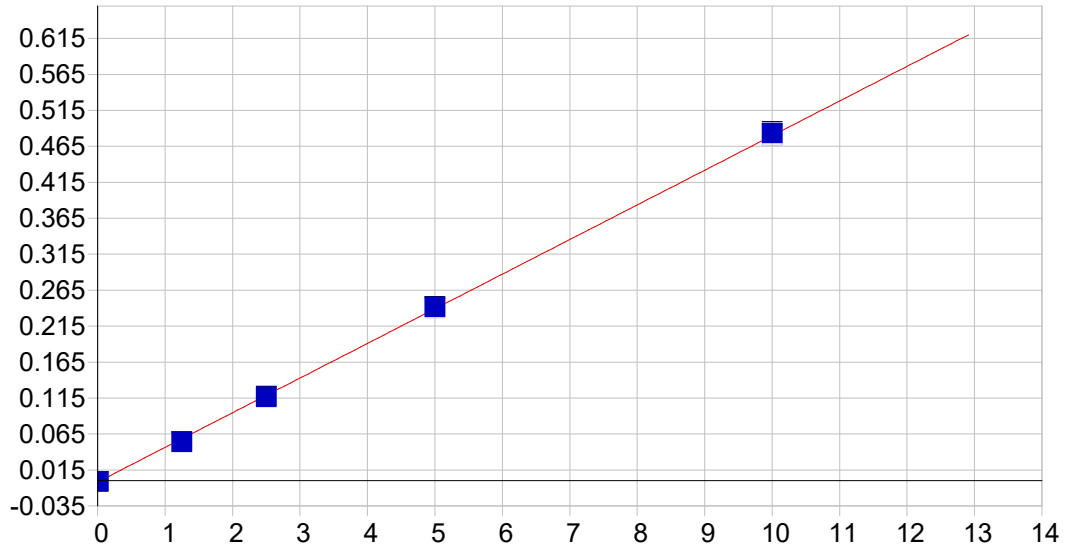
K 769.896 { 44}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004840	Re-Slope:	1.000000
A1 (Gain):	0.003535	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999618	Status:	OK.
Std Error of Est:	0.000202		
Predicted MDL:	0.052731		
Predicted MQL:	0.175769		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00037	.000	.000	.00484	.000	1
S2	37.500	34.717	-2.78	-7.42	.12757	.001	1
S3	75.000	71.914	-3.09	-4.11	.25907	.002	1
S4	150.00	153.52	3.52	2.35	.54756	.003	1
S5	300.00	302.30	2.30	.766	1.0735	.005	1
S1	5.0000	5.0527	.053	1.05	.02270	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



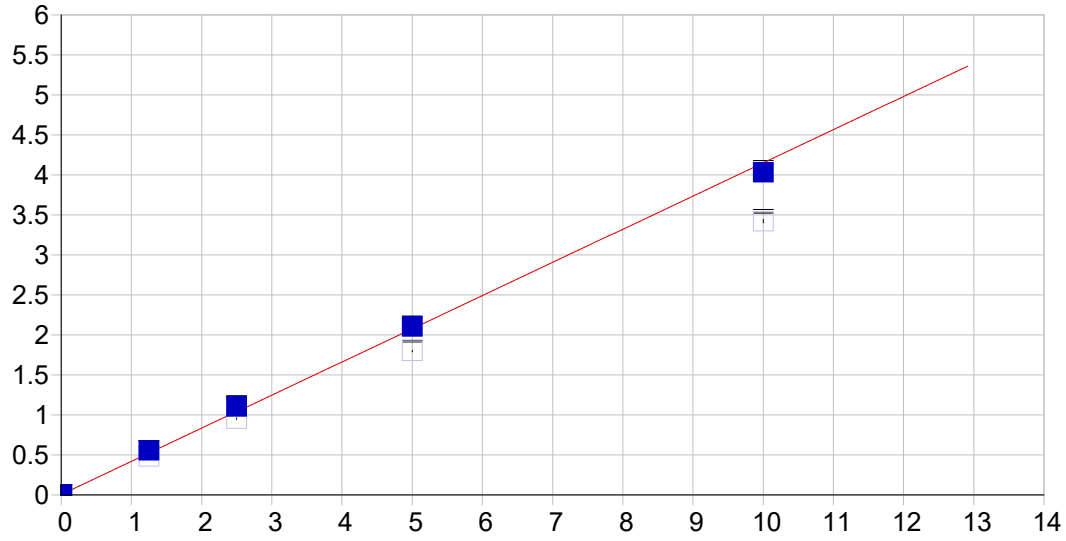
P 177.495 {490}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001764	Re-Slope:	1.000000
A1 (Gain):	0.048162	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999767	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.002357		
Predicted MQL:	0.007858		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00176	.000	1
S1	.01000	.01034	.000	3.42	-.00127	.000	1
S3	2.5000	2.4601	-.040	-1.60	.11586	.001	1
S4	5.0000	5.0580	.058	1.16	.24012	.000	1
S5	10.000	10.074	.074	.736	.47996	.002	1
S2	1.2500	1.1580	-.092	-7.36	.05358	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



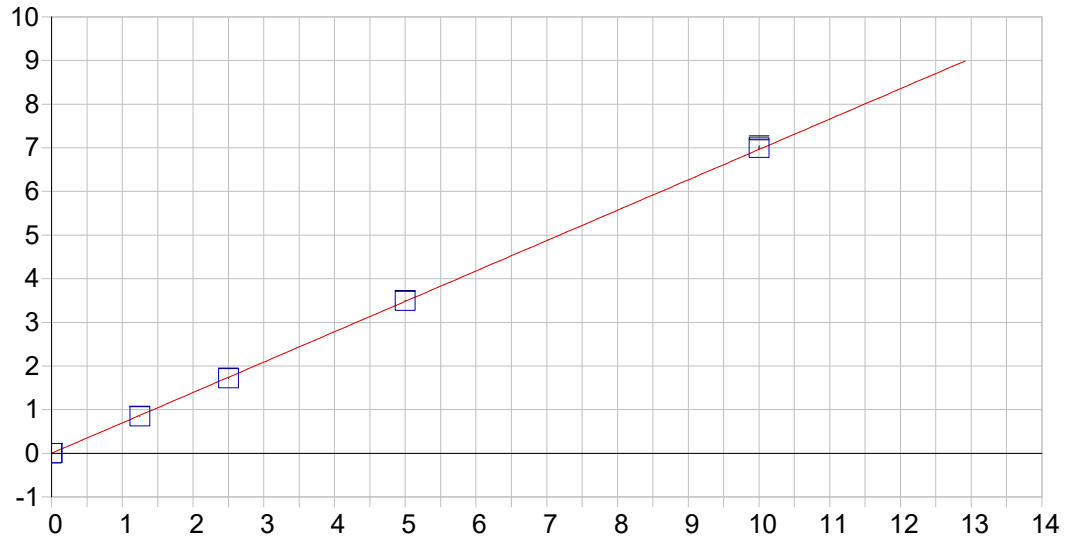
B 249.678 {135}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003911	Re-Slope:	1.000000
A1 (Gain):	0.414630	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998500	Status:	OK.
Std Error of Est:	0.000325		
Predicted MDL:	0.000887		
Predicted MQL:	0.002957		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00392	.000	1
S1	.01000	-.00303	-.013	-130.	.00244	.000	1
S3	2.5000	2.6578	.158	6.31	.95344	.010	1
S4	5.0000	5.0639	.064	1.28	1.7986	.009	1
S5	10.000	9.7135	-.287	-2.87	3.4215	.023	1
S2	1.2500	1.3293	.079	6.35	.47885	.002	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



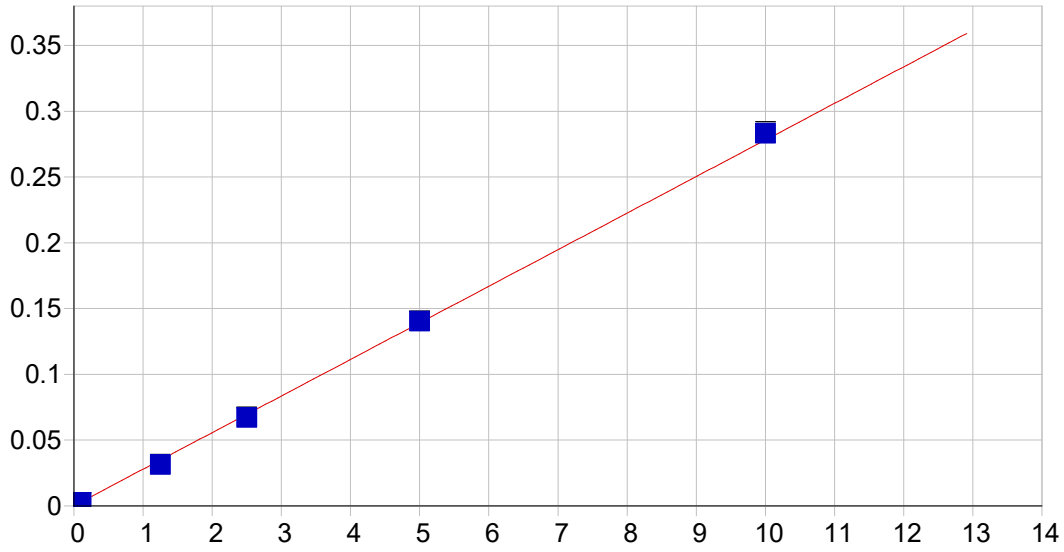
Mo 202.030 {467}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000049	Re-Slope:	1.000000
A1 (Gain):	0.696250	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000116		
Predicted MDL:	0.000306		
Predicted MQL:	0.001022		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00005	.000	1
S1	.01000	.00998	-.000	-.167	.00700	.000	1
S3	2.5000	2.4663	-.034	-1.35	1.7172	.007	1
S4	5.0000	5.0169	.017	.337	3.4930	.007	1
S5	10.000	10.053	.053	.532	6.9996	.042	1
S2	1.2500	1.2136	-.036	-2.91	.84505	.003	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



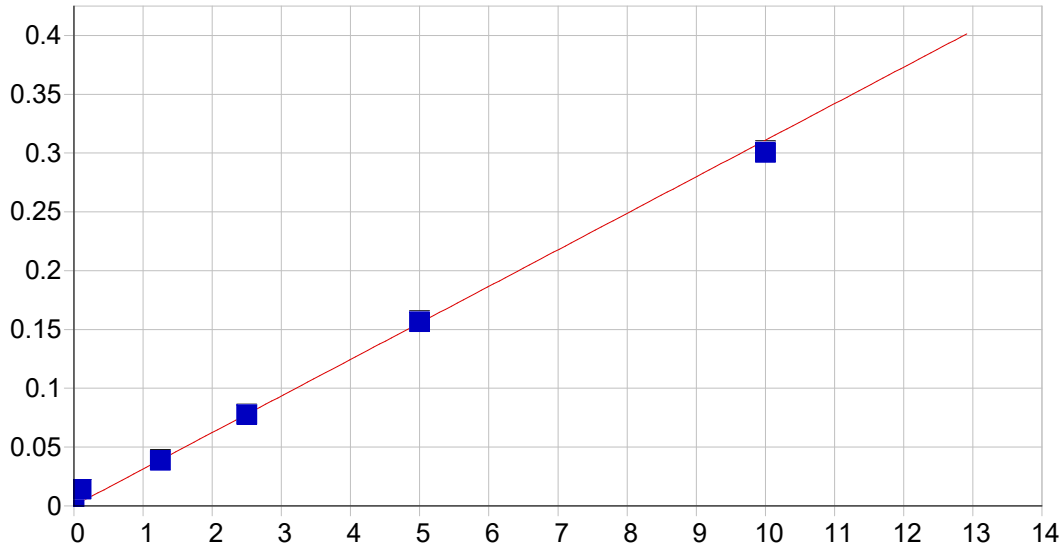
S 182.034 {485}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000134	Re-Slope:	1.000000
A1 (Gain):	0.027805	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999452	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.004036		
Predicted MQL:	0.013454		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00013	.000	1
S1	.10000	.08927	-.011	-10.7	.00262	.000	1
S3	2.5000	2.4089	-.091	-3.64	.06720	.000	1
S4	5.0000	5.0462	.046	.925	.14062	.000	1
S5	10.000	10.181	.181	1.81	.28356	.001	1
S2	1.2500	1.1248	-.125	-10.0	.03145	.000	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



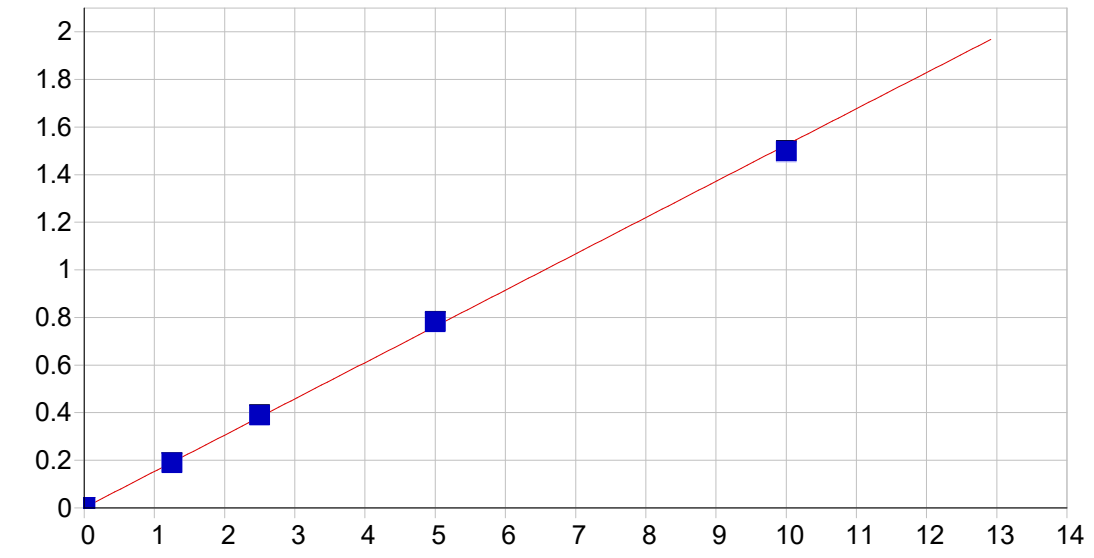
Si 251.611 {134}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000268	Re-Slope:	1.000000
A1 (Gain):	0.031064	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.969453	Status:	OK.
Std Error of Est:	0.000419		
Predicted MDL:	0.006350		
Predicted MQL:	0.021165		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00034	-.000	.000	.00026	.000	1
S1	.10000	.44645	.346	346.	.01414	.000	1
S3	2.5000	2.4856	-.014	-.575	.07771	.000	1
S4	5.0000	5.0294	.029	.588	.15696	.001	1
S5	10.000	9.6572	-.343	-3.43	.30119	.001	1
S2	1.2500	1.2323	-.018	-1.42	.03866	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



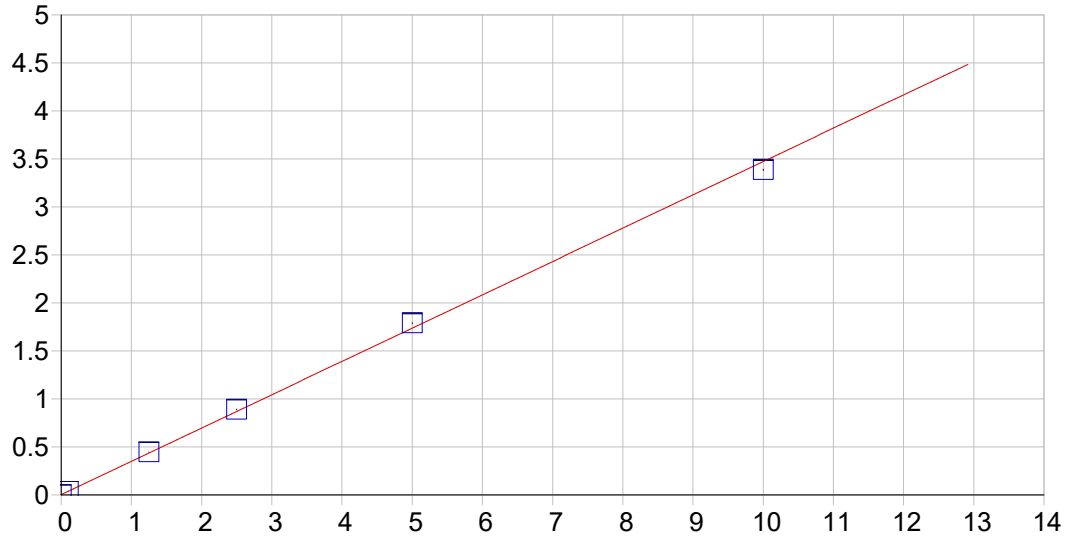
Sn 189.989 {478}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000752	Re-Slope:	1.000000
A1 (Gain):	0.152360	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999798	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.000849		
Predicted MQL:	0.002829		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00075	.000	1
S1	.00700	.00654	-.000	-6.59	.00170	.000	1
S3	2.5000	2.5527	.053	2.11	.38851	.001	1
S4	5.0000	5.1298	.130	2.60	.77997	.001	1
S5	10.000	9.8295	-.171	-1.71	1.4937	.003	1
S2	1.2500	1.2384	-.012	-.927	.18885	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



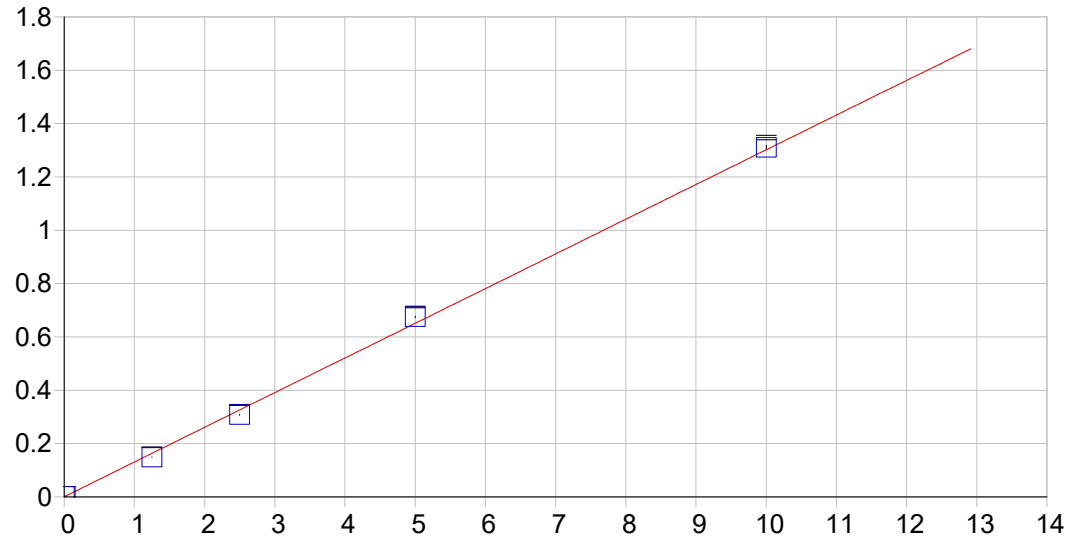
Ti 336.121 {100}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001888	Re-Slope:	1.000000
A1 (Gain):	0.347057	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999652	Status:	OK.
Std Error of Est:	0.000487		
Predicted MDL:	0.001122		
Predicted MQL:	0.003741		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00188	.000	1
S1	.10000	.10590	.006	5.90	.03864	.000	1
S3	2.5000	2.5594	.059	2.38	.89014	.003	1
S4	5.0000	5.1509	.151	3.02	1.7895	.005	1
S5	10.000	9.7535	-.246	-2.46	3.3869	.006	1
S2	1.2500	1.2803	.030	2.42	.44621	.002	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



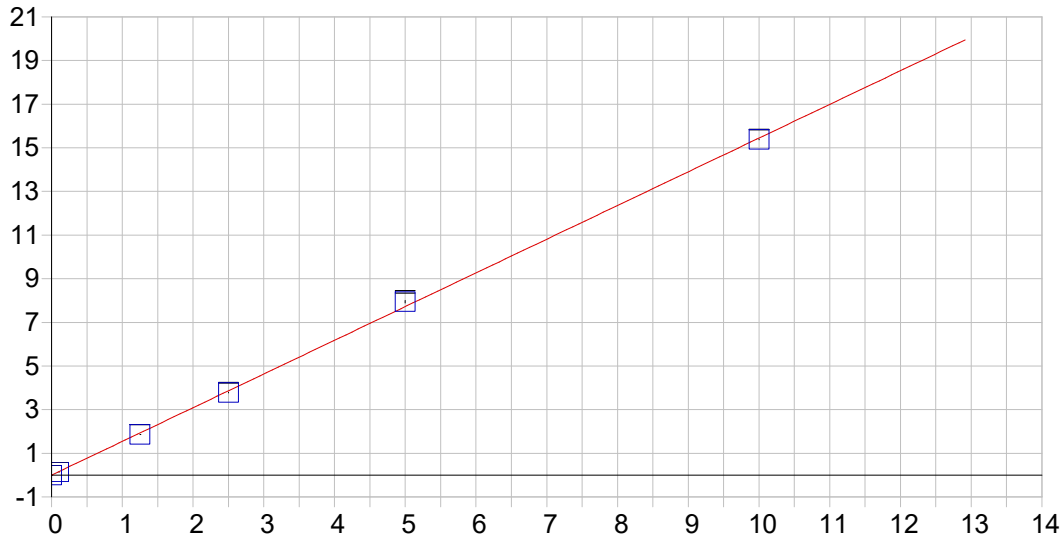
Li 670.784 { 50}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000790	Re-Slope:	1.000000
A1 (Gain):	0.130081	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999319	Status:	OK.
Std Error of Est:	0.000099		
Predicted MDL:	0.001443		
Predicted MQL:	0.004811		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00079	.000	1
S5	10.000	10.068	.068	.681	1.3105	.008	1
S4	5.0000	5.1862	.186	3.72	.67542	.003	1
S3	2.5000	2.3602	-.140	-5.59	.30781	.002	1
S1	.01500	.01396	-.001	-6.93	.00261	.000	1
S2	1.2500	1.1365	-.113	-9.08	.14863	.002	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4



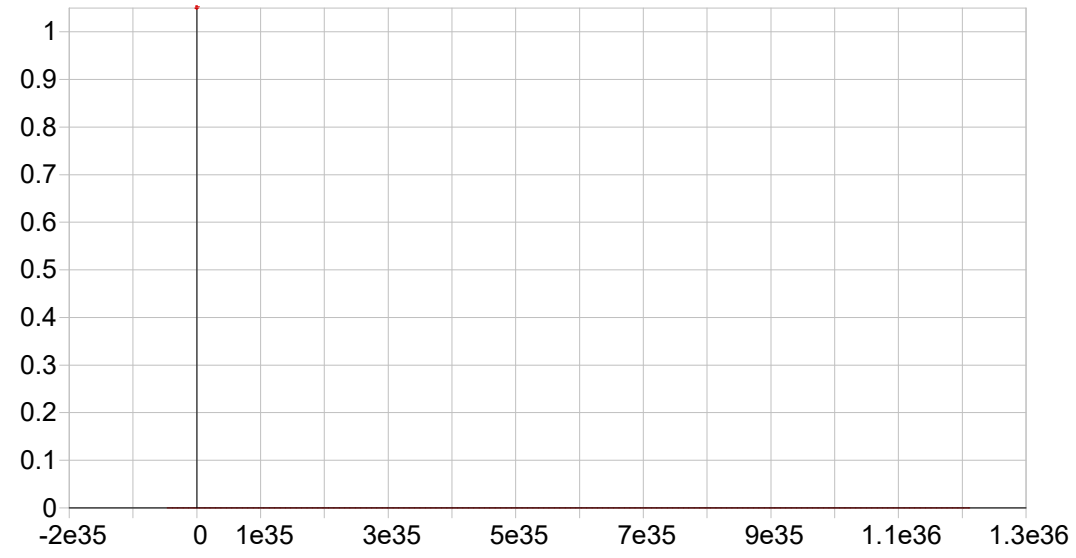
Sr 407.771 { 83}

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000035	Re-Slope:	1.000000
A1 (Gain):	1.544555	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999811	Status:	OK.
Std Error of Est:	0.001594		
Predicted MDL:	0.000068		
Predicted MQL:	0.000226		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00005	.000	1
S1	.10000	.09549	-.005	-4.51	.14753	.001	1
S3	2.5000	2.4453	-.055	-2.19	3.7769	.014	1
S4	5.0000	5.1430	.143	2.86	7.9436	.057	1
S5	10.000	9.9589	-.041	-.411	15.382	.016	1
S2	1.2500	1.2074	-.043	-3.41	1.8649	.001	1

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

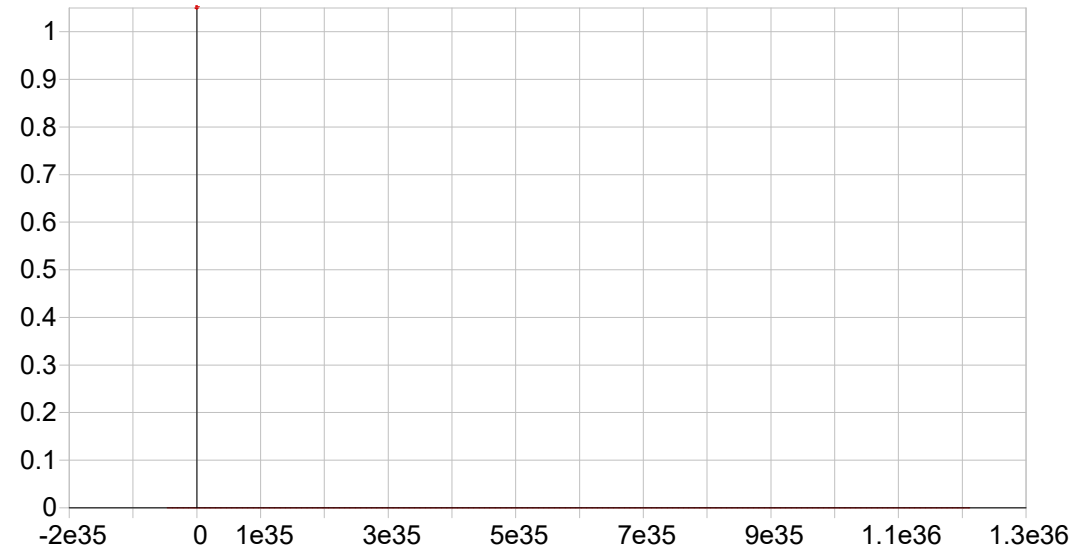


Y 224.306 {450}*

Date of Fit:	2/2/2025 15:22:59	Type of Fit:	Linear	Weighting:	1/Conc

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

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



Y 360.073 { 94}*

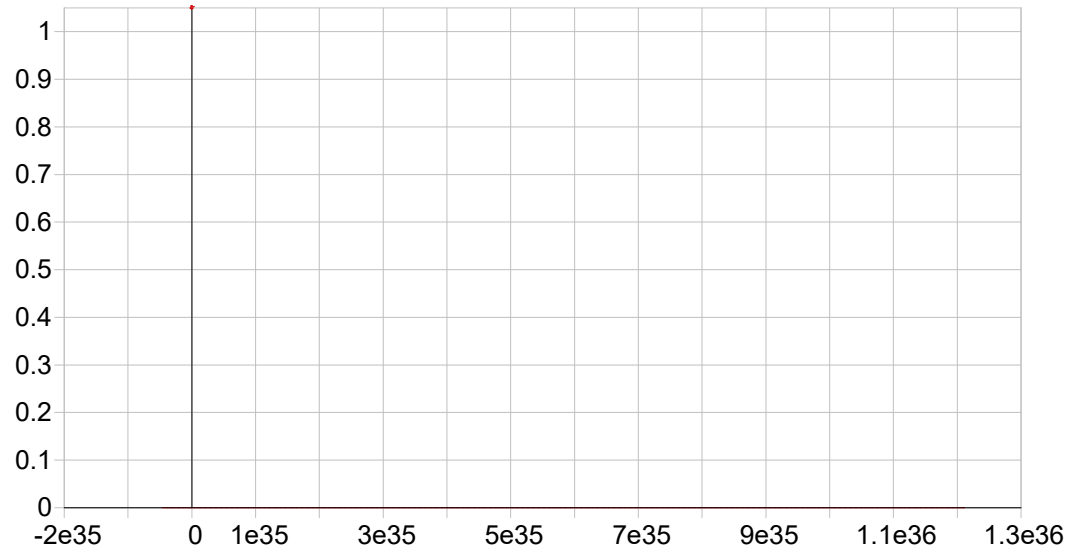
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

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

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



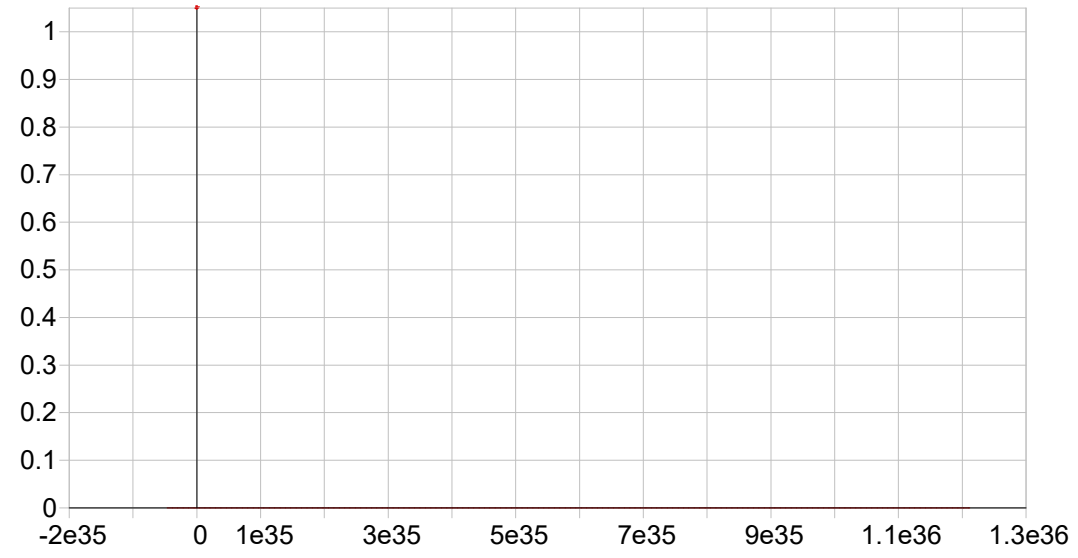
Y 371.030 { 91}*

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

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

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

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

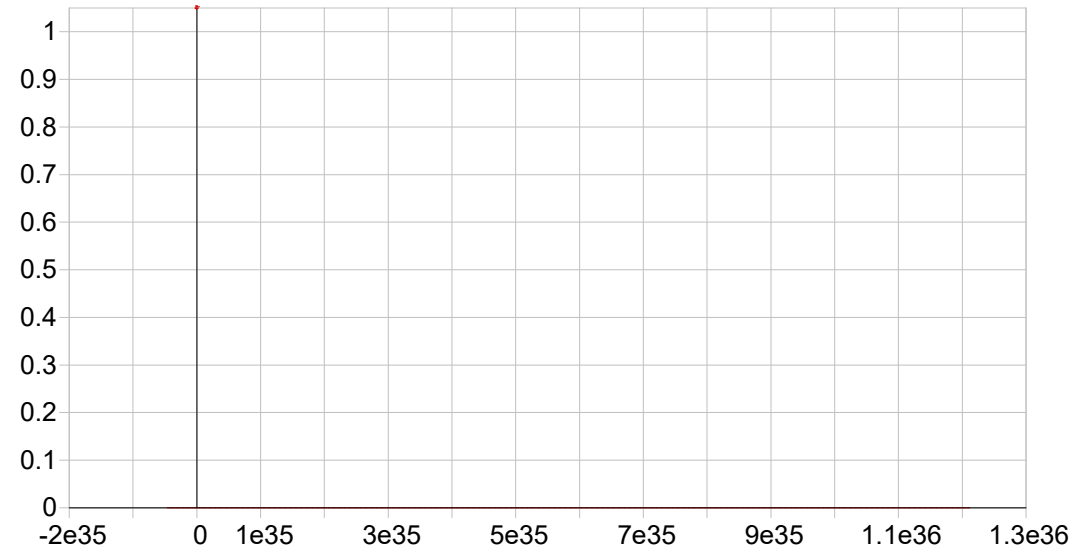


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

A0 (Offset):	0.000000	Re-Slope:	1.000000
A1 (Gain):	0.000000	Y-int:	0.000000

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

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

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S0 Acquired: 2/2/2025 10:59:42 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00007**	**.00027**	**-.00002**	**.00039**	**.00023**	**-.00002**	**.00641**	**-.00006**
Stddev	.00005	.00007	.00016	.00003	.00018	.00003	.00037	.00012
%RSD	71.838	26.784	718.75	6.9116	81.732	173.31	5.7727	216.03
#1	-.00003	.00022	-.00018	.00038	.00019	.00001	.00600	-.00004
#2	-.00012	.00035	-.00003	.00037	.00006	-.00006	.00654	-.00019
#3	-.00005	.00024	.00014	.00042	.00043	-.00001	.00670	.00006

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00006**	**.00007**	**-.00004**	**-.00016**	**.00044**	**-.00001**	**-.00002**	**-.00001**
Stddev	.00014	.00005	.00006	.00022	.00024	.00001	.00004	.00002
%RSD	227.51	74.526	179.36	136.33	54.317	48.381	262.62	311.81
#1	-.00005	.00006	-.00010	-.00033	.00058	-.00001	-.00001	-.00003
#2	.00022	.00012	.00003	-.00023	.00057	-.00002	.00002	.00001
#3	.00001	.00002	-.00004	.00008	.00016	-.00002	-.00006	.00000

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00017**	**-.00027**	**-.00098**	**.00026**	**.00041**	**.00484**	**-.00176**	**.00392**
Stddev	.00020	.00004	.00090	.00054	.00034	.00010	.00012	.00019
%RSD	117.21	14.952	91.993	208.00	82.439	2.1044	6.8856	4.7873
#1	-.00038	-.00031	-.00042	-.00014	.00080	.00494	-.00189	.00383
#2	-.00017	-.00026	-.00050	.00005	.00018	.00485	-.00165	.00413
#3	.00003	-.00023	-.00203	.00088	.00025	.00474	-.00176	.00379

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00005**	**.00013**	**.00026**	**.00075**	**.00188**	**.00079**	**.00005**
Stddev	.00005	.00003	.00022	.00004	.00046	.00011	.00006
%RSD	104.27	24.245	85.140	5.9267	24.514	14.035	125.66
#1	-.00000	.00011	.00009	.00079	.00141	.00072	.00004
#2	.00005	.00012	.00050	.00076	.00233	.00073	-.00001
#3	.00010	.00017	.00018	.00071	.00191	.00092	.00011

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S0 Acquired: 2/2/2025 10:59:42 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3728.5	72695.	11101.	2471.9	4477.8
Stddev	11.6	203.	44.	16.6	15.8
%RSD	.31143	.27914	.39386	.66969	.35275
#1	3715.3	72488.	11056.	2455.6	4459.6
#2	3733.1	72705.	11104.	2488.7	4487.9
#3	3737.2	72893.	11143.	2471.4	4485.8

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S1 Acquired: 2/2/2025 11:03:56 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00041**	**.00168**	**.00226**	**.00244**	**.00843**	**.00215**	**.07863**	**.02138**
Stddev	.00012	.00015	.00029	.00008	.00021	.00017	.00006	.00021
%RSD	29.276	9.1422	12.904	3.4680	2.4499	7.7149	.07265	.99996
#1	.00034	.00158	.00213	.00238	.00861	.00228	.07862	.02161
#2	.00055	.00186	.00206	.00253	.00821	.00222	.07870	.02135
#3	.00035	.00160	.00260	.00240	.00848	.00196	.07859	.02118

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.01509**	**.04075**	**.00181**	**.04386**	**.00509**	**.00051**	**.00132**	**.01011**
Stddev	.00017	.00018	.00006	.00004	.00021	.00003	.00004	.00003
%RSD	1.1509	.44616	3.1425	.09427	4.1262	5.7120	2.8544	.28270
#1	.01528	.04062	.00188	.04391	.00521	.00054	.00129	.01008
#2	.01493	.04096	.00180	.04384	.00485	.00052	.00136	.01013
#3	.01507	.04067	.00177	.04385	.00521	.00048	.00132	.01012

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02497**	**.00259**	**.00832**	**.00675**	**.01706**	**.02270**	**-.00127**	**.00244**
Stddev	.00026	.00003	.00089	.00016	.00013	.00004	.00006	.00024
%RSD	1.0604	1.1254	10.696	2.4345	.78900	.17746	4.9801	9.9375
#1	.02517	.00257	.00887	.00687	.01711	.02268	-.00134	.00218
#2	.02467	.00259	.00880	.00681	.01716	.02268	-.00124	.00266
#3	.02507	.00263	.00729	.00656	.01691	.02275	-.00122	.00248

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00700**	**.00262**	**.01414**	**.00170**	**.03864**	**.00261**	**.14753**
Stddev	.00028	.00005	.00004	.00005	.00038	.00022	.00076
%RSD	4.0417	1.7859	.27444	2.6798	.98209	8.4421	.51454
#1	.00707	.00266	.01411	.00166	.03833	.00251	.14681
#2	.00669	.00257	.01412	.00170	.03852	.00245	.14832
#3	.00724	.00262	.01418	.00175	.03907	.00286	.14745

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S1 Acquired: 2/2/2025 11:03:56 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3721.5	72067.	12812.	2445.5	4417.0
Stddev	5.5	366.	75.	17.0	5.5
%RSD	.14753	.50721	.58818	.69559	.12470
#1	3725.7	71678.	12726.	2426.0	4422.8
#2	3723.4	72121.	12867.	2453.7	4416.2
#3	3715.3	72403.	12844.	2456.9	4411.8

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S2 Acquired: 2/2/2025 11:08:08 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.06916**	**.07174**	**1.4908**	**.07526**	**.17570**	**.41559**	**.86859**	**.51721**
Stddev	.00037	.00127	.0042	.00035	.00094	.00255	.00822	.00167
%RSD	.53436	1.7738	.28255	.46781	.53684	.61311	.94609	.32208
#1	.06907	.07069	1.4883	.07495	.17476	.41660	.86675	.51590
#2	.06885	.07137	1.4885	.07519	.17570	.41749	.87757	.51664
#3	.06957	.07316	1.4957	.07564	.17665	.41270	.86145	.51908

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.8676**	**.49884**	**.68031**	**.54508**	**.60752**	**.18621**	**.31874**	**.13070**
Stddev	.0094	.00282	.00117	.00216	.00049	.00054	.00263	.00028
%RSD	.50403	.56542	.17193	.39542	.08114	.29258	.82507	.21284
#1	1.8613	.49844	.68009	.54450	.60737	.18624	.31719	.13053
#2	1.8630	.50184	.68157	.54327	.60807	.18674	.32178	.13102
#3	1.8784	.49624	.67927	.54746	.60713	.18565	.31726	.13054

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.39057**	**.08182**	**.06681**	**.07410**	**.99819**	**.12757**	**.05358**	**.47885**
Stddev	.00145	.00018	.00115	.00048	.00983	.00086	.00032	.00162
%RSD	.37034	.21827	1.7265	.64840	.98440	.67513	.60261	.33738
#1	.39023	.08199	.06701	.07355	.98695	.12763	.05343	.47911
#2	.38933	.08185	.06786	.07434	1.0051	.12840	.05336	.47712
#3	.39216	.08163	.06557	.07441	1.0025	.12668	.05395	.48031

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.84505**	**.03145**	**.03866**	**.18885**	**.44621**	**.14863**	**1.8649**
Stddev	.00294	.00026	.00054	.00059	.00162	.00155	.0010
%RSD	.34768	.81146	1.3876	.31343	.36359	1.0431	.05637
#1	.84385	.03120	.03807	.18846	.44439	.14844	1.8642
#2	.84290	.03171	.03879	.18855	.44751	.15026	1.8661
#3	.84840	.03145	.03912	.18953	.44674	.14718	1.8644

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S2 Acquired: 2/2/2025 11:08:08 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3557.7	68716.	12473.	2312.8	4014.5
Stddev	5.5	207.	22.	3.8	8.0
%RSD	.15380	.30127	.17497	.16285	.19896
#1	3551.9	68655.	12493.	2315.4	4013.1
#2	3562.8	68547.	12476.	2308.4	4023.1
#3	3558.5	68947.	12449.	2314.5	4007.4

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S3 Acquired: 2/2/2025 11:12:05 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.14559	.14448	3.0577	.15670	.36735	.85950	1.7854	1.0308
Stddev	.00089	.00192	.0049	.00125	.00110	.00714	.0136	.0103
%RSD	.61035	1.3271	.15866	.79654	.30069	.83116	.75870	1.0006
#1	.14514	.14335	3.0575	.15691	.36739	.85284	1.7738	1.0394
#2	.14501	.14340	3.0531	.15536	.36623	.85860	1.7821	1.0337
#3	.14661	.14669	3.0627	.15783	.36844	.86705	1.8003	1.0194

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.8166	1.0198	1.3555	1.1135	1.2168	.37750	.65029	.27065
Stddev	.0108	.0052	.0014	.0023	.0029	.00241	.00285	.00122
%RSD	.28198	.50504	.10727	.20858	.23616	.63972	.43895	.45017
#1	3.8170	1.0150	1.3569	1.1132	1.2200	.37548	.64791	.26945
#2	3.8056	1.0190	1.3540	1.1113	1.2145	.37686	.64952	.27062
#3	3.8271	1.0253	1.3555	1.1159	1.2158	.38018	.65346	.27188

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.79558	.16753	.13663	.14882	2.0343	.25907	.11586	.95344
Stddev	.00235	.00022	.00073	.00023	.0091	.00213	.00070	.00975
%RSD	.29531	.13226	.53329	.15288	.44477	.82399	.60688	1.0221
#1	.79638	.16776	.13647	.14899	2.0239	.25733	.11557	.96318
#2	.79294	.16749	.13743	.14892	2.0394	.25843	.11535	.95345
#3	.79743	.16732	.13600	.14856	2.0397	.26146	.11666	.94369

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.7172	.06720	.07771	.38851	.89014	.30781	3.7769
Stddev	.0068	.00037	.00025	.00113	.00329	.00216	.0138
%RSD	.39420	.54924	.32722	.29213	.37015	.70313	.36680
#1	1.7163	.06715	.07792	.38826	.89255	.30620	3.7719
#2	1.7109	.06687	.07779	.38752	.89150	.30695	3.7662
#3	1.7244	.06760	.07743	.38975	.88639	.31027	3.7925

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S3 Acquired: 2/2/2025 11:12:05 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3343.3	66476.	12314.	2237.0	3726.1
Stddev	8.8	69.	121.	5.1	6.6
%RSD	.26311	.10410	.98591	.22669	.17739
#1	3343.1	66511.	12219.	2234.6	3723.3
#2	3352.2	66397.	12271.	2233.6	3733.6
#3	3334.6	66522.	12451.	2242.9	3721.3

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S4 Acquired: 2/2/2025 11:15:58 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.30361	.28071	6.1533	.32345	.76933	1.8495	3.7831	1.9908
Stddev	.00057	.00232	.0063	.00032	.00142	.0091	.0035	.0131
%RSD	.18723	.82496	.10160	.09940	.18455	.49391	.09352	.65608
#1	.30349	.28162	6.1561	.32344	.76869	1.8392	3.7842	2.0030
#2	.30312	.28244	6.1461	.32314	.76835	1.8527	3.7860	1.9925
#3	.30423	.27808	6.1576	.32378	.77096	1.8566	3.7792	1.9770

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.5970	2.1394	2.6851	2.2335	2.4590	.78367	1.3676	.57746
Stddev	.0031	.0036	.0040	.0039	.0109	.00262	.0025	.00113
%RSD	.04072	.16994	.14978	.17413	.44485	.33386	.18108	.19528
#1	7.5985	2.1353	2.6894	2.2326	2.4464	.78091	1.3649	.57618
#2	7.5991	2.1417	2.6846	2.2301	2.4661	.78400	1.3698	.57794
#3	7.5934	2.1413	2.6814	2.2378	2.4646	.78611	1.3679	.57828

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.5887	.34337	.28435	.29827	4.2909	.54756	.24012	1.7986
Stddev	.0018	.00122	.00186	.00014	.0341	.00286	.00016	.0088
%RSD	.11376	.35573	.65555	.04810	.79415	.52190	.06870	.48906
#1	1.5898	.34478	.28389	.29813	4.2594	.54431	.24010	1.8047
#2	1.5867	.34261	.28640	.29841	4.3271	.54873	.24029	1.8025
#3	1.5898	.34271	.28275	.29826	4.2861	.54965	.23996	1.7885

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.4930	.14062	.15696	.77997	1.7895	.67542	7.9436
Stddev	.0066	.00029	.00057	.00091	.0051	.00298	.0566
%RSD	.18810	.20904	.36100	.11726	.28400	.44138	.71184
#1	3.4860	.14088	.15704	.77899	1.7872	.67198	7.8812
#2	3.4940	.14030	.15749	.78080	1.7954	.67715	7.9582
#3	3.4991	.14068	.15637	.78011	1.7860	.67713	7.9914

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S4 Acquired: 2/2/2025 11:15:58 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3087.6**	**63323.**	**12315.**	**2103.5**	**3452.8**
Stddev	3.7	129.	71.	13.9	3.7
%RSD	.12031	.20377	.57961	.66027	.10669
#1	3090.2	63223.	12258.	2112.1	3450.7
#2	3089.2	63276.	12291.	2087.5	3457.1
#3	3083.3	63468.	12395.	2110.9	3450.7

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S5 Acquired: 2/2/2025 11:19:59 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.62768**	**.53426**	**11.833**	**.66209**	**1.5863**	**3.6217**	**7.2549**	**3.8925**
Stddev	.00336	.00439	.033	.00371	.0102	.0157	.0475	.0218
%RSD	.53510	.82189	.27712	.56093	.64407	.43347	.65456	.56019
#1	.62552	.52940	11.813	.65864	1.5796	3.6393	7.2035	3.8765
#2	.62597	.53793	11.814	.66161	1.5813	3.6091	7.2972	3.8837
#3	.63155	.53544	11.871	.66602	1.5981	3.6167	7.2641	3.9174

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**14.466**	**4.0257**	**4.9916**	**4.3050**	**4.7570**	**1.4672**	**2.5311**	**1.1054**
Stddev	.030	.0235	.0131	.0099	.0149	.0064	.0213	.0045
%RSD	.20928	.58408	.26271	.22926	.31381	.43565	.84229	.40370
#1	14.438	4.0523	5.0019	4.2996	4.7486	1.4706	2.5472	1.1082
#2	14.462	4.0175	4.9961	4.2990	4.7481	1.4711	2.5391	1.1078
#3	14.498	4.0075	4.9769	4.3164	4.7742	1.4598	2.5069	1.1003

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.0445**	**.68698**	**.54179**	**.56367**	**8.2365**	**1.0735**	**.47996**	**3.4215**
Stddev	.0075	.00120	.00172	.00095	.0419	.0049	.00197	.0232
%RSD	.24756	.17521	.31702	.16832	.50896	.45429	.41047	.67772
#1	3.0382	.68832	.54076	.56259	8.2192	1.0753	.47894	3.4093
#2	3.0425	.68665	.54377	.56411	8.2843	1.0773	.47871	3.4070
#3	3.0529	.68598	.54084	.56433	8.2061	1.0680	.48223	3.4482

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6.9996**	**.28356**	**.30119**	**1.4937**	**3.3869**	**1.3105**	**15.382**
Stddev	.0417	.00098	.00092	.0031	.0063	.0081	.016
%RSD	.59555	.34671	.30642	.20605	.18494	.61557	.10559
#1	6.9709	.28244	.30012	1.4915	3.3797	1.3130	15.392
#2	6.9805	.28395	.30169	1.4923	3.3901	1.3170	15.363
#3	7.0474	.28429	.30175	1.4972	3.3910	1.3014	15.391

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S5 Acquired: 2/2/2025 11:19:59 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2763.4	60813.	11839.	1987.2	3177.3
Stddev	16.4	195.	47.	8.7	8.2
%RSD	.59366	.32096	.39524	.43539	.25878
#1	2773.9	60729.	11884.	1993.4	3182.6
#2	2771.9	60674.	11841.	1977.3	3181.5
#3	2744.5	61036.	11791.	1991.0	3167.8

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: S6 Acquired: 2/2/2025 11:24:34 Type: Cal
Method: EPA SFAM01.0(v61) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S06 Custom ID2: Custom ID3:
Comment:

Elem	Al3961	Ca3736	Fe2598	Mg2790	Na8183
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.6355	6.5718	3.8845	1.8198	1.5565
Stddev	.0738	.0589	.0086	.0021	.0050
%RSD	.76632	.89560	.22117	.11676	.31951
#1	9.5907	6.6019	3.8746	1.8189	1.5599
#2	9.7207	6.6096	3.8894	1.8222	1.5589
#3	9.5950	6.5040	3.8895	1.8183	1.5508

Int. Std.	Y_3600	Y_3710
Units	Cts/S	Cts/S
Avg	57185.	11362.
Stddev	88.	48.
%RSD	.15433	.42421
#1	57087.	11308.
#2	57211.	11400.
#3	57258.	11379.

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICV007 Acquired: 2/2/2025 11:52:50 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .8906478	1.077177	.9910018	.9498537	.9048143	2.474920
Stddev	.0061384	.007424	.0053981	.0018666	.0033119	.007404
%RSD	.6892042	.6892033	.5447135	.1965160	.3660272	.2991529
#1	.8859290	1.068620	.9885105	.9493279	.9047175	2.481765
#2	.8884269	1.081014	.9872992	.9483064	.9015519	2.475933
#3	.8975875	1.081897	.9971956	.9519269	.9081736	2.467062

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .4275946	F .5634942	.5009176	9.967470	.5649134	.5057399
Stddev	.0030877	.0019168	.0014907	.050277	.0006233	.0016801
%RSD	.7221020	.3401545	.2976000	.5044131	.1103336	.3321998
#1	.4311268	.5613487	.4997028	10.02540	.5656199	.5043631
#2	.4262483	.5640966	.5004688	9.94188	.5646787	.5052447
#3	.4254086	.5650375	.5025811	9.93514	.5644415	.5076119

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5299868	9.360202	F .4599122	6.260393	.5118281	.2384998
Stddev	.0016505	.056277	.0014644	.004080	.0022016	.0003372
%RSD	.3114214	.6012381	.3184041	.0651721	.4301440	.1413679
#1	.5281271	9.423474	.4613165	6.264252	.5106491	.2387763
#2	.5312776	9.341393	.4600259	6.256123	.5104671	.2381242
#3	.5305557	9.315738	.4583943	6.260805	.5143681	.2385989

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.37106	.5119524	F .8764566	9.364688	F -.000533	F .0322575
Stddev	.23208	.0035200	.0087717	.074425	.001014	.0003106
%RSD	2.237738	.6875592	1.000816	.7947418	190.1643	.9628180
#1	10.36631	.5155923	.8864953	9.449981	-.001373	.0321329
#2	10.60548	.5116987	.8726034	9.331150	-.000820	.0326110
#3	10.14139	.5085661	.8702709	9.312934	.000593	.0320285

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICV007 Acquired: 2/2/2025 11:52:50 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000334	F .0041728	F .0046273	F -.002747	F -.000764	F -.000419
Stddev	.000138	.0009592	.0034791	.000321	.000696	.000682
%RSD	41.29714	22.98753	75.18486	11.68950	91.09320	162.8281
#1	-.000223	.0030762	.0008353	-.003105	-.001124	-.001104
#2	-.000292	.0045858	.0076718	-.002650	.000038	.000260
#3	-.000489	.0048563	.0053749	-.002485	-.001206	-.000413

Elem	Sr4077
Units	ppm
Avg	F .0011690
Stddev	.0000699
%RSD	5.977857
#1	.0010905
#2	.0012245
#3	.0011920

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3641.164	70406.10	11631.42	2349.836	4311.423
Stddev	11.120	71.71	48.56	1.496	11.035
%RSD	.3054001	.1018454	.4175152	.0636784	.2559577
#1	3650.650	70438.72	11684.57	2348.552	4321.351
#2	3643.916	70455.70	11620.34	2349.477	4313.378
#3	3628.927	70323.89	11589.36	2351.479	4299.541

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICB007 Acquired: 2/2/2025 11:56:46 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008691**	**-.001810**	**-.000548**	**-.001354**	**-.000412**	**-.003763**	**.0031043**
Stddev	.0011440	.002280	.000878	.002998	.000613	.005280	.0008743
%RSD	131.6248	125.9970	160.2605	221.3592	148.9215	140.3181	28.16479
#1	-.000334	.000727	-.001355	.001312	-.001062	-.009350	.0031422
#2	.001943	-.003690	-.000676	-.000775	-.000330	.001145	.0022116
#3	.000998	-.002466	.000387	-.004599	.000157	-.003084	.0039591

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000008**	**.0000323**	**-.005303**	**-.000252**	**.0000874**	**.0011333**	**.0031441**
Stddev	.000047	.0000707	.004995	.000486	.0000923	.0021164	.0012735
%RSD	557.7741	218.7130	94.18925	192.3964	105.5331	186.7436	40.50547
#1	.000033	.0000631	.000327	.000281	.0000053	.0001022	.0039126
#2	-.000060	-.000049	-.007034	-.000670	.0001873	.0035676	.0016741
#3	.000002	.000082	-.009203	-.000368	.0000698	-.000270	.0038456

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002788**	**.0034802**	**-.000153**	**.0004881**	**.2446233**	**-.002037**	**.0003674**
Stddev	.0001339	.0104745	.000153	.0002391	.2363940	.000999	.0017800
%RSD	48.03497	300.9685	99.75522	48.97770	96.63591	49.04072	484.5253
#1	.0002915	.0139625	-.000026	.0002132	-.028339	-.003167	.0003113
#2	.0001389	.0034646	-.000323	.0006477	.382014	-.001274	-.001384
#3	.0004058	-.006986	-.000110	.0006033	.380195	-.001668	.002175

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2189123**	**.0002491**	**-.004914**	**-.000149**	**-.000309**	**.0052579**	**-.003722**
Stddev	.0652281	.0024568	.000062	.000270	.002206	.0017117	.000556
%RSD	29.79645	986.2282	1.253516	180.7888	714.5925	32.55484	14.92510
#1	.2933010	.0022186	-.004948	-.000301	.002123	.0052404	-.003092
#2	.1714978	.0010327	-.004843	-.000310	-.002183	.0035551	-.003934
#3	.1919383	-.002504	-.004952	.000162	-.000866	.0069784	-.004141

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICB007 Acquired: 2/2/2025 11:56:46 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB007 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0005730	-.002909	-.000025
Stddev	.0006205	.001726	.000031
%RSD	108.2987	59.33610	123.6990
#1	.0012894	-.000938	-.000011
#2	.0002019	-.003640	-.000061
#3	.0002277	-.004150	-.000004

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3642.224	70583.64	11890.22	2358.086	4397.196
Stddev	4.181	96.71	21.38	5.984	3.411
%RSD	.1148010	.1370116	.1797799	.2537834	.0775752
#1	3642.646	70526.62	11875.01	2358.291	4397.425
#2	3646.179	70695.30	11880.99	2363.966	4400.487
#3	3637.848	70529.00	11914.66	2352.002	4393.676

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICSA007 Acquired: 2/2/2025 12:00:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005328**	**-.001124**	**-.000903**	**.0223970**	**.0107178**	**216.9201**
Stddev	.003220	.003514	.001550	.0070328	.0010064	1.1993
%RSD	60.43830	312.7680	171.5703	31.40053	9.390109	.5528660
#1	-.006979	.002795	-.001996	.0287245	.0113327	215.6929
#2	-.001617	-.003997	-.001585	.0236414	.0112643	216.9779
#3	-.007388	-.002169	.000871	.0148251	.0095563	218.0894

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066539**	**-.000530**	**.0014560**	**227.4857**	**.0610879**	**.0009769**
Stddev	.0009806	.000047	.0001155	1.1833	.0001228	.0002922
%RSD	14.73712	8.876630	7.930480	.5201567	.2009771	29.91386
#1	.0065000	-.000521	.0013227	226.2773	.0611378	.0009517
#2	.0077023	-.000580	.0015193	227.5378	.0609480	.0012810
#3	.0057593	-.000487	.0015260	228.6421	.0611779	.0006981

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.011955**	**94.97197**	**.0123428**	**222.6221**	**.0034151**	**.0019241**
Stddev	.001766	.53807	.0000279	1.0699	.0002590	.0002532
%RSD	14.77440	.5665595	.2259998	.4805773	7.583676	13.16163
#1	-.013984	94.42557	.0123742	221.6107	.0031161	.0016420
#2	-.011125	94.98904	.0123332	222.5134	.0035608	.0019986
#3	-.010757	95.50131	.0123209	223.7422	.0035685	.0021318

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.385874**	**-.005802**	**-.006219**	**.1106352**	**.0037792**	F **.3567518**
Stddev	.325553	.001539	.000615	.0109632	.0008633	.0031207
%RSD	84.36751	26.53058	9.892497	9.909353	22.84383	.8747636
#1	-.232354	-.006657	-.005520	.0981137	.0033764	.3545944
#2	-.165468	-.004025	-.006462	.1185091	.0047703	.3553309
#3	-.759801	-.006725	-.006677	.1152828	.0031908	.3603302

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICSA007 Acquired: 2/2/2025 12:00:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008675	.0185537	.0014948	F -.007747	-.002498	.0027122
Stddev	.0003376	.0035755	.0063382	.001953	.000705	.0004462
%RSD	38.92266	19.27112	424.0295	25.20445	28.20702	16.45121
#1	.0005007	.0148748	.0033275	-.005645	-.003100	.0022042
#2	.0009365	.0220159	-.005558	-.008090	-.002670	.0030409
#3	.0011653	.0187703	.006715	-.009505	-.001723	.0028914

Elem	Sr4077
Units	ppm
Avg	.0961217
Stddev	.0006172
%RSD	.6420819
#1	.0955943
#2	.0959702
#3	.0968005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3277.910	64192.88	11395.30	2141.455	3580.624
Stddev	2.794	109.94	68.25	8.252	6.319
%RSD	.0852339	.1712699	.5989545	.3853686	.1764820
#1	3277.931	64316.40	11345.45	2147.864	3583.839
#2	3280.693	64105.72	11367.36	2144.358	3584.689
#3	3275.106	64156.54	11473.09	2132.143	3573.344

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICSAB007 Acquired: 2/2/2025 12:05:00 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0919046	.1028944	.0512488	.0671569	.5583795	222.9248
Stddev	.0008356	.0002538	.0005033	.0024930	.0027020	.7962
%RSD	.9091797	.2466124	.9819756	3.712220	.4838935	.3571473
#1	.0911196	.1028185	.0510702	.0651062	.5562161	223.2971
#2	.0927829	.1026873	.0518169	.0699319	.5575144	222.0107
#3	.0918113	.1031775	.0508591	.0664326	.5614081	223.4666

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4746010	.5254716	1.002088	232.7891	.5999298	.5074029
Stddev	.0028341	.0010059	.002277	.8300	.0013804	.0005345
%RSD	.5971514	.1914271	.2271938	.3565329	.2300935	.1053382
#1	.4762167	.5245180	1.001257	233.5161	.5998504	.5072726
#2	.4713286	.5265227	1.000344	231.8848	.5985909	.5069455
#3	.4762577	.5253741	1.004664	232.9665	.6013483	.5079904

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5052719	97.41026	.4904144	228.3146	1.010255	.2026789
Stddev	.0013508	.38596	.0028418	.9258	.000915	.0007777
%RSD	.2673347	.3962207	.5794658	.4054799	.0905646	.3836965
#1	.5053692	97.66514	.4929672	229.0907	1.009246	.2021372
#2	.5065713	96.96621	.4873525	227.2899	1.010489	.2023295
#3	.5038751	97.59943	.4909235	228.5631	1.011031	.2035700

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.546954	.4899338	.9500353	.0610833	.0045090	F .3724076
Stddev	.426481	.0019495	.0119496	.0229350	.0021791	.0017120
%RSD	77.97386	.3979149	1.257805	37.54712	48.32752	.4597131
#1	-.723035	.4921606	.9585565	.0673290	.0048634	.3739449
#2	-.857200	.4891059	.9363761	.0356724	.0064892	.3705626
#3	-.060626	.4885348	.9551734	.0802486	.0021744	.3727153

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: ICSAB007 Acquired: 2/2/2025 12:05:00 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002806	.0208619	.0122597	F -.007103	-.004677	.0023138
Stddev	.0003973	.0020861	.0075899	.000719	.001483	.0015828
%RSD	141.5661	9.999346	61.90967	10.12398	31.71500	68.40652
#1	.0006971	.0226083	.0130120	-.007496	-.004735	.0007996
#2	-.000094	.0214255	.0043216	-.006273	-.003165	.0039572
#3	.000239	.0185520	.0194455	-.007539	-.006129	.0021845

Elem	Sr4077
Units	ppm
Avg	.0983416
Stddev	.0002259
%RSD	.2297611
#1	.0984238
#2	.0980861
#3	.0985151

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3290.169	64518.56	11761.78	2134.011	3606.553
Stddev	2.394	206.37	12.14	13.588	4.433
%RSD	.0727579	.3198670	.1031885	.6367306	.1229068
#1	3291.398	64326.73	11754.36	2123.019	3608.860
#2	3291.700	64736.92	11755.20	2149.203	3609.357
#3	3287.411	64492.04	11775.79	2129.811	3601.443

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCV033 Acquired: 2/2/2025 12:08:56 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV033 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.964030**	**4.957115**	**24.56970**	**5.014988**	**5.026607**	**373.4154**
Stddev	.004015	.085996	.04265	.007916	.013596	2.3173
%RSD	.0808836	1.734794	.1735702	.1578498	.2704893	.6205821
#1	4.968630	5.009239	24.61676	5.023993	5.020109	376.0270
#2	4.962231	5.004248	24.55870	5.009126	5.017480	372.6144
#3	4.961229	4.857857	24.53362	5.011846	5.042234	371.6048

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.234133**	**.5355758**	**2.484085**	**376.2711**	**15.42642**	**2.489869**
Stddev	.020869	.0006450	.008269	.7347	.03862	.003279
%RSD	.2259968	.1204286	.3328690	.1952548	.2503274	.1316874
#1	9.211137	.5354925	2.490657	375.7837	15.46551	2.493273
#2	9.239395	.5362585	2.486798	377.1161	15.42546	2.486731
#3	9.251868	.5349766	2.474801	375.9134	15.38829	2.489604

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.27551**	**377.1581**	**13.90230**	**370.1047**	**2.488443**	**1.273736**
Stddev	.01356	.5766	.01797	.7418	.005305	.001032
%RSD	.0887897	.1528925	.1292284	.2004354	.2131812	.0809838
#1	15.29069	377.7928	13.91952	370.8582	2.494385	1.273485
#2	15.26459	377.0151	13.88367	370.0809	2.486761	1.272854
#3	15.27123	376.6664	13.90370	369.3751	2.484183	1.274870

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**379.0829**	**2.458083**	**14.40334**	**144.2494**	**5.046469**	F **6.068614**
Stddev	.1260	.011834	.03293	.2648	.025378	.002161
%RSD	.0332387	.4814371	.2286051	.1835794	.5028932	.0356024
#1	378.9407	2.471732	14.38267	144.4844	5.062362	6.067378
#2	379.1806	2.450690	14.44131	144.3013	5.059844	6.071109
#3	379.1275	2.451828	14.38603	143.9625	5.017201	6.067356

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCV033 Acquired: 2/2/2025 12:08:56 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV033 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.899378**	**5.104339**	**4.864817**	**4.963141**	**4.952673**	**4.654700**
Stddev	.008070	.011448	.028966	.011717	.004113	.013277
%RSD	.1647144	.2242771	.5954134	.2360901	.0830421	.2852477
#1	4.901647	5.116765	4.833479	4.974113	4.956002	4.666885
#2	4.890416	5.094221	4.870366	4.964510	4.948075	4.640549
#3	4.906070	5.102029	4.890607	4.950798	4.953942	4.656664

Elem	Sr4077
Units	ppm
Avg	**4.822472**
Stddev	.023543
%RSD	.4881906
#1	4.796149
#2	4.841514
#3	4.829754

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2880.563**	**60657.72**	**10869.16**	**1967.411**	**3184.940**
Stddev	8.881	161.25	13.16	5.718	2.103
%RSD	.3082959	.2658422	.1210803	.2906577	.0660382
#1	2884.352	60476.30	10856.05	1966.564	3185.617
#2	2886.920	60712.09	10869.06	1962.164	3186.621
#3	2870.416	60784.75	10882.37	1973.506	3182.582

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCB033 Acquired: 2/2/2025 12:13:14 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB033 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000074**	**-.000110**	**-.000230**	**.0004036**	**-.000163**	**.0012568**	**-.000230**
Stddev	.000824	.000759	.000824	.0028310	.001230	.0035654	.000584
%RSD	1121.352	692.2382	358.0512	701.4925	755.5880	283.6914	253.7350
#1	-.001012	-.000273	.000346	.0021749	.001137	-.002860	.000419
#2	.000257	.000717	-.001174	-.002862	-.000316	.003374	-.000396
#3	.000534	-.000773	.000138	.001897	-.001309	.003256	-.000714

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000054**	**.0000102**	**.0010686**	**.0001521**	**.0000783**	**.0009939**	**.0065883**
Stddev	.000042	.0000142	.0121345	.0001765	.0002609	.0015447	.0040515
%RSD	77.62052	139.4967	1135.570	116.0296	333.0011	155.4107	61.49559
#1	-.000072	-.000006	.0141875	.0002265	-.000168	.0010219	.0026282
#2	-.000006	.000021	-.009753	-.000049	.000352	.0025244	.0107255
#3	-.000085	.000015	-.001229	.000279	.000051	-.000565	.0064112

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**.0024668**	**.0000783**	**.0003792**	**.0649616**	**-.002154**	**.0009698**
Stddev	.000315	.0060024	.0001276	.0002519	.2265997	.001096	.0004235
%RSD	572.3116	243.3263	163.0015	66.40797	348.8212	50.89284	43.66757
#1	-.000070	.0074269	.0002113	.0000993	-.181032	-.003241	.0011069
#2	-.000362	-.004206	-.000043	.0005874	.110740	-.002172	.0004948
#3	.000267	.004179	.000067	.0004510	.265177	-.001049	.0013079

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0548638**	**.0000821**	**.0009813**	**.0001044**	**-.000412**	**.0027586**	**-.003218**
Stddev	.0240105	.0008033	.0004730	.0001609	.003772	.0061041	.000351
%RSD	43.76376	978.6600	48.20487	154.0568	914.6783	221.2763	10.90494
#1	.0705064	.0006937	.0004351	-.000075	.001122	.0095538	-.003591
#2	.0272187	.0003801	.0012536	.000235	.002351	-.002260	-.002895
#3	.0668663	-.000828	.0012553	.000154	-.004710	.000982	-.003168

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCB033 Acquired: 2/2/2025 12:13:14 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB033 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000129	-.002442	.0000806
Stddev	.000506	.000533	.0000560
%RSD	391.8363	21.84357	69.48412
#1	-.000241	-.001988	.0000183
#2	-.000569	-.003029	.0000967
#3	.000423	-.002308	.0001269

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3660.842	71513.93	11644.41	2378.391	4419.600
Stddev	1.122	246.69	85.85	9.835	6.116
%RSD	.0306605	.3449529	.7372206	.4135036	.1383904
#1	3661.053	71750.54	11567.98	2387.706	4417.682
#2	3661.844	71532.99	11737.29	2379.358	4426.445
#3	3659.629	71258.26	11627.98	2368.108	4414.672

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166472BL Acquired: 2/2/2025 12:17:49 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS472 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002278**	**-.000430**	**-.000772**	**.0000893**	**-.000109**	**.0041036**	**.0040201**
Stddev	.001112	.001086	.000570	.0005196	.001385	.0081279	.0008195
%RSD	48.79888	252.2055	73.81449	581.7520	1273.066	198.0688	20.38474
#1	-.003002	-.001339	-.001225	-.000067	-.001679	.0134757	.0049396
#2	-.002835	.000772	-.000958	-.000334	.000940	-.000154	.0037538
#3	-.000998	-.000724	-.000132	.000669	.000413	-.001012	.0033669

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000259**	**-.000041**	**.0002698**	**.0000086**	**.0001854**	**.0020502**	**.0079434**
Stddev	.0000752	.000017	.0036038	.0004080	.0001714	.0015235	.0011226
%RSD	290.5759	41.02725	1335.819	4763.817	92.47754	74.31223	14.13297
#1	.0000613	-.000039	-.002990	.0001930	.0000185	.0003560	.0082150
#2	.0000769	-.000058	-.000340	.0002918	.0003611	.0024867	.0089052
#3	-.000061	-.000025	.004140	-.000459	.0001766	.0033078	.0067098

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000138**	**-.009582**	**-.000284**	**.0005262**	**.2000317**	**-.002540**	**-.000148**
Stddev	.0003736	.008718	.000227	.0000965	.2004835	.002319	.002202
%RSD	2702.722	90.98671	80.00546	18.33388	100.2259	91.28297	1490.379
#1	.0000527	-.005837	-.000052	.0004816	-.003353	-.001368	-.002625
#2	.0003664	-.003361	-.000506	.0006369	.205966	-.001042	.000592
#3	-.000378	-.019546	-.000292	.0004602	.397482	-.005211	.001589

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2967913**	**-.000457**	**-.002821**	**.0000016**	**.0001243**	**.0053077**	**-.000094**
Stddev	.0175934	.001203	.000475	.0003543	.0047550	.0065392	.000115
%RSD	5.927855	263.4943	16.82767	22042.60	3824.005	123.2023	123.1035
#1	.2816403	-.001180	-.003262	.0002650	.0020179	.0086036	.000029
#2	.3160869	.000932	-.002882	.0001411	-.005286	.0095432	-.000200
#3	.2926465	-.001122	-.002319	-.000401	.003641	-.002224	-.000110

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166472BL Acquired: 2/2/2025 12:17:49 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS472 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0009243	-.004061	.0000586
Stddev	.0005644	.002008	.0000604
%RSD	61.06063	49.45375	103.1473
#1	.0014401	-.003716	.0001268
#2	.0010113	-.002248	.0000120
#3	.0003215	-.006220	.0000369

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3619.889	71513.16	12520.77	2368.923	4356.377
Stddev	5.536	240.36	50.52	11.362	9.161
%RSD	.1529339	.3361027	.4034991	.4796300	.2102932
#1	3625.076	71267.47	12516.12	2356.679	4363.246
#2	3620.531	71747.80	12472.73	2370.963	4359.910
#3	3614.060	71524.22	12573.45	2379.126	4345.976

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166472BS Acquired: 2/2/2025 12:21:59 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS472 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0160291**	**.0506580**	**.0180991**	**.0644651**	**.1080407**	**.3599850**	**.3649855**
Stddev	.0009996	.0006411	.0014246	.0020091	.0012785	.0049601	.0028821
%RSD	6.235981	1.265625	7.871120	3.116511	1.183367	1.377866	.7896578
#1	.0151310	.0512070	.0193798	.0665851	.1081218	.3549920	.3616973
#2	.0171060	.0499534	.0165647	.0625892	.1092767	.3649116	.3661855
#3	.0158503	.0508135	.0183528	.0642210	.1067235	.3600515	.3670738

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105277**	**.0099569**	**9.473884**	**.0215220**	**.0976729**	**.0566495**	**.1923871**
Stddev	.0000249	.0001366	.039892	.0002202	.0003413	.0023753	.0065752
%RSD	.2362559	1.371604	.4210750	1.023032	.3494409	4.192940	3.417694
#1	.0105519	.0099623	9.432404	.0217716	.0973220	.0592748	.1891708
#2	.0105290	.0098178	9.477275	.0214391	.0980037	.0546492	.1880392
#3	.0105022	.0100907	9.511972	.0213553	.0976931	.0560244	.1999513

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0293834**	**8.596292**	**.0795502**	**.0195485**	**9.564362**	**.1022642**	**.1184195**
Stddev	.0000724	.058514	.0001838	.0004525	.083167	.0003298	.0014927
%RSD	.2463966	.6806924	.2310766	2.314923	.8695486	.3224737	1.260540
#1	.0293604	8.557163	.0796519	.0194044	9.500984	.1026049	.1167348
#2	.0293252	8.568153	.0796606	.0191856	9.533568	.1022412	.1189464
#3	.0294645	8.663560	.0793380	.0200555	9.658534	.1019465	.1195774

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.174298**	**.0183476**	**-.003637**	**.0201152**	**.1733911**	**.8531773**	**.0125506**
Stddev	.075871	.0009194	.000253	.0003896	.0043405	.0077053	.0004432
%RSD	.8269943	5.010923	6.945800	1.936641	2.503300	.9031257	3.530966
#1	9.094215	.0189266	-.003696	.0204733	.1696455	.8582791	.0126523
#2	9.183575	.0172875	-.003855	.0201718	.1781480	.8569390	.0129341
#3	9.245104	.0188287	-.003360	.0197004	.1723798	.8443137	.0120655

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166472BS Acquired: 2/2/2025 12:21:59 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS472 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2028010	.0233332	.1905202
Stddev	.0007631	.0011270	.0013597
%RSD	.3762803	4.829951	.7136759
#1	.2035701	.0222815	.1891120
#2	.2027888	.0245228	.1906232
#3	.2020440	.0231955	.1918255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3617.673	70212.05	12426.34	2332.747	4282.034
Stddev	3.189	265.88	60.56	13.114	5.609
%RSD	.0881593	.3786836	.4873452	.5621605	.1309955
#1	3616.818	70519.01	12366.62	2345.532	4287.903
#2	3621.203	70053.92	12424.69	2333.382	4281.475
#3	3614.999	70063.20	12487.70	2319.328	4276.726

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166385BL Acquired: 2/2/2025 12:26:02 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS385 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000951**	**-.001657**	**-.000760**	**.0008127**	**-.001087**	**-.004604**	**.0030346**
Stddev	.003176	.001921	.001434	.0013816	.000959	.002528	.0000807
%RSD	334.0634	115.9361	188.7349	170.0112	88.22891	54.91261	2.660473
#1	-.003905	.000535	.000882	-.000326	-.000469	-.003915	.0030103
#2	-.001355	-.002457	-.001394	.002350	-.002192	-.007406	.0031247
#3	.002408	-.003048	-.001768	.000414	-.000601	-.002492	.0029689

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000018**	**.0000038**	**-.006547**	**.0000883**	**.0002358**	**.0020299**	**.0045621**
Stddev	.000014	.0000348	.009017	.0001957	.0002113	.0025448	.0042147
%RSD	74.95413	920.1790	137.7146	221.5364	89.62511	125.3639	92.38549
#1	-.000019	-.000028	.002606	-.000125	.0004673	-.000019	.0009154
#2	-.000004	-.000002	-.006828	.000260	.0000531	.001230	.0091765
#3	-.000032	.000041	-.015420	.000130	.0001871	.004879	.0035943

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000093**	**-.009162**	**-.000464**	**.0002703**	**.1080133**	**-.000990**	**-.000174**
Stddev	.000262	.018992	.000244	.0002548	.1456527	.000021	.002259
%RSD	281.8193	207.2915	52.60095	94.26427	134.8469	2.121186	1296.410
#1	.000094	.003912	-.000676	.0003478	-.038558	-.000984	.001521
#2	-.000392	-.000451	-.000518	.0004772	.252730	-.000972	-.002738
#3	.000020	-.030947	-.000197	-.000014	.109869	-.001013	.000695

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2571957**	**.0000825**	**-.005058**	**-.000071**	**.0026891**	**.0030523**	**-.000345**
Stddev	.0243964	.0005682	.000725	.000171	.0016707	.0026295	.000232
%RSD	9.485522	688.6255	14.33414	239.0643	62.12879	86.14921	67.14366
#1	.2633721	-.000310	-.005815	.000102	.0017502	.0058160	-.000207
#2	.2779103	.000734	-.004370	-.000239	.0016990	.0005815	-.000216
#3	.2303048	-.000177	-.004990	-.000077	.0046180	.0027594	-.000613

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166385BL Acquired: 2/2/2025 12:26:02 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS385 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0002773	-.003057	.0000349
Stddev	.0008563	.000372	.0000251
%RSD	308.8024	12.17281	71.85649
#1	-.000611	-.002691	.0000530
#2	.001097	-.003046	.0000454
#3	.000346	-.003435	.0000063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3608.129	71510.05	12407.78	2367.403	4346.140
Stddev	10.338	103.42	37.08	10.264	7.856
%RSD	.2865261	.1446255	.2988468	.4335463	.1807553
#1	3603.494	71626.36	12364.97	2361.897	4342.357
#2	3619.974	71428.45	12429.62	2361.066	4355.172
#3	3600.919	71475.35	12428.76	2379.245	4340.891

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166385BS Acquired: 2/2/2025 12:30:11 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS385 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0171800**	**.0530533**	**.0190424**	**.0675580**	**.1120941**	**.3743670**	**.3952545**
Stddev	.0033288	.0008115	.0004188	.0021000	.0027365	.0083157	.0009845
%RSD	19.37597	1.529632	2.199124	3.108430	2.441276	2.221280	.2490831
#1	.0138820	.0522647	.0189478	.0699090	.1091037	.3660335	.3945043
#2	.0205388	.0530093	.0186790	.0668967	.1127053	.3744026	.3963693
#3	.0171194	.0538860	.0195003	.0658682	.1144734	.3826649	.3948900

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105623**	**.0103334**	**10.11374**	**.0222257**	**.1011015**	**.0603431**	**.2208433**
Stddev	.0001023	.0000826	.03989	.0001903	.0005391	.0006420	.0011526
%RSD	.9681183	.7989782	.3944466	.8564434	.5332240	1.063846	.5219286
#1	.0106754	.0104259	10.09406	.0221719	.1017020	.0610303	.2220493
#2	.0105350	.0103071	10.15965	.0224372	.1009434	.0597588	.2197527
#3	.0104764	.0102672	10.08752	.0220680	.1006592	.0602402	.2207279

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0311908**	**9.172145**	**.0820260**	**.0199019**	**10.02035**	**.1074791**	**.1253364**
Stddev	.0006529	.036154	.0003742	.0003264	.41680	.0012189	.0013930
%RSD	2.093277	.3941665	.4561538	1.639827	4.159516	1.134060	1.111388
#1	.0317984	9.148311	.0822192	.0199794	10.29388	.1071597	.1268966
#2	.0312734	9.213744	.0815947	.0195438	10.22653	.1088258	.1242178
#3	.0305005	9.154379	.0822641	.0201826	9.54065	.1064517	.1248946

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.855321**	**.0174173**	**-.003611**	**.0204495**	**.1813954**	**.8794746**	**.0135191**
Stddev	.037301	.0014741	.000409	.0002890	.0012069	.0094440	.0010378
%RSD	.3784887	8.463219	11.33507	1.413276	.6653425	1.073824	7.676277
#1	9.823697	.0157484	-.003151	.0206393	.1819676	.8831269	.0143195
#2	9.845808	.0185413	-.003934	.0205923	.1822098	.8687499	.0138912
#3	9.896458	.0179622	-.003748	.0201169	.1800088	.8865471	.0123466

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: PB166385BS Acquired: 2/2/2025 12:30:11 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS385 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2115719	.0251776	.1991544
Stddev	.0017621	.0007243	.0006684
%RSD	.8328489	2.876616	.3356013
#1	.2096141	.0254382	.1984554
#2	.2120712	.0257355	.1997872
#3	.2130305	.0243591	.1992206

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3577.804	69830.52	12767.73	2325.842	4216.023
Stddev	6.789	156.86	54.08	6.473	8.805
%RSD	.1897498	.2246271	.4235616	.2783221	.2088361
#1	3570.919	69715.06	12706.73	2321.406	4207.312
#2	3584.493	69767.39	12809.79	2322.849	4224.919
#3	3578.000	70009.11	12786.66	2333.270	4215.837

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-05 Acquired: 2/2/2025 12:34:14 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8127924**	**-.029912**	**3.103565**	**.0800229**	**.0089475**	**170.7293**
Stddev	.0047880	.001444	.008174	.0067479	.0022173	.5089
%RSD	.5890750	4.828437	.2633651	8.432469	24.78173	.2980645
#1	.8079159	-.031229	3.107258	.0830024	.0077529	171.1515
#2	.8174866	-.030141	3.109241	.0847682	.0075836	170.8723
#3	.8129747	-.028367	3.094197	.0722980	.0115060	170.1643

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.189431**	**.0212970**	**.0170341**	**142.1209**	**6.393485**	**.1034926**
Stddev	.004930	.0001690	.0002252	.3593	.008380	.0003703
%RSD	.4144534	.7935231	1.321943	.2527821	.1310715	.3578015
#1	1.195034	.0212819	.0172874	142.5009	6.383825	.1035747
#2	1.187501	.0211360	.0168566	142.0750	6.398805	.1038150
#3	1.185758	.0214730	.0169583	141.7868	6.397825	.1030882

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.924972**	**340.1805**	**13.86367**	**30.08704**	**1.027669**	**.0269345**
Stddev	.004664	.7243	.03521	.12358	.000706	.0004541
%RSD	.0469948	.2129236	.2539612	.4107363	.0686730	1.685783
#1	9.922705	340.6308	13.90348	30.13557	1.028351	.0274063
#2	9.930337	340.5656	13.85093	30.17900	1.027715	.0268965
#3	9.921876	339.3449	13.83661	29.94657	1.026941	.0265006

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.06807**	**.1862860**	**1.181463**	**8.905568**	F **11.86210**	**1.444679**
Stddev	.17404	.0008457	.008528	.053797	.06030	.003648
%RSD	.8260884	.4539632	.7218577	.6040819	.5083579	.2525352
#1	21.10437	.1865056	1.190961	8.967536	11.93132	1.446378
#2	20.87875	.1870002	1.178967	8.870839	11.83397	1.447167
#3	21.22111	.1853522	1.174461	8.878327	11.82099	1.440491

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-05 Acquired: 2/2/2025 12:34:14 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0241429	F 26.78337	F 15.22459	6.648740	3.680041	.4328680
Stddev	.0000812	.03104	.07350	.014798	.005875	.0002531
%RSD	.3362311	.1159077	.4827389	.2225739	.1596417	.0584717
#1	.0240619	26.80926	15.14664	6.665650	3.684144	.4330868
#2	.0241424	26.74895	15.23451	6.638159	3.673311	.4329263
#3	.0242243	26.79190	15.29262	6.642411	3.682668	.4325908

Elem	Sr4077
Units	ppm
Avg	1.179513
Stddev	.013480
%RSD	1.142830
#1	1.179757
#2	1.192869
#3	1.165913

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3474.948	71298.48	13378.83	2315.501	3806.209
Stddev	9.846	129.58	28.68	1.754	8.962
%RSD	.2833528	.1817417	.2143865	.0757676	.2354621
#1	3475.979	71353.98	13411.91	2315.475	3806.204
#2	3464.627	71150.39	13363.74	2313.760	3797.250
#3	3484.238	71391.06	13360.84	2317.269	3815.174

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-06 Acquired: 2/2/2025 12:38:12 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8029825**	**-.027748**	**3.074448**	**.0811713**	**.0072723**	**170.3813**
Stddev	.0035744	.004484	.009268	.0021060	.0024793	1.6464
%RSD	.4451351	16.16128	.3014449	2.594447	34.09266	.9663066
#1	.7997668	-.024014	3.065116	.0792169	.0048402	172.2778
#2	.8068310	-.032722	3.083650	.0808953	.0097963	169.3187
#3	.8023497	-.026507	3.074578	.0834016	.0071804	169.5473

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.194690**	**.0216420**	**.0167496**	**142.6790**	**6.337958**	**.1020916**
Stddev	.011344	.0005594	.0001042	1.0995	.018712	.0008729
%RSD	.9495279	2.584748	.6220194	.7706253	.2952340	.8550440
#1	1.207195	.0222879	.0167309	143.8807	6.358787	.1012637
#2	1.185062	.0213227	.0168618	141.7234	6.322569	.1030035
#3	1.191812	.0213153	.0166560	142.4329	6.332517	.1020075

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.999892**	**339.9348**	**13.94914**	**30.17501**	**1.016445**	**.0277787**
Stddev	.213048	2.6444	.11280	.17938	.002234	.0008377
%RSD	2.130501	.7779265	.8086163	.5944526	.2198115	3.015599
#1	10.24581	342.8734	14.06638	30.35995	1.014371	.0283172
#2	9.87122	337.7468	13.84139	30.00177	1.018811	.0268136
#3	9.88265	339.1842	13.93965	30.16330	1.016154	.0282053

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.51854**	**.1903973**	**1.183044**	**8.808390**	F **11.66209**	**1.439020**
Stddev	.50534	.0044679	.015963	.035968	.02040	.009408
%RSD	2.348383	2.346603	1.349343	.4083369	.1749061	.6538059
#1	22.09622	.1954661	1.200131	8.849916	11.63908	1.449483
#2	21.15842	.1870310	1.168512	8.788199	11.67794	1.431256
#3	21.30099	.1886948	1.180489	8.787053	11.66926	1.436321

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-06 Acquired: 2/2/2025 12:38:12 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0239254	F 26.27002	F 15.97926	6.565655	3.748903	.4338390
Stddev	.0002108	.08864	.23360	.018810	.079602	.0048019
%RSD	.8809612	.3374003	1.461899	.2864858	2.123337	1.106833
#1	.0237639	26.18710	16.24789	6.544397	3.839457	.4392710
#2	.0241638	26.36344	15.82382	6.580141	3.689970	.4301594
#3	.0238484	26.25952	15.86606	6.572428	3.717283	.4320867

Elem	Sr4077
Units	ppm
Avg	1.170921
Stddev	.017207
%RSD	1.469544
#1	1.184117
#2	1.151459
#3	1.177186

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3500.467	71491.73	13226.67	2329.243	3839.264
Stddev	11.543	271.46	187.67	11.998	9.605
%RSD	.3297526	.3797076	1.418868	.5151064	.2501684
#1	3510.911	71262.51	13013.47	2315.905	3848.444
#2	3488.074	71791.50	13366.88	2339.155	3829.284
#3	3502.417	71421.18	13299.66	2332.670	3840.063

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-05LX5 Acquired: 2/2/2025 12:42:13 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1560754**	**-.004694**	**.6447735**	**.0181803**	**-.000122**	**35.05881**	**.2483678**
Stddev	.0017874	.002969	.0027201	.0003565	.000784	.33903	.0022590
%RSD	1.145212	63.25113	.4218696	1.960803	644.7161	.9670284	.9095466
#1	.1581237	-.008016	.6420849	.0183577	.000650	35.40969	.2497002
#2	.1548314	-.003766	.6447116	.0177699	-.000097	35.03372	.2496438
#3	.1552713	-.002300	.6475240	.0184132	-.000917	34.73303	.2457595

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0045113**	**.0029752**	**30.18613**	**1.360803**	**.0208782**	**2.112958**	**73.79639**
Stddev	.0000793	.0001080	.28503	.024388	.0001194	.048461	.70919
%RSD	1.758652	3.630704	.9442412	1.792180	.5717724	2.293517	.9610061
#1	.0045665	.0028638	30.44487	1.372424	.0209644	2.118716	74.47917
#2	.0044204	.0030795	30.23293	1.377207	.0209281	2.061876	73.84653
#3	.0045471	.0029821	29.88060	1.332777	.0207419	2.158283	73.06346

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.965854**	**6.504538**	**.2072597**	**.0067374**	**4.754917**	**.0390363**	**.2443712**
Stddev	.027768	.085492	.0008360	.0002101	.289135	.0022825	.0050105
%RSD	.9362624	1.314348	.4033811	3.118593	6.080760	5.847253	2.050371
#1	2.991582	6.487734	.2065622	.0067367	5.029084	.0371166	.2466663
#2	2.969561	6.597185	.2081865	.0065277	4.452838	.0384321	.2478232
#3	2.936418	6.428696	.2070306	.0069479	4.782828	.0415601	.2386243

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.056318**	**2.294164**	**.3105181**	**.0046569**	**5.218245**	**3.261893**	**1.353018**
Stddev	.048881	.004544	.0037916	.0002524	.013635	.067509	.003345
%RSD	2.377102	.1980547	1.221042	5.419165	.2612858	2.069634	.2472390
#1	2.041267	2.295973	.3135755	.0045554	5.230438	3.272762	1.349786
#2	2.110954	2.297525	.3117032	.0044711	5.220774	3.189609	1.356466
#3	2.016732	2.288994	.3062755	.0049442	5.203523	3.323309	1.352802

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-05LX5 Acquired: 2/2/2025 12:42:13 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7986699	.0862171	.2369098
Stddev	.0183016	.0004853	.0020330
%RSD	2.291503	.5628518	.8581405
#1	.8020843	.0861498	.2390026
#2	.7789017	.0857690	.2367846
#3	.8150239	.0867325	.2349423

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3653.909	72262.92	13261.29	2386.349	4247.229
Stddev	9.519	1125.40	182.12	34.780	4.005
%RSD	.2605156	1.557371	1.373296	1.457462	.0942957
#1	3642.964	71675.12	13241.74	2365.924	4249.332
#2	3658.500	71553.13	13452.40	2366.616	4249.744
#3	3660.262	73560.51	13089.74	2426.508	4242.610

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-07 Acquired: 2/2/2025 12:46:09 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8612000**	**.0649709**	**3.071147**	**.2650041**	**.1797636**	**165.0879**
Stddev	.0057716	.0025722	.015728	.0037961	.0011645	1.2279
%RSD	.6701822	3.959070	.5121113	1.432467	.6478091	.7437961
#1	.8630104	.0622313	3.088941	.2644018	.1797056	164.2260
#2	.8658493	.0653468	3.059107	.2690654	.1786292	164.5439
#3	.8547402	.0673344	3.065392	.2615452	.1809561	166.4939

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.672143**	**.1171972**	**.1117777**	**135.1847**	**6.716897**	**1.072698**
Stddev	.039499	.0010442	.0007082	1.0787	.086055	.004704
%RSD	.8454119	.8909883	.6335906	.7979232	1.281166	.4385554
#1	4.635535	.1169511	.1125943	134.3445	6.665137	1.078112
#2	4.666887	.1162979	.1113306	134.8085	6.669318	1.070370
#3	4.714006	.1183424	.1114083	136.4011	6.816235	1.069611

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.31542**	**324.8426**	**14.04672**	**28.62961**	**1.967327**	**.0947240**
Stddev	.00992	2.5705	.09880	.18194	.007988	.0005712
%RSD	.0961789	.7913150	.7033741	.6354851	.4060499	.6030334
#1	10.31634	323.0722	13.96532	28.55576	1.976531	.0946513
#2	10.30507	323.6646	14.01818	28.49621	1.962200	.0941926
#3	10.32485	327.7910	14.15664	28.83686	1.963249	.0953281

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.44560**	**1.122770**	**2.023533**	**8.363098**	F **11.51217**	**1.364005**
Stddev	.33215	.005784	.024506	.096415	.06208	.011429
%RSD	1.624557	.5151872	1.211046	1.152861	.5392794	.8379075
#1	20.07386	1.116974	1.998408	8.283704	11.58084	1.357704
#2	20.71321	1.122794	2.024822	8.335207	11.46000	1.357113
#3	20.54974	1.128543	2.047369	8.470384	11.49568	1.377198

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-07 Acquired: 2/2/2025 12:46:09 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6305S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0233509	F 26.00221	F 15.32888	6.501887	3.647746	.4063067
Stddev	.0001886	.16608	.04149	.030166	.005636	.0045566
%RSD	.8074994	.6387139	.2706971	.4639635	.1545055	1.121477
#1	.0233211	26.18074	15.34650	6.536577	3.654246	.4022479
#2	.0235526	25.85231	15.28149	6.487273	3.644215	.4054364
#3	.0231791	25.97356	15.35866	6.481811	3.644777	.4112357

Elem	Sr4077
Units	ppm
Avg	1.115103
Stddev	.008317
%RSD	.7458318
#1	1.108318
#2	1.112610
#3	1.124381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3505.728	71978.19	12882.83	2313.432	3850.221
Stddev	7.400	755.97	50.03	23.216	8.216
%RSD	.2110806	1.050276	.3883237	1.003539	.2134007
#1	3501.871	72480.11	12895.53	2331.151	3840.744
#2	3501.053	72345.74	12925.28	2321.995	3854.565
#3	3514.259	71108.73	12827.67	2287.151	3855.353

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-09 Acquired: 2/2/2025 12:50:02 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0443019**	**-.003688**	**1.071638**	**.0124558**	**.0050259**	**54.72222**	**.2013144**
Stddev	.0016044	.001060	.003449	.0008038	.0007643	.44724	.0024296
%RSD	3.621453	28.75135	.3218125	6.453545	15.20639	.8172826	1.206859
#1	.0456655	-.004499	1.071582	.0133839	.0058905	55.12830	.2038264
#2	.0425341	-.002488	1.068218	.0120021	.0044407	54.24288	.1989766
#3	.0447060	-.004077	1.075115	.0119813	.0047465	54.79548	.2011402

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0036166**	**.0019790**	**7.389594**	**.1598293**	**.0260142**	**.0463668**	**52.26772**
Stddev	.0001186	.0001019	.054217	.0012784	.0001057	.0018607	.38202
%RSD	3.279512	5.149817	.7336935	.7998315	.4064077	4.012945	.7308841
#1	.0034802	.0020386	7.430781	.1609045	.0259065	.0475167	52.58715
#2	.0036954	.0020371	7.328169	.1584158	.0261178	.0473637	51.84455
#3	.0036743	.0018613	7.409832	.1601675	.0260182	.0442201	52.37147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6467963**	**14.75515**	**.0901152**	**.0007185**	**1.419631**	**.1278432**	**.1876210**
Stddev	.0053213	.08938	.0008269	.0002833	.086292	.0019095	.0012499
%RSD	.8227197	.6057800	.9175844	39.43464	6.078445	1.493612	.6662036
#1	.6513253	14.79996	.0896450	.0010088	1.519215	.1263558	.1872772
#2	.6409356	14.65222	.0896305	.0007037	1.366923	.1271773	.1890069
#3	.6481281	14.81326	.0910699	.0004428	1.372756	.1299965	.1865789

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.642161**	**2.386601**	**.1907574**	**.0028359**	**4.787194**	**6.425653**	**.0136184**
Stddev	.041974	.004999	.0023051	.0003046	.027360	.065896	.0011043
%RSD	1.152457	.2094529	1.208395	10.73891	.5715153	1.025509	8.108485
#1	3.670135	2.386128	.1924862	.0026891	4.778397	6.423488	.0134744
#2	3.593897	2.381856	.1881403	.0026326	4.765315	6.492605	.0125933
#3	3.662451	2.391820	.1916458	.0031861	4.817869	6.360867	.0147876

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-09 Acquired: 2/2/2025 12:50:02 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.069422	.1163114	.0446652
Stddev	.015748	.0007970	.0003252
%RSD	.5130602	.6852550	.7280127
#1	3.053837	.1172314	.0449636
#2	3.069101	.1158287	.0443186
#3	3.085328	.1158742	.0447133

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3737.028	74675.68	12218.96	2471.446	4199.594
Stddev	13.812	411.41	128.79	9.836	16.059
%RSD	.3695960	.5509301	1.054000	.3979691	.3823932
#1	3737.750	74488.15	12360.21	2464.952	4201.778
#2	3750.465	75147.44	12188.63	2482.762	4214.449
#3	3722.870	74391.44	12108.05	2466.624	4182.555

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-10 Acquired: 2/2/2025 12:53:59 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0434302	-.001427	1.075616	.0134126	.0071411	59.53043	.2276363
Stddev	.0011509	.001138	.003840	.0047361	.0012064	.07786	.0004863
%RSD	2.650101	79.79665	.3569779	35.31061	16.89323	.1307870	.2136486
#1	.0421433	-.002457	1.073903	.0079443	.0078264	59.61239	.2275885
#2	.0443610	-.000204	1.072931	.0160885	.0057482	59.52145	.2281449
#3	.0437862	-.001619	1.080014	.0162050	.0078487	59.45745	.2271757

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031304	.0017073	7.937168	.1593824	.0256769	.0449014	56.94960
Stddev	.0000556	.0000890	.026194	.0005443	.0000921	.0021220	.11558
%RSD	1.775549	5.215080	.3300158	.3415194	.3588566	4.725877	.2029486
#1	.0031932	.0018094	7.944026	.1594015	.0256938	.0465942	57.06602
#2	.0031104	.0016455	7.959250	.1588287	.0255774	.0425208	56.94790
#3	.0030876	.0016671	7.908227	.1599169	.0257594	.0455890	56.83488

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6973706	16.14236	.0902213	.0019170	1.074814	.1286481	.1983379
Stddev	.0008409	.03103	.0003778	.0002035	.345160	.0021643	.0022061
%RSD	.1205829	.1922333	.4187284	10.61488	32.11344	1.682351	1.112274
#1	.6972777	16.17739	.0900023	.0020075	1.043396	.1309181	.2008852
#2	.6982540	16.11831	.0900041	.0020594	.746438	.1266077	.1970711
#3	.6965799	16.13138	.0906575	.0016839	1.434609	.1284187	.1970574

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.216361	2.387541	.2176298	.0026815	4.791597	6.662520	.0127092
Stddev	.089362	.014396	.0008069	.0002778	.017781	.044743	.0007449
%RSD	2.119408	.6029527	.3707575	10.36116	.3710875	.6715610	5.861397
#1	4.286349	2.382592	.2176673	.0023627	4.780692	6.711755	.0129205
#2	4.247031	2.376273	.2184172	.0028103	4.781984	6.651459	.0118814
#3	4.115702	2.403759	.2168048	.0028716	4.812115	6.624344	.0133256

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-10 Acquired: 2/2/2025 12:53:59 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**3.070337**	**.1281417**	**.0477948**
Stddev	.003500	.0002335	.0000697
%RSD	.1140080	.1822153	.1457753
#1	3.074161	.1279134	.0477599
#2	3.067290	.1281315	.0477495
#3	3.069561	.1283801	.0478751

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3709.669**	**75533.14**	**13447.01**	**2471.564**	**4175.585**
Stddev	7.494	270.80	19.42	13.867	13.041
%RSD	.2020172	.3585190	.1444380	.5610697	.3123253
#1	3717.857	75349.77	13426.05	2459.650	4188.394
#2	3708.001	75405.48	13450.55	2468.256	4176.038
#3	3703.150	75844.18	13464.41	2486.786	4162.323

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-09LX5 Acquired: 2/2/2025 12:57:58 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0094350**	**-.002451**	**.2143237**	**.0027123**	**.0011902**	**12.19057**	**.0481968**
Stddev	.0018897	.002422	.0014118	.0033815	.0005905	.16045	.0005701
%RSD	20.02824	98.81637	.6587105	124.6722	49.61486	1.316172	1.182870
#1	.0109939	-.000070	.2155018	-.001167	.0017527	12.25564	.0485288
#2	.0099779	-.004912	.2127588	.004271	.0005751	12.30827	.0485231
#3	.0073333	-.002372	.2147104	.005033	.0012429	12.00781	.0475385

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006731**	**.0002982**	**1.628811**	**.0330648**	**.0051139**	**.0108817**	**11.92858**
Stddev	.0000453	.0000394	.018198	.0011584	.0001550	.0006808	.13141
%RSD	6.730427	13.21556	1.117286	3.503312	3.030603	6.256305	1.101657
#1	.0006661	.0003364	1.641849	.0334027	.0049443	.0114970	11.96215
#2	.0007215	.0002577	1.636564	.0340166	.0052482	.0109977	12.03995
#3	.0006318	.0003006	1.608020	.0317750	.0051493	.0101503	11.78364

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1445987**	**3.310273**	**.0175669**	**.0008136**	**.2017775**	**.0268578**	**.0398882**
Stddev	.0009012	.042200	.0002787	.0003108	.1778411	.0016393	.0022561
%RSD	.6232510	1.274814	1.586252	38.20416	88.13721	6.103515	5.656067
#1	.1452397	3.312091	.0174922	.0007929	-.003432	.0275316	.0424440
#2	.1449881	3.351534	.0173332	.0011343	.311039	.0249890	.0390469
#3	.1435683	3.267193	.0178753	.0005136	.297725	.0280528	.0381735

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.062736**	**.4659456**	**.0397507**	**.0003884**	**.9220709**	**1.347082**	**.0026840**
Stddev	.010229	.0030127	.0005680	.0000936	.0053939	.026635	.0004502
%RSD	.9624754	.6465767	1.428882	24.09717	.5849796	1.977241	16.77444
#1	1.056193	.4673843	.0403908	.0002908	.9162674	1.327892	.0031886
#2	1.057492	.4624833	.0395543	.0003969	.9269308	1.377491	.0023234
#3	1.074523	.4679692	.0393069	.0004774	.9230145	1.335861	.0025401

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-09LX5 Acquired: 2/2/2025 12:57:58 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6389072	.0234776	.0098483
Stddev	.0121974	.0005912	.0000914
%RSD	1.909100	2.518078	.9280238
#1	.6272146	.0233338	.0099127
#2	.6515534	.0241275	.0098884
#3	.6379537	.0229716	.0097436

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3644.151	72638.01	12816.67	2404.964	4298.371
Stddev	8.535	909.25	216.36	40.388	10.745
%RSD	.2342016	1.251753	1.688107	1.679359	.2499686
#1	3654.002	72164.27	13031.13	2384.030	4309.195
#2	3639.476	72063.44	12598.46	2379.341	4287.707
#3	3638.975	73686.30	12820.42	2451.522	4298.212

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-11 Acquired: 2/2/2025 13:02:04 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1144916**	**.0986935**	**1.100248**	**.2040510**	**.1869423**	**57.60310**	**3.539936**
Stddev	.0013902	.0020340	.002883	.0012892	.0020085	.71831	.048863
%RSD	1.214275	2.060974	.2620313	.6318061	1.074398	1.246997	1.380344
#1	.1160906	.1010402	1.103577	.2050290	.1891953	58.10167	3.587127
#2	.1138151	.0974369	1.098537	.2025900	.1862921	56.77976	3.489557
#3	.1135690	.0976033	1.098632	.2045340	.1853394	57.92787	3.543123

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1145245**	**.1015620**	**7.366153**	**.5820005**	**1.022274**	**.5496728**	**53.85040**
Stddev	.0003587	.0003569	.108457	.0056422	.002206	.0010647	.65662
%RSD	.3131969	.3514217	1.472371	.9694445	.2157953	.1936873	1.219334
#1	.1145401	.1019203	7.465119	.5859865	1.024196	.5485807	54.31698
#2	.1148752	.1015592	7.250208	.5755446	1.022761	.5497299	53.09954
#3	.1141583	.1012065	7.383133	.5844705	1.019865	.5507077	54.13467

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.487760**	**14.70508**	**1.098040**	**.0752842**	**.7629034**	**1.107456**	**1.032681**
Stddev	.016501	.18911	.001833	.0005614	.0828975	.004257	.013284
%RSD	1.109122	1.286044	.1669169	.7457129	10.86605	.3843784	1.286391
#1	1.502950	14.78850	1.100033	.0756537	.8522662	1.112351	1.044281
#2	1.470203	14.48860	1.097660	.0746382	.6885115	1.104619	1.018189
#3	1.490127	14.83814	1.096427	.0755608	.7479325	1.105398	1.035574

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.630791**	**2.355541**	**.1986711**	**.0024649**	**4.708721**	**6.615246**	**.0127209**
Stddev	.038792	.009356	.0030677	.0001468	.010999	.058724	.0010462
%RSD	1.068427	.3971708	1.544094	5.953995	.2335883	.8877099	8.224282
#1	3.658115	2.364298	.1994766	.0023046	4.721422	6.682910	.0117570
#2	3.586390	2.356643	.1952811	.0024974	4.702387	6.577571	.0138335
#3	3.647869	2.345684	.2012557	.0025926	4.702355	6.585259	.0125723

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-11 Acquired: 2/2/2025 13:02:04 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6342S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.031336	.1164496	.0444411
Stddev	.018214	.0017288	.0005739
%RSD	.6008580	1.484595	1.291342
#1	3.051425	.1184321	.0447999
#2	3.026684	.1156609	.0437792
#3	3.015899	.1152558	.0447441

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3719.724	73831.48	12187.67	2446.981	4196.469
Stddev	3.305	601.56	27.18	23.141	3.649
%RSD	.0888440	.8147722	.2230005	.9457030	.0869601
#1	3720.147	73451.79	12197.03	2428.860	4192.823
#2	3716.227	74525.06	12157.05	2473.048	4196.463
#3	3722.796	73517.58	12208.93	2439.034	4200.122

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-01 Acquired: 2/2/2025 13:05:56 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6301 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.254088**	**-.026239**	**.5585754**	**.1076703**	**.0521579**	**105.7095**
Stddev	.004382	.001660	.0026256	.0051481	.0025136	1.1721
%RSD	.1943973	6.326135	.4700524	4.781347	4.819278	1.108817
#1	2.254371	-.026152	.5607256	.1030216	.0493999	104.3578
#2	2.249571	-.024624	.5556493	.1067862	.0543200	106.4450
#3	2.258321	-.027941	.5593512	.1132032	.0527539	106.3256

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4141430**	**.0171802**	**.0193362**	**83.02756**	**4.400415**	**.0388840**
Stddev	.0039181	.0003558	.0003624	.75947	.048828	.0002896
%RSD	.9460857	2.070848	1.874001	.9147210	1.109612	.7447724
#1	.4096267	.0173882	.0196066	82.15060	4.344776	.0385590
#2	.4161683	.0167694	.0189245	83.46631	4.436128	.0389781
#3	.4166340	.0173830	.0194775	83.46577	4.420343	.0391148

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.38934**	**441.4064**	**1.645555**	**10.24357**	**1.267286**	**.0637569**
Stddev	.12756	6.8419	.015116	.06523	.003882	.0014515
%RSD	.8288750	1.550029	.9185916	.6367410	.3063332	2.276673
#1	15.43993	433.9416	1.628165	10.16946	1.270887	.0626285
#2	15.24425	447.3793	1.655543	10.26899	1.263173	.0653944
#3	15.48384	442.8984	1.652957	10.29225	1.267798	.0632478

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.361178**	**.1317862**	**6.477604**	**3.293429**	F **12.89394**	**1.861528**
Stddev	.154668	.0024869	.059685	.090928	.03897	.032482
%RSD	11.36281	1.887030	.9214065	2.760905	.3022653	1.744932
#1	1.508546	.1345917	6.418364	3.192008	12.88438	1.826330
#2	1.200120	.1298531	6.476722	3.367661	12.86064	1.890350
#3	1.374867	.1309138	6.537725	3.320618	12.93681	1.867904

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-01 Acquired: 2/2/2025 13:05:56 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6301 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0323666	F 43.97328	5.486196	1.553759	1.460793	.0460920
Stddev	.0004173	.13885	.037161	.006407	.011932	.0008224
%RSD	1.289293	.3157538	.6773604	.4123687	.8168192	1.784255
#1	.0319575	43.96102	5.485311	1.560196	1.469778	.0452540
#2	.0323505	43.84097	5.449484	1.547382	1.447255	.0461240
#3	.0327917	44.11785	5.523791	1.553699	1.465345	.0468979

Elem	Sr4077
Units	ppm
Avg	.4972730
Stddev	.0055498
%RSD	1.116049
#1	.4909104
#2	.5011163
#3	.4997923

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3454.675	71842.24	13632.54	2308.403	3956.825
Stddev	5.533	696.60	147.29	20.277	8.657
%RSD	.1601665	.9696190	1.080458	.8783888	.2187907
#1	3451.580	72646.09	13569.46	2328.397	3948.521
#2	3461.063	71465.10	13800.87	2308.957	3965.797
#3	3451.381	71415.54	13527.30	2287.855	3956.155

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-02 Acquired: 2/2/2025 13:09:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6302 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1134526**	**-.070273**	**.3511087**	**.0802245**	**.0444058**	**61.50344**
Stddev	.0025478	.001198	.0029213	.0015890	.0023879	.42804
%RSD	2.245660	1.704853	.8320091	1.980633	5.377408	.6959560
#1	.1149872	-.071634	.3504282	.0813597	.0471056	61.19194
#2	.1148589	-.069804	.3543101	.0809051	.0425706	61.99152
#3	.1105116	-.069380	.3485877	.0784086	.0435414	61.32687

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.335453**	**.0142021**	**.0130278**	**145.7155**	**3.582719**	**.9400697**
Stddev	.004502	.0000586	.0001576	.9352	.019107	.0072302
%RSD	.3371209	.4126826	1.209508	.6418093	.5333029	.7691119
#1	1.331132	.0142420	.0129344	145.1458	3.574501	.9371131
#2	1.340116	.0141348	.0132097	146.7948	3.604560	.9483096
#3	1.335112	.0142294	.0129393	145.2058	3.569096	.9347864

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.266927**	**372.2706**	F **98.95473**	**8.235729**	**2.467957**	**.0422281**
Stddev	.023106	2.3628	1.30026	.008201	.023181	.0003195
%RSD	.3179553	.6346999	1.313994	.0995830	.9392733	.7567069
#1	7.247366	370.7759	99.54065	8.230167	2.456809	.0421435
#2	7.260995	374.9946	99.85894	8.245148	2.494606	.0425814
#3	7.292420	371.0413	97.46461	8.231874	2.452456	.0419593

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.818112**	**.0458510**	**.7428192**	**5.820345**	**8.933866**	**1.591060**
Stddev	.230114	.0010882	.0041348	.071597	.092742	.011599
%RSD	12.65674	2.373392	.5566309	1.230116	1.038097	.7290248
#1	1.658881	.0469603	.7439237	5.799352	8.914478	1.584262
#2	2.081946	.0447852	.7462895	5.900092	9.034770	1.604453
#3	1.713510	.0458075	.7382443	5.761591	8.852350	1.584464

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-02 Acquired: 2/2/2025 13:09:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6302 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139243	F 16.36898	6.557993	.2951805	.9789643	.0426266
Stddev	.0006245	.13914	.046335	.0027382	.0048925	.0001365
%RSD	4.485334	.8500022	.7065404	.9276544	.4997600	.3203144
#1	.0140032	16.34105	6.565671	.2932390	.9776907	.0427285
#2	.0145057	16.51996	6.508299	.2983125	.9748347	.0424714
#3	.0132641	16.24593	6.600009	.2939900	.9843677	.0426798

Elem	Sr4077
Units	ppm
Avg	.7940727
Stddev	.0055907
%RSD	.7040585
#1	.7906590
#2	.8005246
#3	.7910343

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3634.091	73505.54	14415.83	2382.170	3905.133
Stddev	30.554	462.16	69.14	12.430	35.155
%RSD	.8407636	.6287406	.4795918	.5217778	.9002327
#1	3639.127	73843.65	14446.29	2386.312	3919.014
#2	3601.332	72978.92	14464.51	2368.199	3865.157
#3	3661.815	73694.05	14336.70	2392.001	3931.229

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-03 Acquired: 2/2/2025 13:13:57 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6303 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2020761	-.010762	.2587639	.0236059	.0120626	37.75991	.1513429
Stddev	.0012260	.002069	.0023355	.0013500	.0014503	.15975	.0019315
%RSD	.6067199	19.22320	.9025541	5.718863	12.02329	.4230626	1.276253
#1	.2034611	-.010369	.2567152	.0222284	.0121092	37.93404	.1535298
#2	.2016374	-.008918	.2582694	.0249266	.0105896	37.62013	.1498703
#3	.2011297	-.013000	.2613070	.0236628	.0134891	37.72558	.1506284

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020244	.0036389	11.67855	1.144334	.0638099	.3999728	97.73445
Stddev	.0000649	.0000768	.03609	.000954	.0001908	.0052334	.44192
%RSD	3.205616	2.110052	.3090357	.0833821	.2989695	1.308452	.4521635
#1	.0020965	.0036004	11.72008	1.145143	.0636782	.4059593	98.13584
#2	.0019707	.0037273	11.65479	1.144577	.0637228	.3962652	97.26088
#3	.0020059	.0035890	11.66078	1.143281	.0640286	.3976938	97.80663

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420557	11.61886	.1702730	.0036731	.3170749	.1006360	.3127219
Stddev	.011086	.04442	.0003381	.0000134	.2197397	.0015710	.0023638
%RSD	.4579805	.3823078	.1985515	.3654529	69.30215	1.561072	.7558893
#1	2.431398	11.66091	.1703933	.0036849	.5609540	.1022922	.3145750
#2	2.409242	11.57240	.1698912	.0036760	.2557798	.0991669	.3100598
#3	2.421030	11.62329	.1705344	.0036585	.1344908	.1004490	.3135309

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.651165	2.328081	.3889443	.0178504	2.748171	5.099009	.0645403
Stddev	.036634	.005861	.0014784	.0001067	.016032	.082709	.0007546
%RSD	2.218667	.2517368	.3801053	.5979315	.5833575	1.622056	1.169135
#1	1.621999	2.323605	.3901596	.0179373	2.740616	5.194337	.0652553
#2	1.639214	2.325924	.3872984	.0178825	2.737312	5.056350	.0637516
#3	1.692282	2.334714	.3893749	.0177313	2.766584	5.046338	.0646141

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-03 Acquired: 2/2/2025 13:13:57 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6303 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.202746	.0627270	.0738272
Stddev	.033938	.0018345	.0003878
%RSD	1.540719	2.924623	.5252668
#1	2.241672	.0627306	.0742223
#2	2.187207	.0645597	.0734471
#3	2.179360	.0608907	.0738121

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3695.475	74771.00	13033.08	2420.877	4223.966
Stddev	10.878	114.63	140.39	10.083	13.541
%RSD	.2943593	.1533092	1.077220	.4165172	.3205799
#1	3704.470	74811.43	12874.86	2411.267	4236.336
#2	3698.569	74859.93	13081.59	2419.989	4226.063
#3	3683.385	74641.63	13142.78	2431.375	4209.499

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-04 Acquired: 2/2/2025 13:17:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6304 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1929726**	**-.008570**	**.2577881**	**.0215400**	**.0102191**	**33.63821**	**.1277518**
Stddev	.0015282	.001792	.0004352	.0039272	.0019003	.19432	.0012667
%RSD	.7919022	20.90529	.1688216	18.23215	18.59580	.5776900	.9915143
#1	.1930551	-.007931	.2582745	.0230375	.0080311	33.45588	.1263709
#2	.1914049	-.007185	.2576544	.0170843	.0111685	33.61611	.1280247
#3	.1944578	-.010594	.2574355	.0244981	.0114575	33.84264	.1288597

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018620**	**.0030968**	**9.313530**	**.9616867**	**.0591047**	**.3976705**	**86.46554**
Stddev	.0000722	.0000721	.075340	.0022275	.0001840	.0038151	.53017
%RSD	3.877200	2.328845	.8089356	.2316188	.3112467	.9593700	.6131546
#1	.0018738	.0031685	9.234505	.9629050	.0593015	.3947445	85.93425
#2	.0019276	.0030243	9.321539	.9591158	.0590753	.4019856	86.46779
#3	.0017846	.0030977	9.384546	.9630392	.0589371	.3962815	86.99458

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.005436**	**10.47801**	**.1489182**	**.0022933**	**-.117817**	**.0957390**	**.2541380**
Stddev	.015949	.06756	.0004547	.0003029	.486521	.0006009	.0023866
%RSD	.7953122	.6448030	.3053561	13.20622	412.9470	.6276413	.9391007
#1	1.989521	10.44672	.1493020	.0019762	-.382851	.0961804	.2558259
#2	2.005369	10.43176	.1490366	.0023240	.443676	.0950547	.2514075
#3	2.021419	10.55554	.1484159	.0025795	-.414276	.0959819	.2551806

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.237273**	**2.123728**	**.3389396**	**.0140964**	**2.472949**	**5.021236**	**.0678678**
Stddev	.049888	.004384	.0028843	.0003985	.009161	.035620	.0005360
%RSD	4.032107	.2064097	.8509807	2.826843	.3704374	.7093841	.7897417
#1	1.183830	2.127487	.3362091	.0143744	2.479175	4.981039	.0684401
#2	1.245374	2.118913	.3386534	.0136398	2.462430	5.048878	.0677859
#3	1.282615	2.124783	.3419564	.0142749	2.477242	5.033792	.0673775

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-04 Acquired: 2/2/2025 13:17:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6304 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.140457**	**.0504554**	**.0605047**
Stddev	.007961	.0010604	.0003106
%RSD	.3719147	2.101620	.5133724
#1	2.133060	.0501995	.0602787
#2	2.148881	.0495465	.0603764
#3	2.139428	.0516204	.0608588

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3676.823**	**72834.66**	**12288.11**	**2380.125**	**4220.117**
Stddev	5.566	165.99	67.68	12.903	6.756
%RSD	.1513894	.2278949	.5507705	.5421109	.1600873
#1	3679.153	72951.67	12271.05	2367.635	4218.212
#2	3670.471	72907.62	12230.59	2393.405	4214.517
#3	3680.846	72644.69	12362.69	2379.335	4227.620

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-08 Acquired: 2/2/2025 13:21:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6306 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1607158	-.004362	1.659721	.0247516	-.037974	53.66747	.2262236
Stddev	.0047156	.003967	.004184	.0018770	.001749	.31736	.0022127
%RSD	2.934151	90.94608	.2520725	7.583242	4.605494	.5913441	.9781098
#1	.1614144	-.006559	1.660797	.0250789	-.039991	53.33474	.2251352
#2	.1556899	.000218	1.655104	.0264433	-.037050	53.96682	.2287697
#3	.1650432	-.006745	1.663261	.0227325	-.036880	53.70085	.2247659

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020669	.0020756	6.377031	7.457907	.0299469	5.357684	110.1579
Stddev	.0000208	.0000358	.049351	.012859	.0005062	.031002	.6365
%RSD	1.007300	1.723459	.7738894	.1724225	1.690169	.5786377	.5778099
#1	.0020441	.0021168	6.342706	7.449364	.0295460	5.352732	109.4822
#2	.0020849	.0020525	6.433587	7.472696	.0297789	5.329456	110.7462
#3	.0020716	.0020575	6.354798	7.451660	.0305156	5.390863	110.2454

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.051796	16.01426	.1642973	.0232456	-.217800	.1337081	.2090355
Stddev	.004906	.11690	.0002319	.0003050	.186879	.0025446	.0013896
%RSD	.4664641	.7300019	.1411391	1.312124	85.80276	1.903075	.6647444
#1	1.048548	15.89423	.1645213	.0229525	-.079918	.1333463	.2074750
#2	1.057440	16.12777	.1640582	.0232230	-.430495	.1364142	.2101391
#3	1.049401	16.02077	.1643123	.0235613	-.142988	.1313639	.2094923

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.062726	4.519498	.4524325	.0094038	2.141773	6.373156	9.863783
Stddev	.108364	.009594	.0040868	.0002509	.005841	.009024	.032518
%RSD	2.140425	.2122695	.9033027	2.668105	.2727293	.1415882	.3296698
#1	4.937987	4.515558	.4478741	.0095457	2.146951	6.376000	9.896475
#2	5.133628	4.512502	.4557691	.0091141	2.135441	6.380415	9.831443
#3	5.116564	4.530434	.4536544	.0095516	2.142927	6.363053	9.863431

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-08 Acquired: 2/2/2025 13:21:55 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6306 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.368150	.0894685	.0263987
Stddev	.003587	.0008865	.0000978
%RSD	.1065000	.9908285	.3704221
#1	3.368721	.0889542	.0262864
#2	3.371418	.0904922	.0264447
#3	3.364312	.0889593	.0264651

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3650.781	74525.78	13735.56	2409.883	4244.480
Stddev	7.806	240.20	63.07	8.583	10.629
%RSD	.2138274	.3223102	.4591584	.3561561	.2504242
#1	3642.562	74774.11	13691.67	2417.057	4232.276
#2	3658.096	74294.62	13807.83	2412.218	4251.713
#3	3651.685	74508.62	13707.19	2400.375	4249.452

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-09 Acquired: 2/2/2025 13:25:52 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6307 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3509497**	**-.017644**	**.6258822**	**.0418017**	**.0176193**	**109.9248**
Stddev	.0009662	.002324	.0023812	.0002598	.0011336	1.4238
%RSD	.2753256	13.17117	.3804561	.6214621	6.433863	1.295239
#1	.3505044	-.016518	.6259150	.0420365	.0185205	111.5689
#2	.3502864	-.016098	.6234848	.0415226	.0163465	109.1035
#3	.3520583	-.020317	.6282469	.0418461	.0179907	109.1021

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1809780**	**.0098723**	**.0068444**	**10.88483**	**.3049824**	**.2034065**
Stddev	.0017378	.0001340	.0001732	.09658	.0040899	.0006364
%RSD	.9602144	1.357178	2.529763	.8872783	1.341022	.3128534
#1	.1829742	.0099776	.0068284	10.99628	.3096777	.2037756
#2	.1801565	.0097215	.0066799	10.82565	.3021955	.2026717
#3	.1798032	.0099178	.0070250	10.83255	.3030740	.2037722

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1021366**	**130.9209**	**1.967994**	**12.20124**	**.1558033**	**.0029842**
Stddev	.0014680	1.7182	.022684	.16571	.0004339	.0007169
%RSD	1.437238	1.312425	1.152631	1.358176	.2785110	24.02244
#1	.1006586	132.9045	1.994092	12.39177	.1562232	.0031563
#2	.1021569	129.8907	1.956873	12.12133	.1553566	.0035994
#3	.1035943	129.9676	1.953016	12.09063	.1558299	.0021970

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.939727**	**.2038918**	**.1797948**	**2.771965**	**9.918692**	**.5032270**
Stddev	.203681	.0018527	.0029477	.068255	.034376	.0091170
%RSD	10.50051	.9086680	1.639487	2.462332	.3465750	1.811713
#1	1.741192	.2029453	.1818356	2.836882	9.954451	.5136853
#2	1.929797	.2060265	.1811336	2.700802	9.885891	.4990414
#3	2.148192	.2027035	.1764153	2.778210	9.915735	.4969544

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-09 Acquired: 2/2/2025 13:25:52 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6307 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0157958	F 18.44637	5.180971	.0683250	2.253814	.1173399
Stddev	.0003047	.04973	.006595	.0006504	.005342	.0014706
%RSD	1.928963	.2696093	.1272934	.9519576	.2370112	1.253248
#1	.0158772	18.48974	5.174372	.0689932	2.252014	.1189079
#2	.0154587	18.39209	5.180979	.0676939	2.249604	.1159915
#3	.0160516	18.45728	5.187562	.0682881	2.259823	.1171202

Elem	Sr4077
Units	ppm
Avg	.0841791
Stddev	.0009879
%RSD	1.173517
#1	.0853189
#2	.0836466
#3	.0835717

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4505.048	90080.36	14985.91	2910.666	4101.070
Stddev	2.638	973.78	59.64	39.901	2.982
%RSD	.0585485	1.081009	.3979905	1.370843	.0727180
#1	4508.059	88963.19	15029.77	2864.776	4097.967
#2	4503.941	90749.40	15009.97	2937.160	4103.915
#3	4503.145	90528.48	14918.00	2930.063	4101.327

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-10 Acquired: 2/2/2025 13:29:48 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6308 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5080831**	**.0077605**	**2.909058**	**.0202002**	**-.491144**	**17.99816**
Stddev	.0019867	.0009057	.002995	.0016139	.002253	.14894
%RSD	.3910105	11.67071	.1029591	7.989553	.4587949	.8275469
#1	.5057896	.0072147	2.912414	.0213229	-.490974	18.05838
#2	.5092744	.0088059	2.908104	.0183507	-.488980	17.82853
#3	.5091852	.0072607	2.906656	.0209270	-.493478	18.10756

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1690440**	**-.000093**	**.0019989**	**5.809733**	F **46.00585**	**.0150404**
Stddev	.0015134	.000032	.0000517	.060713	.16360	.0002851
%RSD	.8952756	34.11197	2.586217	1.045018	.3556104	1.895584
#1	.1697955	-.000107	.0020070	5.817496	46.10591	.0147252
#2	.1673019	-.000116	.0020461	5.745512	45.81705	.0151159
#3	.1700345	-.000057	.0019436	5.866191	46.09458	.0152802

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.717806**	**99.62737**	**.4286299**	**4.879565**	**.0606376**	**.0754498**
Stddev	.004006	.77719	.0053485	.051914	.0006165	.0007624
%RSD	.2331863	.7801012	1.247810	1.063905	1.016739	1.010446
#1	1.720098	100.0076	.4311315	4.928668	.0611773	.0758461
#2	1.720139	98.7333	.4224890	4.825236	.0599657	.0745709
#3	1.713180	100.1412	.4322691	4.884792	.0607697	.0759324

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0770323**	**.1872981**	**-.040669**	**2.763263**	**8.093262**	**.3911595**
Stddev	.4397879	.0006056	.002297	.022807	.011325	.0039011
%RSD	570.9135	.3233257	5.648200	.8253654	.1399368	.9973295
#1	-.417230	.1866100	-.039089	2.780830	8.105268	.3923175
#2	.425120	.1875342	-.043305	2.737488	8.082770	.3868104
#3	.223207	.1877501	-.039615	2.771473	8.091749	.3943504

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-10 Acquired: 2/2/2025 13:29:48 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6308 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0464547	6.192775	4.895689	F 65.40243	2.663689	.0175381
Stddev	.0001012	.014346	.024485	.09031	.012950	.0013536
%RSD	.2178028	.2316505	.5001317	.1380861	.4861541	7.717785
#1	.0465714	6.191130	4.916495	65.47751	2.677145	.0160611
#2	.0464001	6.179322	4.868708	65.42758	2.651314	.0178338
#3	.0463925	6.207872	4.901864	65.30221	2.662608	.0187193

Elem	Sr4077
Units	ppm
Avg	.0369641
Stddev	.0002584
%RSD	.6991387
#1	.0369426
#2	.0367171
#3	.0372326

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3018.502	72125.36	12215.05	2306.942	4214.874
Stddev	.717	352.19	106.62	7.272	5.064
%RSD	.0237586	.4883030	.8728544	.3152096	.1201495
#1	3019.129	71726.43	12138.19	2299.340	4210.967
#2	3018.657	72393.21	12170.20	2313.831	4213.060
#3	3017.720	72256.45	12336.77	2307.653	4220.596

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-11 Acquired: 2/2/2025 13:33:51 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6309 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0934782	-.009001	.1719255	.0264652	.0120565	36.52707	.2287916
Stddev	.0013881	.000986	.0039441	.0021453	.0015470	.09660	.0004393
%RSD	1.484922	10.95354	2.294066	8.106200	12.83146	.2644603	.1920174
#1	.0919119	-.009966	.1713663	.0240832	.0122039	36.63831	.2282845
#2	.0939666	-.009042	.1682908	.0282451	.0104411	36.46439	.2290332
#3	.0945560	-.007996	.1761193	.0270672	.0135246	36.47850	.2290570

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018612	.0038460	12.15055	.2370191	.0495649	.2161514	103.7182
Stddev	.0001038	.0000549	.02706	.0009163	.0003779	.0031299	.1551
%RSD	5.578598	1.428039	.2227355	.3866027	.7624746	1.448019	.1495838
#1	.0018620	.0038850	12.16225	.2363194	.0495747	.2174624	103.8588
#2	.0017570	.0037832	12.16980	.2366815	.0491821	.2184126	103.5518
#3	.0019646	.0038698	12.11961	.2380563	.0499378	.2125791	103.7441

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.047139	15.79114	.1535771	.0058371	1.980507	.1019004	.6181084
Stddev	.001497	.02808	.0005609	.0001289	.126189	.0012741	.0072459
%RSD	.1429843	.1778389	.3652358	2.208575	6.371526	1.250305	1.172270
#1	1.046780	15.76323	.1540059	.0057659	2.114980	.1030654	.6106702
#2	1.045854	15.79078	.1529423	.0059859	1.864677	.1020958	.6251452
#3	1.048783	15.81939	.1537832	.0057595	1.961866	.1005399	.6185098

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.372685	3.125618	.4038725	.0056058	2.493411	5.910042	.0446222
Stddev	.033455	.011824	.0003535	.0002260	.012641	.016616	.0004839
%RSD	.9919260	.3782772	.0875199	4.032297	.5069591	.2811477	1.084511
#1	3.409213	3.120012	.4035709	.0054241	2.484422	5.927202	.0446181
#2	3.343536	3.117640	.4037851	.0058589	2.487948	5.894030	.0441404
#3	3.365307	3.139202	.4042614	.0055343	2.507865	5.908894	.0451082

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-11 Acquired: 2/2/2025 13:33:51 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6309 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.102175**	**.0782712**	**.0699303**
Stddev	.001917	.0007495	.0002481
%RSD	.0911982	.9575644	.3548155
#1	2.103857	.0790889	.0702137
#2	2.102581	.0781079	.0697519
#3	2.100087	.0776169	.0698253

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3619.445**	**71871.28**	**12989.10**	**2349.020**	**4097.867**
Stddev	11.903	145.92	33.99	11.697	13.233
%RSD	.3288557	.2030260	.2616940	.4979507	.3229127
#1	3617.993	72036.02	13027.97	2361.462	4099.686
#2	3632.008	71758.31	12964.95	2338.248	4110.095
#3	3608.336	71819.50	12974.37	2347.349	4083.819

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCV034 Acquired: 2/2/2025 13:37:51 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV034 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.921747**	**4.981659**	**24.33898**	**4.997848**	**5.041212**	**404.4308**
Stddev	.032449	.029431	.15288	.018786	.029043	2.0708
%RSD	.6593053	.5907936	.6281169	.3758798	.5761038	.5120252
#1	4.884608	5.006665	24.16949	4.977617	5.010458	402.8549
#2	4.936021	4.949226	24.38097	5.001186	5.045008	403.6613
#3	4.944613	4.989087	24.46647	5.014741	5.068170	406.7762

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.657770**	**.5099421**	**2.463532**	**394.3942**	**15.75206**	**2.474011**
Stddev	.167168	.0081661	.012530	3.0185	.02761	.016759
%RSD	1.730913	1.601382	.5086236	.7653588	.1752631	.6774007
#1	9.466155	.5008575	2.449610	396.2940	15.76466	2.454951
#2	9.773766	.5166725	2.467082	395.9750	15.72040	2.480646
#3	9.733390	.5122964	2.473904	390.9135	15.77111	2.486437

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.39304**	**403.1097**	**14.47217**	**391.8630**	**2.469800**	**1.305841**
Stddev	.31759	1.8506	.06243	1.7420	.015581	.001868
%RSD	2.063223	.4590742	.4313989	.4445414	.6308660	.1430601
#1	15.02845	401.2570	14.40898	390.0064	2.452358	1.305675
#2	15.60956	403.1139	14.47372	392.1209	2.474698	1.304061
#3	15.54112	404.9581	14.53382	393.4616	2.482343	1.307787

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**361.6978**	**2.410923**	**15.04749**	**154.8377**	**4.912665**	F **5.964300**
Stddev	7.0751	.044035	.06053	.7946	.023834	.070892
%RSD	1.956092	1.826460	.4022665	.5131957	.4851541	1.188603
#1	353.5284	2.361746	15.11601	154.1272	4.885696	5.884238
#2	365.8374	2.446703	15.00129	154.6901	4.921401	6.019101
#3	365.7276	2.424320	15.02516	155.6957	4.930899	5.989562

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCV034 Acquired: 2/2/2025 13:37:51 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV034 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.918861**	**5.011543**	**4.681072**	**4.920614**	**4.836183**	**4.937876**
Stddev	.029257	.017246	.088589	.022432	.095879	.027732
%RSD	.5947955	.3441216	1.892485	.4558758	1.982544	.5616126
#1	4.885950	4.991630	4.582372	4.895657	4.726153	4.921569
#2	4.928709	5.021366	4.753697	4.927090	4.901822	4.922163
#3	4.941923	5.021633	4.707147	4.939096	4.880575	4.969896

Elem	Sr4077
Units	ppm
Avg	**5.268229**
Stddev	.014026
%RSD	.2662323
#1	5.279658
#2	5.272452
#3	5.252577

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2864.656**	**58230.29**	**11293.78**	**1867.942**	**3175.764**
Stddev	15.049	56.32	201.64	8.714	16.609
%RSD	.5253161	.0967167	1.785452	.4664824	.5230012
#1	2881.500	58276.84	11517.64	1858.228	3194.839
#2	2859.933	58246.33	11126.39	1870.527	3167.955
#3	2852.536	58167.69	11237.31	1875.070	3164.499

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCB034 Acquired: 2/2/2025 13:42:09 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB034 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010395**	**-.002304**	**.0002317**	**-.000099**	**.0001363**	**.0164156**	**.0035599**
Stddev	.0010180	.001142	.0006462	.001317	.0012269	.0072862	.0006921
%RSD	97.93572	49.58296	278.8720	1328.275	900.3986	44.38586	19.44153
#1	.0019979	-.003397	.0008291	-.001000	-.001054	.0214633	.0029333
#2	-.000029	-.001118	.0003203	-.000711	.001396	.0197210	.0043028
#3	.001150	-.002396	-.000454	.001413	.000067	.0080626	.0034436

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000516**	**.0001123**	**.0096780**	**.0006641**	**.0000904**	**.0008667**	**.0181655**
Stddev	.0000448	.0000120	.0047449	.0002914	.0002082	.0004455	.0079764
%RSD	86.77577	10.68015	49.02725	43.87963	230.3447	51.40278	43.90968
#1	.0000260	.0001018	.0086966	.0004103	-.000107	.0003529	.0164836
#2	.0001034	.0001253	.0055006	.0009823	.000071	.0011020	.0111642
#3	.0000255	.0001097	.0148369	.0005996	.000308	.0011452	.0268488

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004495**	**-.007866**	**.0000972**	**.0007172**	**-.395996**	**-.002566**	**.0012746**
Stddev	.0001506	.010901	.0002129	.0003379	.255349	.000380	.0028767
%RSD	33.49377	138.5826	219.1813	47.11432	64.48285	14.82248	225.6874
#1	.0005945	-.011461	.0001754	.0007062	-.141338	-.002174	.0003293
#2	.0002940	.004378	.0002599	.0010604	-.394619	-.002591	-.001010
#3	.0004599	-.016516	-.000144	.0003849	-.652031	-.002933	.004505

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2910594**	**.0000174**	**-.001634**	**.0002258**	**.0000211**	**.0032833**	**.0002848**
Stddev	.0367695	.0015361	.000263	.0000465	.0030240	.0008858	.0007048
%RSD	12.63299	8827.542	16.08605	20.59956	14349.15	26.97824	247.5187
#1	.2878013	-.001272	-.001352	.0002525	-.001099	.0023119	.0001302
#2	.2560274	-.000392	-.001678	.0001721	.003445	.0040463	-.000330
#3	.3293495	.001717	-.001871	.0002529	-.002283	.0034916	.001054

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCB034 Acquired: 2/2/2025 13:42:09 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB034 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0022268	-.003972	.0001973
Stddev	.0002760	.000096	.0000618
%RSD	12.39491	2.425287	31.32753
#1	.0020861	-.004047	.0001592
#2	.0020495	-.003863	.0001640
#3	.0025448	-.004007	.0002686

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3592.512	70844.52	12466.43	2286.533	4350.448
Stddev	3.749	260.32	76.91	5.995	8.598
%RSD	.1043660	.3674479	.6169520	.2621770	.1976379
#1	3588.745	70546.19	12554.93	2283.494	4346.343
#2	3596.244	70961.83	12415.71	2282.666	4360.329
#3	3592.545	71025.54	12428.66	2293.438	4344.671

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-12 Acquired: 2/2/2025 13:46:19 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6320 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0249554	-.005010	.0495504	.0151032	.0076898	69.82286	.1968092
Stddev	.0026937	.001313	.0014339	.0026005	.0013225	.69424	.0016692
%RSD	10.79414	26.21543	2.893755	17.21805	17.19753	.9942912	.8481368
#1	.0255052	-.003856	.0508766	.0166069	.0072673	70.34501	.1983006
#2	.0220292	-.004734	.0497457	.0121004	.0066302	70.08855	.1971208
#3	.0273318	-.006439	.0480288	.0166023	.0091719	69.03501	.1950061

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029433	.0010279	7.890302	.1876444	.0367235	.0467424	62.88416
Stddev	.0000473	.0000932	.104038	.0016450	.0001034	.0019692	.63538
%RSD	1.606801	9.065037	1.318560	.8766575	.2816239	4.212828	1.010390
#1	.0029283	.0011156	7.966348	.1881068	.0366155	.0455746	63.33187
#2	.0029053	.0009300	7.932820	.1890087	.0367335	.0490159	63.16367
#3	.0029962	.0010382	7.771739	.1858177	.0368216	.0456366	62.15695

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5205809	18.16642	.1138944	.0022866	.8011477	.1076113	.1598842
Stddev	.0066279	.12453	.0004851	.0000530	.3037847	.0008816	.0020519
%RSD	1.273172	.6855089	.4259603	2.316879	37.91869	.8192707	1.283397
#1	.5245278	18.22462	.1135236	.0022610	.6740870	.1066966	.1622512
#2	.5242859	18.25119	.1137161	.0022514	.5815229	.1084556	.1587913
#3	.5129289	18.02344	.1144434	.0023476	1.147833	.1076815	.1586099

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.166622	2.141585	.2384352	.0011601	.9989709	8.861436	.0115033
Stddev	.065377	.008021	.0036820	.0000990	.0071148	.062409	.0007654
%RSD	2.064577	.3745525	1.544233	8.537194	.7122145	.7042753	6.653854
#1	3.206939	2.132616	.2415611	.0012744	.9938016	8.801086	.0116046
#2	3.201736	2.144066	.2393679	.0010992	1.007085	8.925718	.0106922
#3	3.091190	2.148073	.2343765	.0011067	.996026	8.857505	.0122129

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-12 Acquired: 2/2/2025 13:46:19 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6320 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.423285	.1596575	.0446005
Stddev	.013127	.0031145	.0004873
%RSD	.3834609	1.950735	1.092683
#1	3.408144	.1624927	.0448903
#2	3.430235	.1601560	.0448734
#3	3.431475	.1563238	.0440379

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3621.728	71712.96	12410.09	2383.437	4087.287
Stddev	6.192	592.47	100.66	28.721	12.885
%RSD	.1709747	.8261683	.8111528	1.205015	.3152373
#1	3621.329	71538.63	12525.59	2384.348	4094.293
#2	3628.110	71227.21	12341.05	2354.272	4095.151
#3	3615.745	72373.04	12363.62	2411.692	4072.418

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-13 Acquired: 2/2/2025 13:50:18 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6321 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2791437**	**.0006983**	**1.351080**	**.0220811**	**.0293090**	**70.67161**
Stddev	.0048644	.0005732	.017110	.0024110	.0039612	.21997
%RSD	1.742609	82.08971	1.266359	10.91895	13.51515	.3112629
#1	.2840360	.0012221	1.369811	.0205885	.0325363	70.42913
#2	.2743077	.0000860	1.336275	.0207921	.0248884	70.72736
#3	.2790875	.0007867	1.347153	.0248626	.0305023	70.85835

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4551214**	**.0036267**	**.0032919**	**13.20934**	**28.38670**	**.0453774**
Stddev	.0027923	.0001686	.0001512	.05884	.19999	.0006361
%RSD	.6135239	4.650006	4.591884	.4454292	.7045108	1.401789
#1	.4520452	.0038201	.0034663	13.14471	28.59726	.0459003
#2	.4558233	.0035499	.0031987	13.22350	28.36351	.0446692
#3	.4574958	.0035102	.0032106	13.25981	28.19931	.0455626

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.85834**	**86.29759**	**1.316318**	**18.63056**	**.4115356**	**.0390777**
Stddev	.10959	.26730	.006380	.00819	.0045521	.0004148
%RSD	.7375380	.3097385	.4846617	.0439538	1.106124	1.061386
#1	14.93619	86.02429	1.309010	18.62533	.4166040	.0392253
#2	14.90581	86.31004	1.320774	18.64000	.4077952	.0386094
#3	14.73303	86.55845	1.319171	18.62636	.4102076	.0393985

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.614557**	**.2039936**	**.3964094**	**6.565378**	**5.333115**	**.3438736**
Stddev	.373583	.0028757	.0037184	.027919	.069972	.0012680
%RSD	23.13843	1.409692	.9380068	.4252421	1.312029	.3687450
#1	1.279231	.2072177	.3947041	6.533783	5.413047	.3428452
#2	2.017234	.2016934	.3938496	6.575628	5.282942	.3434853
#3	1.547206	.2030697	.4006745	6.586724	5.303355	.3452904

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-13 Acquired: 2/2/2025 13:50:18 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6321 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0157638	F 11.90763	F 10.26254	F 12.25142	3.448267	.2189505
Stddev	.0005575	.14428	.04562	.14980	.018758	.0013549
%RSD	3.536286	1.211621	.4445571	1.222742	.5439927	.6187942
#1	.0162549	12.06584	10.25991	12.41566	3.450696	.2178857
#2	.0151579	11.78333	10.30942	12.12229	3.465692	.2184905
#3	.0158787	11.87372	10.21829	12.21632	3.428412	.2204755

Elem	Sr4077
Units	ppm
Avg	.1133499
Stddev	.0004035
%RSD	.3559506
#1	.1129051
#2	.1134523
#3	.1136924

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3386.564	72933.44	12428.71	2378.304	4115.413
Stddev	35.281	149.17	127.78	3.206	43.359
%RSD	1.041800	.2045299	1.028111	.1347909	1.053575
#1	3347.776	72761.52	12313.07	2379.163	4068.107
#2	3416.747	73028.63	12407.18	2374.756	4153.266
#3	3395.167	73010.17	12565.89	2380.993	4124.865

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-14 Acquired: 2/2/2025 13:54:22 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6322 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.753212**	**-.093312**	**1.276025**	**.1922804**	**.1328287**	**121.0171**
Stddev	.005407	.005383	.006167	.0073326	.0027693	1.6654
%RSD	.3084009	5.769174	.4832869	3.813514	2.084840	1.376210
#1	1.754255	-.098892	1.268930	.2003103	.1305635	122.4951
#2	1.747360	-.088149	1.279041	.1859399	.1359159	119.2126
#3	1.758022	-.092894	1.280103	.1905911	.1320065	121.3436

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.450935**	**.0128372**	**.0459000**	**74.24944**	**16.50228**	**.2103315**
Stddev	.018843	.0002215	.0007537	.93716	.26578	.0013195
%RSD	1.298670	1.725247	1.642007	1.262175	1.610561	.6273460
#1	1.465283	.0130650	.0450729	75.05882	16.72595	.2090608
#2	1.429596	.0128239	.0465479	73.22270	16.20846	.2102388
#3	1.457925	.0126226	.0460792	74.46681	16.57243	.2116949

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.967469**	F **863.4941**	**9.705753**	**29.29543**	**.7630990**	**.0319626**
Stddev	.120556	13.8024	.122891	.42868	.0016509	.0004350
%RSD	1.513109	1.598440	1.266165	1.463302	.2163380	1.360961
#1	8.065983	877.6897	9.811690	29.63104	.7611932	.0324452
#2	8.003389	850.1217	9.571021	28.81252	.7640869	.0318418
#3	7.833035	862.6710	9.734548	29.44274	.7640171	.0316007

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.298854**	**.3715194**	**2.325703**	**12.98695**	F **18.82624**	**3.271530**
Stddev	.472172	.0040985	.039651	.12636	.04492	.062355
%RSD	5.077740	1.103171	1.704886	.9730075	.2385812	1.905980
#1	9.716904	.3752138	2.361299	13.08969	18.77640	3.329287
#2	8.786726	.3722337	2.282968	12.84585	18.83875	3.205420
#3	9.392931	.3671107	2.332842	13.02531	18.86358	3.279884

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-14 Acquired: 2/2/2025 13:54:22 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6322 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0308717	F 42.92173	F 19.26516	2.926761	4.593640	.2666998
Stddev	.0005512	.08691	.24162	.009538	.072316	.0039868
%RSD	1.785493	.2024932	1.254160	.3258990	1.574272	1.494867
#1	.0306654	42.82137	19.42574	2.916252	4.647183	.2699599
#2	.0304534	42.97169	19.38244	2.934870	4.622363	.2622549
#3	.0314963	42.97213	18.98728	2.929161	4.511375	.2678846

Elem	Sr4077
Units	ppm
Avg	.5275231
Stddev	.0078407
%RSD	1.486318
#1	.5349269
#2	.5193086
#3	.5283338

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3522.264	74125.00	13371.70	2349.824	3778.682
Stddev	8.377	924.35	183.47	38.879	7.590
%RSD	.2378380	1.247019	1.372098	1.654568	.2008659
#1	3522.128	73343.32	13249.39	2310.071	3785.231
#2	3513.956	75145.25	13283.04	2387.766	3770.364
#3	3530.709	73886.42	13582.66	2351.635	3780.452

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-15 Acquired: 2/2/2025 13:58:19 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6323 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2239451**	**-.000590**	**7.264617**	**.0185514**	**-.057008**	**53.22239**
Stddev	.0022007	.001640	.054241	.0023159	.002008	.69175
%RSD	.9826835	277.9484	.7466514	12.48379	3.522256	1.299729
#1	.2257675	-.002181	7.284977	.0197424	-.059276	53.99155
#2	.2215002	.001095	7.203141	.0200294	-.055457	53.02436
#3	.2245675	-.000683	7.305732	.0158823	-.056291	52.65125

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3596653**	**.0033151**	**.0073312**	**11.99477**	**17.38216**	**.0462098**
Stddev	.0057996	.0000875	.0000765	.17988	.12378	.0005325
%RSD	1.612493	2.638578	1.043477	1.499627	.7121246	1.152384
#1	.3663618	.0033760	.0072586	12.20067	17.51376	.0463913
#2	.3562662	.0033545	.0073241	11.91545	17.36466	.0456103
#3	.3563679	.0032149	.0074111	11.86818	17.26806	.0466279

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **72.91043**	**75.78990**	**.6704123**	**11.95497**	**2.610205**	**.1041070**
Stddev	.21264	.92132	.0103904	.10850	.021593	.0005252
%RSD	.2916492	1.215622	1.549847	.9076111	.8272474	.5044538
#1	73.10217	76.80526	.6823707	12.07102	2.618251	.1047054
#2	72.94739	75.55721	.6652745	11.93785	2.585744	.1037230
#3	72.68173	75.00724	.6635918	11.85605	2.626619	.1038924

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.676541**	**.1261604**	**9.027226**	**3.492253**	**5.583975**	**.3205676**
Stddev	.243835	.0004029	.089301	.019181	.058955	.0042552
%RSD	14.54394	.3193388	.9892436	.5492307	1.055791	1.327382
#1	1.401642	.1257375	9.128060	3.513470	5.595912	.3252321
#2	1.866703	.1262040	8.995492	3.487147	5.519965	.3195729
#3	1.761278	.1265397	8.958126	3.476142	5.636049	.3168980

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-15 Acquired: 2/2/2025 13:58:19 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6323 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158339	F 50.22781	7.648569	F 16.36857	2.521682	.1479670
Stddev	.0002307	.48717	.052636	.15496	.014207	.0032232
%RSD	1.457165	.9699139	.6881787	.9467214	.5633875	2.178348
#1	.0158147	50.37503	7.698918	16.41059	2.537816	.1516877
#2	.0160737	49.68401	7.652878	16.19693	2.516186	.1461872
#3	.0156134	50.62439	7.593911	16.49819	2.511045	.1460260

Elem	Sr4077
Units	ppm
Avg	.1030754
Stddev	.0010849
%RSD	1.052545
#1	.1042895
#2	.1027356
#3	.1022010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3457.330	74142.52	13590.51	2360.536	4120.110
Stddev	21.025	677.69	38.48	11.750	29.053
%RSD	.6081391	.9140386	.2831229	.4977514	.7051410
#1	3448.513	73434.48	13608.90	2351.249	4113.609
#2	3481.329	74207.96	13546.28	2356.614	4151.863
#3	3442.150	74785.12	13616.33	2373.744	4094.859

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-16 Acquired: 2/2/2025 14:02:18 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6324 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3408121**	**-.011471**	**.4597397**	**.0455063**	**.0159366**	**91.40988**
Stddev	.0016668	.004456	.0019766	.0015308	.0013208	.59121
%RSD	.4890563	38.84360	.4299501	3.363888	8.287777	.6467630
#1	.3427280	-.016599	.4605199	.0471632	.0145012	91.61793
#2	.3400126	-.009265	.4574920	.0452110	.0171006	91.86893
#3	.3396957	-.008548	.4612072	.0441446	.0162079	90.74277

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9634252**	**.0073537**	**.0087356**	**122.9709**	**.2388997**	**.0604717**
Stddev	.0067497	.0001858	.0000523	.7988	.0021194	.0001638
%RSD	.7005892	2.526471	.5982752	.6496158	.8871446	.2708504
#1	.9658569	.0074924	.0087958	123.2151	.2402176	.0606397
#2	.9686220	.0071426	.0087010	123.6191	.2400265	.0603125
#3	.9557966	.0074261	.0087102	122.0785	.2364549	.0604629

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1318646**	**116.7820**	**1.022861**	**25.60172**	**.3246920**	**.0039180**
Stddev	.0025730	.8812	.007158	.12070	.0015382	.0003213
%RSD	1.951224	.7545896	.6998367	.4714333	.4737346	8.201122
#1	.1291500	117.0091	1.024962	25.62452	.3264546	.0035752
#2	.1321763	117.5274	1.028733	25.70938	.3236216	.0039663
#3	.1342675	115.8094	1.014887	25.47124	.3239997	.0042124

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.411438**	**.2670909**	**.4051687**	**5.771401**	**7.618010**	**.5277440**
Stddev	.196600	.0012696	.0064737	.043524	.032114	.0059714
%RSD	2.652653	.4753467	1.597782	.7541366	.4215584	1.131504
#1	7.369656	.2662595	.4093431	5.789454	7.648802	.5301939
#2	7.239087	.2685523	.4084518	5.802994	7.584719	.5321008
#3	7.625570	.2664610	.3977113	5.721755	7.620507	.5209372

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1223-16 Acquired: 2/2/2025 14:02:18 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6324 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0225140	F 40.31654	6.546166	.0193333	3.389586	.3570025
Stddev	.0003990	.15564	.047613	.0007236	.018211	.0018309
%RSD	1.772166	.3860428	.7273440	3.742514	.5372686	.5128426
#1	.0223225	40.47860	6.491189	.0199675	3.369333	.3582488
#2	.0222468	40.16824	6.574111	.0185452	3.394810	.3578583
#3	.0229726	40.30277	6.573197	.0194873	3.404613	.3549005

Elem	Sr4077
Units	ppm
Avg	.9335838
Stddev	.0055180
%RSD	.5910587
#1	.9354654
#2	.9379150
#3	.9273711

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3897.436	77959.44	13828.44	2485.698	3861.412
Stddev	7.159	449.34	84.40	18.013	11.905
%RSD	.1836753	.5763759	.6103019	.7246729	.3083186
#1	3890.141	77868.24	13922.54	2482.709	3849.523
#2	3904.450	77562.70	13803.34	2469.367	3873.334
#3	3897.716	78447.38	13759.45	2505.019	3861.377

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-01 Acquired: 2/2/2025 14:06:14 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6313 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.953971**	**2.309383**	**1.842259**	**1.071940**	**1.214998**	**52.67088**
Stddev	.014620	.024290	.003609	.005310	.003839	.28377
%RSD	.7482036	1.051806	.1958805	.4953753	.3159835	.5387572
#1	1.954821	2.281695	1.840720	1.071876	1.211982	52.51792
#2	1.938945	2.319346	1.839675	1.066663	1.213692	52.49641
#3	1.968147	2.327107	1.846382	1.077282	1.219320	52.99831

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.786145**	F **1.818478**	**1.338038**	**58.11561**	**2.978325**	**2.146446**
Stddev	.019222	.008571	.004279	.34122	.034056	.002563
%RSD	.5076881	.4713549	.3197892	.5871411	1.143453	.1194033
#1	3.769566	1.813173	1.334907	57.82140	2.965332	2.145051
#2	3.781655	1.813893	1.336294	58.03574	2.952678	2.144884
#3	3.807215	1.828366	1.342914	58.48967	3.016964	2.149404

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.500339**	**75.79142**	**4.380981**	**16.89819**	**1.408071**	**.5381419**
Stddev	.007356	.37739	.024764	.12316	.002868	.0054494
%RSD	.4902768	.4979329	.5652627	.7288362	.2036582	1.012642
#1	1.502017	75.51277	4.356749	16.89534	1.406888	.5375857
#2	1.506710	75.64060	4.379950	16.77648	1.405983	.5329919
#3	1.492289	76.22090	4.406245	17.02275	1.411341	.5438481

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.248050**	**1.353655**	**4.071146**	**12.81745**	**2.748775**	**2.773711**
Stddev	.277829	.002344	.028991	.04934	.004607	.017392
%RSD	6.540152	.1731571	.7121032	.3849334	.1676162	.6270123
#1	4.514536	1.352441	4.038294	12.77789	2.744387	2.766834
#2	3.960121	1.356357	4.082002	12.80173	2.748362	2.760809
#3	4.269493	1.352166	4.093141	12.87274	2.753574	2.793489

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-01 Acquired: 2/2/2025 14:06:14 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6313 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5864562	.6692642	9.371130	1.244103	2.726062	1.193268
Stddev	.0001928	.0028087	.043556	.004997	.018205	.004084
%RSD	.0328815	.4196720	.4647932	.4016282	.6678240	.3422688
#1	.5863065	.6668430	9.321025	1.239961	2.710094	1.191467
#2	.5863882	.6686061	9.399958	1.242695	2.745887	1.190393
#3	.5866738	.6723435	9.392409	1.249653	2.722204	1.197943

Elem	Sr4077
Units	ppm
Avg	2.508493
Stddev	.042466
%RSD	1.692902
#1	2.489631
#2	2.478725
#3	2.557123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3733.368	75102.67	13346.92	2417.756	3950.815
Stddev	4.698	524.03	43.87	21.457	6.407
%RSD	.1258385	.6977450	.3286763	.8874754	.1621637
#1	3736.056	75411.65	13397.13	2437.304	3958.201
#2	3736.104	75398.74	13316.03	2421.165	3946.757
#3	3727.943	74497.63	13327.59	2394.798	3947.487

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-02 Acquired: 2/2/2025 14:10:10 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6314 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.641479**	**1.374298**	**3.006002**	**1.863683**	**1.244577**	**53.91202**
Stddev	.005715	.018371	.007591	.002383	.003321	.04465
%RSD	.3481489	1.336761	.2525159	.1278887	.2668248	.0828152
#1	1.636462	1.357096	3.011474	1.864075	1.240760	53.87387
#2	1.647700	1.372148	2.997337	1.861127	1.246174	53.90105
#3	1.640274	1.393649	3.009197	1.865846	1.246798	53.96112

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.427895**	F **1.578339**	**1.648186**	**54.90350**	**2.030945**	**2.051761**
Stddev	.006763	.004816	.002208	.06676	.003317	.001187
%RSD	.1972936	.3051296	.1339952	.1215886	.1633191	.0578643
#1	3.434018	1.577497	1.646841	54.97882	2.034426	2.050399
#2	3.420636	1.583520	1.646982	54.85164	2.030586	2.052581
#3	3.429031	1.573999	1.650735	54.88004	2.027822	2.052303

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.155799**	**80.72951**	**4.740936**	**17.67114**	**2.352567**	**1.022519**
Stddev	.003698	.05731	.009923	.06969	.001152	.000992
%RSD	.1171904	.0709918	.2092995	.3943829	.0489567	.0970441
#1	3.158038	80.73998	4.750419	17.68470	2.351238	1.023624
#2	3.157828	80.66769	4.730625	17.59567	2.353206	1.022228
#3	3.151530	80.78086	4.741764	17.73306	2.353259	1.021705

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.745542**	**2.057071**	**2.235190**	**12.82073**	**2.994876**	**2.251855**
Stddev	.094509	.004057	.010793	.04312	.007135	.002770
%RSD	1.991532	.1972172	.4828779	.3363133	.2382536	.1230302
#1	4.853639	2.052784	2.224526	12.79031	2.986637	2.252794
#2	4.704461	2.060850	2.246108	12.80180	2.998942	2.254033
#3	4.678525	2.057578	2.234937	12.87007	2.999049	2.248737

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-02 Acquired: 2/2/2025 14:10:10 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6314 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.483069**	**.6193991**	**7.562482**	**1.609954**	**3.791712**	**1.083585**
Stddev	.004149	.0065257	.016113	.002351	.007432	.000930
%RSD	.2797478	1.053545	.2130683	.1460232	.1959992	.0858624
#1	1.478303	.6150681	7.574594	1.612347	3.794071	1.084544
#2	1.485870	.6162246	7.544195	1.609866	3.797678	1.082686
#3	1.485035	.6269046	7.568658	1.607648	3.783387	1.083526

Elem	Sr4077
Units	ppm
Avg	**1.085726**
Stddev	.012440
%RSD	1.145817
#1	1.093546
#2	1.092252
#3	1.071381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3813.936**	**74107.48**	**12313.69**	**2423.282**	**4020.935**
Stddev	7.342	97.81	40.42	13.214	3.999
%RSD	.1925108	.1319851	.3282586	.5453105	.0994513
#1	3822.156	74046.33	12313.51	2435.047	4025.452
#2	3808.029	74055.81	12273.37	2408.985	4017.849
#3	3811.624	74220.29	12354.21	2425.814	4019.502

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-03 Acquired: 2/2/2025 14:21:38 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6325 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0484263	-.004061	.9420884	.0259047	.0112207	85.18294
Stddev	.0024385	.004689	.0013869	.0028696	.0017257	.46391
%RSD	5.035584	115.4760	.1472137	11.07745	15.37968	.5445990
#1	.0479069	.001277	.9404883	.0226209	.0127140	84.80280
#2	.0510827	-.007516	.9428319	.0271638	.0116166	85.69986
#3	.0462893	-.005944	.9429450	.0279296	.0093314	85.04617

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5325400	.0122818	.0044428	67.04002	.1939265	.0219170
Stddev	.0037620	.0001134	.0000398	.31987	.0007236	.0001656
%RSD	.7064358	.9234285	.8967817	.4771310	.3731334	.7557254
#1	.5294697	.0123628	.0044884	66.77052	.1931567	.0220188
#2	.5367365	.0121522	.0044255	67.39350	.1940300	.0220063
#3	.5314138	.0123305	.0044145	66.95604	.1945927	.0217259

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2168380	56.31286	.6821914	8.391609	.0975876	.0032447
Stddev	.0015146	.25432	.0042122	.058883	.0000593	.0001943
%RSD	.6985134	.4516138	.6174538	.7016844	.0607680	5.988295
#1	.2183430	56.04915	.6779220	8.364075	.0975296	.0034205
#2	.2168570	56.55661	.6863440	8.459214	.0976481	.0030361
#3	.2153139	56.33282	.6823083	8.351537	.0975852	.0032776

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.328255	.1352558	.3365408	3.881634	F 12.78516	.2395399
Stddev	.380728	.0005415	.0018625	.047323	.02292	.0009695
%RSD	28.66376	.4003487	.5534386	1.219164	.1793068	.4047261
#1	1.767481	.1352969	.3382918	3.827313	12.77090	.2387017
#2	1.092395	.1357756	.3367467	3.903656	12.77298	.2406016
#3	1.124889	.1346949	.3345839	3.913933	12.81161	.2393163

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-03 Acquired: 2/2/2025 14:21:38 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6325 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098064	F 19.78984	6.795438	.0224592	1.612978	.0665650
Stddev	.0000617	.06452	.044594	.0004033	.008045	.0001611
%RSD	.6293101	.3260258	.6562391	1.795860	.4987890	.2420429
#1	.0098757	19.75099	6.830172	.0223443	1.618399	.0663807
#2	.0097859	19.75422	6.810991	.0221258	1.616800	.0666357
#3	.0097575	19.86432	6.745149	.0229075	1.603734	.0666787

Elem	Sr4077
Units	ppm
Avg	.6220117
Stddev	.0044874
%RSD	.7214313
#1	.6178139
#2	.6267412
#3	.6214799

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3871.851	78044.70	13793.28	2516.240	4019.074
Stddev	2.855	231.15	60.21	12.854	3.767
%RSD	.0737495	.2961820	.4364933	.5108388	.0937271
#1	3870.836	78311.61	13723.91	2527.540	4015.864
#2	3875.076	77911.08	13831.95	2502.256	4023.221
#3	3869.643	77911.40	13823.98	2518.924	4018.137

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-04 Acquired: 2/2/2025 14:25:37 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6326 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097733	-.001854	.0851397	.0149902	.0014453	39.41588	.2432093
Stddev	.0011613	.000557	.0012503	.0026048	.0011659	.13159	.0011393
%RSD	11.88256	30.04428	1.468562	17.37684	80.66675	.3338602	.4684318
#1	.0091884	-.002293	.0842382	.0176771	.0010088	39.53343	.2427699
#2	.0111108	-.001227	.0865671	.0124760	.0005607	39.27372	.2423552
#3	.0090207	-.002040	.0846138	.0148176	.0027665	39.44048	.2445028

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047696	.0017203	12.38049	.0968871	.0128698	.0214976	18.88803
Stddev	.0000359	.0000668	.02334	.0015171	.0001872	.0014887	.09004
%RSD	.7535860	3.885745	.1884967	1.565831	1.454240	6.924996	.4767205
#1	.0047613	.0016701	12.40727	.0985492	.0130001	.0231954	18.97384
#2	.0048090	.0016947	12.36451	.0955768	.0126553	.0204153	18.79428
#3	.0047385	.0017962	12.36968	.0965354	.0129540	.0208822	18.89598

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7510869	4.069868	.0455489	.0020956	.2508933	.0351436	.0817547
Stddev	.0015623	.022774	.0003982	.0002046	.2884223	.0012029	.0015012
%RSD	.2080119	.5595879	.8742073	9.763645	114.9582	3.422761	1.836186
#1	.7528188	4.084218	.0451667	.0023309	-.037342	.0364862	.0833445
#2	.7506583	4.081777	.0455186	.0019596	.539502	.0341640	.0803615
#3	.7497836	4.043608	.0459613	.0019963	.250519	.0347807	.0815582

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.413907	3.652194	.0740259	.0019964	4.073683	7.222191	.0045123
Stddev	.044778	.005747	.0001308	.0003915	.010391	.052760	.0010758
%RSD	1.855009	.1573473	.1766439	19.60810	.2550845	.7305321	23.84222
#1	2.446025	3.653566	.0739255	.0022012	4.070696	7.281238	.0036030
#2	2.362757	3.645886	.0739786	.0015451	4.065113	7.179678	.0042341
#3	2.432940	3.657131	.0741738	.0022431	4.085241	7.205655	.0057000

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-04 Acquired: 2/2/2025 14:25:37 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6326 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9252465	.0367964	.0886428
Stddev	.0027548	.0013063	.0004259
%RSD	.2977407	3.550186	.4804975
#1	.9281553	.0383010	.0887786
#2	.9249073	.0361373	.0881655
#3	.9226770	.0359509	.0889843

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3830.030	74735.13	13745.54	2442.388	4373.399
Stddev	8.369	262.79	63.52	7.328	6.929
%RSD	.2185001	.3516276	.4621318	.3000493	.1584387
#1	3829.241	74439.11	13693.74	2434.150	4379.614
#2	3838.764	74940.90	13726.46	2448.182	4374.655
#3	3822.083	74825.39	13816.41	2444.832	4365.927

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-05 Acquired: 2/2/2025 14:29:39 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6331 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1655440**	**-.013341**	**.3492179**	**.0543676**	**.0202854**	**91.98951**
Stddev	.0012321	.002790	.0015228	.0025017	.0015397	.55293
%RSD	.7442545	20.91338	.4360558	4.601489	7.589953	.6010764
#1	.1648445	-.010681	.3506284	.0527029	.0217922	91.49507
#2	.1669666	-.016245	.3494218	.0572445	.0203493	92.58655
#3	.1648208	-.013097	.3476034	.0531555	.0187149	91.88690

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4585569**	**.0053699**	**.0089515**	**126.6596**	**.2092574**	**.0764592**
Stddev	.0015732	.0000415	.0000674	.7204	.0020216	.0006359
%RSD	.3430804	.7731068	.7524775	.5687481	.9660719	.8316626
#1	.4576751	.0053850	.0090279	126.0279	.2080789	.0771721
#2	.4603733	.0054018	.0089006	127.4441	.2115917	.0759504
#3	.4576224	.0053230	.0089262	126.5068	.2081017	.0762552

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1036411**	**149.5554**	**2.228977**	**30.11662**	**.2425099**	**.0082047**
Stddev	.0017963	.8962	.012603	.20291	.0002189	.0004480
%RSD	1.733210	.5992534	.5654034	.6737425	.0902469	5.459785
#1	.1018496	148.6462	2.219112	29.88924	.2423745	.0077405
#2	.1036316	150.4380	2.243175	30.27925	.2423927	.0082392
#3	.1054422	149.5820	2.224646	30.18137	.2427624	.0086345

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7738864**	**.1960798**	**.6959233**	**6.466659**	**7.643282**	**.6295476**
Stddev	.2984106	.0013640	.0031824	.072734	.021893	.0042204
%RSD	38.55999	.6956482	.4572855	1.124747	.2864324	.6703909
#1	1.109245	.1950051	.6983239	6.474397	7.631936	.6256854
#2	.674760	.1976143	.6971323	6.535214	7.629391	.6340525
#3	.537654	.1956200	.6923136	6.390366	7.668519	.6289050

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-05 Acquired: 2/2/2025 14:29:39 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6331 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030616	F 28.98404	5.732268	.0168753	3.458683	.1971014
Stddev	.0002336	.04051	.030606	.0008905	.016763	.0018345
%RSD	7.628999	.1397577	.5339272	5.276693	.4846705	.9307583
#1	.0028184	29.02948	5.697135	.0178889	3.449068	.1982633
#2	.0032842	28.95172	5.746516	.0165178	3.448941	.1980544
#3	.0030822	28.97093	5.753153	.0162191	3.478039	.1949865

Elem	Sr4077
Units	ppm
Avg	.5531174
Stddev	.0036345
%RSD	.6570992
#1	.5497790
#2	.5569891
#3	.5525839

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3758.179	75478.78	14591.66	2428.840	3887.148
Stddev	13.366	632.44	65.50	9.837	9.888
%RSD	.3556637	.8379093	.4489033	.4049959	.2543675
#1	3742.776	75870.34	14666.98	2430.237	3876.228
#2	3765.026	74749.15	14559.89	2418.380	3889.723
#3	3766.735	75816.85	14548.09	2437.904	3895.494

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-06 Acquired: 2/2/2025 14:33:36 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6332 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3564367**	**-.011921**	**.1589450**	**.0379693**	**.0184192**	**83.15598**	**.2303750**
Stddev	.0016466	.000964	.0005947	.0032748	.0013962	.56969	.0024051
%RSD	.4619512	8.088134	.3741391	8.624775	7.579947	.6850819	1.044000
#1	.3561971	-.011424	.1583385	.0341958	.0191241	83.65807	.2326810
#2	.3581899	-.013032	.1595271	.0400674	.0193224	83.27300	.2305623
#3	.3549231	-.011306	.1589692	.0396446	.0168111	82.53687	.2278817

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037040**	**.0049857**	**21.75375**	**.2664511**	**.0721505**	**.0424447**	**153.3860**
Stddev	.0000279	.0000304	.10461	.0021130	.0004054	.0016697	.8205
%RSD	.7526498	.6094372	.4808596	.7930299	.5619211	3.933724	.5349032
#1	.0036813	.0050190	21.84903	.2666850	.0716824	.0421412	154.0169
#2	.0037351	.0049594	21.77042	.2684374	.0723846	.0442453	153.6828
#3	.0036956	.0049788	21.64182	.2642308	.0723846	.0409477	152.4585

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.635389**	**27.20670**	**.2264751**	**.0051257**	**.5140625**	**.1957368**	**.2873567**
Stddev	.011470	.17401	.0010536	.0004746	.0917845	.0017236	.0049144
%RSD	.7013353	.6395869	.4652042	9.259915	17.85473	.8805838	1.710196
#1	1.646288	27.28510	.2256743	.0055497	.4411559	.1972174	.2930134
#2	1.636454	27.32771	.2276686	.0046130	.4838985	.1938447	.2849186
#3	1.623424	27.00728	.2260823	.0052144	.6171331	.1961484	.2841380

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.027816**	**3.791898**	**.5937383**	**.0082480**	**4.777873**	**6.482182**	**.0160070**
Stddev	.029560	.014375	.0043288	.0002210	.011948	.037585	.0005428
%RSD	1.457718	.3790933	.7290763	2.679378	.2500756	.5798224	3.391127
#1	2.060173	3.776116	.5976577	.0079962	4.766906	6.524824	.0153812
#2	2.021045	3.804243	.5944652	.0084098	4.790606	6.453867	.0162893
#3	2.002229	3.795335	.5890921	.0083381	4.776107	6.467855	.0163505

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-06 Acquired: 2/2/2025 14:33:36 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6332 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.368893	.2478966	.1326563
Stddev	.037940	.0034991	.0009736
%RSD	.8684080	1.411529	.7339242
#1	4.412238	.2511141	.1335058
#2	4.352727	.2484043	.1328693
#3	4.341714	.2441713	.1315939

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3739.184	75612.47	13387.51	2476.787	4026.718
Stddev	15.823	467.89	57.01	6.029	15.503
%RSD	.4231684	.6188044	.4258250	.2434240	.3850149
#1	3757.374	75553.62	13341.72	2472.925	4043.457
#2	3731.568	75176.79	13369.46	2473.701	4012.852
#3	3728.609	76107.01	13451.36	2483.734	4023.845

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-07 Acquired: 2/2/2025 14:37:33 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6333 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5307844**	**-.035676**	**.7099690**	**.0920573**	**.0411305**	**193.4167**
Stddev	.0059140	.002739	.0060833	.0035079	.0006298	1.9164
%RSD	1.114206	7.677505	.8568448	3.810566	1.531244	.9908319
#1	.5339413	-.036913	.7042019	.0920154	.0405889	191.5519
#2	.5239618	-.037578	.7093795	.0885705	.0418216	193.3171
#3	.5344501	-.032537	.7163257	.0955859	.0409811	195.3809

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7115788**	**.0085568**	**.0182931**	**85.17562**	**.5184943**	**.1957280**
Stddev	.0037616	.0000961	.0000556	.38231	.0007422	.0005168
%RSD	.5286336	1.122725	.3041218	.4488512	.1431468	.2640249
#1	.7102270	.0084504	.0182664	84.92352	.5177282	.1953545
#2	.7158295	.0085827	.0182559	85.61551	.5185448	.1955117
#3	.7086799	.0086372	.0183571	84.98783	.5192100	.1963178

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1187332**	**314.7641**	**5.951382**	**52.68401**	**.5708308**	**.0112307**
Stddev	.0005347	1.3519	.026755	.17512	.0026668	.0003592
%RSD	.4503262	.4295093	.4495585	.3324002	.4671790	3.198113
#1	.1192478	313.7170	5.936270	52.53920	.5692003	.0108369
#2	.1181805	316.2904	5.982273	52.87864	.5693838	.0113150
#3	.1187713	314.2850	5.935601	52.63419	.5739083	.0115403

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.931573**	**.3680524**	**.8501469**	**4.835672**	F **17.95319**	**1.254689**
Stddev	.178631	.0014848	.0082878	.002335	.09871	.007526
%RSD	9.247957	.4034097	.9748719	.0482872	.5498322	.5998240
#1	1.959723	.3663735	.8433158	4.833313	17.87750	1.250732
#2	1.740538	.3685911	.8593668	4.837982	17.91724	1.263368
#3	2.094457	.3691926	.8477581	4.835720	18.06484	1.249967

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-07 Acquired: 2/2/2025 14:37:33 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6333 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142294	F 34.80835	6.478447	.0320825	6.086199	.5163831
Stddev	.0004750	.20392	.014048	.0007881	.014488	.0013009
%RSD	3.337945	.5858361	.2168381	2.456597	.2380477	.2519290
#1	.0138438	34.68088	6.481296	.0313667	6.069553	.5165453
#2	.0140844	34.70063	6.490852	.0319537	6.093077	.5175953
#3	.0147599	35.04354	6.463193	.0329271	6.095966	.5150087

Elem	Sr4077
Units	ppm
Avg	.4938513
Stddev	.0021480
%RSD	.4349515
#1	.4917421
#2	.4960361
#3	.4937757

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4302.029	85680.61	15913.93	2809.445	3783.081
Stddev	13.050	196.88	46.90	15.410	14.256
%RSD	.3033414	.2297816	.2946973	.5485022	.3768313
#1	4314.575	85771.56	15919.08	2819.561	3795.387
#2	4302.985	85454.70	15958.04	2791.710	3786.396
#3	4288.528	85815.58	15864.67	2817.064	3767.460

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-08 Acquired: 2/2/2025 14:41:36 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6334 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4992884**	**-.039598**	**.6895051**	**.0749685**	**.0339740**	**170.0618**
Stddev	.0020557	.003589	.0031549	.0036487	.0009174	1.5794
%RSD	.4117296	9.063879	.4575650	4.866923	2.700448	.9287396
#1	.4971957	-.035455	.6919331	.0775003	.0349702	168.2508
#2	.5013050	-.041741	.6859390	.0707862	.0331638	171.1540
#3	.4993646	-.041599	.6906432	.0766189	.0337879	170.7806

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5966787**	**.0104741**	**.0184971**	**73.55236**	**.5122776**	**.1863816**
Stddev	.0068615	.0000365	.0001796	.80747	.0056612	.0010050
%RSD	1.149954	.3487348	.9708948	1.097811	1.105097	.5392074
#1	.5891052	.0105090	.0186334	72.68948	.5057947	.1860985
#2	.6024809	.0104771	.0182936	74.28971	.5162457	.1855485
#3	.5984501	.0104361	.0185643	73.67789	.5147923	.1874977

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1111277**	**278.8659**	**5.129146**	**46.19625**	**.5484198**	**.0023201**
Stddev	.0009078	2.7067	.062465	.45556	.0021430	.0008268
%RSD	.8168546	.9706242	1.217852	.9861433	.3907530	35.63775
#1	.1117735	275.7960	5.062815	45.71795	.5483893	.0024602
#2	.1100898	280.9090	5.186849	46.62503	.5462922	.0030680
#3	.1115197	279.8927	5.137773	46.24575	.5505778	.0014322

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.619343**	**.3637259**	**.7535749**	**3.930409**	F **17.09198**	**1.056944**
Stddev	.093919	.0009082	.0120176	.051590	.07635	.013091
%RSD	5.799813	.2496974	1.594741	1.312582	.4467142	1.238570
#1	1.520402	.3626810	.7401108	3.873520	17.09064	1.041853
#2	1.707268	.3641704	.7632155	3.943549	17.01631	1.065249
#3	1.630360	.3643262	.7573984	3.974159	17.16900	1.063730

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-08 Acquired: 2/2/2025 14:41:36 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6334 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136659	F 32.00438	8.624445	.0329467	6.194050	.4466189
Stddev	.0001551	.13857	.031674	.0006363	.020450	.0074209
%RSD	1.134850	.4329699	.3672582	1.931413	.3301573	1.661580
#1	.0137719	31.94826	8.630694	.0331106	6.191993	.4380500
#2	.0137378	31.90266	8.652529	.0334850	6.215451	.4508742
#3	.0134879	32.16220	8.590112	.0322444	6.174706	.4509324

Elem	Sr4077
Units	ppm
Avg	.4357722
Stddev	.0035300
%RSD	.8100593
#1	.4317108
#2	.4375033
#3	.4381026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4313.039	84063.47	14120.24	2737.980	3819.218
Stddev	2.607	885.81	54.59	26.779	10.984
%RSD	.0604331	1.053742	.3865822	.9780678	.2875893
#1	4313.558	85029.82	14111.42	2768.548	3826.261
#2	4315.347	83289.97	14070.60	2718.655	3824.831
#3	4310.212	83870.63	14178.70	2726.737	3806.562

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-12 Acquired: 2/2/2025 14:45:31 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6343 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0493225	-.004455	.2480667	.0160267	.0058716	76.60877	.1896869
Stddev	.0006198	.001402	.0022764	.0006318	.0007749	.03871	.0003854
%RSD	1.256590	31.47160	.9176641	3.942428	13.19678	.0505352	.2031987
#1	.0489609	-.006043	.2473604	.0166376	.0050765	76.61624	.1895555
#2	.0489685	-.003386	.2506126	.0160666	.0059139	76.64321	.1901209
#3	.0500382	-.003937	.2462272	.0153758	.0066245	76.56687	.1893844

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024991	.0014906	5.913974	.1510268	.0182656	.0210179	59.73938
Stddev	.0001195	.0000915	.018419	.0001309	.0001587	.0020028	.08381
%RSD	4.780685	6.137756	.3114561	.0866648	.8688502	9.528889	.1402974
#1	.0024062	.0014752	5.910662	.1508764	.0180982	.0228542	59.74141
#2	.0024572	.0014079	5.933825	.1510885	.0182847	.0213172	59.82215
#3	.0026338	.0015889	5.897435	.1511154	.0184138	.0188823	59.65456

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5069910	13.41642	.0658413	.0024486	1.557407	.1203590	.1698244
Stddev	.0002719	.02260	.0005593	.0000861	.740216	.0028791	.0040985
%RSD	.0536265	.1684455	.8494761	3.516071	47.52874	2.392107	2.413388
#1	.5069587	13.43378	.0652141	.0023750	2.410708	.1176547	.1651731
#2	.5072776	13.42462	.0662883	.0024276	1.087998	.1233858	.1729063
#3	.5067367	13.39087	.0660216	.0025433	1.173516	.1200365	.1713938

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.375003	2.723703	.2327184	.0032993	5.183710	7.367658	.0153422
Stddev	.051286	.002356	.0004176	.0004014	.000623	.058957	.0010012
%RSD	2.159417	.0865115	.1794321	12.16448	.0120245	.8002134	6.525582
#1	2.422245	2.726367	.2328723	.0033821	5.183120	7.301179	.0161743
#2	2.382308	2.721890	.2330372	.0028630	5.184362	7.413599	.0156212
#3	2.320456	2.722854	.2322457	.0036528	5.183649	7.388195	.0142311

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-12 Acquired: 2/2/2025 14:45:31 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6343 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.601469	.1126290	.0515786
Stddev	.022987	.0003748	.0001211
%RSD	.8836010	.3327708	.2347715
#1	2.575576	.1130401	.0516266
#2	2.619469	.1123065	.0514409
#3	2.609362	.1125403	.0516684

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3660.666	72561.64	13353.06	2355.248	4168.236
Stddev	3.440	98.52	101.85	4.416	1.310
%RSD	.0939594	.1357703	.7627515	.1874771	.0314344
#1	3657.085	72574.25	13470.26	2353.502	4166.754
#2	3660.971	72457.43	13286.00	2360.269	4169.241
#3	3663.943	72653.25	13302.92	2351.972	4168.712

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-13 Acquired: 2/2/2025 14:49:32 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6344 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0401321	.0000767	.0832484	.0089312	.0037365	35.63492	.1891154
Stddev	.0026977	.0021261	.0008188	.0037004	.0005568	.26652	.0005669
%RSD	6.721964	2770.691	.9835314	41.43262	14.90215	.7479134	.2997368
#1	.0428029	.0001749	.0841389	.0078801	.0043711	35.47100	.1888848
#2	.0401851	-.002097	.0825281	.0058700	.0033300	35.49132	.1887003
#3	.0374083	.002152	.0830782	.0130435	.0035082	35.94245	.1897612

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022582	.0019169	10.82413	.0921833	.0327807	.0222315	40.44665
Stddev	.0000766	.0000568	.08253	.0003383	.0002661	.0021962	.26857
%RSD	3.390072	2.963832	.7624296	.3669534	.8117555	9.878889	.6640171
#1	.0021785	.0019522	10.75590	.0918233	.0330880	.0196955	40.30231
#2	.0022651	.0019472	10.80064	.0924946	.0326306	.0234960	40.28111
#3	.0023311	.0018514	10.91586	.0922320	.0326236	.0235030	40.75653

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5966717	9.667952	.0707663	.0013758	.5071096	.0653346	.1962088
Stddev	.0037575	.058930	.0005445	.0003476	.0814048	.0007443	.0034284
%RSD	.6297360	.6095371	.7694219	25.26189	16.05271	1.139225	1.747332
#1	.5936222	9.616097	.0713811	.0013736	.4136990	.0651618	.1931124
#2	.5955235	9.655722	.0703450	.0017245	.5447270	.0661501	.1956208
#3	.6008692	9.732037	.0705728	.0010294	.5629028	.0646919	.1998932

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.597591	1.911323	.1523450	.0014124	6.021964	5.119851	.0061618
Stddev	.078770	.002996	.0010140	.0002810	.015151	.040629	.0003428
%RSD	3.032437	.1567607	.6656126	19.89709	.2515933	.7935644	5.562921
#1	2.521158	1.912086	.1513227	.0011814	6.039389	5.119314	.0061521
#2	2.593108	1.913863	.1523619	.0017253	6.014600	5.160746	.0058240
#3	2.678507	1.908018	.1533505	.0013305	6.011902	5.079493	.0065093

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-13 Acquired: 2/2/2025 14:49:32 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6344 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.678000	.0938001	.0518285
Stddev	.016087	.0008642	.0004768
%RSD	.9587002	.9213191	.9200149
#1	1.665560	.0936454	.0515228
#2	1.672272	.0930237	.0515847
#3	1.696167	.0947312	.0523779

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3702.470	71462.13	12543.38	2342.807	4247.817
Stddev	7.733	310.62	93.22	9.130	8.649
%RSD	.2088487	.4346574	.7431778	.3897236	.2035993
#1	3695.170	71814.45	12642.83	2346.692	4237.873
#2	3710.572	71344.14	12529.34	2332.376	4253.584
#3	3701.668	71227.80	12457.99	2349.352	4251.994

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-14 Acquired: 2/2/2025 14:53:33 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6345 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0443276**	**-.004036**	**.1125988**	**.0129867**	**.0044686**	**62.56114**	**.3454298**
Stddev	.0018570	.002418	.0015037	.0013257	.0007596	.23408	.0028716
%RSD	4.189326	59.90146	1.335478	10.20809	16.99930	.3741689	.8313150
#1	.0464597	-.003311	.1128479	.0120618	.0039244	62.60871	.3452447
#2	.0434593	-.002064	.1139624	.0123929	.0041449	62.76778	.3483894
#3	.0430638	-.006734	.1109860	.0145055	.0053365	62.30692	.3426552

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027956**	**.0019407**	**12.46640**	**.1515360**	**.0352483**	**.0253952**	**64.64858**
Stddev	.0000947	.0000093	.02786	.0006538	.0002662	.0017829	.18111
%RSD	3.389051	.4776094	.2234651	.4314849	.7551511	7.020595	.2801392
#1	.0027077	.0019322	12.47631	.1507811	.0354295	.0274533	64.66192
#2	.0028960	.0019506	12.48795	.1519045	.0349427	.0244106	64.82265
#3	.0027832	.0019393	12.43494	.1519224	.0353726	.0243217	64.46117

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.032502**	**16.30656**	**.0887834**	**.0025137**	**.6192152**	**.1014960**	**.2434255**
Stddev	.005640	.03598	.0002082	.0002378	.0177347	.0016611	.0017078
%RSD	.5462148	.2206470	.2345145	9.460070	2.864064	1.636586	.7015808
#1	1.032661	16.33731	.0888594	.0026227	.6149495	.1000761	.2453095
#2	1.038060	16.31537	.0885478	.0022409	.6040024	.1010891	.2429882
#3	1.026784	16.26699	.0889429	.0026774	.6386938	.1033227	.2419789

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.949874**	**1.782587**	**.2530048**	**.0022618**	**5.974877**	**6.407141**	**.0112812**
Stddev	.059597	.001774	.0012277	.0004239	.019267	.029440	.0005660
%RSD	1.508838	.0995095	.4852539	18.74210	.3224615	.4594900	5.017309
#1	3.992505	1.784615	.2521490	.0025143	5.995758	6.417378	.0109251
#2	3.975342	1.781324	.2544114	.0017724	5.971083	6.430096	.0119338
#3	3.881774	1.781822	.2524538	.0024987	5.957790	6.373949	.0109846

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-14 Acquired: 2/2/2025 14:53:33 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6345 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.705532**	**.1468543**	**.0892822**
Stddev	.011031	.0009960	.0004765
%RSD	.4077368	.6782247	.5336817
#1	2.701692	.1461950	.0894321
#2	2.717970	.1480000	.0896657
#3	2.696934	.1463678	.0887488

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3712.885**	**71213.40**	**13409.37**	**2324.049**	**4202.146**
Stddev	2.487	99.03	28.77	11.573	9.134
%RSD	.0669841	.1390594	.2145664	.4979692	.2173537
#1	3710.056	71325.76	13439.10	2333.793	4192.300
#2	3713.872	71175.66	13407.34	2327.096	4203.796
#3	3714.727	71138.80	13381.66	2311.257	4210.342

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-15 Acquired: 2/2/2025 14:57:32 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6346 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0400427**	**-.003097**	**.0865456**	**.0129439**	**.0071303**	**46.60846**	**.2591700**
Stddev	.0019941	.000895	.0012002	.0020770	.0016052	.13219	.0023439
%RSD	4.979872	28.91333	1.386745	16.04590	22.51198	.2836078	.9043734
#1	.0378226	-.002080	.0854942	.0142020	.0053355	46.62380	.2609333
#2	.0416817	-.003444	.0878532	.0140831	.0076270	46.73230	.2600665
#3	.0406237	-.003767	.0862894	.0105466	.0084285	46.46927	.2565102

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024832**	**.0018503**	**9.887678**	**.1266958**	**.0368280**	**.0415652**	**60.85368**
Stddev	.0000830	.0000586	.023568	.0003318	.0002264	.0006019	.23166
%RSD	3.344367	3.166648	.2383552	.2618582	.6147207	1.448007	.3806766
#1	.0025335	.0019160	9.906229	.1264729	.0365981	.0422383	60.93153
#2	.0023873	.0018034	9.895646	.1265375	.0368353	.0410787	61.03638
#3	.0025287	.0018315	9.861159	.1270771	.0370507	.0413787	60.59313

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.111948**	**15.22620**	**.0892267**	**.0026439**	**.6063665**	**.0949022**	**.2174726**
Stddev	.003309	.06671	.0006231	.0004682	.2306995	.0010536	.0027263
%RSD	.2976139	.4381058	.6982987	17.71010	38.04622	1.110222	1.253615
#1	1.112980	15.28912	.0887538	.0026028	.6699521	.0954256	.2205397
#2	1.114619	15.23321	.0889936	.0021975	.3505427	.0936894	.2165531
#3	1.108246	15.15626	.0899327	.0031312	.7986049	.0955918	.2153250

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.196920**	**2.230108**	**.2377326**	**.0019694**	**4.357267**	**6.272406**	**.0094117**
Stddev	.024450	.003969	.0015303	.0003181	.013690	.077010	.0010234
%RSD	.3945511	.1779574	.6437190	16.15052	.3141790	1.227766	10.87351
#1	6.204818	2.232655	.2375687	.0019866	4.354713	6.284463	.0085079
#2	6.216445	2.225536	.2393383	.0022785	4.345034	6.190078	.0092042
#3	6.169498	2.232134	.2362908	.0016431	4.372054	6.342677	.0105229

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-15 Acquired: 2/2/2025 14:57:32 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6346 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.658821	.1138158	.0580551
Stddev	.046576	.0003282	.0003229
%RSD	1.751760	.2884078	.5561130
#1	2.692059	.1141919	.0579513
#2	2.605586	.1136685	.0584171
#3	2.678819	.1135871	.0577969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3740.091	71716.25	13469.35	2351.402	4219.278
Stddev	10.837	134.63	237.05	6.508	7.818
%RSD	.2897487	.1877195	1.759932	.2767645	.1852988
#1	3731.718	71763.49	13343.14	2350.129	4212.103
#2	3752.331	71564.37	13742.81	2345.625	4227.611
#3	3736.224	71820.88	13322.11	2358.453	4218.121

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-16 Acquired: 2/2/2025 15:01:31 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6347 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0248948	-.003299	.1425832	.0232647	.0093372	84.82717	.2780592
Stddev	.0001928	.002324	.0014087	.0011939	.0001634	.53988	.0014106
%RSD	.7743427	70.43107	.9879993	5.131674	1.749732	.6364480	.5073173
#1	.0251102	-.000954	.1436185	.0245850	.0093498	84.21329	.2764440
#2	.0247386	-.003344	.1431522	.0222612	.0094938	85.04013	.2786846
#3	.0248357	-.005600	.1409790	.0229478	.0091678	85.22810	.2790492

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027652	.0017762	6.494403	.2224777	.0306580	.0057647	87.82675
Stddev	.0000249	.0000871	.038557	.0007368	.0002276	.0023035	.43986
%RSD	.9018645	4.905782	.5936991	.3311928	.7422599	39.95900	.5008293
#1	.0027465	.0017900	6.451879	.2218730	.0306270	.0074279	87.32009
#2	.0027935	.0018556	6.504243	.2222618	.0308995	.0031355	88.04919
#3	.0027555	.0016830	6.527087	.2232984	.0304475	.0067307	88.11097

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7955366	21.32441	.0923077	.0032530	.8056535	.1422705	.1904328
Stddev	.0048509	.05670	.0002277	.0000600	.3722206	.0003730	.0031918
%RSD	.6097685	.2658947	.2467174	1.843050	46.20108	.2621692	1.676073
#1	.7899856	21.26941	.0924366	.0033220	.4893928	.1419152	.1868794
#2	.7989609	21.38267	.0920447	.0032139	1.215841	.1426590	.1930567
#3	.7976633	21.32115	.0924417	.0032231	.711727	.1422374	.1913621

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.655215	1.235084	.3404708	.0013830	2.873801	8.515312	.0197334
Stddev	.030800	.000794	.0019116	.0004458	.014232	.037617	.0005462
%RSD	1.159974	.0642618	.5614634	32.23517	.4952220	.4417626	2.767921
#1	2.620124	1.235091	.3384036	.0013860	2.864597	8.552921	.0197992
#2	2.677769	1.235875	.3408341	.0009357	2.866614	8.515330	.0202438
#3	2.667753	1.234287	.3421747	.0018273	2.890194	8.477686	.0191573

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: Q1246-16 Acquired: 2/2/2025 15:01:31 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: A6347 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.150330**	**.1910444**	**.0462610**
Stddev	.005553	.0023214	.0002089
%RSD	.1337918	1.215094	.4515267
#1	4.145572	.1883850	.0460255
#2	4.156431	.1920829	.0463336
#3	4.148988	.1926651	.0464239

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3637.613**	**71544.05**	**13244.17**	**2368.500**	**4091.693**
Stddev	10.410	212.49	16.83	7.631	4.758
%RSD	.2861793	.2970012	.1270668	.3221682	.1162755
#1	3628.800	71741.40	13227.42	2376.206	4087.971
#2	3649.098	71571.64	13244.02	2368.348	4097.053
#3	3634.940	71319.12	13261.08	2360.947	4090.055

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCV035 Acquired: 2/2/2025 15:05:31 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV035 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.858309**	**4.926736**	**24.19654**	**4.929083**	**4.979525**	**419.1833**
Stddev	.006500	.001097	.03965	.011275	.002043	2.0083
%RSD	.1337933	.0222712	.1638488	.2287370	.0410182	.4791047
#1	4.856369	4.926386	24.17487	4.924364	4.979092	419.7497
#2	4.865559	4.925856	24.24230	4.941950	4.981749	420.8476
#3	4.853000	4.927965	24.17246	4.920934	4.977734	416.9526

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.42029**	**.4909201**	**2.446965**	**415.9388**	**15.48257**	**2.460236**
Stddev	.07654	.0052064	.004481	6.0123	.12122	.002771
%RSD	.7345030	1.060545	.1831409	1.445482	.7829684	.1126309
#1	10.47819	.4955199	2.444732	422.5265	15.61434	2.460142
#2	10.33351	.4919726	2.452124	410.7478	15.45758	2.463052
#3	10.44916	.4852678	2.444039	414.5421	15.37578	2.457513

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.58645**	**422.6421**	**15.43850**	**411.8284**	**2.455840**	**1.294216**
Stddev	.21708	5.3394	.19456	4.4924	.003124	.011255
%RSD	1.392718	1.263337	1.260205	1.090846	.1272050	.8696681
#1	15.82663	428.8075	15.66249	417.0156	2.456859	1.307203
#2	15.52847	419.5326	15.31163	409.2060	2.458328	1.288161
#3	15.40426	419.5864	15.34137	409.2634	2.452334	1.287285

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**400.5358**	**2.489249**	**15.67239**	**160.9420**	**4.879522**	F **5.948043**
Stddev	5.7387	.026409	.20507	2.1832	.021001	.053549
%RSD	1.432758	1.060919	1.308507	1.356537	.4303817	.9002860
#1	407.1519	2.519212	15.90258	163.4616	4.856406	6.004833
#2	397.5489	2.479177	15.50917	159.6105	4.897425	5.940830
#3	396.9066	2.469359	15.60542	159.7538	4.884736	5.898465

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCV035 Acquired: 2/2/2025 15:05:31 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV035 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.910705**	**4.943792**	**4.925027**	**4.906450**	**5.058021**	**5.312647**
Stddev	.009269	.016916	.067738	.005956	.065809	.075560
%RSD	.1887465	.3421749	1.375387	.1213872	1.301090	1.422266
#1	4.903390	4.940491	5.003238	4.905791	5.130073	5.399345
#2	4.921129	4.928770	4.886830	4.912708	5.042905	5.260819
#3	4.907596	4.962116	4.885015	4.900851	5.001085	5.277778

Elem	Sr4077
Units	ppm
Avg	**5.338930**
Stddev	.048843
%RSD	.9148379
#1	5.394050
#2	5.301029
#3	5.321710

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2888.360**	**58997.44**	**11680.20**	**1906.505**	**3199.293**
Stddev	6.444	551.78	118.68	18.319	7.591
%RSD	.2230934	.9352533	1.016076	.9608829	.2372581
#1	2883.244	58364.87	11562.90	1885.377	3192.714
#2	2886.240	59247.73	11677.49	1916.171	3197.566
#3	2895.597	59379.71	11800.21	1917.967	3207.598

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCB035 Acquired: 2/2/2025 15:09:50 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB035 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012184**	**-.000840**	**.0004070**	**.0013629**	**.0003225**	**-.000219**	**.0045344**
Stddev	.0023090	.001534	.0003683	.0013113	.0015908	.008042	.0003303
%RSD	189.5215	182.5864	90.49874	96.22027	493.2838	3667.832	7.283376
#1	.0032376	-.000068	-.000002	.0028553	.0013150	-.009506	.0048117
#2	-.001299	-.002607	.000712	.0008382	.0011648	.004364	.0046226
#3	.001717	.000154	.000511	.0003951	-.001512	.004484	.0041690

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000287**	**.0001514**	**.0114202**	**.0004022**	**.0004392**	**.0012856**	**.0134411**
Stddev	.0000528	.0001436	.0065978	.0000857	.0000811	.0027755	.0025635
%RSD	183.6924	94.84441	57.77301	21.31698	18.46901	215.8973	19.07197
#1	-.000014	.0000004	.0139384	.0003060	.0005250	-.000194	.0147269
#2	.000013	.0002864	.0039342	.0004303	.0003638	.004487	.0151073
#3	.000088	.0001675	.0163881	.0004705	.0004288	-.000436	.0104892

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004633**	**-.001434**	**-.000116**	**.0004585**	**-.235137**	**-.001343**	**.0017655**
Stddev	.0005488	.011533	.000351	.0004938	.217999	.003201	.0015398
%RSD	118.4602	804.3539	302.1562	107.6982	92.71134	238.4327	87.21951
#1	.0000278	.002362	.000071	.0004346	-.483700	-.004222	.0029489
#2	.0002823	-.014386	-.000521	.0009638	-.076420	.002105	.0000246
#3	.0010796	.007723	.000101	-.000023	-.145291	-.001910	.0023229

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3151463**	**-.001392**	**-.001401**	**.0004694**	**.0020335**	**.0012346**	**-.000583**
Stddev	.0508679	.000293	.000719	.0002432	.0034347	.0008303	.000273
%RSD	16.14105	21.02243	51.35454	51.80324	168.9091	67.25126	46.83886
#1	.2602113	-.001443	-.001433	.0006826	.0026391	.0013567	-.000268
#2	.3606180	-.001077	-.002104	.0002046	-.001664	.0003500	-.000740
#3	.3246095	-.001656	-.000666	.0005211	.005125	.0019970	-.000742

Reviewed By:Eman
On:2/5/2025 9:21:39 AM
Inst Id :P4

Sample Name: CCB035 Acquired: 2/2/2025 15:09:50 Type: Unk
Method: EPA SFAM01.0(v61) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB035 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0008087	-.004729	.0001380
Stddev	.0006274	.000941	.0000377
%RSD	77.57485	19.90677	27.28081
#1	.0007315	-.004666	.0000967
#2	.0002235	-.003821	.0001470
#3	.0014711	-.005700	.0001704

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3599.771	70112.14	12302.02	2345.145	4330.161
Stddev	34.327	159.17	96.61	7.310	41.094
%RSD	.9535867	.2270223	.7853280	.3117095	.9490250
#1	3594.727	69991.57	12225.98	2337.555	4325.966
#2	3568.244	70292.56	12269.35	2352.139	4291.325
#3	3636.340	70052.28	12410.73	2345.742	4373.192

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Prep Standard - Chemical Standard Summary

Order ID : Q1246

Test : Metals CLP12

Prepbatch ID : PB166472,

Sequence ID/Qc Batch ID: LB134523,

Standard ID :
MP83500,MP84041,MP84063,MP84070,MP84204,MP84206,MP84207,MP84208,MP84209,MP84210,MP84211,MP84212,MP84213,MP84214,MP84215,MP84216,MP84218,MP84219,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5298,M5393,M5429,M5466,M5472,M5476,M5496,M5497,M5513,M5519,M5565,M5658,M5697,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5817,M5819,M5875,M5942,M5959,M5961,M5962,M5976,M5977,M5978,M5985,M5990,M6021,M6023,M6025,M6028,M6030,M6032,M6077,M6121,M6125,M6126,M6127,M6128,M6144,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP84063	01/14/2025	02/14/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/16/2025

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5298 + 0.20000ml of M5476 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M6128 + 0.40000ml of M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5961 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5497 + 10.00000ml of M5519 + 10.00000ml of M5806 + 10.00000ml of M6127 + 2.00000ml of M5942 + 4.00000ml of M6032 + 34.24000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP84070	01/14/2025	02/14/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/16/2025

FROM 2.50000ml of M5962 + 50.00000ml of M5565 + 50.00000ml of M5990 + 147.50000ml of MP83500 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP84204	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2480	ICP AES STD 6 ISM01.3	MP84206	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 4.00000ml of M5289 + 4.00000ml of M5298 + 4.00000ml of M5497 + 4.00000ml of M6127 + 4.00000ml of M6144 + 30.00000ml of MP84204 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP84207	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5476 + 0.50000ml of M5815 + 0.50000ml of M5817 + 12.50000ml of M5519 + 12.50000ml of M5819 + 12.50000ml of M6128 + 12.50000ml of M6144 + 13.75000ml of M5697 + 14.50000ml of M5298 + 14.50000ml of M5496 + 14.50000ml of M5658 + 2.00000ml of M5513 + 22.50000ml of M5497 + 22.50000ml of M6127 + 5.00000ml of M5393 + 5.00000ml of M5802 + 5.00000ml of M5875 + 5.00000ml of M6077 + 303.50000ml of MP84204 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1005	ICPAES ISM01.2(S4)	MP84208	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 250.00000ml of MP84204 + 250.00000ml of MP84207 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP84209	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 25.00000ml of MP84207 + 75.00000ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP84210	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 12.50000ml of MP84207 + 87.50000ml of MP84204 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP84211	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5298 + 0.20000ml of M5476 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5977 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M6128 + 0.40000ml of M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5961 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5497 + 10.00000ml of M5519 + 10.00000ml of M6127 + 10.00000ml of M6144 + 2.00000ml of M5978 + 4.00000ml of M6032 + 34.24000ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP84212	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.50000ml of MP84211 + 99.50000ml of MP84204 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP84213	01/24/2025	02/05/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5466 + 0.25000ml of M5218 + 0.25000ml of M5472 + 10.00000ml of M5295 + 89.77500ml of MP84204 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP84214	01/24/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 25.00000ml of M5130 + 225.00000ml of MP84204 = 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
905	ICP AES ICSAB SOLN	MP84215	01/24/2025	02/07/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 25.00000ml of M5130 + 25.00000ml of M5223 + 200.00000ml of MP84204 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1119	ICPAES ISM01.2(CCV)	MP84216	01/24/2025	02/04/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 0.75000ml of M5497 + 0.75000ml of M6127 + 1.22500ml of M5496 + 1.25000ml of M5298 + 1.25000ml of M6144 + 19.77500ml of MP84204 + 25.00000ml of MP84207 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP84218	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP84219	01/24/2025	02/24/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 01/27/2025

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	01/31/2025	05/20/2024 / jaswal	04/20/2021 / bin	M5130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	01/31/2025	05/20/2024 / jaswal	04/20/2021 / bin	M5223

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	04/20/2021 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	020422	02/04/2025	05/02/2023 / jaswal	06/15/2022 / jaswal	M5298

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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 #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	10/12/2022 / bin	09/19/2022 / bin	M5393

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	061322	06/13/2025	03/06/2023 / bin	03/01/2023 / bin	M5466

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	01/14/2025 / Jaswal	03/16/2023 / jaswal	M5472

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	03/18/2023 / bin	03/17/2023 / bin	M5497

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	05/30/2023 / jaswal	05/26/2023 / jaswal	M5565

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	01/16/2025 / JANVI	02/22/2024 / Jaswal	M5977

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-5 / CLP Spike Standard 5	V2-MEB742037	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5990

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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R: 02/22/24 M5986 M5987, M5988, M5989-M5990

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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:	CLPP-SPK-5
Lot Number:	V2-MEB742037
Matrix:	5% (v/v) HNO_3
Value / Analyte(s):	100 µg/mL ea: Antimony,
	50 µg/mL ea: Selenium, Cadmium, Thallium,
	40 µg/mL ea: Arsenic,
	20 µg/mL ea: Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.7 µg/mL	Arsenic, As	40.00 ± 0.26 µg/mL
Cadmium, Cd	49.99 ± 0.22 µg/mL	Lead, Pb	19.99 ± 0.09 µg/mL
Selenium, Se	50.00 ± 0.23 µg/mL	Thallium, Tl	50.00 ± 0.22 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

R: 8/5/24

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

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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		

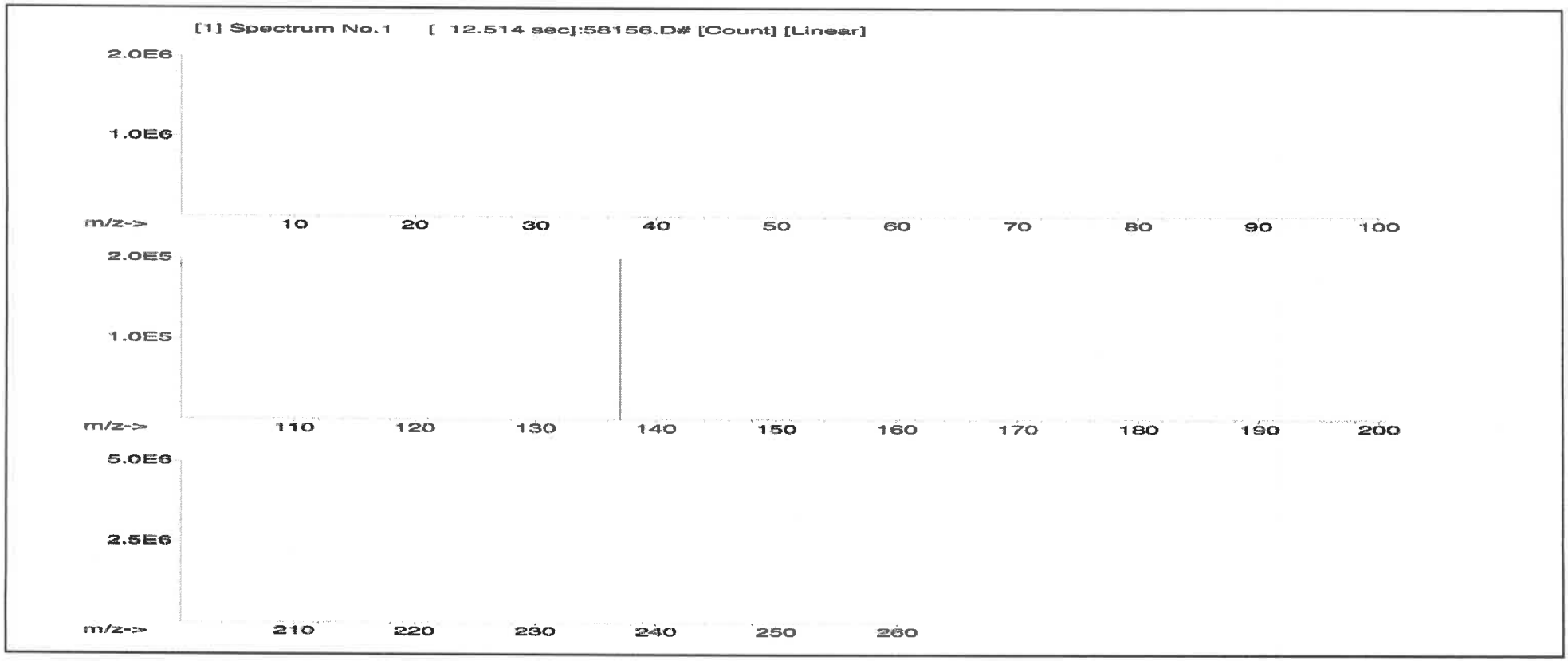
Giovanni Esposito

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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Certified Reference Material CRM

R 8/15/24

M6028

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

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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		

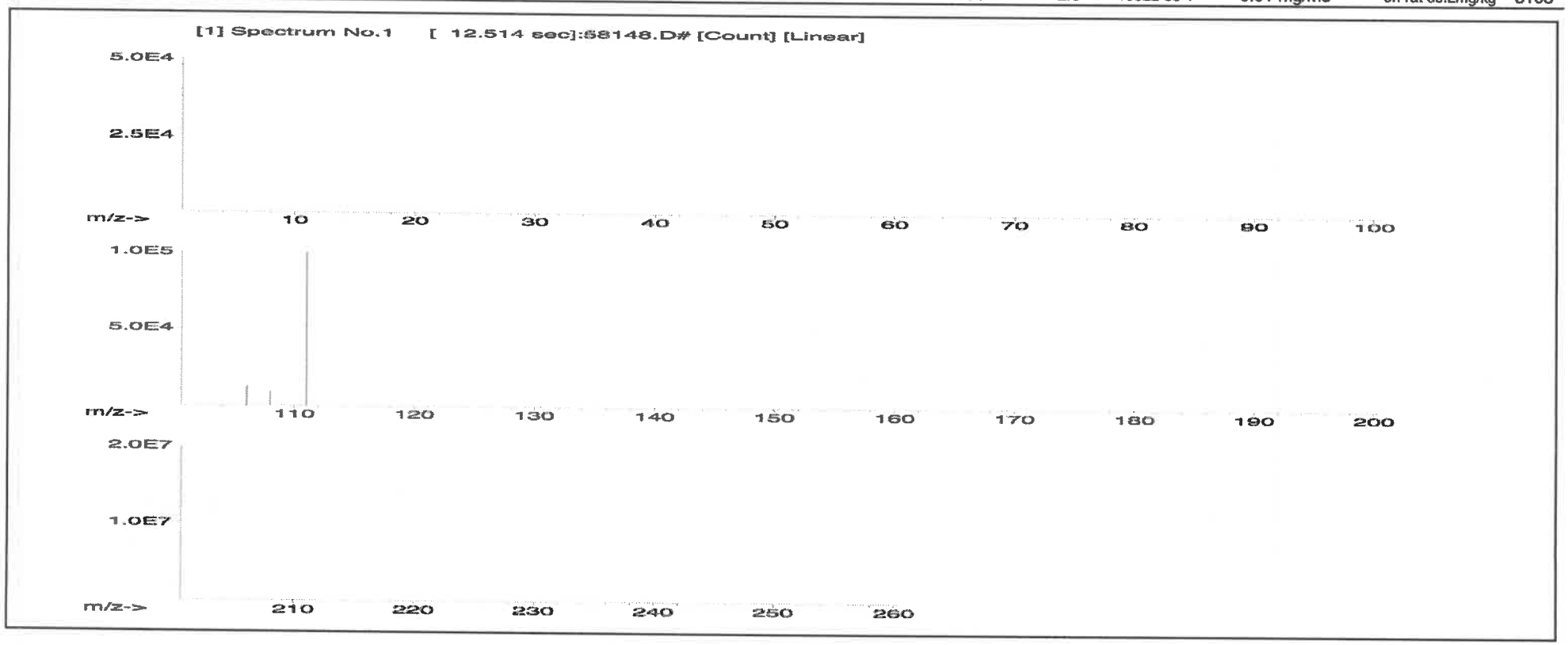
Aleah O'Brady

Formulated By:	Aleah O'Brady	070124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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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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Certificate of Analysis

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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:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

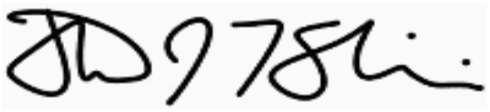
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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

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- 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

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

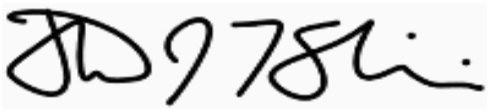
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certified Reference Material CRM

R: 8/5/24 M6025

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AR-1539 Certificate Number
https://Absolutestandards.com

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

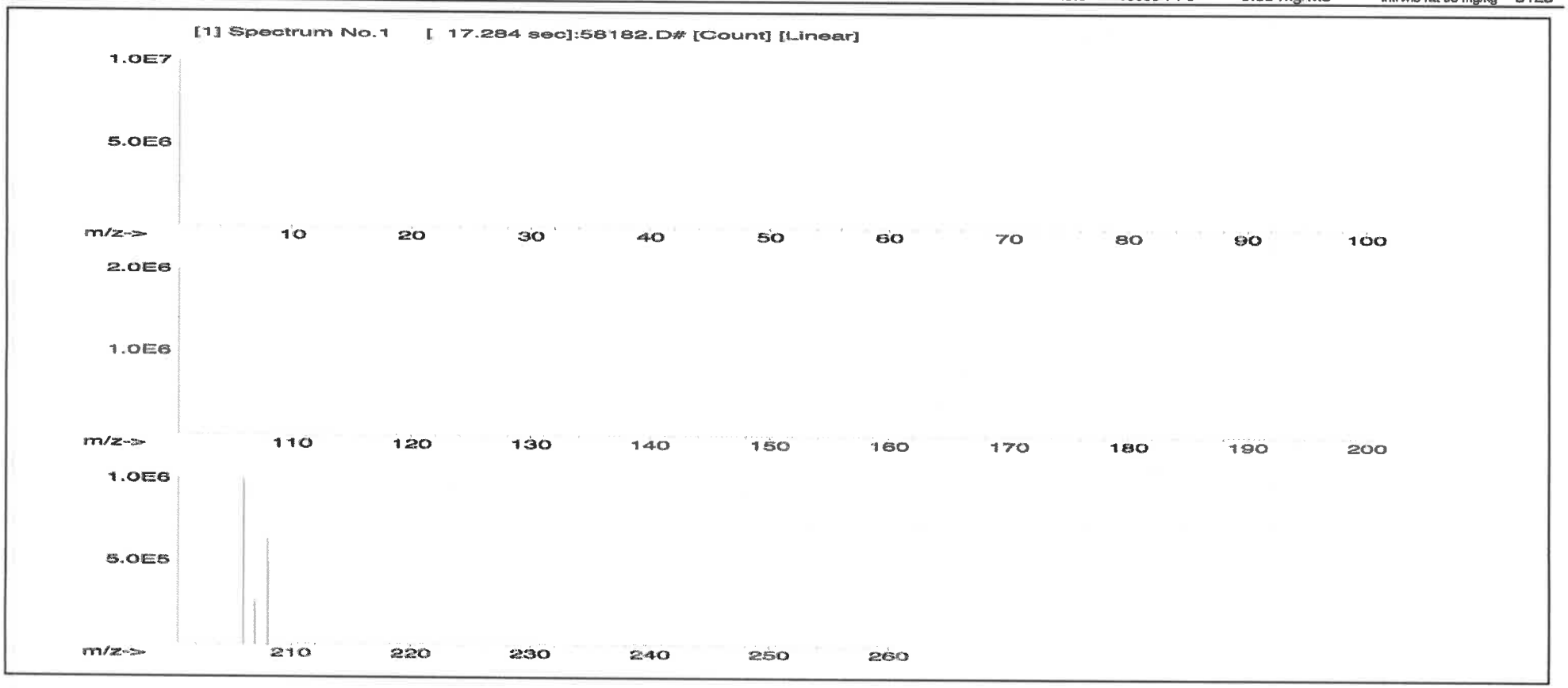
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		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.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5289 R: 07/12/22 (BH)

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

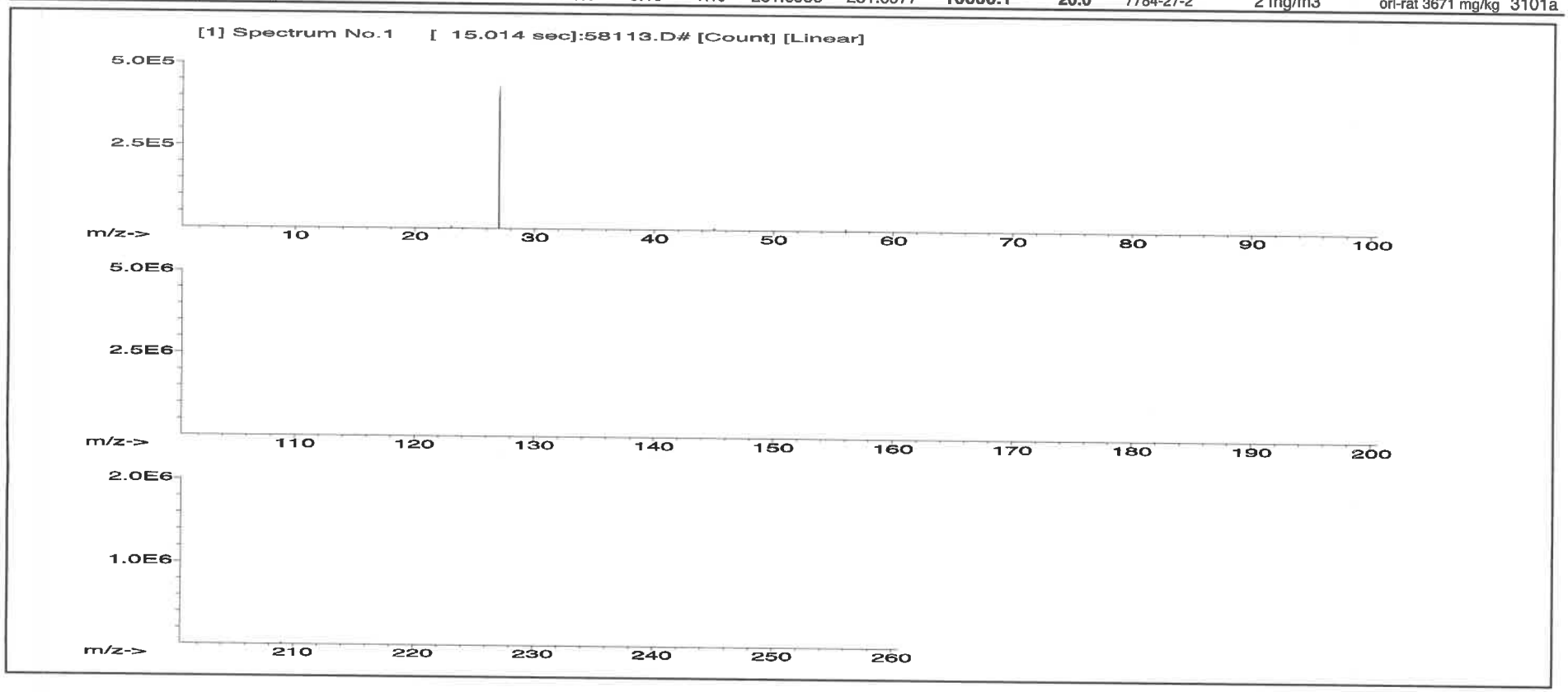
Part Number: 58113
Lot Number: 070622
Description: Aluminum (Al)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

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

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALD012021A1	10000	99.999	0.10	7.10	281.6956	281.6977	**10000.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	T	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

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

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

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

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

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

SJ 6/15/22

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

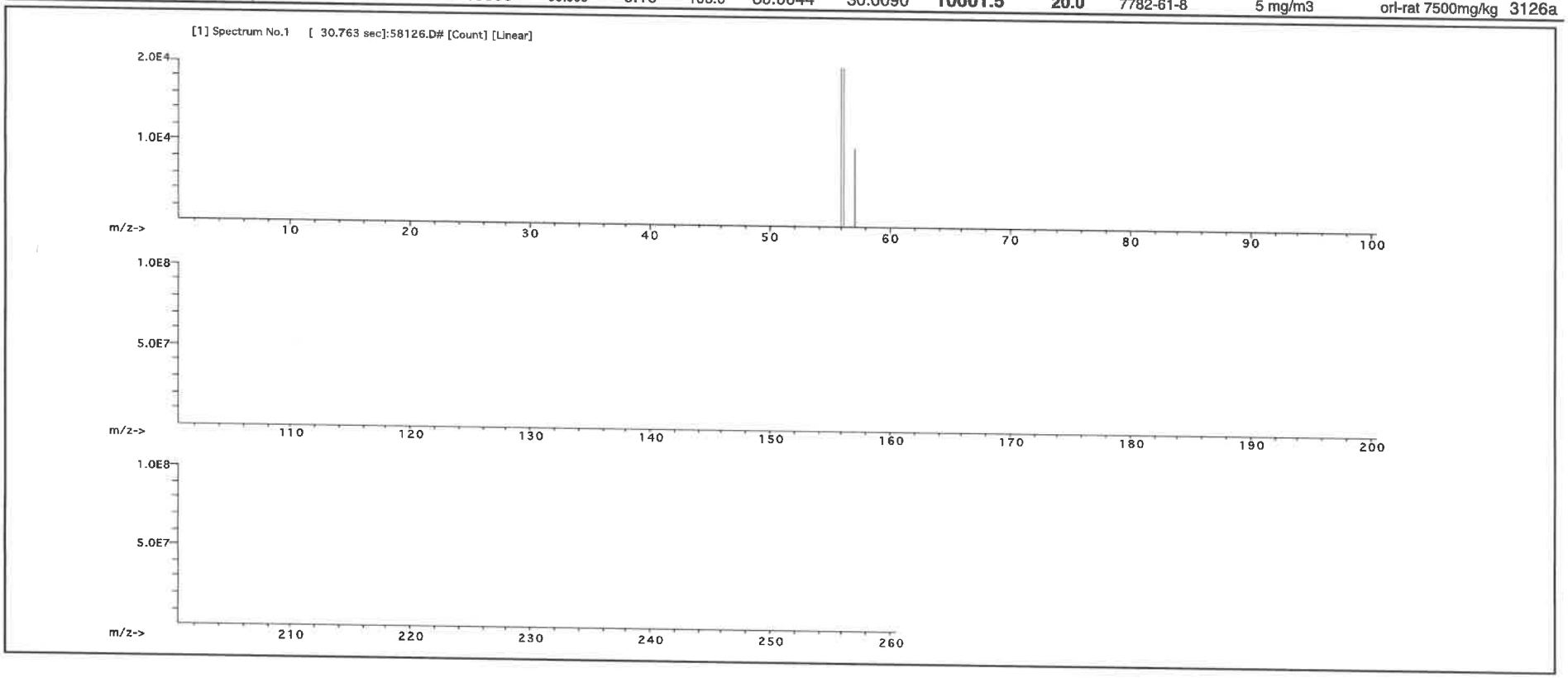
Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20370011	Nitric Acid	
5.0%	150.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.058	Flask Uncertainty		

Giovanni Esposito
Formulated By: Giovanni Esposito 020422

Pedro Rentas
Reviewed By: Pedro L. Rentas 020422

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN346	221035107	10000	99.999	0.10	100.0	30.0044	30.0090	**10001.5**	**20.0**	7782-61-8	5 mg/m3	orl-rat 7500mg/kg	3126a



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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	<0.5	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

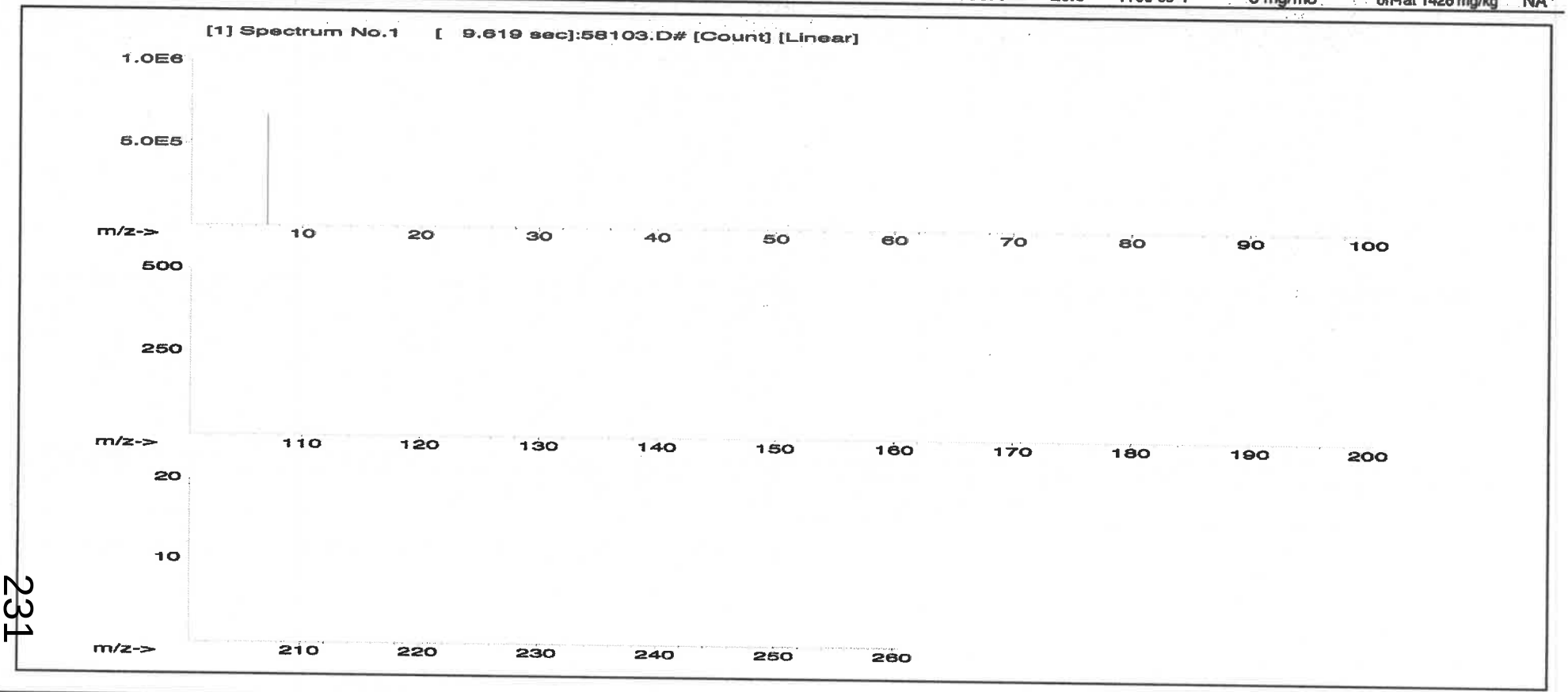
Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 | 0.058 Flask Uncertainty | 5E-05 Balance Uncertainty

		Lot #	
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

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

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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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M 5466
R: 03/01/23 BH

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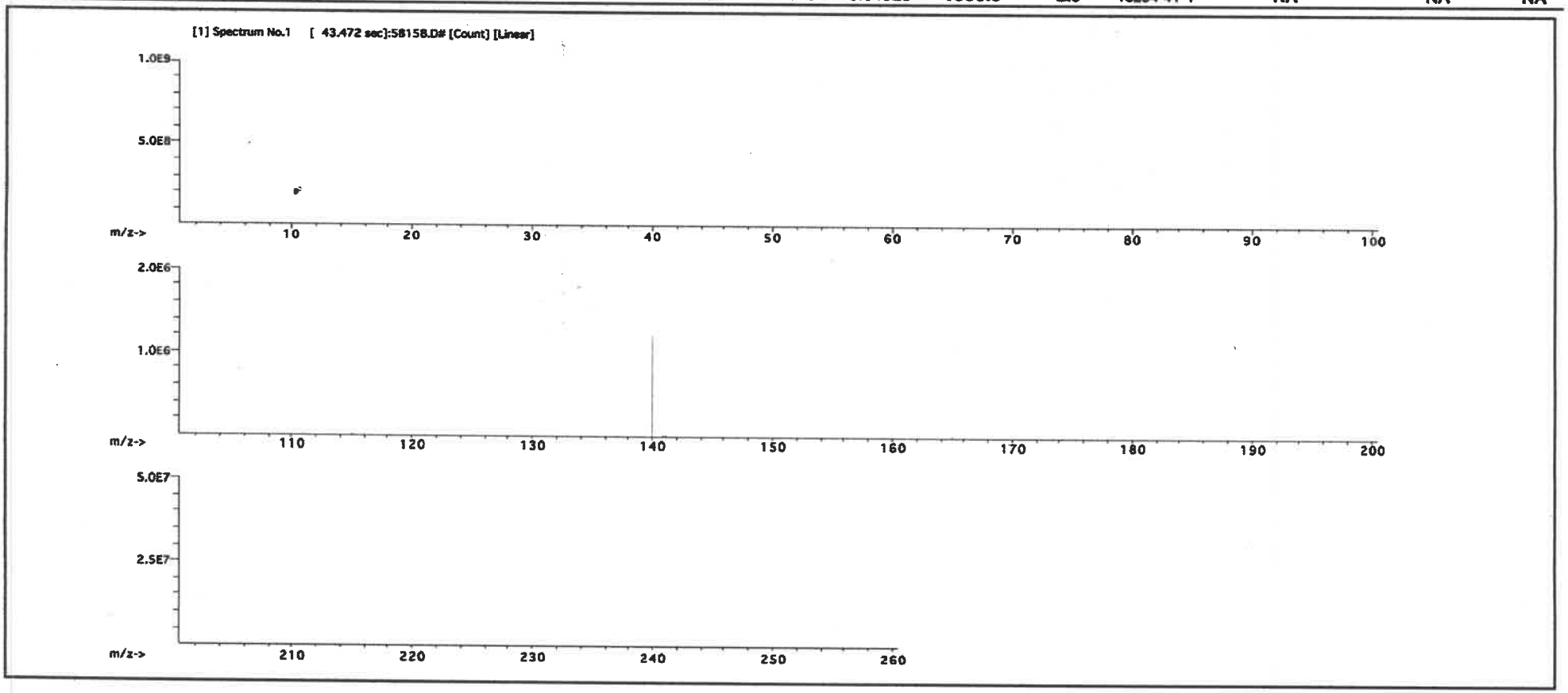
CERTIFIED WEIGHT REPORT:

Part Number:	**57058**			**Lot #**	
Lot Number:	**061322**	**Solvent:**	20510011	Nitric Acid	
Description:	**Cerium (Ce)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	061325				
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):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	061322
Reviewed By:	Pedro L. Rentas	061322

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04923	1000.0	2.0	10294-41-4	NA	NA	NA



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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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.
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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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M5496 R 7/20/23

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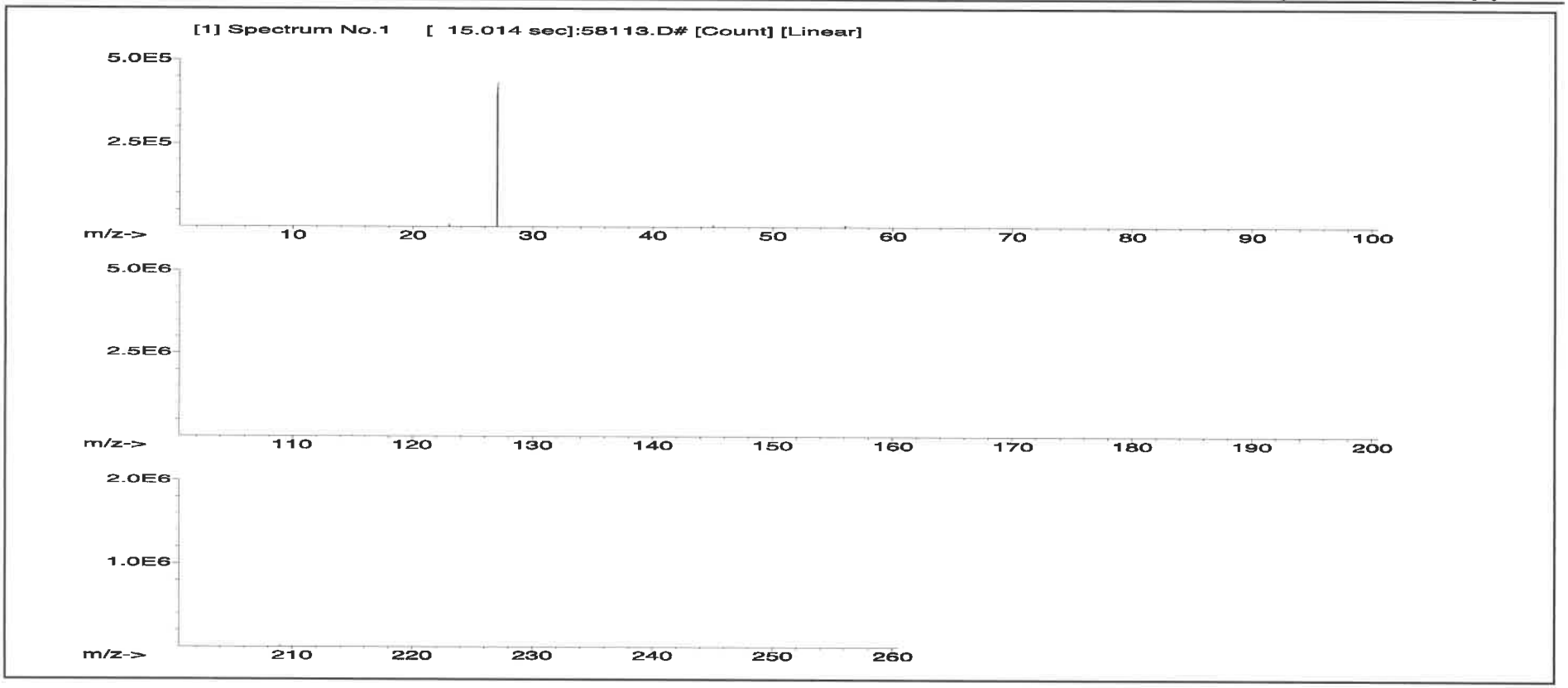
CERTIFIED WEIGHT REPORT:

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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M5497 - M5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

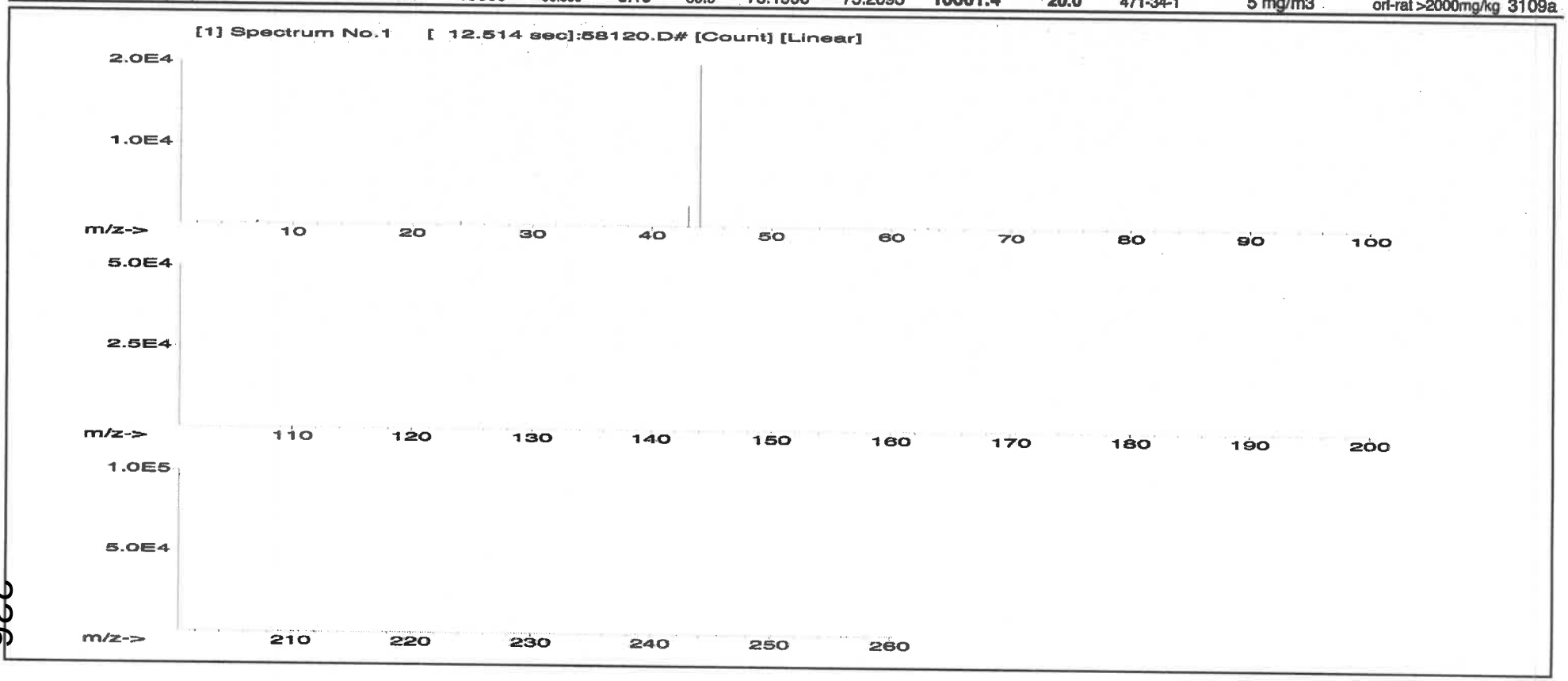
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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
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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MA513 R:03/17/23

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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

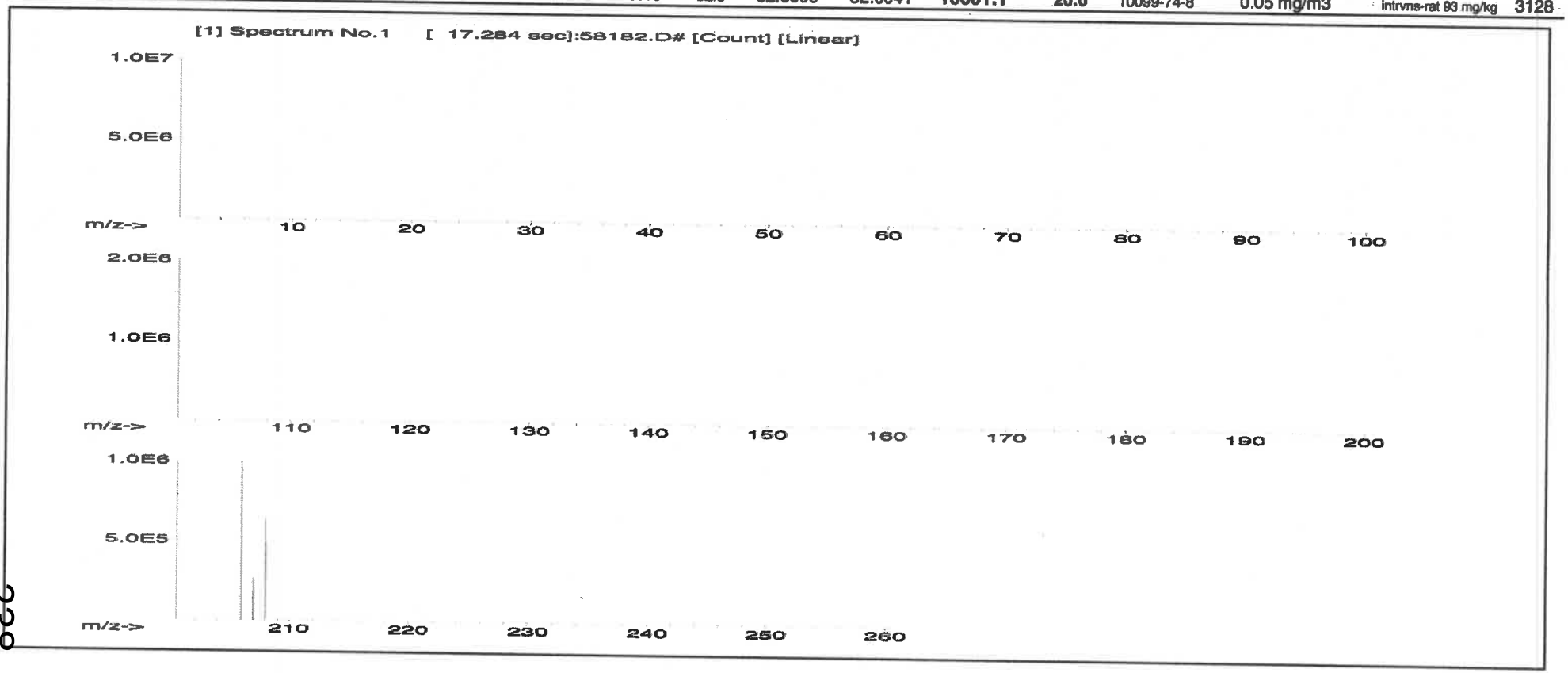
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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



238

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).

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M5519. M5520 BH R:03/17/23

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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

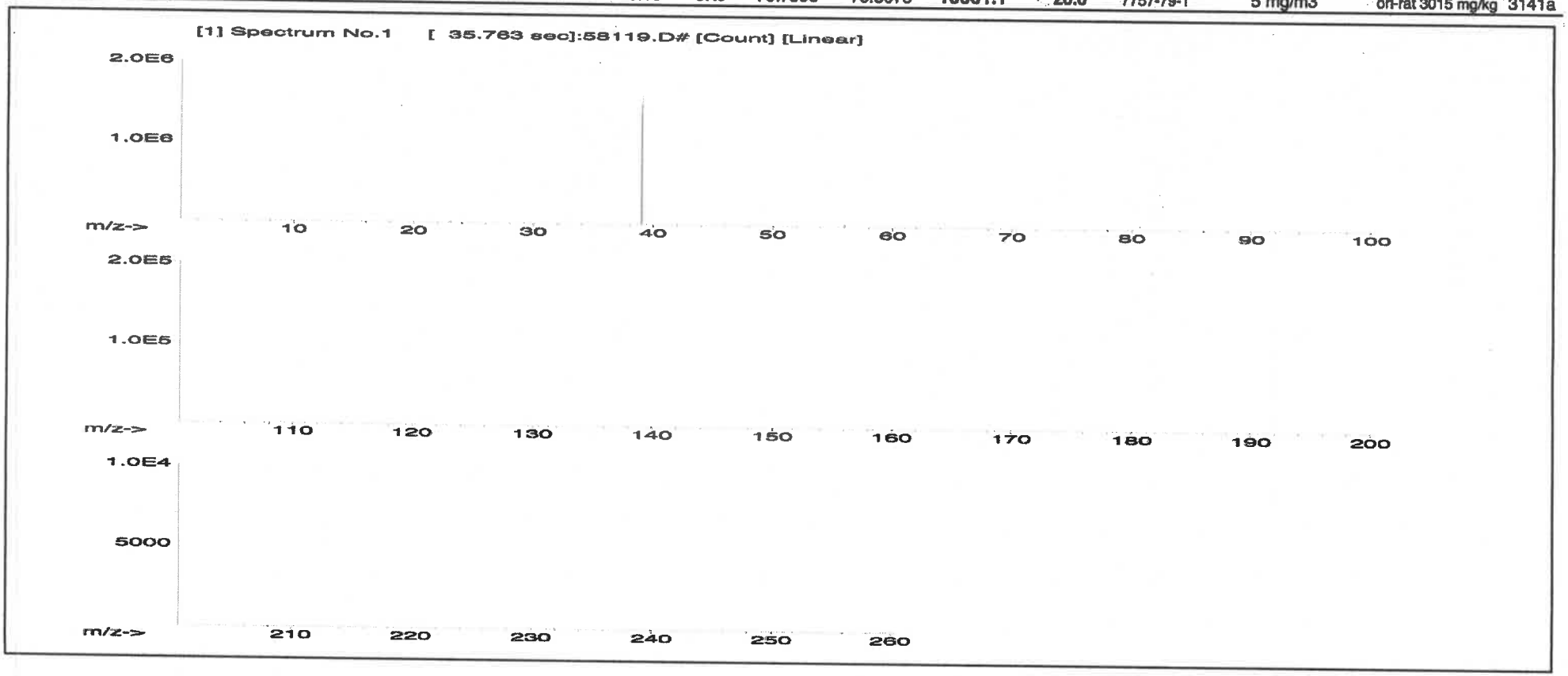
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



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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	<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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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-SPK-1
Lot Number:	T2-MEB721963
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 000 µg/mL ea: Aluminum, Barium,
	1 000 µg/mL ea: Iron,
	500 µg/mL ea: Manganese, Nickel, Vanadium, Zinc, Cobalt,
	250 µg/mL ea: Copper,
	200 µg/mL ea: Chromium,
	50 µg/mL ea: Beryllium, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Chromium, Cr	200.0 ± 1.1 µg/mL
Cobalt, Co	500.0 ± 2.4 µg/mL	Copper, Cu	250.0 ± 1.0 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method I with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (t) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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 (t) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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

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M5658 R! 8/25/23

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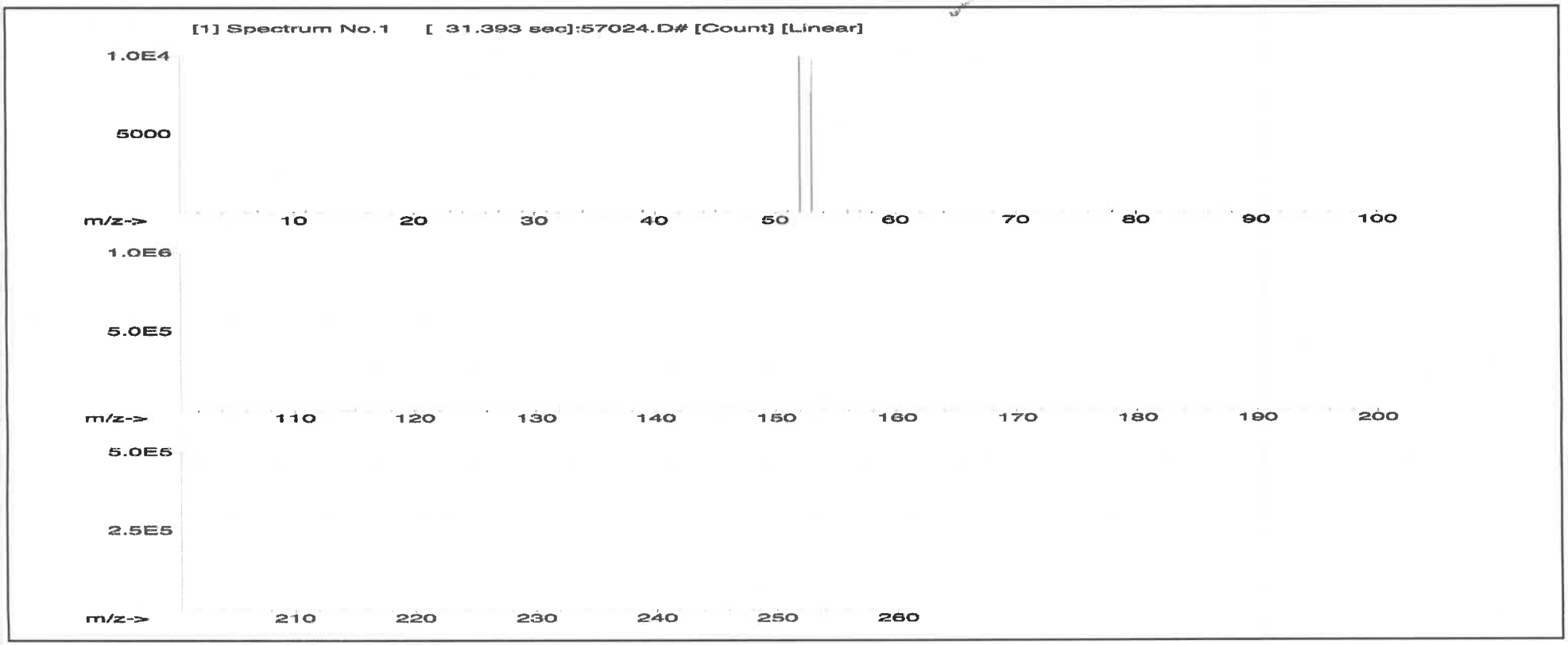
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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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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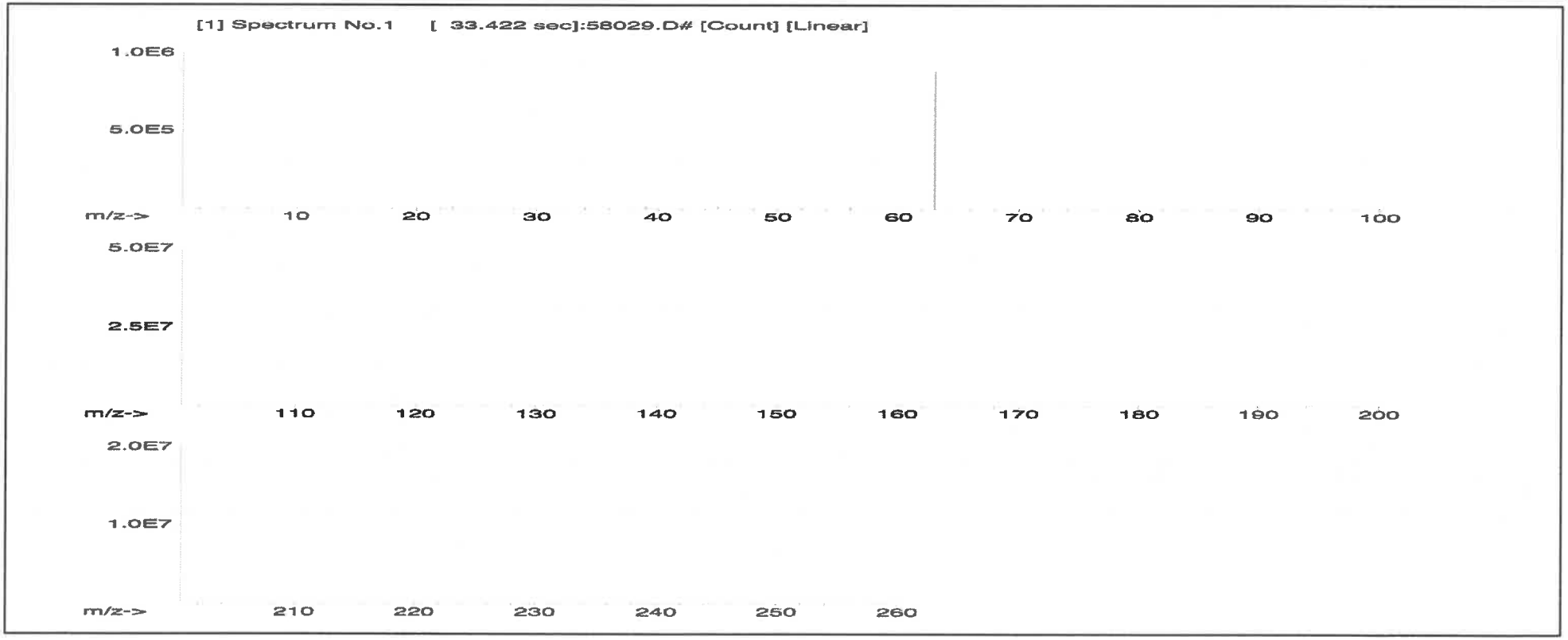
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**58029**	24002546	Nitric Acid		
Lot Number:	**102523**				
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	102526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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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	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
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Certified Reference Material CRM

R: 02/09/24 M5798

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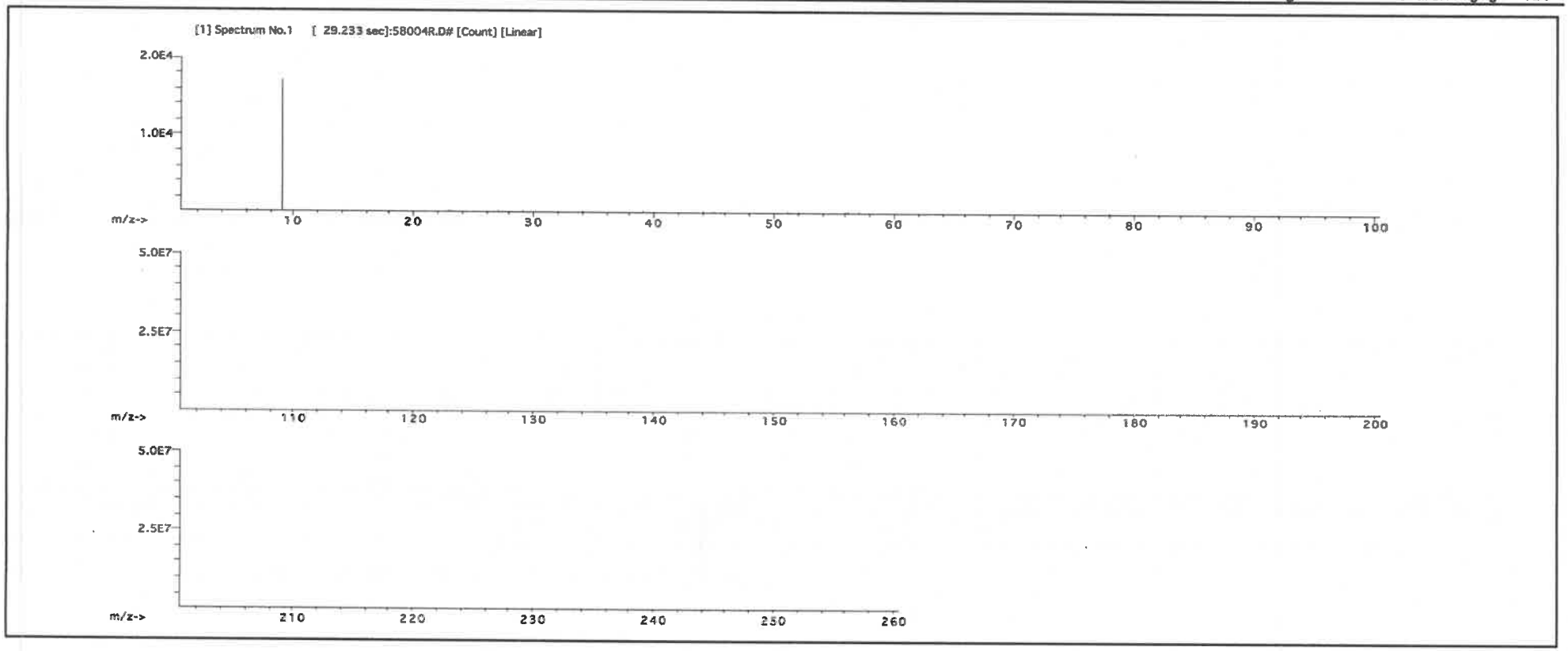
CERTIFIED WEIGHT REPORT:

		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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* 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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252

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

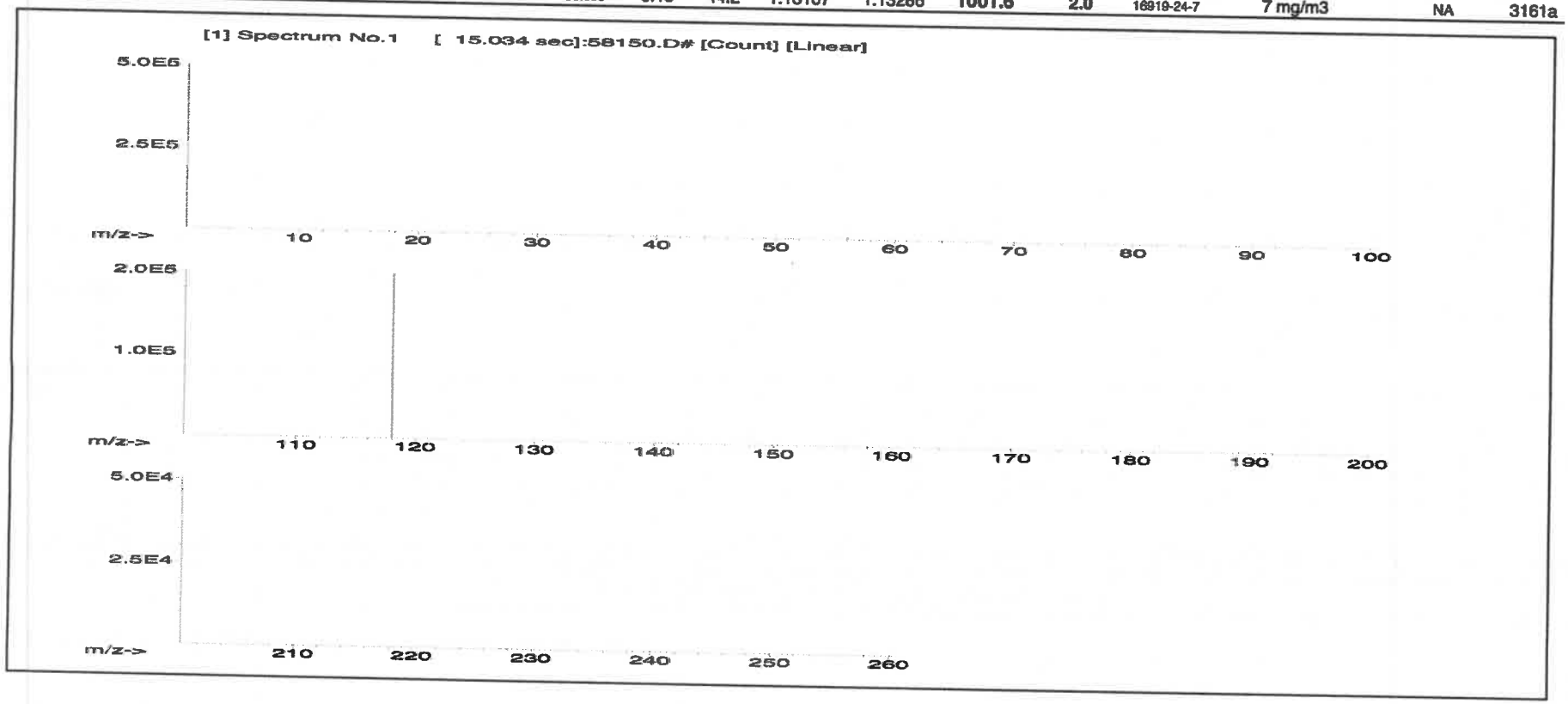
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	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



253

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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* 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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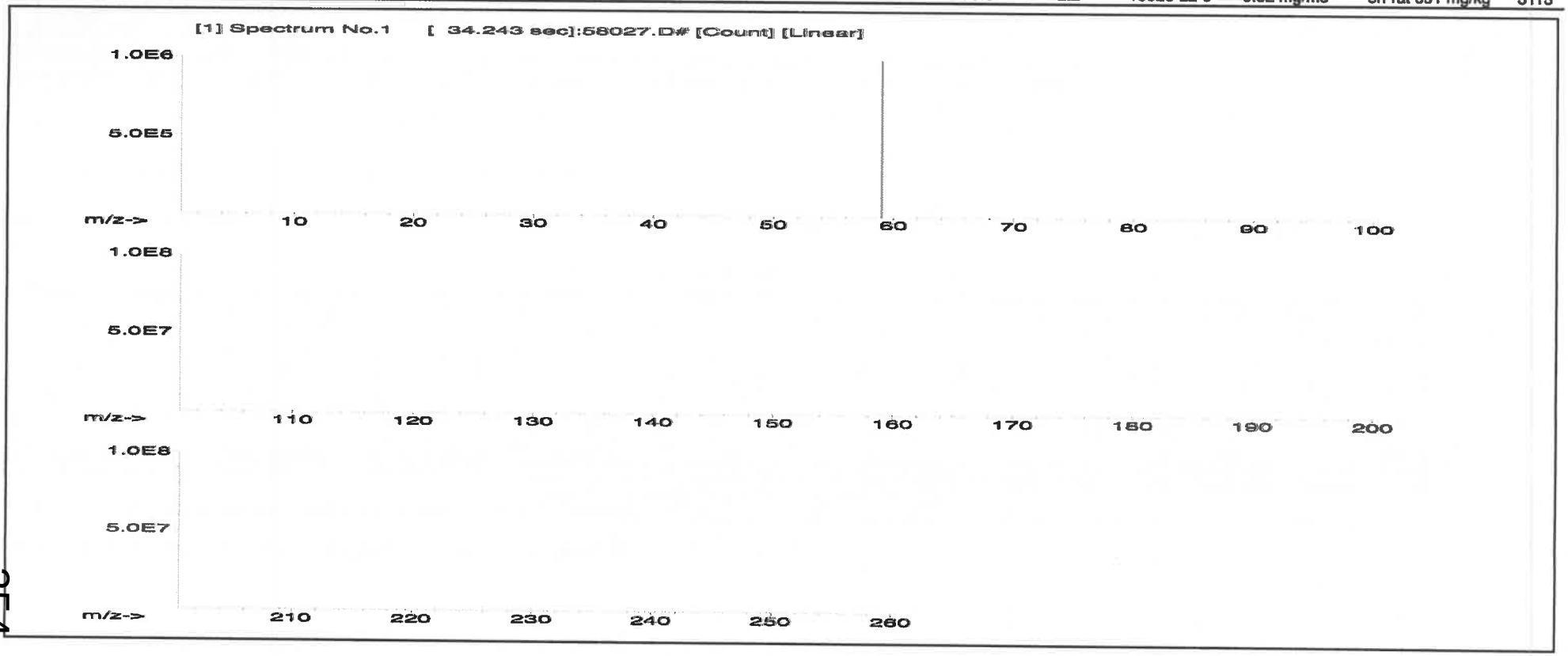
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**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



254

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.

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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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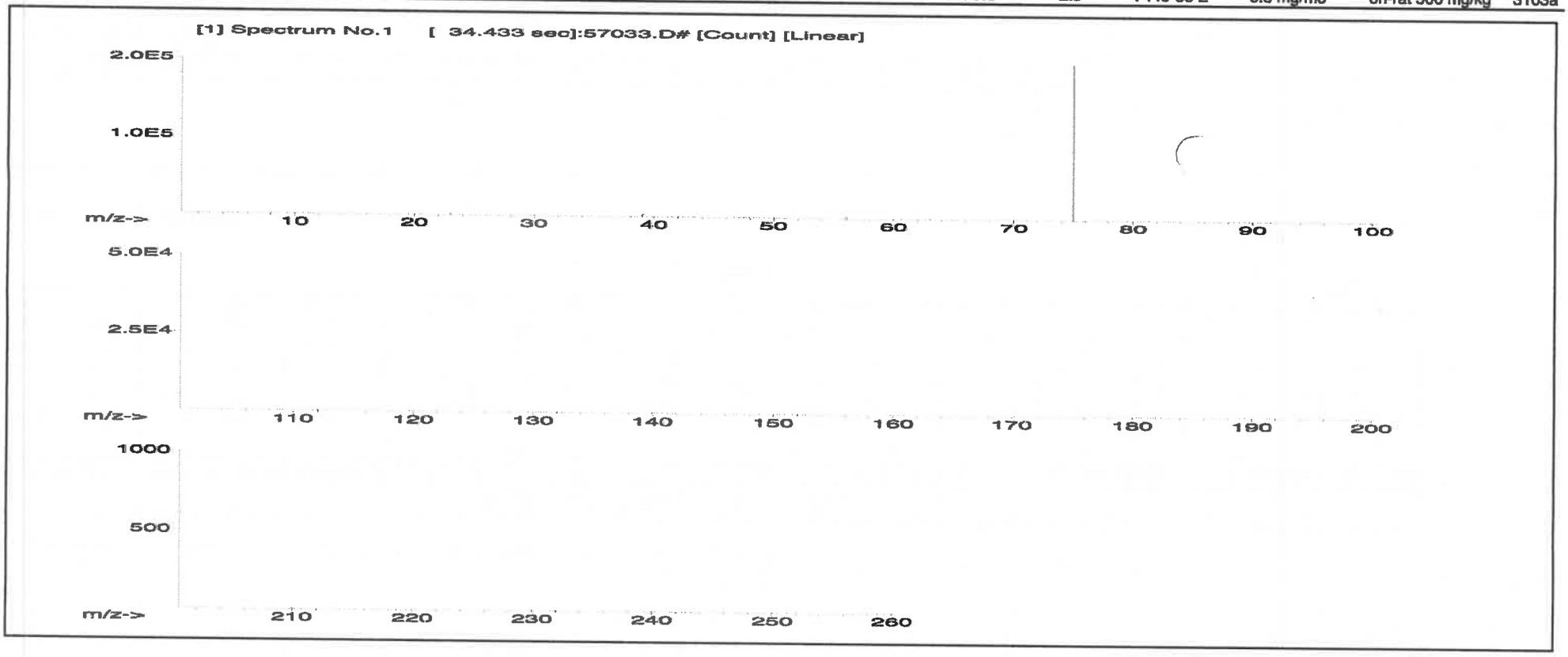
256

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



257

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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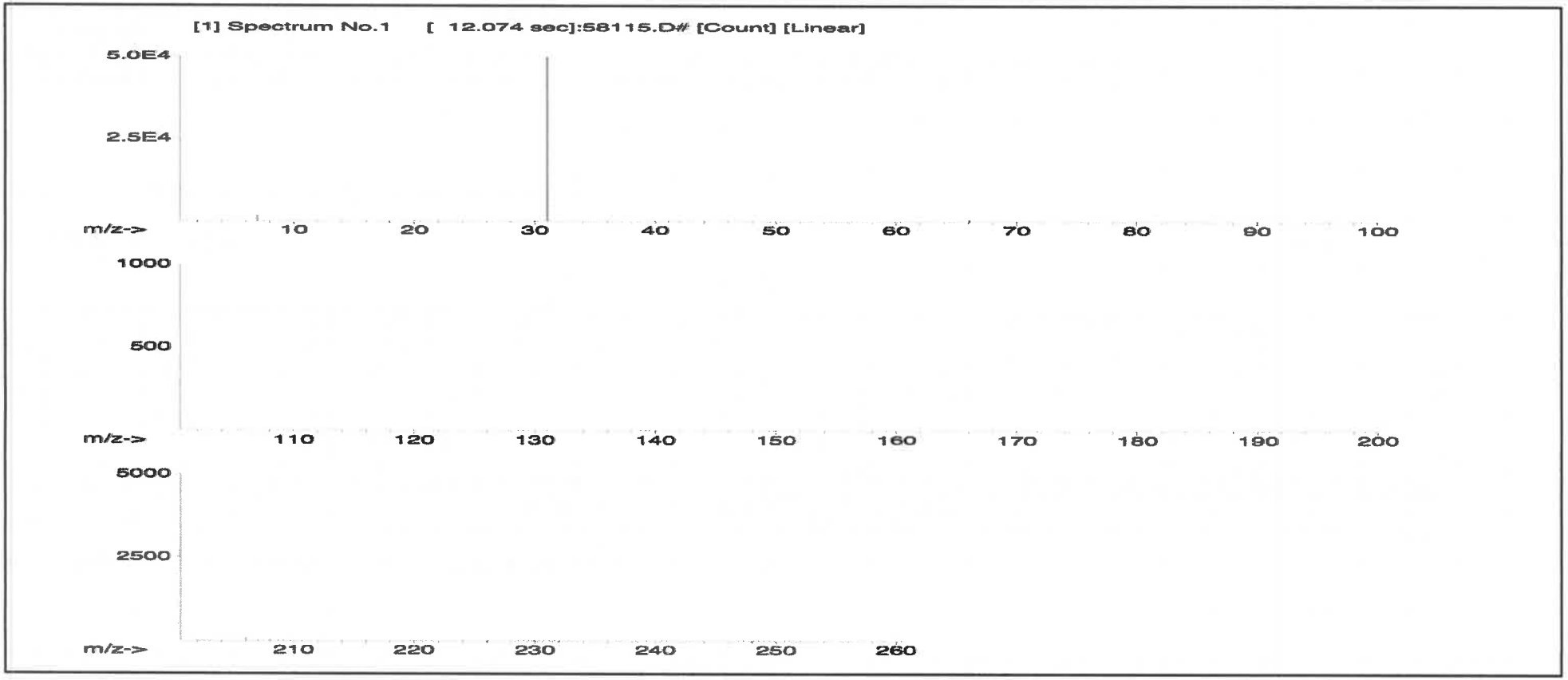
258

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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260

CERTIFIED WEIGHT REPORT:

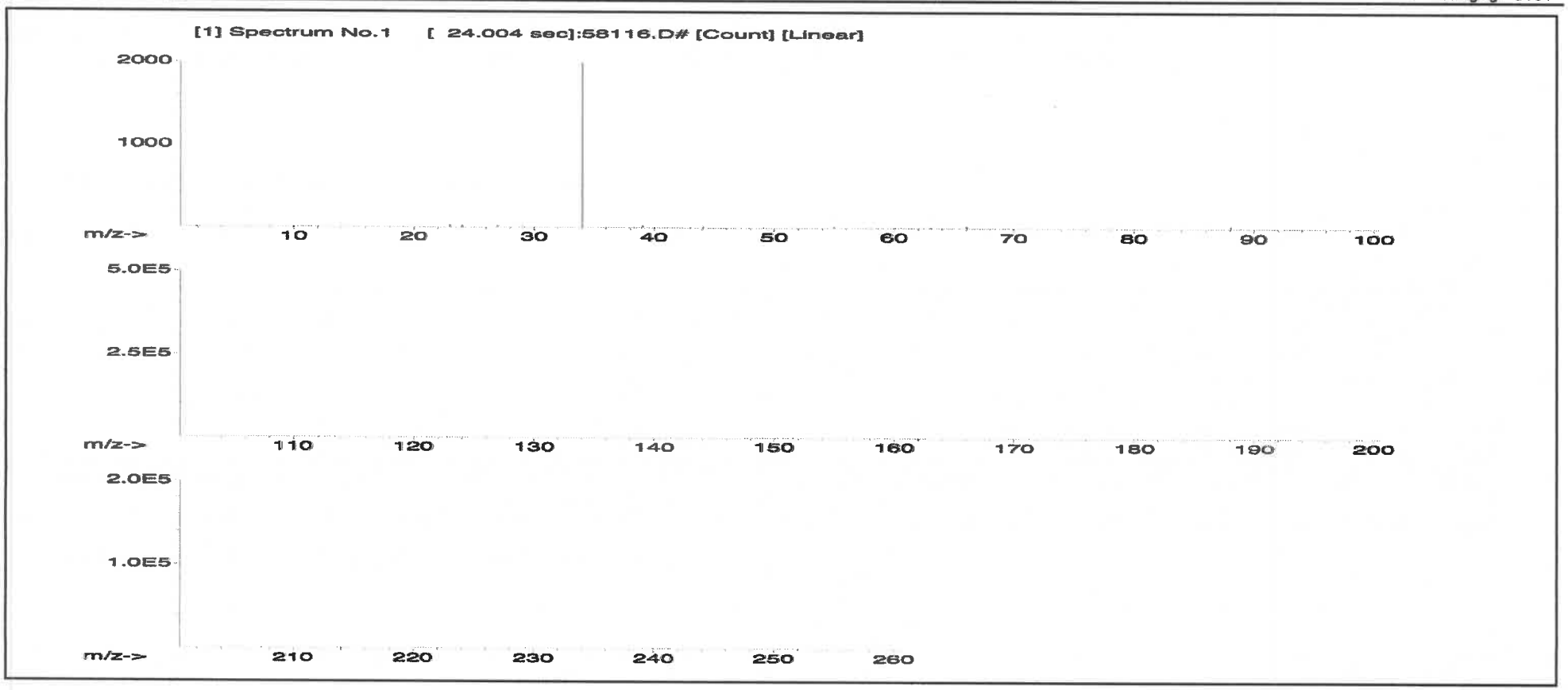
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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



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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	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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262

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

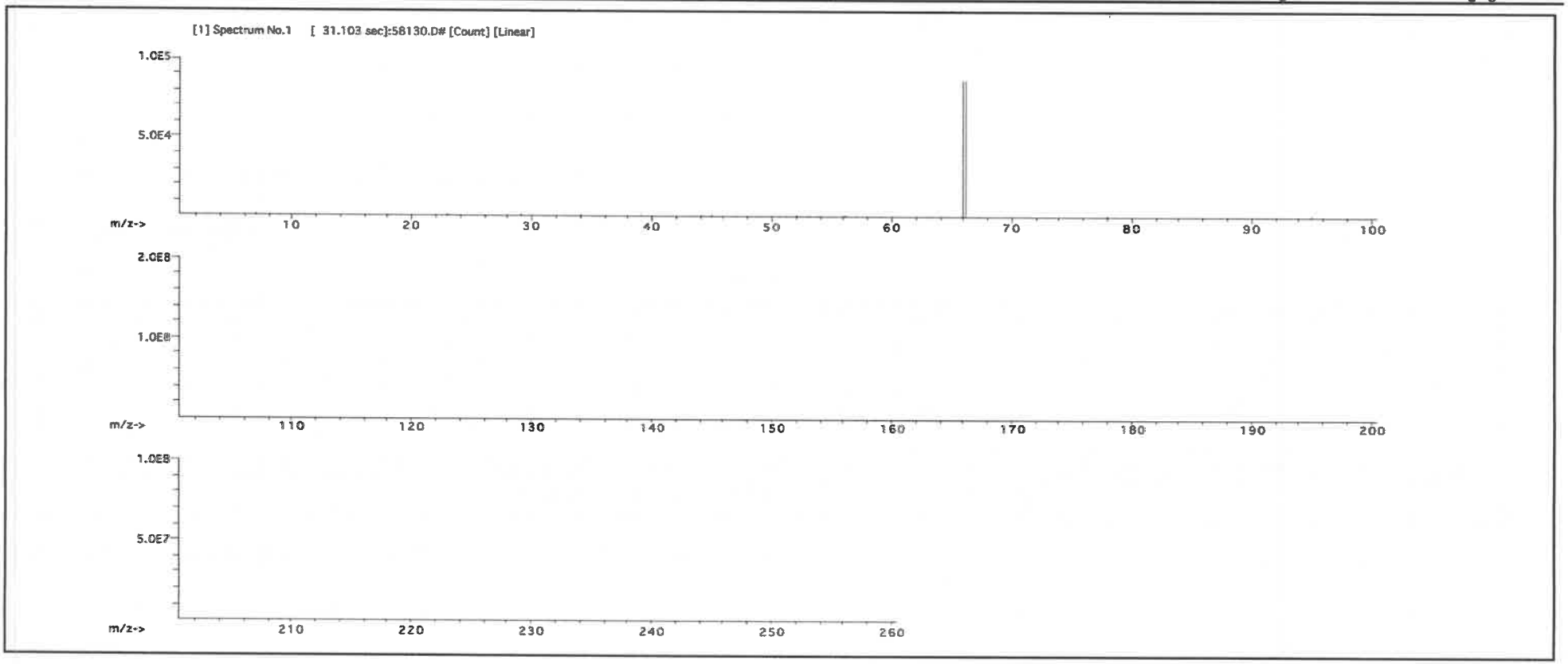
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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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:	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

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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

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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 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5961 R: 6/11/24

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AR-1539 Certificate Number
https://Absolutestandards.com

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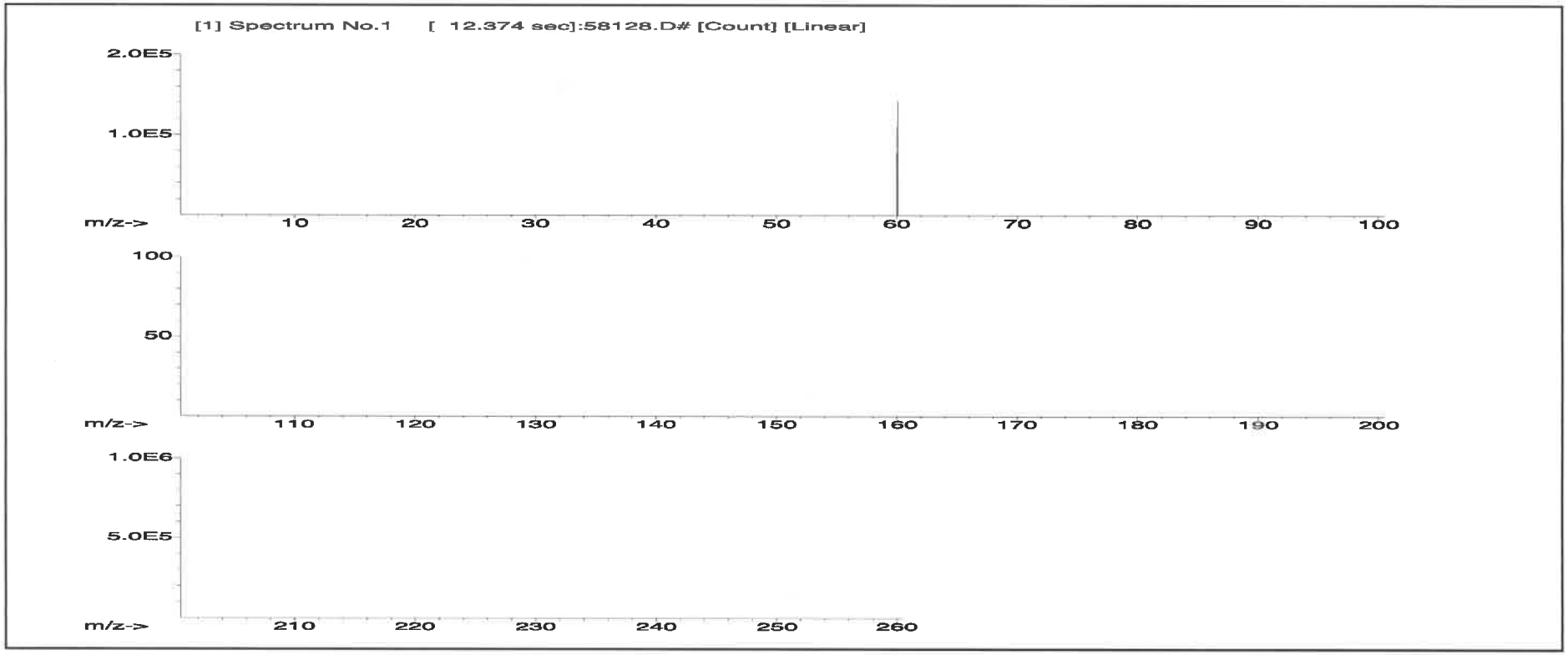
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57028**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**041124**			
Description:	**Nickel (Ni)**			
		2%	5.0 (mL)	Nitric Acid
Expiration Date:	041127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	249.85	0.002	Flask Uncertainty	

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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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	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24

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

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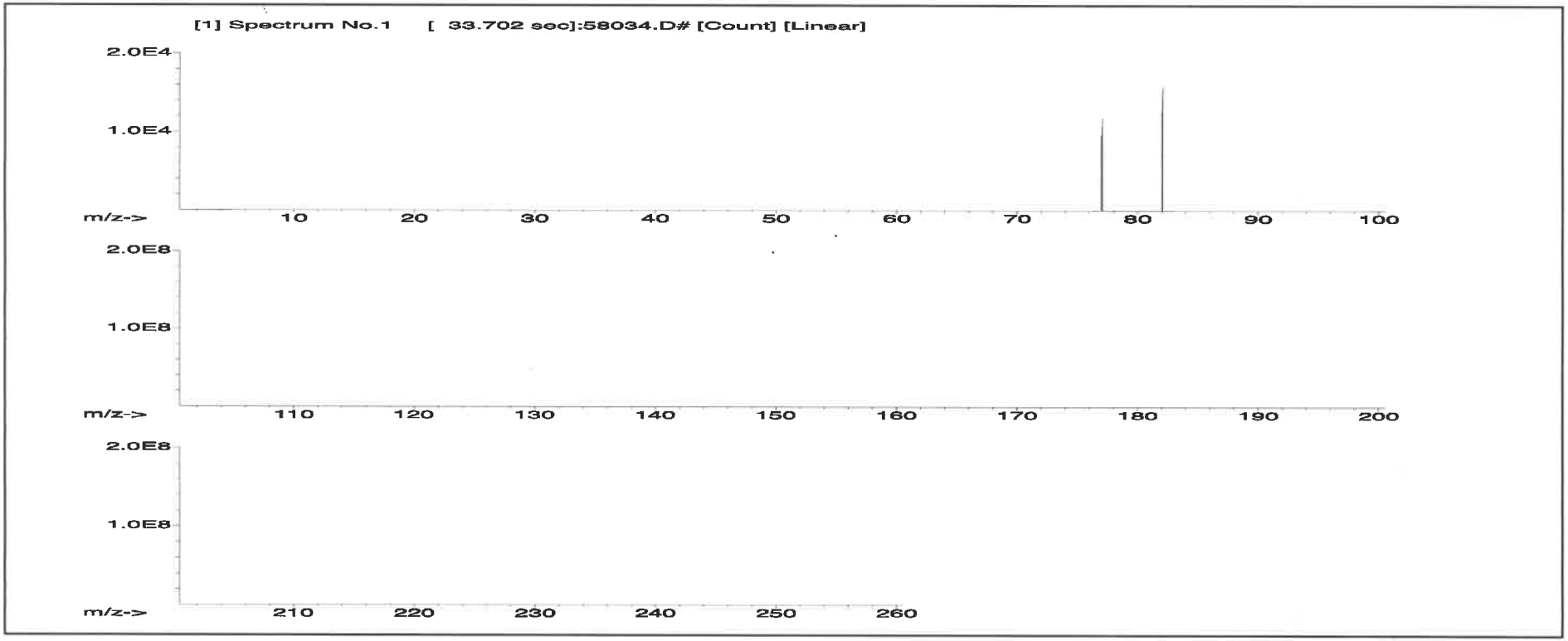
CERTIFIED WEIGHT REPORT:

		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



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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	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

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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:	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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 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

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1.0 ACCREDITATION / REGISTRATION

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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

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M5978, M5979

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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:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = (\Sigma(w_i)^2\ (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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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

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R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

Certificate of Analysis

M6074
M6075
M6076
M6077

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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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

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

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

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CERTIFIED WEIGHT REPORT:

R→ 1/13/25

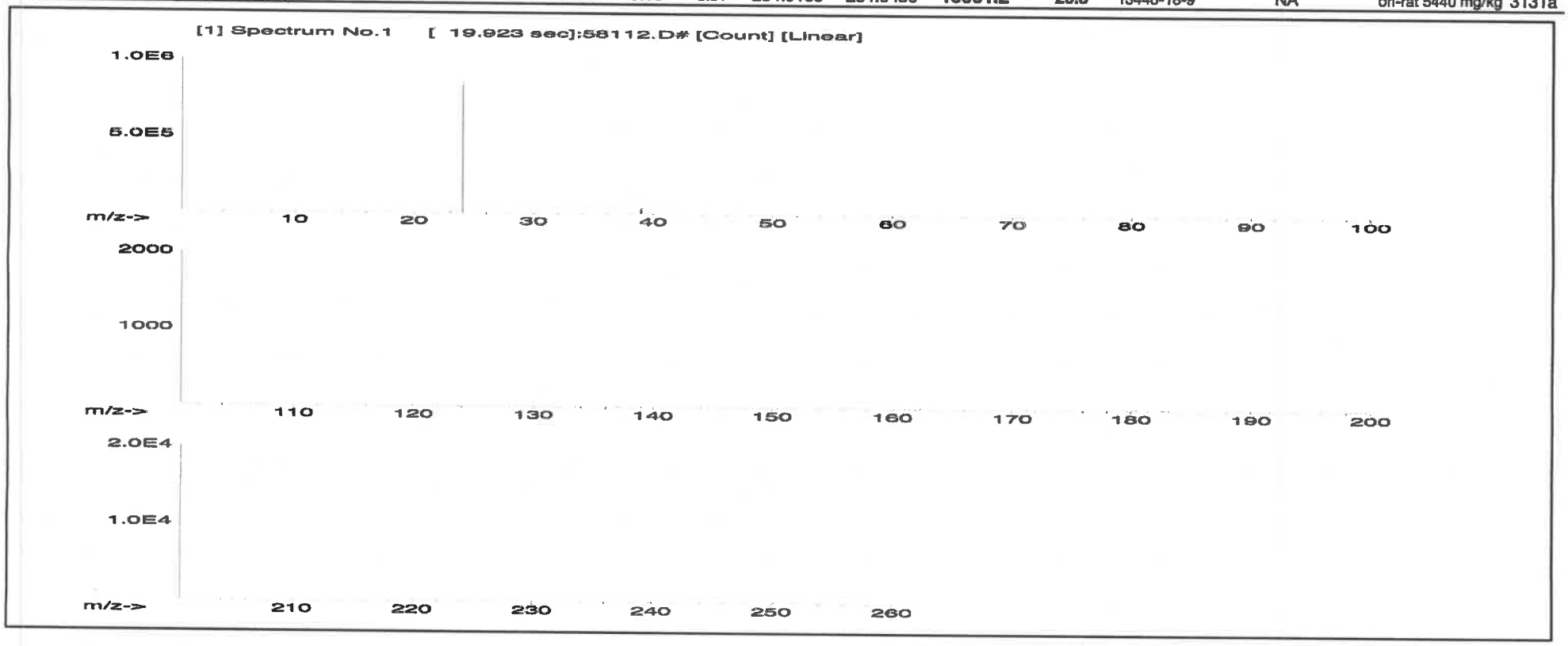
M 6127

Part Number:	**58112**		**Lot #**		
Lot Number:	**112124**	**Solvent:**	24012496	Nitric Acid	
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	112127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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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	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

304

CERTIFIED WEIGHT REPORT:

R->1/13/25
M6928

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

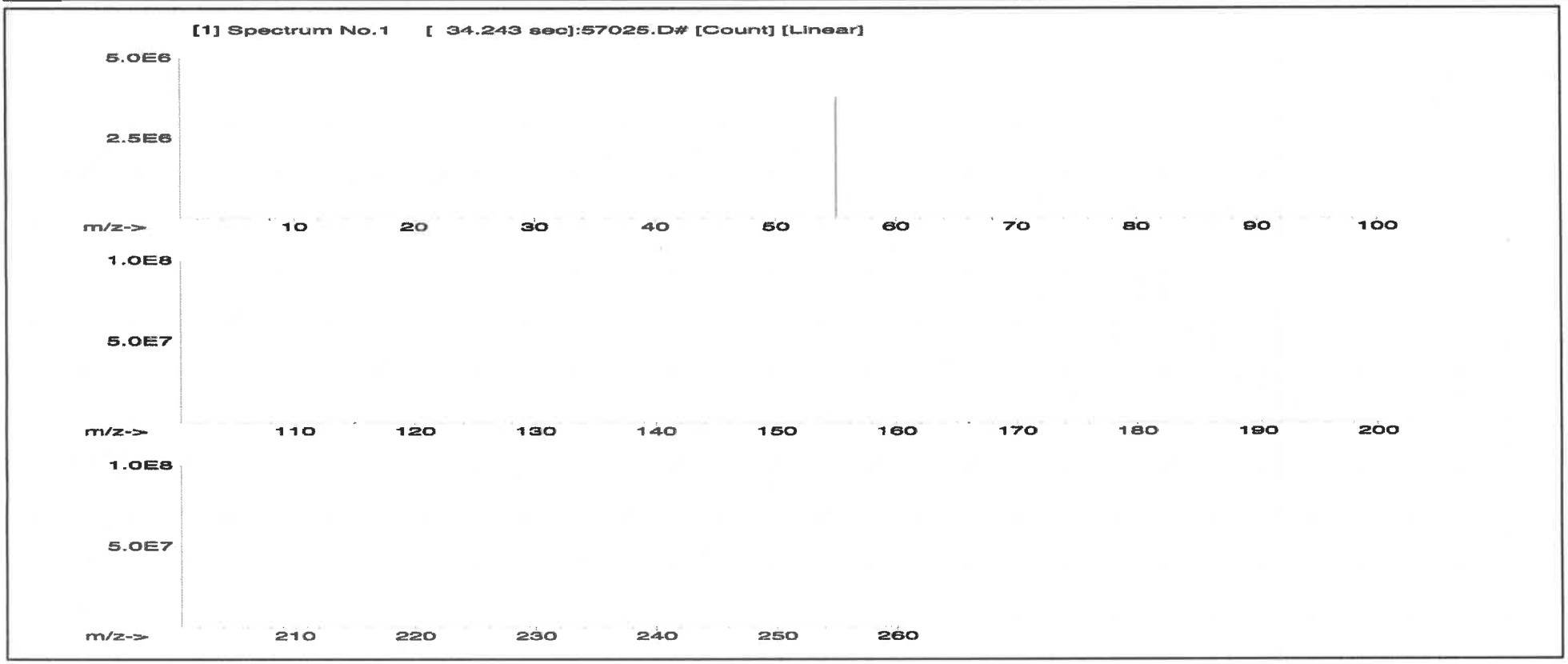
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

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



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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	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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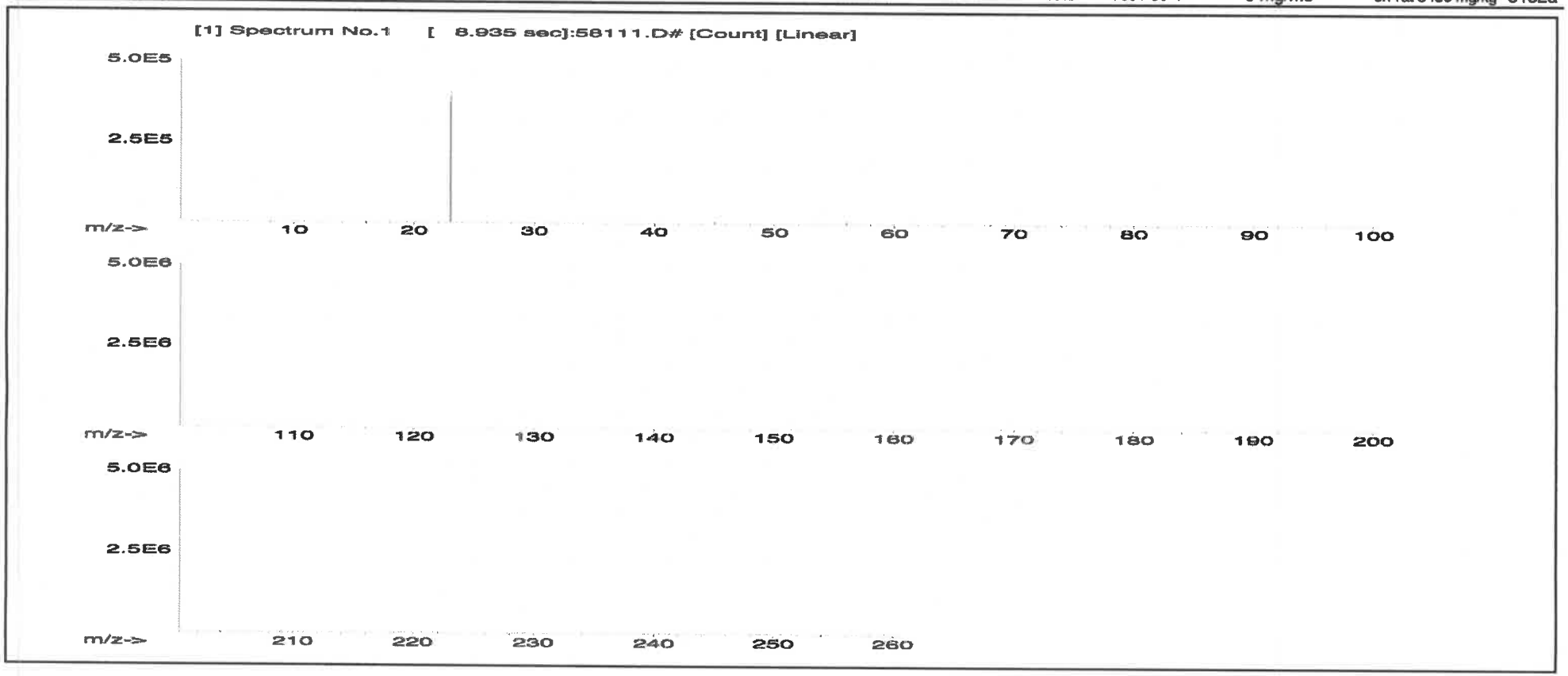
CERTIFIED WEIGHT REPORT:

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



307

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).
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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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R: 01/03/24 M5806, M5807

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308

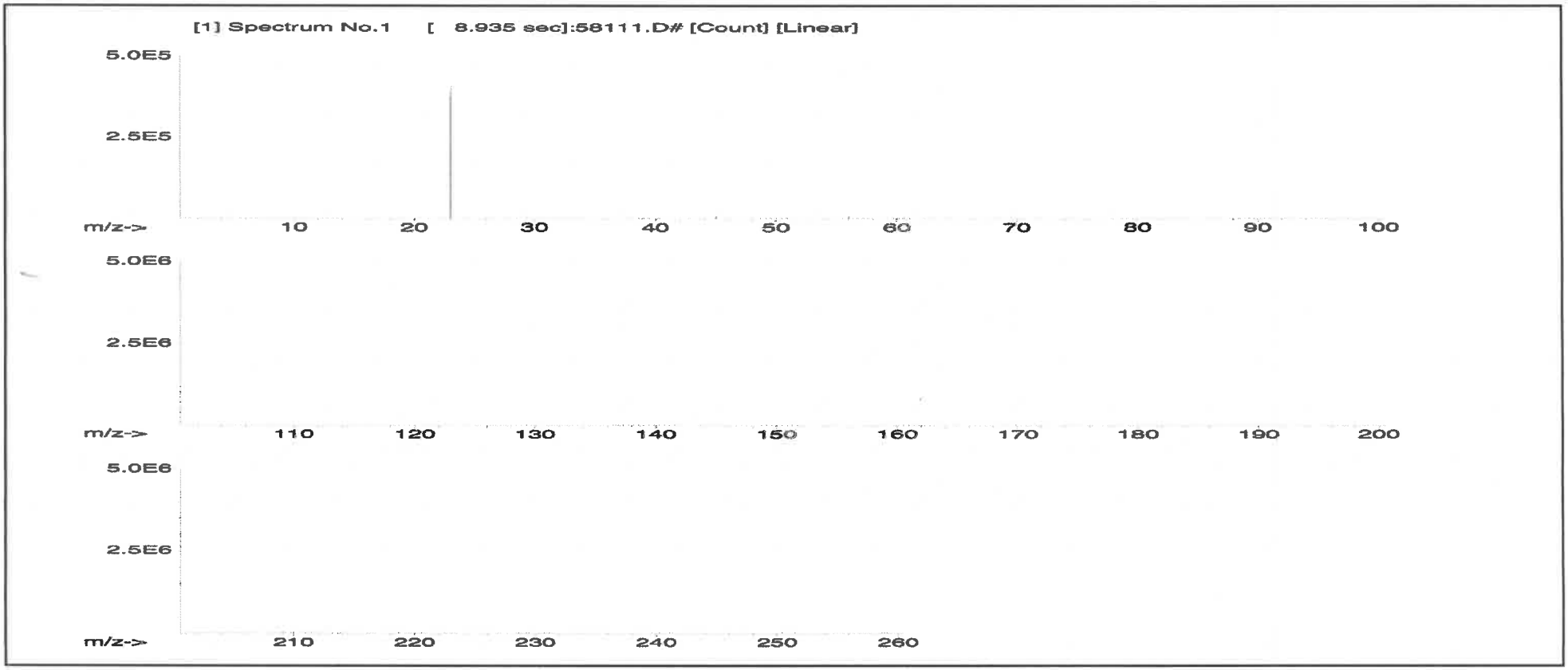
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**122223**			
Description:	**Sodium (Na)**	2%	60.0 (mL)	Nitric Acid
Expiration Date:	122226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	3000.4	0.06	Flask Uncertainty	

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



309

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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R: 01/03/24 M5802, M5803

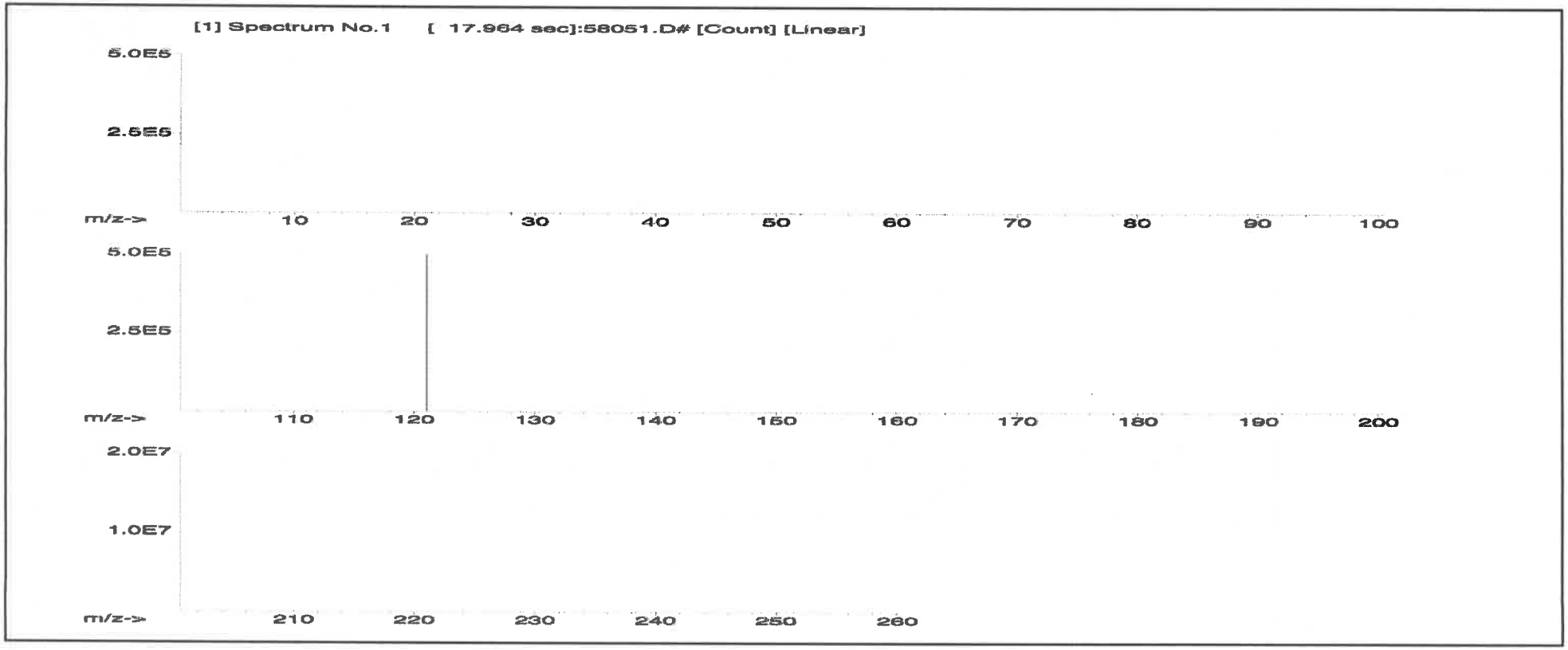
310

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57051**	24002546	Nitric Acid		
Lot Number:	**120523**				
Description:	**Antimony (Sb)**				
		2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	120526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



311

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:

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M6030

R: 8/5/24

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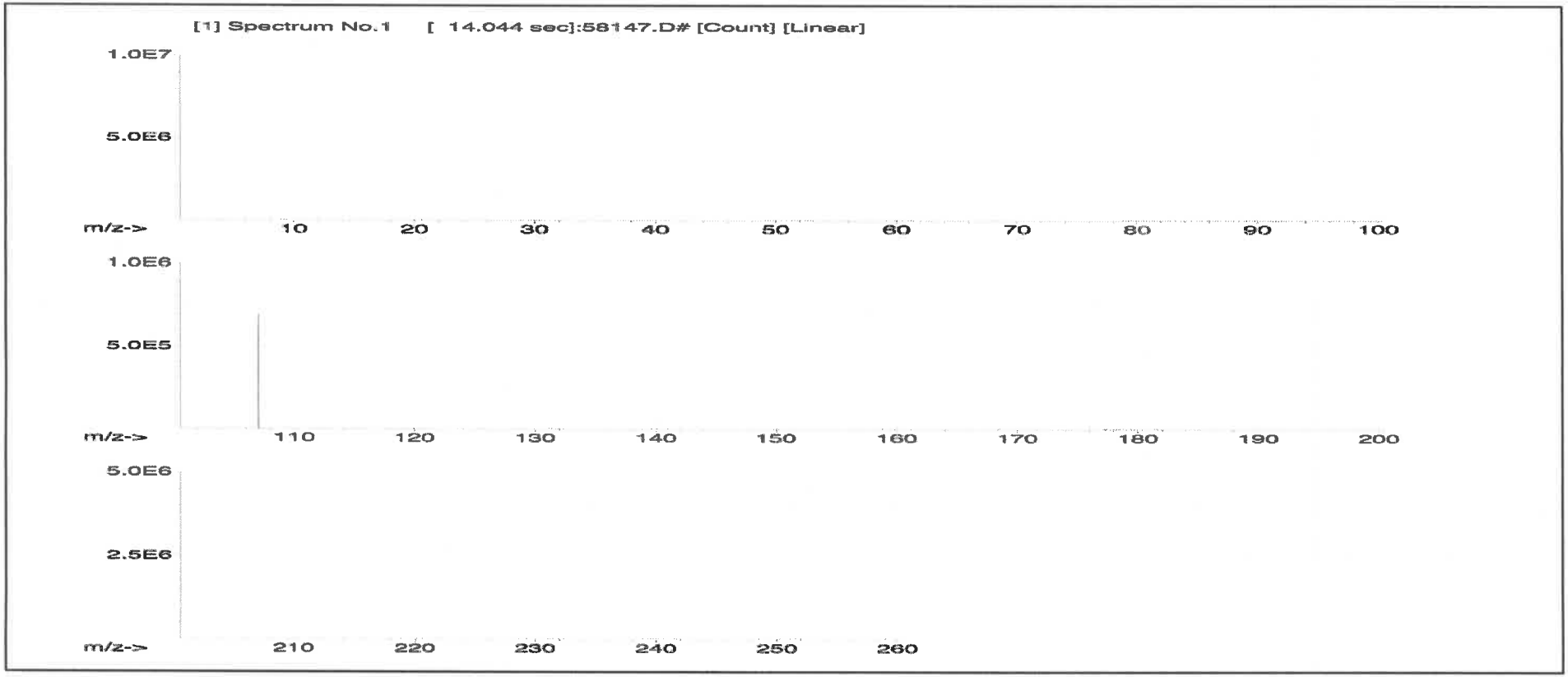
CERTIFIED WEIGHT REPORT:

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



313

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:

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R: 8/5/24 M6019

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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 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

R: 03/16/23 M5473, M5474, M5475, M5476

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AR-1539 Certificate Number
https://Absolutestandards.com

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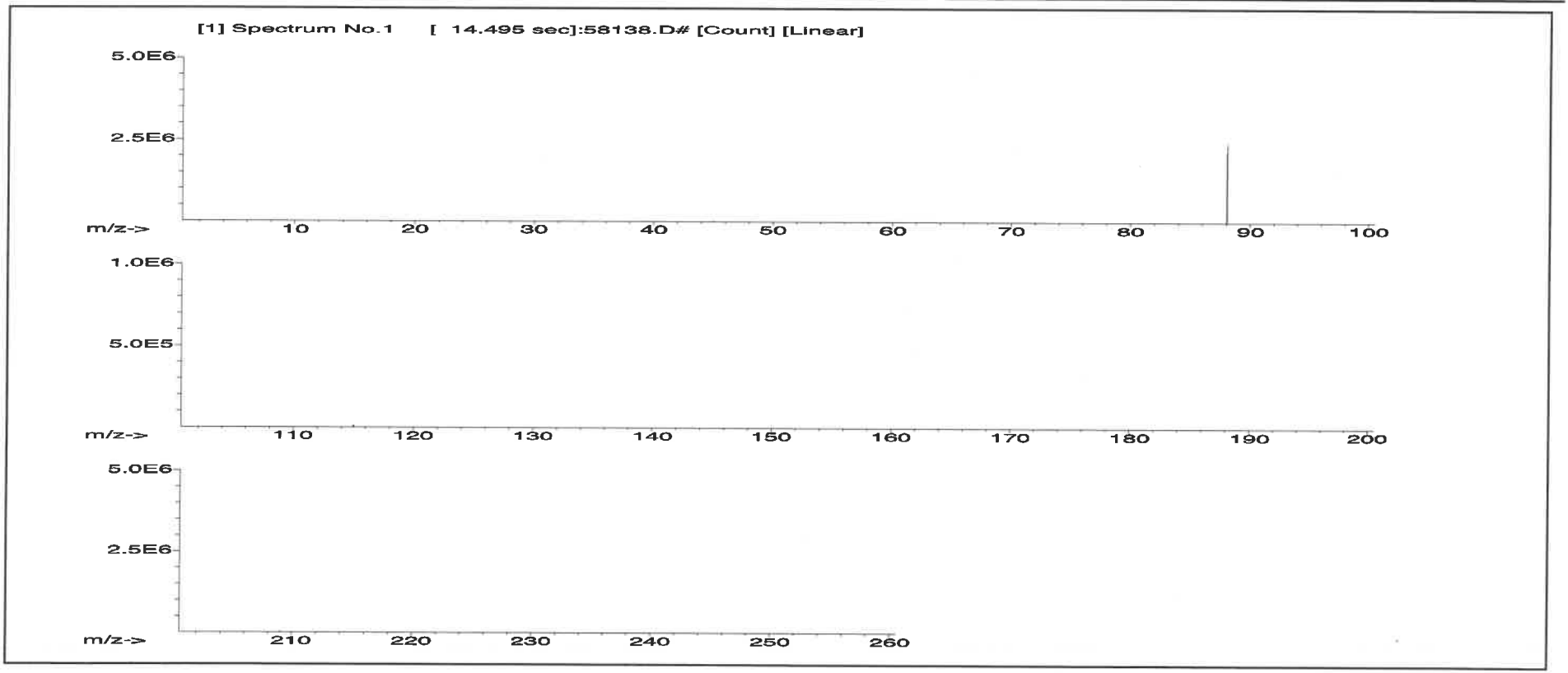
CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



319

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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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

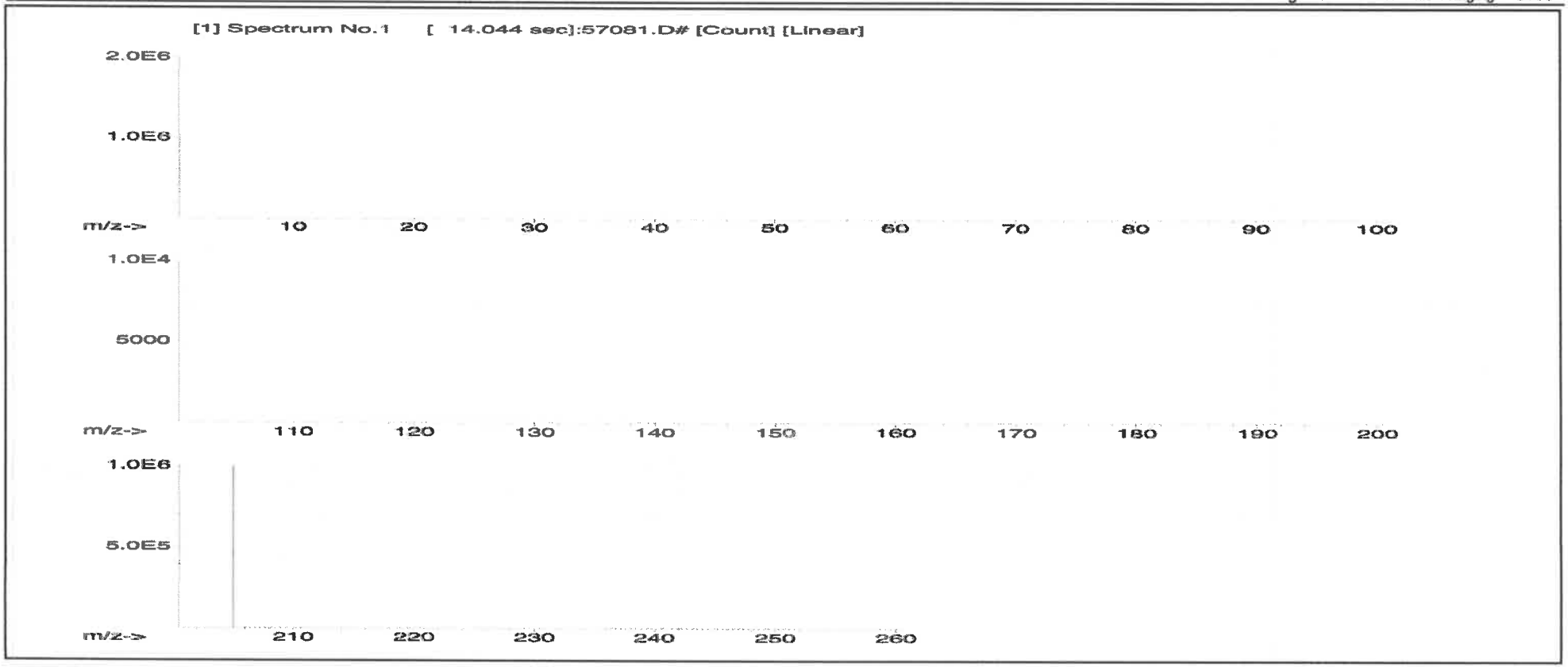
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



321

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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M6021

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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		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	

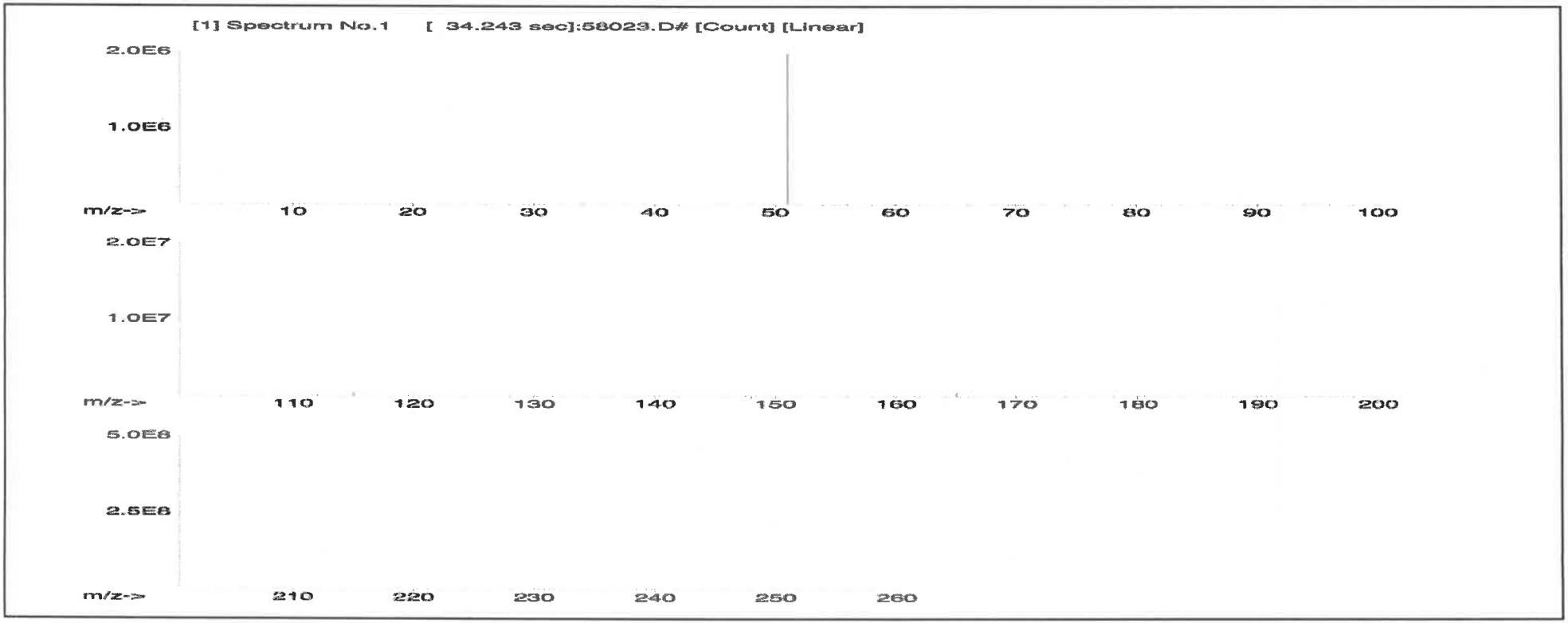
Aleah O'Brady

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



323

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
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Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166472

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : A6313

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

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

Start Digest Date: 02/01/2025 **Time :** 10:45 **Temp :** 96 °C

End Digest Date: 02/01/2025 **Time :** 12:50 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

Dig Technician Signature: SKS.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP84063
Spike Sol 6	1.00	MP84070
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP84041
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #2 CELL #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/01/25 13:50	Lab. metals.	Metals Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166472

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB166472BL	PBS472	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	1
PB166472BS	LCS472	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP84063	2
Q1246-01	A6313	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	3
Q1246-02	A6314	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	4
Q1246-03	A6325	N/A	4.75	100	Brown	Yellow	Medium	N/A	N/A	5
Q1246-04	A6326	N/A	1.09	100	Brown	Yellow	Medium	N/A	N/A	6
Q1246-05	A6331	N/A	7.38	100	Brown	Yellow	Medium	N/A	N/A	7
Q1246-06	A6332	N/A	1.30	100	Brown	Yellow	Medium	N/A	N/A	8
Q1246-07	A6333	N/A	6.10	100	Brown	Yellow	Medium	N/A	N/A	9
Q1246-08	A6334	N/A	6.39	100	Brown	Yellow	Medium	N/A	N/A	10
Q1246-09	A6342	N/A	1.40	100	Brown	Yellow	Medium	N/A	N/A	11
Q1246-10	A6342D	N/A	1.25	100	Brown	Yellow	Medium	N/A	N/A	12
Q1246-11	A6342S	N/A	1.26	100	Brown	Yellow	Medium	N/A	MP84070	13
Q1246-12	A6343	N/A	1.38	100	Brown	Yellow	Medium	N/A	N/A	14
Q1246-13	A6344	N/A	1.16	100	Brown	Yellow	Medium	N/A	N/A	15
Q1246-14	A6345	N/A	1.19	100	Brown	Yellow	Medium	N/A	N/A	16
Q1246-15	A6346	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	17
Q1246-16	A6347	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	18

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134523

Review By	Sarabjit Jaswal	Review On	2/3/2025 2:07:55 PM
Supervise By	Eman Mughal	Supervise On	2/5/2025 9:21:39 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/02/25 10:59		Kareem	OK
2	S1	S01	CAL2	02/02/25 11:03		Kareem	OK
3	S2	S02	CAL3	02/02/25 11:08		Kareem	OK
4	S3	S03	CAL4	02/02/25 11:12		Kareem	OK
5	S4	S04	CAL5	02/02/25 11:15		Kareem	OK
6	S5	S05	CAL6	02/02/25 11:19		Kareem	OK
7	S6	S06	CAL7	02/02/25 11:24		Kareem	OK
8	ICV007	ICV007	ICV	02/02/25 11:52	Inst. paused for calibration review	Kareem	OK
9	ICB007	ICB007	ICB	02/02/25 11:56		Kareem	OK
10	ICSA007	ICSA007	ICSA	02/02/25 12:00		Kareem	OK
11	ICSAB007	ICSAB007	ICSAB	02/02/25 12:05		Kareem	OK
12	CCV033	CCV033	CCV	02/02/25 12:08		Kareem	OK
13	CCB033	CCB033	CCB	02/02/25 12:13		Kareem	OK
14	PB166472BL	PBS472	MB	02/02/25 12:17		Kareem	OK
15	PB166472BS	LCS472	LCS	02/02/25 12:21		Kareem	OK
16	PB166385BL	PBS385	MB	02/02/25 12:26		Kareem	OK
17	PB166385BS	LCS385	LCS	02/02/25 12:30		Kareem	OK
18	Q1223-05	A6305	SAM	02/02/25 12:34		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134523

Review By	Sarabjit Jaswal	Review On	2/3/2025 2:07:55 PM
Supervise By	Eman Mughal	Supervise On	2/5/2025 9:21:39 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

19	Q1223-06	A6305D	DUP	02/02/25 12:38		Kareem	OK
20	Q1223-05L	A6305L	SD	02/02/25 12:42		Kareem	OK
21	Q1223-07	A6305S	MS	02/02/25 12:46		Kareem	OK
22	Q1246-09	A6342	SAM	02/02/25 12:50		Kareem	OK
23	Q1246-10	A6342D	DUP	02/02/25 12:53		Kareem	OK
24	Q1246-09L	A6342L	SD	02/02/25 12:57		Kareem	OK
25	Q1246-11	A6342S	MS	02/02/25 13:02		Kareem	OK
26	Q1223-01	A6301	SAM	02/02/25 13:05		Kareem	OK
27	Q1223-02	A6302	SAM	02/02/25 13:09		Kareem	OK
28	Q1223-03	A6303	SAM	02/02/25 13:13		Kareem	OK
29	Q1223-04	A6304	SAM	02/02/25 13:17		Kareem	OK
30	Q1223-08	A6306	SAM	02/02/25 13:21		Kareem	OK
31	Q1223-09	A6307	SAM	02/02/25 13:25		Kareem	OK
32	Q1223-10	A6308	SAM	02/02/25 13:29		Kareem	OK
33	Q1223-11	A6309	SAM	02/02/25 13:33		Kareem	OK
34	CCV034	CCV034	CCV	02/02/25 13:37		Kareem	OK
35	CCB034	CCB034	CCB	02/02/25 13:42		Kareem	OK
36	Q1223-12	A6320	SAM	02/02/25 13:46		Kareem	OK
37	Q1223-13	A6321	SAM	02/02/25 13:50		Kareem	OK
38	Q1223-14	A6322	SAM	02/02/25 13:54	Fe high	Kareem	Dilution

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB134523

Review By	Sarabjit Jaswal	Review On	2/3/2025 2:07:55 PM
Supervise By	Eman Mughal	Supervise On	2/5/2025 9:21:39 AM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84212,MP84210,MP84209,MP84208,MP84207,MP84206
ICV Standard	MP84213
CCV Standard	MP84216
ICSA Standard	MP84214,MP84215
CRI Standard	
LCS Standard	MP84063
Chk Standard	MP84218,MP84219

39	Q1223-15	A6323	SAM	02/02/25 13:58		Kareem	OK
40	Q1223-16	A6324	SAM	02/02/25 14:02		Kareem	OK
41	Q1246-01	A6313	SAM	02/02/25 14:06		Kareem	OK
42	Q1246-02	A6314	SAM	02/02/25 14:10		Kareem	OK
43	Q1246-03	A6325	SAM	02/02/25 14:21		Kareem	OK
44	Q1246-04	A6326	SAM	02/02/25 14:25		Kareem	OK
45	Q1246-05	A6331	SAM	02/02/25 14:29		Kareem	OK
46	Q1246-06	A6332	SAM	02/02/25 14:33		Kareem	OK
47	Q1246-07	A6333	SAM	02/02/25 14:37		Kareem	OK
48	Q1246-08	A6334	SAM	02/02/25 14:41		Kareem	OK
49	Q1246-12	A6343	SAM	02/02/25 14:45		Kareem	OK
50	Q1246-13	A6344	SAM	02/02/25 14:49		Kareem	OK
51	Q1246-14	A6345	SAM	02/02/25 14:53		Kareem	OK
52	Q1246-15	A6346	SAM	02/02/25 14:57		Kareem	OK
53	Q1246-16	A6347	SAM	02/02/25 15:01		Kareem	OK
54	CCV035	CCV035	CCV	02/02/25 15:05		Kareem	OK
55	CCB035	CCB035	CCB	02/02/25 15:09		Kareem	OK
56	Q1223-14DL	A6322	SAM	02/02/25 15:13	2X for Fe	Kareem	Confirms
57	CCV036	CCV036	CCV	02/02/25 15:18		Kareem	OK
58	CCB036	CCB036	CCB	02/02/25 15:22		Kareem	OK

ERA

A Waters Company

Instructions for Catalog # 540QR
Metals in Soil

Revision 111122

Description:

- This standard is packaged in a 2-ounce glass jar containing approximately 30 grams of soil.
- This standard is not preserved.
- The standard can be stored at room temperature.
- The standard will contain all the analytes listed in the ranges specified on the data reporting form.

Before you Begin:

- The Mercury in this standard should be determined using the digestion and analytical procedures in the current version of EPA method 7471, or equivalent.
- The other metals in this standard should be determined using EPA digestion methods 3050 or 3051 followed by your normal analysis procedures.
- This standard should not be analyzed for Hexavalent Chromium. A separate standard, ERA catalog number 921QR, is available for Hexavalent Chromium.
- Although all ERA soil standards have been thoroughly blended prior to shipping, the standards should be homogenized prior to taking an aliquot for analysis due to settling which may occur during shipping.
- The percent moisture of this standard should be determined, and your analytical results adjusted accordingly and reported on a dry weight basis.

Instructions:

1. Open the Metals in Soil standard in a fume hood to avoid inhalation of dust.
2. Mix the sample well prior to removing aliquots for analysis.
3. Digest and analyze the standard using your normal procedures.
4. Determine the percent moisture of an aliquot of the Metals in Soil standard.
5. Report your results as mg/kg on a dry weight basis.

Safety:

ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website www.eraqc.com.

EPA SAMPLE NO.

A6313

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-01

% Solids: 100 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	25		02/02/2025	1632
7440-38-2	Arsenic	180		02/02/2025	1632
7440-39-3	Barium	340		02/02/2025	1632
7440-41-7	Beryllium	140		02/02/2025	1632
7440-43-9	Cadmium	100		02/02/2025	1632
7440-47-3	Chromium	230		02/02/2025	1632
7440-48-4	Cobalt	170		02/02/2025	1632
7440-50-8	Copper	130		02/02/2025	1632
7439-92-1	Lead	140		02/02/2025	1632
7439-96-5	Manganese	400		02/02/2025	1632
7440-02-0	Nickel	110		02/02/2025	1632
7782-49-2	Selenium	91	*	02/02/2025	1632
7440-22-4	Silver	33		02/02/2025	1632
7440-28-0	Thallium	160		02/02/2025	1632
7440-62-2	Vanadium	110		02/02/2025	1632
7440-66-6	Zinc	380		02/02/2025	1632

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

Comments:

EPA SAMPLE NO.

A6314

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-02

% Solids: 100 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	19		02/02/2025	1635
7440-38-2	Arsenic	140		02/02/2025	1635
7440-39-3	Barium	300		02/02/2025	1635
7440-41-7	Beryllium	100		02/02/2025	1635
7440-43-9	Cadmium	120		02/02/2025	1635
7440-47-3	Chromium	140		02/02/2025	1635
7440-48-4	Cobalt	150		02/02/2025	1635
7440-50-8	Copper	250		02/02/2025	1635
7439-92-1	Lead	210		02/02/2025	1635
7439-96-5	Manganese	410		02/02/2025	1635
7440-02-0	Nickel	180		02/02/2025	1635
7782-49-2	Selenium	150	*	02/02/2025	1635
7440-22-4	Silver	30		02/02/2025	1635
7440-28-0	Thallium	87		02/02/2025	1635
7440-62-2	Vanadium	150		02/02/2025	1635
7440-66-6	Zinc	200		02/02/2025	1635

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

Comments:

EPA SAMPLE NO.

A6325

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-03

% Solids: 28.7 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.30	J	02/02/2025	1638
7440-38-2	Arsenic	3.4		02/02/2025	1638
7440-39-3	Barium	58		02/02/2025	1638
7440-41-7	Beryllium	1.4		02/02/2025	1638
7440-43-9	Cadmium	0.34	J	02/02/2025	1638
7440-47-3	Chromium	18		02/02/2025	1638
7440-48-4	Cobalt	1.7		02/02/2025	1638
7440-50-8	Copper	20		02/02/2025	1638
7439-92-1	Lead	75		02/02/2025	1638
7439-96-5	Manganese	71		02/02/2025	1638
7440-02-0	Nickel	8.1		02/02/2025	1638
7782-49-2	Selenium	1.4	J*	02/02/2025	1638
7440-22-4	Silver	0.16	J	02/02/2025	1638
7440-28-0	Thallium	0.21	J	02/02/2025	1638
7440-62-2	Vanadium	13		02/02/2025	1638
7440-66-6	Zinc	44		02/02/2025	1638

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

Comments:

EPA SAMPLE NO.

A6326

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-04

% Solids: 37.5 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	2.2	U	02/02/2025	1642
7440-38-2	Arsenic	1.6		02/02/2025	1642
7440-39-3	Barium	44		02/02/2025	1642
7440-41-7	Beryllium	0.95	J	02/02/2025	1642
7440-43-9	Cadmium	0.20	J	02/02/2025	1642
7440-47-3	Chromium	21		02/02/2025	1642
7440-48-4	Cobalt	2.2		02/02/2025	1642
7440-50-8	Copper	4.8		02/02/2025	1642
7439-92-1	Lead	13		02/02/2025	1642
7439-96-5	Manganese	140		02/02/2025	1642
7440-02-0	Nickel	9.8		02/02/2025	1642
7782-49-2	Selenium	2.5	J*	02/02/2025	1642
7440-22-4	Silver	0.14	J	02/02/2025	1642
7440-28-0	Thallium	0.12	J	02/02/2025	1642
7440-62-2	Vanadium	5.9		02/02/2025	1642
7440-66-6	Zinc	26		02/02/2025	1642

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

Comments:

EPA SAMPLE NO.

A6331

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-05

% Solids: 15.5 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.55	J	02/02/2025	1645
7440-38-2	Arsenic	30		02/02/2025	1645
7440-39-3	Barium	78		02/02/2025	1645
7440-41-7	Beryllium	1.1		02/02/2025	1645
7440-43-9	Cadmium	1.0		02/02/2025	1645
7440-47-3	Chromium	31		02/02/2025	1645
7440-48-4	Cobalt	11		02/02/2025	1645
7440-50-8	Copper	21		02/02/2025	1645
7439-92-1	Lead	54		02/02/2025	1645
7439-96-5	Manganese	470		02/02/2025	1645
7440-02-0	Nickel	35		02/02/2025	1645
7782-49-2	Selenium	3.5	*	02/02/2025	1645
7440-22-4	Silver	0.35	J	02/02/2025	1645
7440-28-0	Thallium	0.21	J	02/02/2025	1645
7440-62-2	Vanadium	37		02/02/2025	1645
7440-66-6	Zinc	130		02/02/2025	1645

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

Comments:

EPA SAMPLE NO.

A6332

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-06

% Solids: 35.9 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.17	J	02/02/2025	1648
7440-38-2	Arsenic	26		02/02/2025	1648
7440-39-3	Barium	49		02/02/2025	1648
7440-41-7	Beryllium	0.71	J	02/02/2025	1648
7440-43-9	Cadmium	0.19	J	02/02/2025	1648
7440-47-3	Chromium	37		02/02/2025	1648
7440-48-4	Cobalt	10		02/02/2025	1648
7440-50-8	Copper	11		02/02/2025	1648
7439-92-1	Lead	30		02/02/2025	1648
7439-96-5	Manganese	320		02/02/2025	1648
7440-02-0	Nickel	31		02/02/2025	1648
7782-49-2	Selenium	1.3	J*	02/02/2025	1648
7440-22-4	Silver	0.20	J	02/02/2025	1648
7440-28-0	Thallium	0.15	J	02/02/2025	1648
7440-62-2	Vanadium	31		02/02/2025	1648
7440-66-6	Zinc	60		02/02/2025	1648

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

Comments:

EPA SAMPLE NO.

A6333

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-07

% Solids: 23.3 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.25	J	02/02/2025	1651
7440-38-2	Arsenic	26		02/02/2025	1651
7440-39-3	Barium	54		02/02/2025	1651
7440-41-7	Beryllium	0.79		02/02/2025	1651
7440-43-9	Cadmium	0.60		02/02/2025	1651
7440-47-3	Chromium	32		02/02/2025	1651
7440-48-4	Cobalt	10		02/02/2025	1651
7440-50-8	Copper	13		02/02/2025	1651
7439-92-1	Lead	48		02/02/2025	1651
7439-96-5	Manganese	480		02/02/2025	1651
7440-02-0	Nickel	31		02/02/2025	1651
7782-49-2	Selenium	1.5	J*	02/02/2025	1651
7440-22-4	Silver	0.23	J	02/02/2025	1651
7440-28-0	Thallium	0.13	J	02/02/2025	1651
7440-62-2	Vanadium	26		02/02/2025	1651
7440-66-6	Zinc	71		02/02/2025	1651

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

Comments:

EPA SAMPLE NO.

A6334

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-08

% Solids: 21.3 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.24	J	02/02/2025	1654
7440-38-2	Arsenic	28		02/02/2025	1654
7440-39-3	Barium	65		02/02/2025	1654
7440-41-7	Beryllium	0.90		02/02/2025	1654
7440-43-9	Cadmium	0.62		02/02/2025	1654
7440-47-3	Chromium	38		02/02/2025	1654
7440-48-4	Cobalt	12		02/02/2025	1654
7440-50-8	Copper	14		02/02/2025	1654
7439-92-1	Lead	53		02/02/2025	1654
7439-96-5	Manganese	540		02/02/2025	1654
7440-02-0	Nickel	36		02/02/2025	1654
7782-49-2	Selenium	1.6	J*	02/02/2025	1654
7440-22-4	Silver	0.28	J	02/02/2025	1654
7440-28-0	Thallium	0.14	J	02/02/2025	1654
7440-62-2	Vanadium	30		02/02/2025	1654
7440-66-6	Zinc	78		02/02/2025	1654

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

Comments:

EPA SAMPLE NO.

A6342

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-09

% Solids: 61.9 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.1	U	02/02/2025	1542
7440-38-2	Arsenic	3.5		02/02/2025	1542
7440-39-3	Barium	26		02/02/2025	1542
7440-41-7	Beryllium	0.34	J	02/02/2025	1542
7440-43-9	Cadmium	0.55	U	02/02/2025	1542
7440-47-3	Chromium	17		02/02/2025	1542
7440-48-4	Cobalt	2.7		02/02/2025	1542
7440-50-8	Copper	6.2		02/02/2025	1542
7439-92-1	Lead	93		02/02/2025	1542
7439-96-5	Manganese	79		02/02/2025	1542
7440-02-0	Nickel	9.3		02/02/2025	1542
7782-49-2	Selenium	2.7	U*	02/02/2025	1542
7440-22-4	Silver	0.55	U	02/02/2025	1542
7440-28-0	Thallium	0.10	J	02/02/2025	1542
7440-62-2	Vanadium	15		02/02/2025	1542
7440-66-6	Zinc	25		02/02/2025	1542

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

Comments:

EPA SAMPLE NO.

A6343

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-12

% Solids: 53.1 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.4	U	02/02/2025	1710
7440-38-2	Arsenic	6.0		02/02/2025	1710
7440-39-3	Barium	26		02/02/2025	1710
7440-41-7	Beryllium	0.32	J	02/02/2025	1710
7440-43-9	Cadmium	0.70	U	02/02/2025	1710
7440-47-3	Chromium	18		02/02/2025	1710
7440-48-4	Cobalt	2.2		02/02/2025	1710
7440-50-8	Copper	4.1		02/02/2025	1710
7439-92-1	Lead	28		02/02/2025	1710
7439-96-5	Manganese	68		02/02/2025	1710
7440-02-0	Nickel	7.9		02/02/2025	1710
7782-49-2	Selenium	0.60	J*	02/02/2025	1710
7440-22-4	Silver	0.70	U	02/02/2025	1710
7440-28-0	Thallium	0.11	J	02/02/2025	1710
7440-62-2	Vanadium	16		02/02/2025	1710
7440-66-6	Zinc	28		02/02/2025	1710

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

Comments:

EPA SAMPLE NO.

A6344

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-13

% Solids: 38.1 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	2.0	U	02/02/2025	1713
7440-38-2	Arsenic	7.5		02/02/2025	1713
7440-39-3	Barium	35		02/02/2025	1713
7440-41-7	Beryllium	0.35	J	02/02/2025	1713
7440-43-9	Cadmium	0.99	U	02/02/2025	1713
7440-47-3	Chromium	13		02/02/2025	1713
7440-48-4	Cobalt	5.2		02/02/2025	1713
7440-50-8	Copper	5.2		02/02/2025	1713
7439-92-1	Lead	13		02/02/2025	1713
7439-96-5	Manganese	110		02/02/2025	1713
7440-02-0	Nickel	11		02/02/2025	1713
7782-49-2	Selenium	0.67	J*	02/02/2025	1713
7440-22-4	Silver	0.99	U	02/02/2025	1713
7440-28-0	Thallium	0.11	J	02/02/2025	1713
7440-62-2	Vanadium	12		02/02/2025	1713
7440-66-6	Zinc	54		02/02/2025	1713

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

Comments:

EPA SAMPLE NO.

A6345

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-14

% Solids: 33.4 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	2.0	U	02/02/2025	1716
7440-38-2	Arsenic	6.8		02/02/2025	1716
7440-39-3	Barium	56		02/02/2025	1716
7440-41-7	Beryllium	0.45	J	02/02/2025	1716
7440-43-9	Cadmium	1.0	U	02/02/2025	1716
7440-47-3	Chromium	21		02/02/2025	1716
7440-48-4	Cobalt	5.4		02/02/2025	1716
7440-50-8	Copper	5.9		02/02/2025	1716
7439-92-1	Lead	16		02/02/2025	1716
7439-96-5	Manganese	170		02/02/2025	1716
7440-02-0	Nickel	13		02/02/2025	1716
7782-49-2	Selenium	0.73	J*	02/02/2025	1716
7440-22-4	Silver	1.0	U	02/02/2025	1716
7440-28-0	Thallium	0.15	J	02/02/2025	1716
7440-62-2	Vanadium	17		02/02/2025	1716
7440-66-6	Zinc	43		02/02/2025	1716

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

Comments:

EPA SAMPLE NO.

A6346

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-15

% Solids: 67.6 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.2	U	02/02/2025	1720
7440-38-2	Arsenic	5.0		02/02/2025	1720
7440-39-3	Barium	28		02/02/2025	1720
7440-41-7	Beryllium	0.25	J	02/02/2025	1720
7440-43-9	Cadmium	0.60	U	02/02/2025	1720
7440-47-3	Chromium	12		02/02/2025	1720
7440-48-4	Cobalt	3.6		02/02/2025	1720
7440-50-8	Copper	5.9		02/02/2025	1720
7439-92-1	Lead	8.5		02/02/2025	1720
7439-96-5	Manganese	140		02/02/2025	1720
7440-02-0	Nickel	8.8		02/02/2025	1720
7782-49-2	Selenium	3.0	U*	02/02/2025	1720
7440-22-4	Silver	0.60	U	02/02/2025	1720
7440-28-0	Thallium	0.096	J	02/02/2025	1720
7440-62-2	Vanadium	11		02/02/2025	1720
7440-66-6	Zinc	28		02/02/2025	1720

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

Comments:

EPA SAMPLE NO.

A6347

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-16

% Solids: 52.4 Date Received: 01/31/2025

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	1.5	U	02/02/2025	1723
7440-38-2	Arsenic	2.7		02/02/2025	1723
7440-39-3	Barium	41		02/02/2025	1723
7440-41-7	Beryllium	0.42	J	02/02/2025	1723
7440-43-9	Cadmium	0.75	U	02/02/2025	1723
7440-47-3	Chromium	31		02/02/2025	1723
7440-48-4	Cobalt	4.3		02/02/2025	1723
7440-50-8	Copper	2.3		02/02/2025	1723
7439-92-1	Lead	18		02/02/2025	1723
7439-96-5	Manganese	120		02/02/2025	1723
7440-02-0	Nickel	13		02/02/2025	1723
7782-49-2	Selenium	0.47	J*	02/02/2025	1723
7440-22-4	Silver	0.75	U	02/02/2025	1723
7440-28-0	Thallium	0.17	J	02/02/2025	1723
7440-62-2	Vanadium	22		02/02/2025	1723
7440-66-6	Zinc	32		02/02/2025	1723

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

Comments:

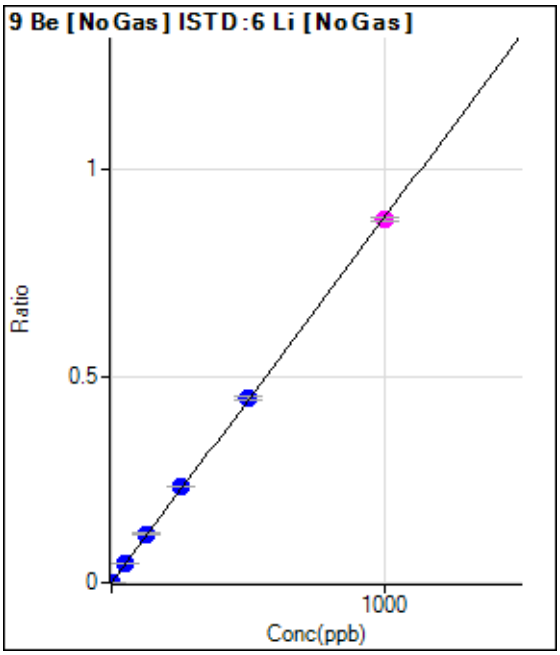
Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

Calibration for 008CALS.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\P7020225 MS.b\
Analysis File: P7020225 MS.batch.bin
DA Date-Time: 2025-02-02 17:25:38
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2025-02-02 14:25:31
2	005CALS.d	S02	2025-02-02 14:28:50
3	006CALS.d	S03	2025-02-02 14:32:07
4	007CALS.d	S04	2025-02-02 14:35:10
5	008CALS.d	S05	2025-02-02 14:38:06
6	009CALS.d	S06	2025-02-02 14:40:52
7	010CALS.d	S07	2025-02-02 14:43:39
8	011CALS.d	S08	2025-02-02 14:46:23

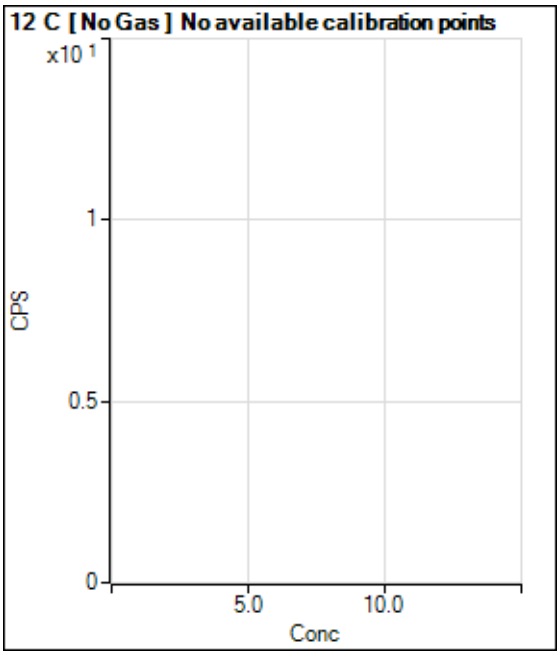
Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	64.45	0.0001	P	26.5
2	☐	1.000	1.099	1113.38	0.0010	P	0.7
3	☐	50.000	54.304	53206.28	0.0480	P	1.1
4	☐	125.000	133.799	139065.22	0.1183	P	1.1
5	☐	250.000	261.735	273165.53	0.2313	P	0.8
6	☐	500.000	504.938	534355.31	0.4462	P	1.6
7	☐	1000.000	993.282	1038276.49	0.8776	M	1.2
8	☐			697.80	0.0006	P	19.3

y = 8.8350E-004 * x + 5.8946E-005
R = 0.9999
DL = 0.05303
BEC = 0.06672

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
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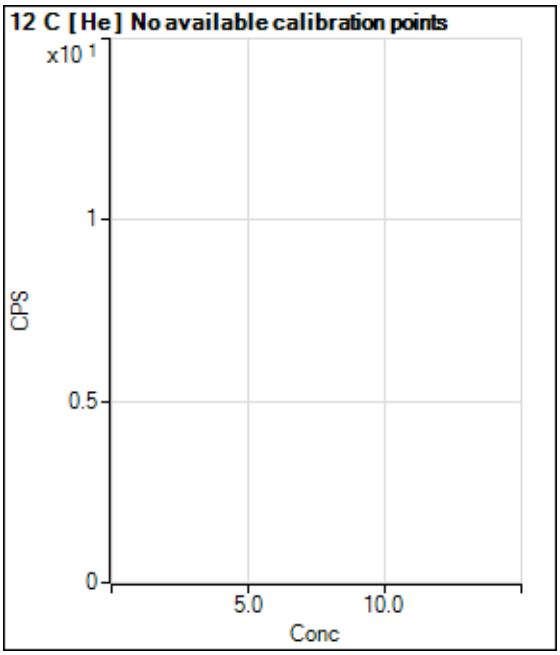
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
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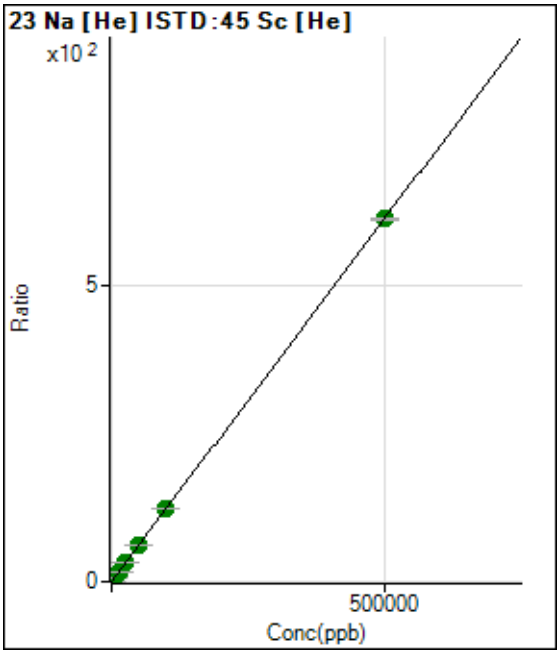
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						



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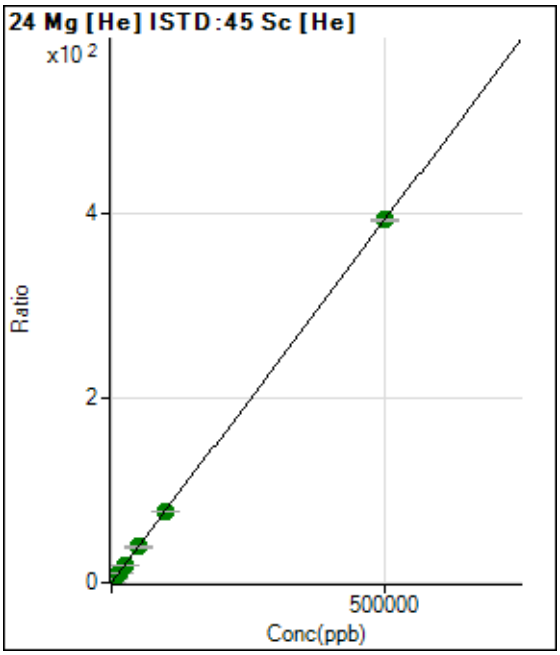
1	☐	0.000	0.000	22326.27	0.0416	P	2.1
2	☐	500.000	494.835	349025.42	0.6461	P	0.8
3	☐	5000.000	4828.662	3150110.79	5.9397	A	0.5
4	☐	12500.000	12413.878	7885588.22	15.2047	A	1.0
5	☐	25000.000	25393.075	15038059.64	31.0583	A	1.5
6	☐	50000.000	50542.029	29511065.95	61.7768	A	0.7
7	☐	100000.00	100421.99	58940577.46	122.7032	A	0.9
8	☐	500000.00	499845.61	301202833.2	610.5839	A	0.6

y = 0.0012 * x + 0.0416
R = 1.0000
DL = 2.169
BEC = 34.09

Weight: <None>
Min Conc: 0

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



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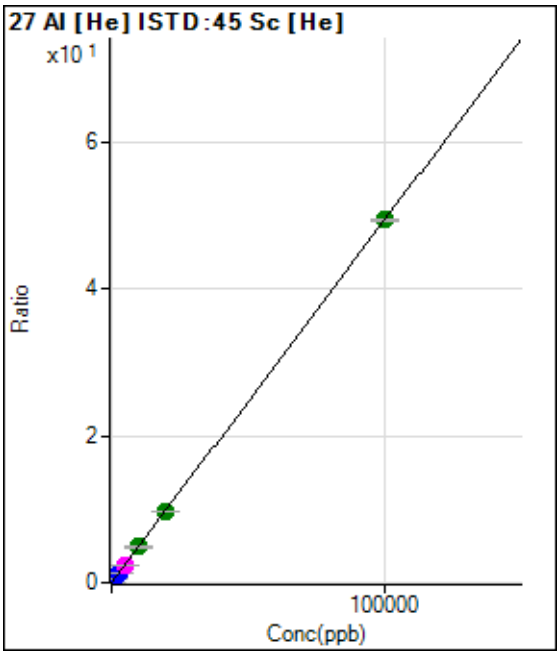
1	☐	0.000	0.000	1307.85	0.0024	P	6.3
2	☐	500.000	494.023	210667.26	0.3899	P	0.6
3	☐	5000.000	4738.193	1972354.36	3.7191	A	1.3
4	☐	12500.000	12098.798	4923125.79	9.4927	A	1.2
5	☐	25000.000	24643.509	9360745.14	19.3327	A	1.2
6	☐	50000.000	49144.450	18415919.31	38.5511	A	0.5
7	☐	100000.00	97675.901	36804220.01	76.6189	A	0.5
8	☐	500000.00	500580.85	193699852.6	392.6552	A	0.4

y = 7.8439E-004 * x + 0.0024
R = 1.0000
DL = 0.5858
BEC = 3.11

Weight: <None>
Min Conc: 0

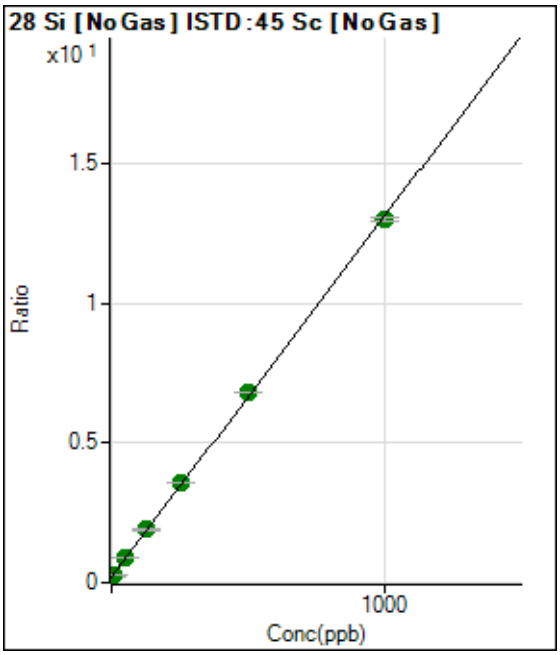


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	335.56	0.0006	P	7.8
2	☐	20.000	19.230	5462.13	0.0101	P	1.4
3	☐	1000.000	956.274	250484.69	0.4723	P	1.3
4	☐	2500.000	2433.664	622883.48	1.2010	P	1.2
5	☐	5000.000	4907.534	1172197.07	2.4213	M	2.9
6	☐	10000.000	9829.569	2316385.47	4.8490	A	0.5
7	☐	20000.000	19718.294	4672185.87	9.7266	A	0.9
8	☐	100000.00	100080.10	24351584.63	49.3648	A	0.4

y = 4.9325E-004 * x + 6.2573E-004
R = 1.0000
DL = 0.2973
BEC = 1.269

Weight: <None>
Min Conc: 0

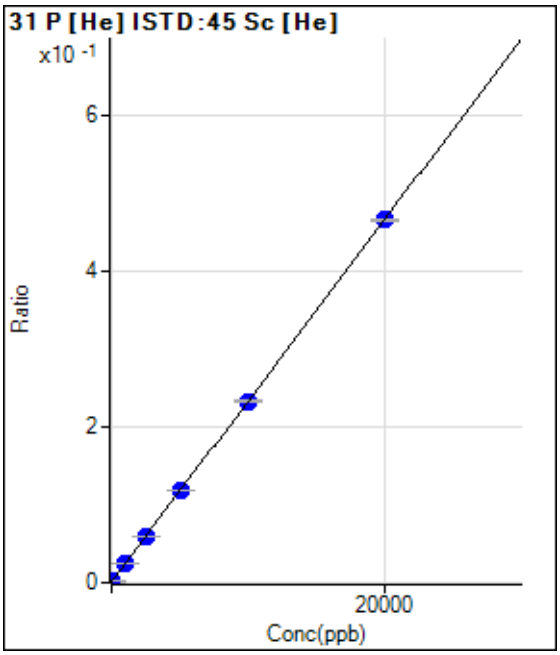
Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	975196.83	0.2050	M	17.1
2	☐	10.000	3.651	1190998.19	0.2521	A	0.5
3	☐	50.000	53.383	4232514.45	0.8938	A	1.4
4	☐	125.000	131.719	8732228.69	1.9046	A	2.7
5	☐	250.000	259.857	15101667.28	3.5579	A	0.7
6	☐	500.000	512.275	27626435.70	6.8148	A	0.2
7	☐	1000.000	990.452	52495473.11	12.9845	A	0.9
8	☐			685501.15	0.1683	P	1.7

y = 0.0129 * x + 0.2050
R = 0.9998
DL = 8.148
BEC = 15.89

Weight: <None>
Min Conc: 0

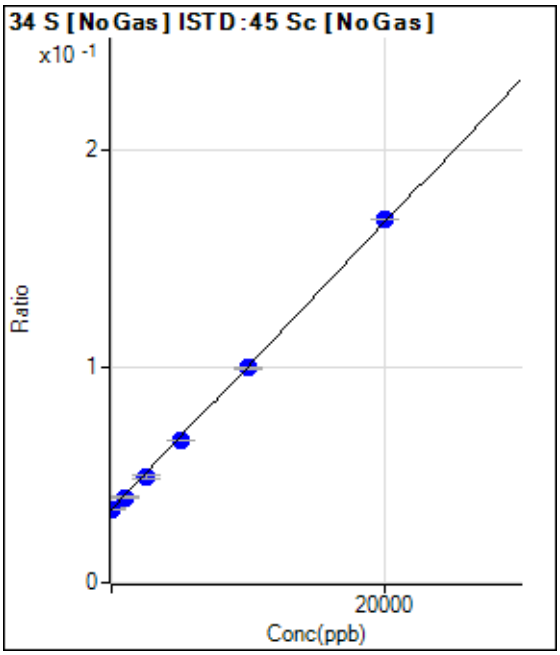


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-18.260	296.67	0.0006	P	7.1
2	☐	0.000	18.260	756.69	0.0014	P	4.4
3	☐	1000.000	991.843	12726.49	0.0240	P	2.4
4	☐	2500.000	2520.090	30841.11	0.0595	P	2.0
5	☐	5000.000	5052.950	57261.00	0.1183	P	1.0
6	☐	10000.000	9973.364	111045.82	0.2325	P	0.6
7	☐	20000.000	19997.977	223431.22	0.4651	P	0.2
8	☐			373.34	0.0008	P	15.7

y = 2.3210E-005 * x + 9.7702E-004
R = 1.0000
DL = 6.504
BEC = 42.09

Weight: <None>
Min Conc: 0

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	15.047	162126.38	0.0341	P	1.3
2	☐	0.000	-15.047	160197.21	0.0339	P	0.3
3	☐	1000.000	825.088	186992.89	0.0395	P	0.7
4	☐	2500.000	2259.201	224667.96	0.0490	P	2.2
5	☐	5000.000	4787.120	279164.14	0.0658	P	0.7
6	☐	10000.000	9828.936	402175.75	0.0992	P	0.5
7	☐	20000.000	20177.597	678592.33	0.1678	P	0.1
8	☐			124941.48	0.0307	P	3.3

y = 6.6327E-006 * x + 0.0340

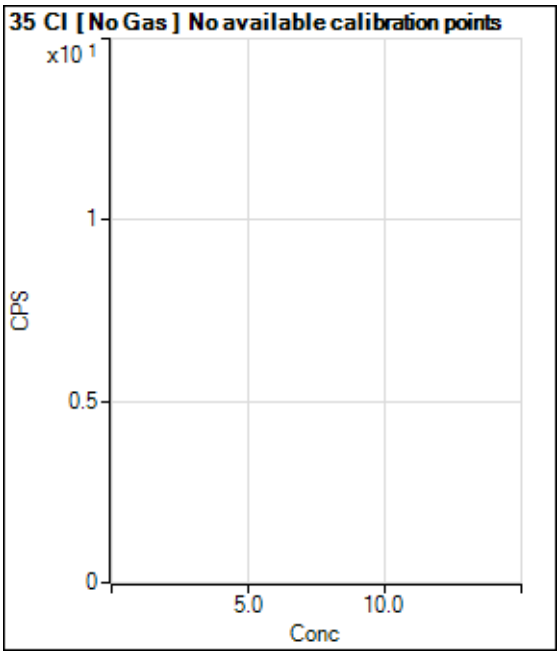
R = 0.9998

DL = 123.9

BEC = 5128

Weight: <None>

Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐						
2	☐						
3	☐						
4	☐						
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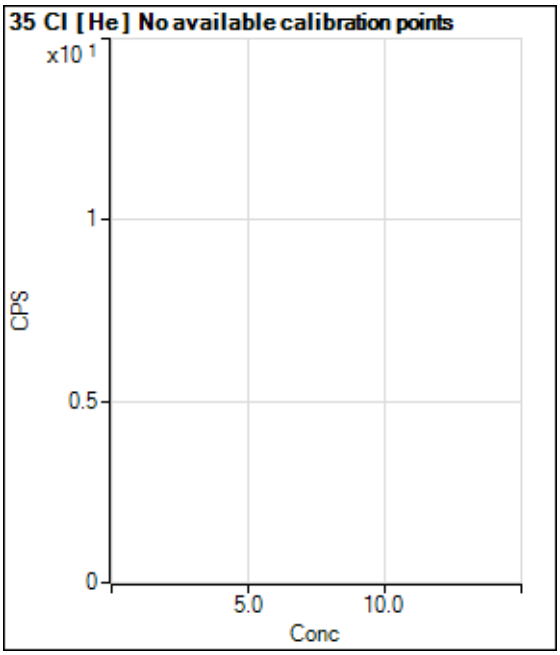
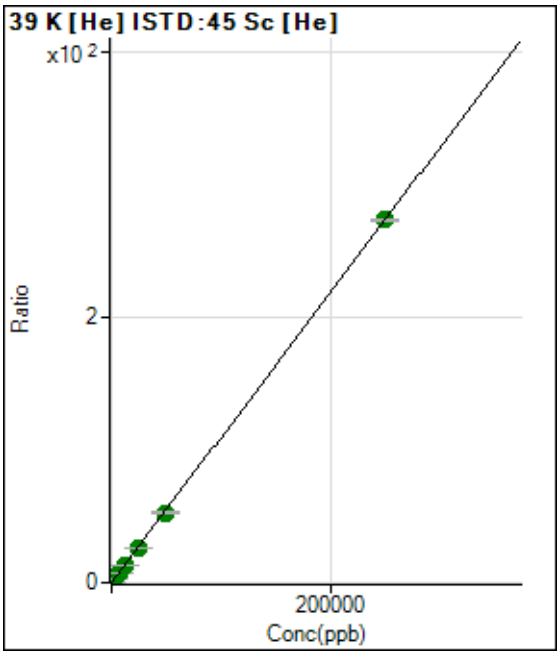
7	☐						
8	☐						

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



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

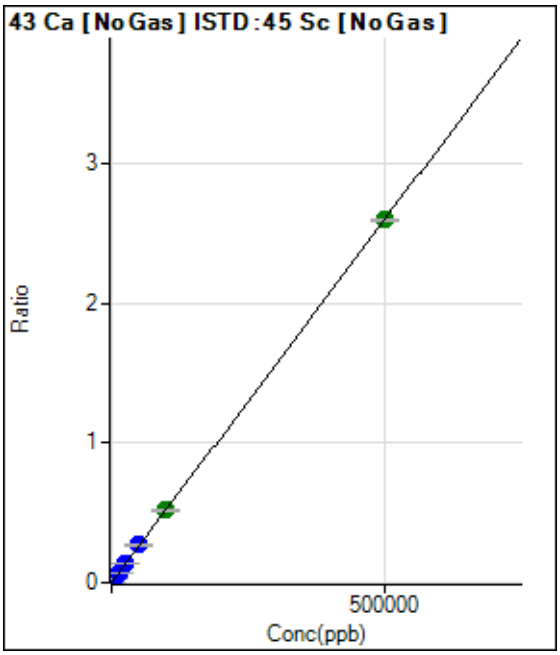


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	67580.12	0.1260	P	1.9
2	☐	500.000	520.629	375271.73	0.6946	P	0.5
3	☐	2500.000	2378.434	1444515.85	2.7236	A	1.6
4	☐	6250.000	6081.801	3510218.70	6.7682	A	1.0
5	☐	12500.000	12062.292	6439841.50	13.2998	A	1.5
6	☐	25000.000	24123.003	12645649.68	26.4718	A	0.4
7	☐	50000.000	48303.236	25401308.79	52.8801	A	0.4
8	☐	250000.00	250454.31	134997872.4	273.6580	A	0.5

y = 0.0011 * x + 0.1260
R = 1.0000
DL = 6.708
BEC = 115.4

Weight: <None>
Min Conc: 0

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



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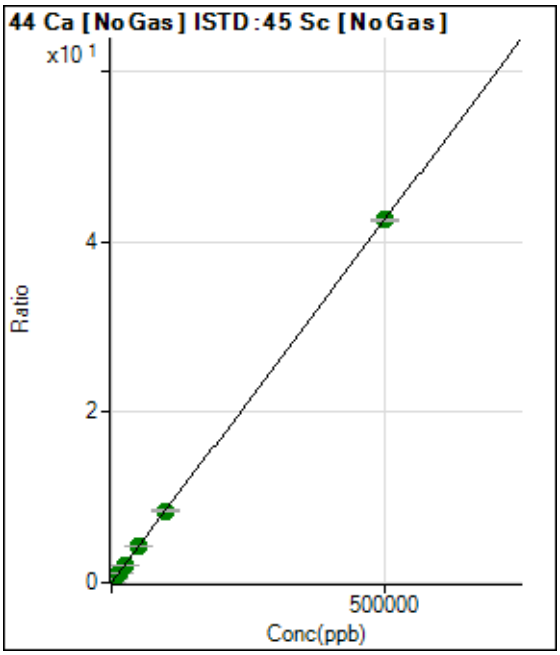
1	☐	0.000	0.000	382.23	0.0001	P	14.7
2	☐	500.000	527.529	13308.16	0.0028	P	0.8
3	☐	5000.000	5000.225	123243.49	0.0260	P	0.7
4	☐	12500.000	12819.084	305259.54	0.0666	P	3.3
5	☐	25000.000	25846.141	569526.66	0.1342	P	0.7
6	☐	50000.000	51658.772	1086864.67	0.2681	P	0.3
7	☐	100000.00	99436.661	2086112.45	0.5160	A	0.7
8	☐	500000.00	499896.47	10565669.35	2.5937	A	0.3

y = 5.1883E-006 * x + 8.0428E-005
R = 1.0000
DL = 6.856
BEC = 15.5

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12062.08	0.0025	P	1.7
2	☐	500.000	528.381	224407.21	0.0475	P	1.1
3	☐	5000.000	4755.239	1928726.21	0.4073	A	0.1
4	☐	12500.000	12176.760	4763339.41	1.0389	A	2.5
5	☐	25000.000	24645.181	8913339.17	2.1001	A	1.2
6	☐	50000.000	49455.163	17073868.50	4.2117	A	0.3
7	☐	100000.00	99252.647	34162822.27	8.4500	A	0.4
8	☐	500000.00	500232.19	173445555.1	42.5778	A	0.4

y = 8.5111E-005 * x + 0.0025
R = 1.0000
DL = 1.558
BEC = 29.82

Weight: <None>
Min Conc: 0

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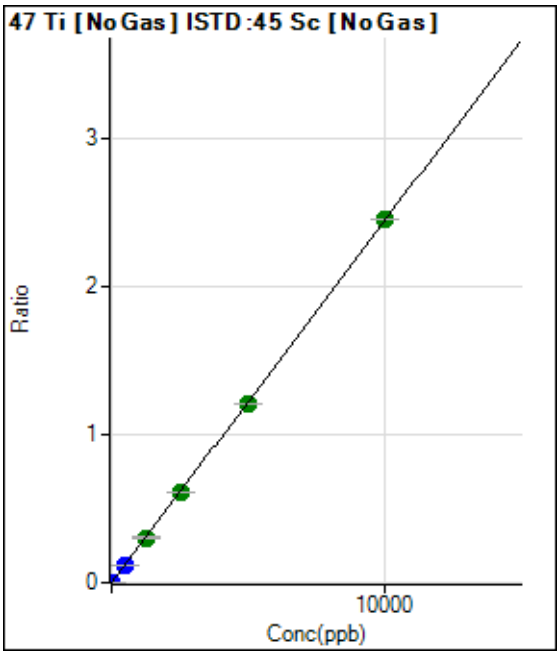
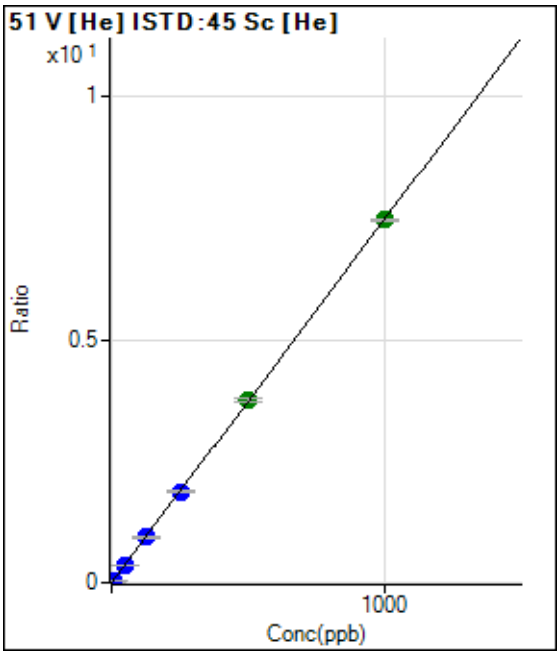


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	93.33	0.0000	P	12.9
2	☐	5.000	5.160	6052.38	0.0013	P	2.9
3	☐	500.000	484.905	561482.12	0.1186	P	0.9
4	☐	1250.000	1237.544	1387361.61	0.3026	A	2.2
5	☐	2500.000	2487.058	2580956.19	0.6081	A	0.6
6	☐	5000.000	4944.447	4900498.64	1.2088	A	0.3
7	☐	10000.000	10033.323	9917146.52	2.4530	A	0.1
8	☐			5045.35	0.0012	P	17.5

y = 2.4448E-004 * x + 1.9639E-005
R = 1.0000
DL = 0.03108
BEC = 0.08033

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0000	P	33.7
2	☐	5.000	5.038	20361.61	0.0377	P	0.7
3	☐	50.000	49.152	194931.78	0.3676	P	1.5
4	☐	125.000	124.476	482750.62	0.9308	P	1.0
5	☐	250.000	250.742	907913.88	1.8750	P	0.6
6	☐	500.000	502.259	1794121.69	3.7558	A	1.7
7	☐	1000.000	998.793	3587659.39	7.4688	A	0.7
8	☐			1833.46	0.0037	P	7.6

y = 0.0075 * x + 1.8667E-005
R = 1.0000
DL = 0.002524
BEC = 0.002496

Weight: <None>
Min Conc: 0

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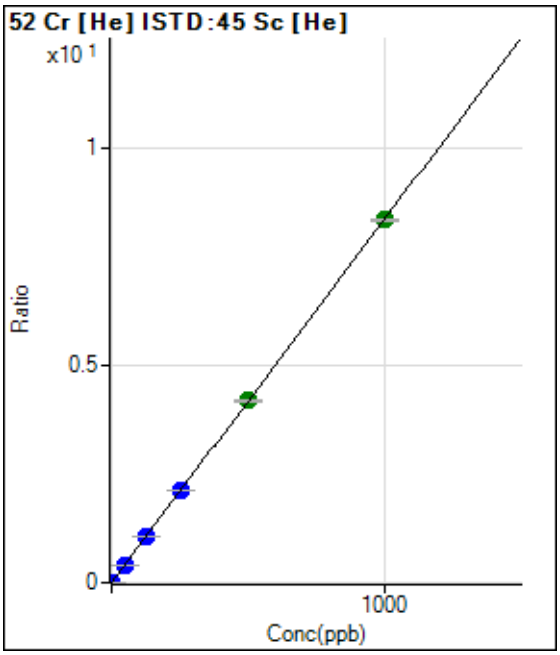
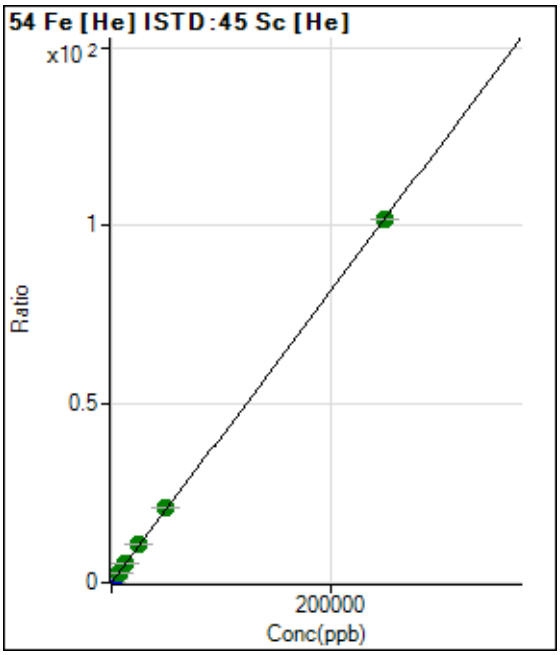


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1261.18	0.0024	P	1.7
2	☐	2.000	2.059	10567.11	0.0196	P	1.9
3	☐	50.000	49.266	219667.78	0.4142	P	0.3
4	☐	125.000	125.968	547343.54	1.0554	P	1.1
5	☐	250.000	253.780	1028399.09	2.1238	P	0.2
6	☐	500.000	501.152	2002344.94	4.1917	A	1.2
7	☐	1000.000	998.394	4010151.99	8.3483	A	0.8
8	☐			10784.84	0.0219	P	9.7

y = 0.0084 * x + 0.0024
R = 1.0000
DL = 0.01402
BEC = 0.2813

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3294.84	0.0061	P	0.5
2	☐	50.000	56.475	15753.90	0.0292	P	2.0
3	☐	2500.000	2617.556	569041.70	1.0730	P	0.5
4	☐	6250.000	6459.570	1368460.67	2.6388	A	2.9
5	☐	12500.000	13156.958	2599546.64	5.3684	A	0.6
6	☐	25000.000	26163.847	5096801.18	10.6695	A	0.5
7	☐	50000.000	51561.570	10097364.85	21.0207	A	0.8
8	☐	250000.00	249532.03	50171920.36	101.7060	A	0.1

y = 4.0756E-004 * x + 0.0061
R = 1.0000
DL = 0.2481
BEC = 15.08

Weight: <None>
Min Conc: 0

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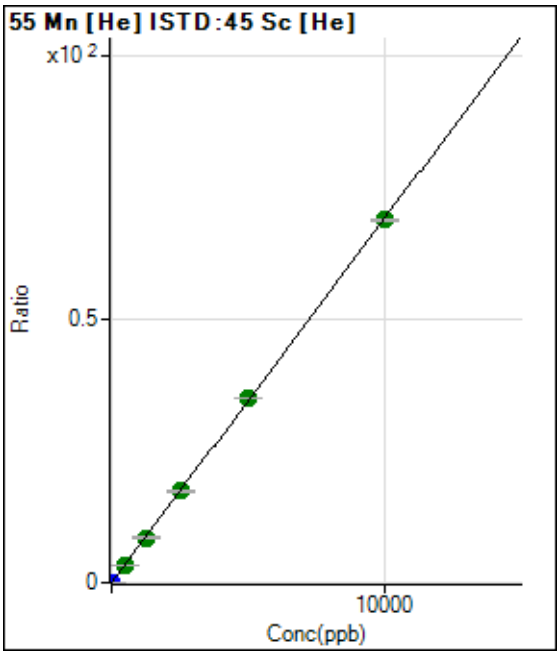
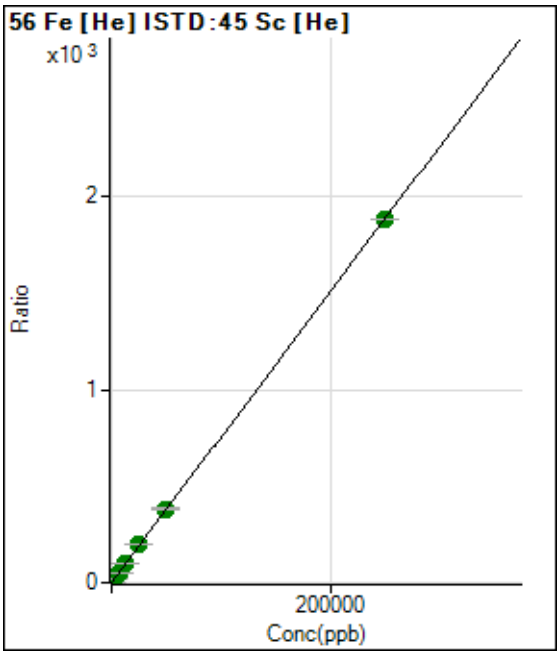


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	428.90	0.0008	P	11.9
2	☐	1.000	1.013	4219.52	0.0078	P	1.2
3	☐	500.000	483.232	1773702.61	3.3445	A	1.8
4	☐	1250.000	1237.326	4440676.22	8.5624	A	1.1
5	☐	2500.000	2520.756	8445664.67	17.4430	A	1.3
6	☐	5000.000	5068.935	16755250.31	35.0749	A	0.8
7	☐	10000.000	9962.766	33114616.73	68.9375	A	0.5
8	☐			25536.15	0.0518	P	3.0

y = 0.0069 * x + 7.9996E-004
R = 1.0000
DL = 0.04144
BEC = 0.1156

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	26447.73	0.0493	P	1.6
2	☐	50.000	54.405	248133.17	0.4593	P	0.7
3	☐	2500.000	2486.902	9965203.53	18.7899	A	0.5
4	☐	6250.000	6381.441	24965858.24	48.1381	A	1.1
5	☐	12500.000	12831.367	46841895.41	96.7430	A	1.2
6	☐	25000.000	25885.017	93204370.83	195.1117	A	0.3
7	☐	50000.000	50918.994	184342281.7	383.7609	A	0.4
8	☐	250000.00	249707.97	928293132.8	1,881.780	A	0.2

y = 0.0075 * x + 0.0493
R = 1.0000
DL = 0.3072
BEC = 6.545

Weight: <None>
Min Conc: 0

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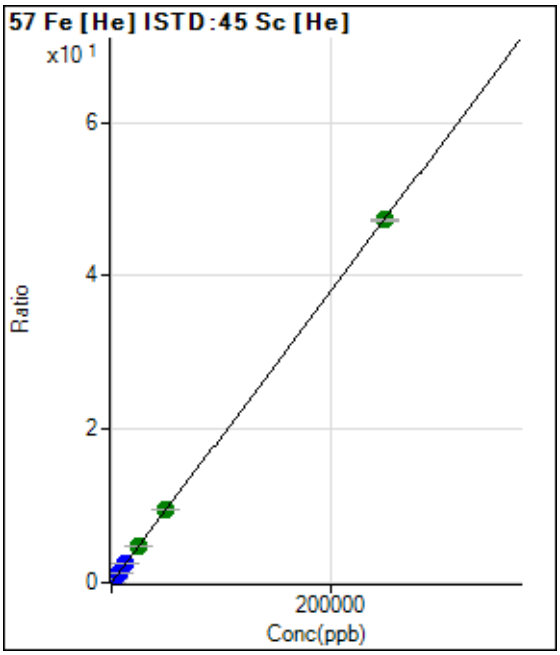
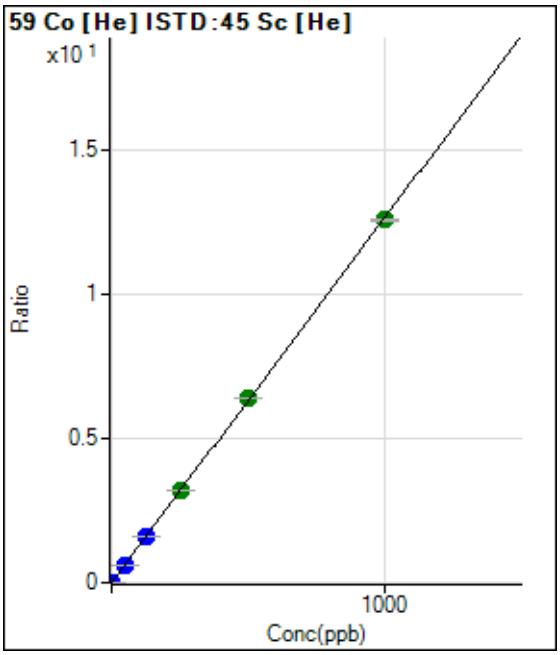


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1793.45	0.0033	P	5.5
2	☐	50.000	56.611	7597.55	0.0141	P	2.7
3	☐	2500.000	2571.189	259973.85	0.4902	P	0.5
4	☐	6250.000	6537.908	643766.41	1.2413	P	0.9
5	☐	12500.000	13212.747	1212992.02	2.5051	P	1.0
6	☐	25000.000	25563.231	2313808.56	4.8437	A	1.6
7	☐	50000.000	50572.570	4601436.91	9.5791	A	0.3
8	☐	250000.00	249785.61	23332602.43	47.2996	A	0.8

y = 1.8935E-004 * x + 0.0033
R = 1.0000
DL = 2.923
BEC = 17.66

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0003	P	8.3
2	☐	1.000	1.068	7427.47	0.0137	P	2.4
3	☐	50.000	49.408	330843.47	0.6238	P	0.3
4	☐	125.000	125.313	820375.48	1.5818	P	0.5
5	☐	250.000	252.877	1545395.72	3.1917	A	1.3
6	☐	500.000	507.910	3062220.17	6.4103	A	0.2
7	☐	1000.000	995.316	6034118.80	12.5616	A	0.5
8	☐			18167.74	0.0368	P	1.4

y = 0.0126 * x + 2.6941E-004
R = 0.9999
DL = 0.005309
BEC = 0.02135

Weight: <None>
Min Conc: 0

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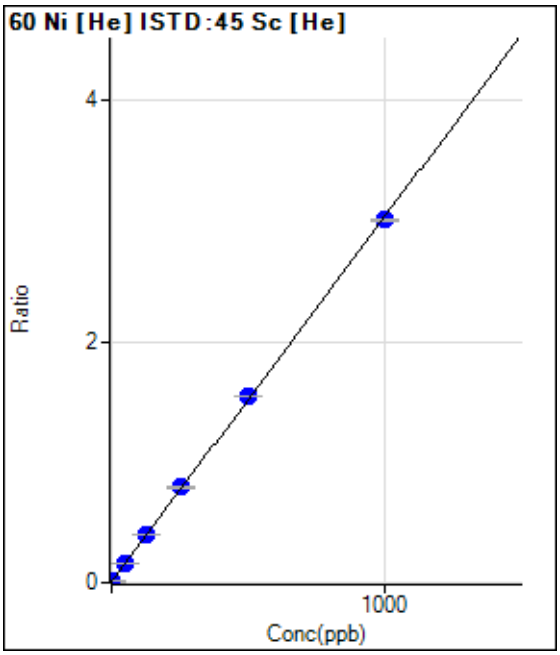
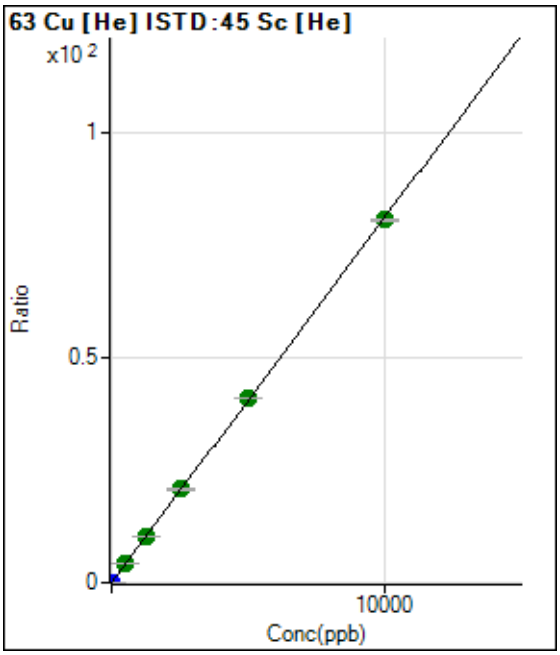


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3516.00	0.0066	P	4.8
2	☐	1.000	0.980	5145.38	0.0095	P	2.8
3	☐	50.000	51.007	85411.27	0.1610	P	0.9
4	☐	125.000	129.346	206588.38	0.3983	P	0.4
5	☐	250.000	259.643	383957.80	0.7930	P	1.0
6	☐	500.000	509.528	740358.66	1.5498	P	0.3
7	☐	1000.000	992.231	1446778.62	3.0119	P	0.2
8	☐			8861.58	0.0180	P	4.1

y = 0.0030 * x + 0.0066
R = 0.9999
DL = 0.3119
BEC = 2.165

Weight: <None>
Min Conc: 0



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1	☐	0.000	0.000	2693.61	0.0050	P	3.8
2	☐	2.000	2.428	13337.12	0.0247	P	2.2
3	☐	500.000	507.118	2180864.01	4.1121	A	0.5
4	☐	1250.000	1283.916	5395544.78	10.4034	A	0.8
5	☐	2500.000	2565.830	10063840.82	20.7855	A	1.6
6	☐	5000.000	5069.198	19614574.01	41.0602	A	0.5
7	☐	10000.000	9944.348	38689428.31	80.5438	A	0.9
8	☐			15131.06	0.0307	P	3.6

y = 0.0081 * x + 0.0050
R = 0.9999
DL = 0.07148
BEC = 0.6203

Weight: <None>
Min Conc: 0

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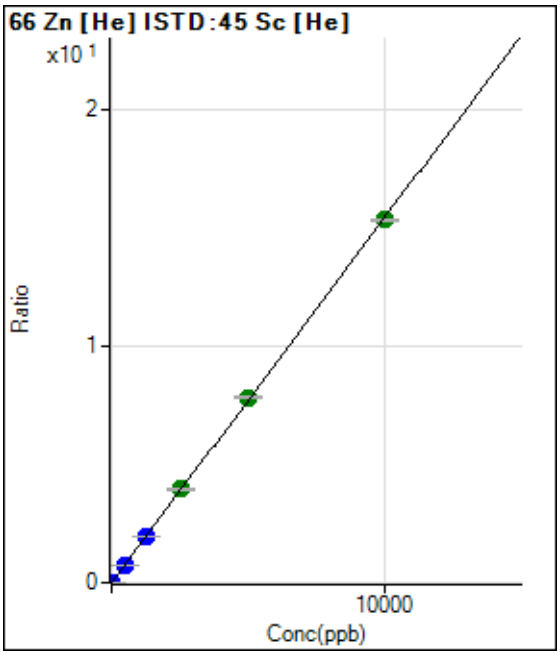
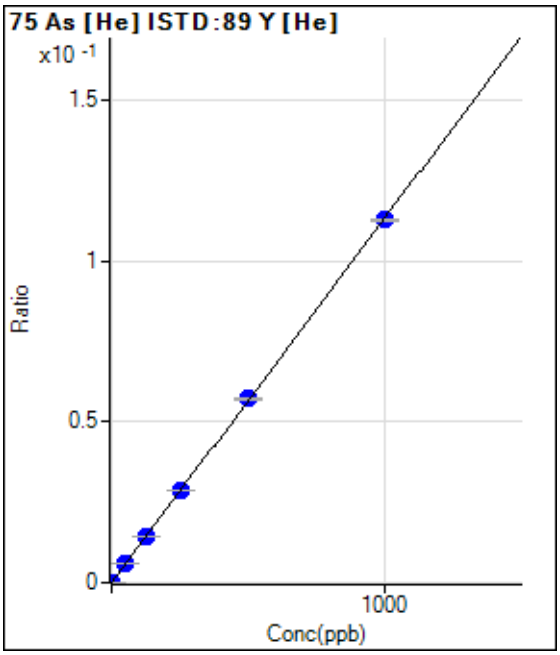


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.02	0.0011	P	7.2
2	☐	2.000	5.221	4950.87	0.0092	P	1.6
3	☐	500.000	487.223	398771.12	0.7519	P	0.5
4	☐	1250.000	1247.836	997833.99	1.9240	P	0.8
5	☐	2500.000	2561.107	1911471.43	3.9476	A	1.0
6	☐	5000.000	5080.586	3740396.09	7.8300	A	0.3
7	☐	10000.000	9945.339	7362044.54	15.3264	A	0.8
8	☐			5108.70	0.0104	P	2.0

y = 0.0015 * x + 0.0011
R = 0.9999
DL = 0.1568
BEC = 0.726

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	14.44	0.0000	P	53.6
2	☐	1.000	1.153	703.36	0.0001	P	4.5
3	☐	50.000	50.630	29882.30	0.0057	P	1.1
4	☐	125.000	127.982	73738.48	0.0145	P	1.3
5	☐	250.000	252.402	139396.22	0.0286	P	0.6
6	☐	500.000	505.403	275170.79	0.0573	P	0.5
7	☐	1000.000	996.294	549232.57	0.1129	P	0.4
8	☐			458.90	0.0001	P	12.7

y = 1.1334E-004 * x + 2.7667E-006
R = 1.0000
DL = 0.03929
BEC = 0.02441

Weight: <None>
Min Conc: 0

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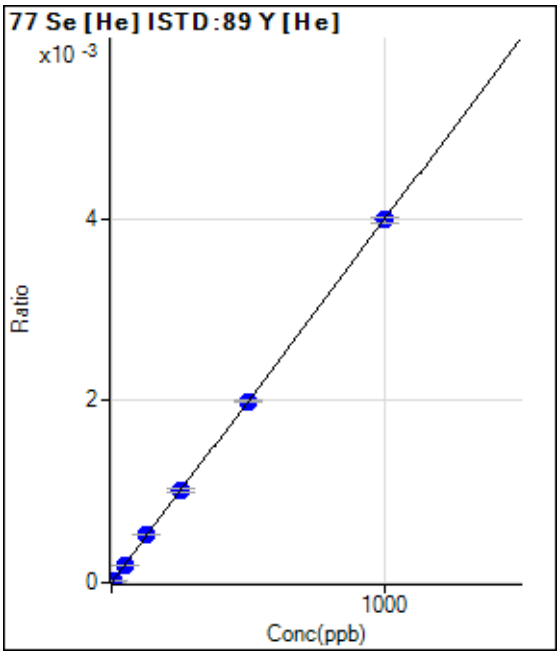
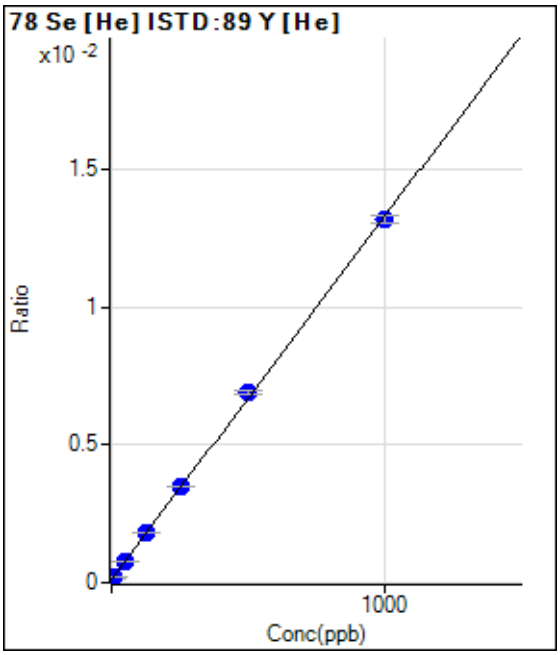


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	5.000	4.753	101.11	0.0000	P	29.0
3	☐	50.000	48.801	1013.38	0.0002	P	4.4
4	☐	125.000	131.729	2670.27	0.0005	P	1.7
5	☐	250.000	252.095	4897.52	0.0010	P	4.6
6	☐	500.000	499.294	9560.95	0.0020	P	1.2
7	☐	1000.000	999.049	19369.43	0.0040	P	1.7
8	☐			5.55	0.0000	P	69.9

y = 3.9861E-006 * x + 2.1491E-007
R = 1.0000
DL = 0.2802
BEC = 0.05392

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	621.13	0.0001	P	9.8
2	☐	5.000	6.156	1053.38	0.0002	P	7.9
3	☐	50.000	50.177	4052.82	0.0008	P	3.2
4	☐	125.000	128.410	9187.36	0.0018	P	1.9
5	☐	250.000	255.547	16954.26	0.0035	P	0.6
6	☐	500.000	514.028	33044.61	0.0069	P	1.8
7	☐	1000.000	991.158	63975.07	0.0132	P	2.0
8	☐			570.02	0.0001	P	14.6

y = 1.3151E-005 * x + 1.1892E-004
R = 0.9998
DL = 2.657
BEC = 9.042

Weight: <None>
Min Conc: 0

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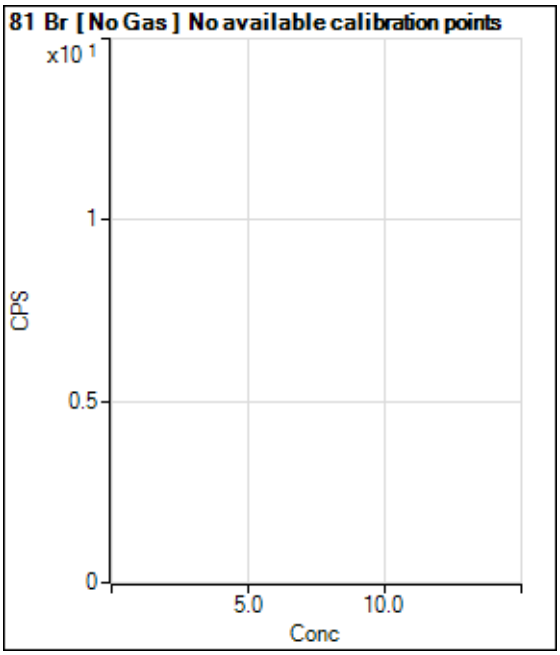
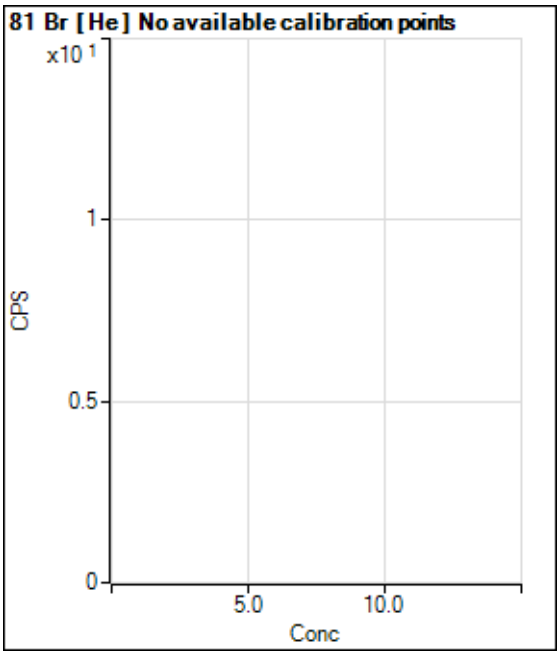


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			16123.33		P	1.2
2	☐			15764.09		P	1.5
3	☐			14914.30		P	3.0
4	☐			14232.53		P	3.0
5	☐			12895.72		P	1.9
6	☐			12502.05		P	0.8
7	☐			12795.63		P	2.9
8	☐			14292.55		P	3.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			150.00		P	17.4
2	☐			111.11		P	24.2
3	☐			121.11		P	18.7
4	☐			101.11		P	6.9
5	☐			95.56		P	10.7
6	☐			104.45		P	12.9
7	☐			101.11		P	29.7
8	☐			126.67		P	5.3

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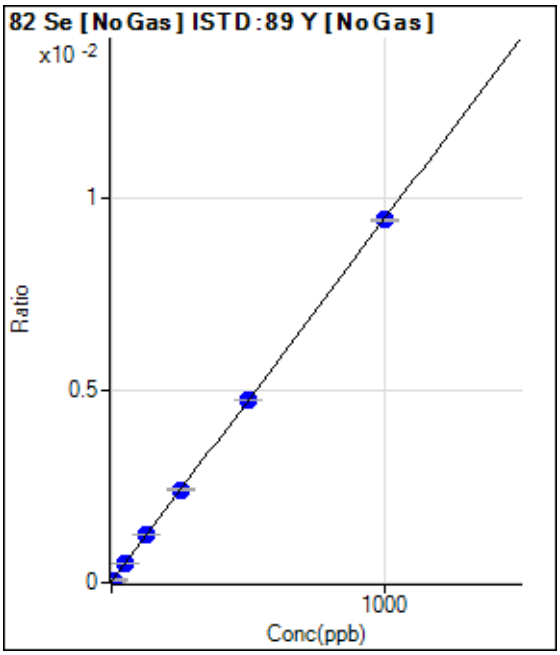
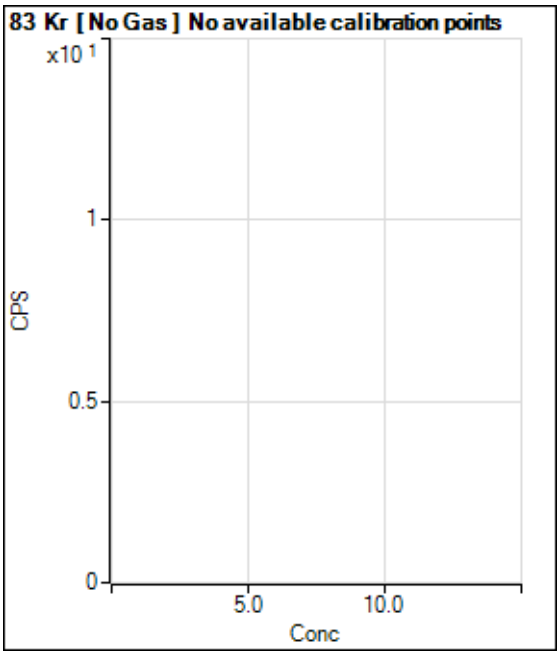


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	387.83	0.0000	P	12.6
2	☐	5.000	5.159	1161.05	0.0001	P	7.7
3	☐	50.000	50.063	7882.15	0.0005	P	1.8
4	☐	125.000	129.119	19413.35	0.0012	P	2.2
5	☐	250.000	254.309	35955.53	0.0024	P	1.1
6	☐	500.000	502.026	69066.80	0.0048	P	0.6
7	☐	1000.000	997.391	136857.94	0.0094	P	0.9
8	☐			509.48	0.0000	P	10.2

y = 9.4348E-006 * x + 2.4451E-005
R = 1.0000
DL = 0.9801
BEC = 2.592

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			231.11		P	13.9
2	☐			215.56		P	16.7
3	☐			215.56		P	14.9
4	☐			188.89		P	1.0
5	☐			201.11		P	20.7
6	☐			182.23		P	14.2
7	☐			192.23		P	18.2
8	☐			255.56		P	12.3

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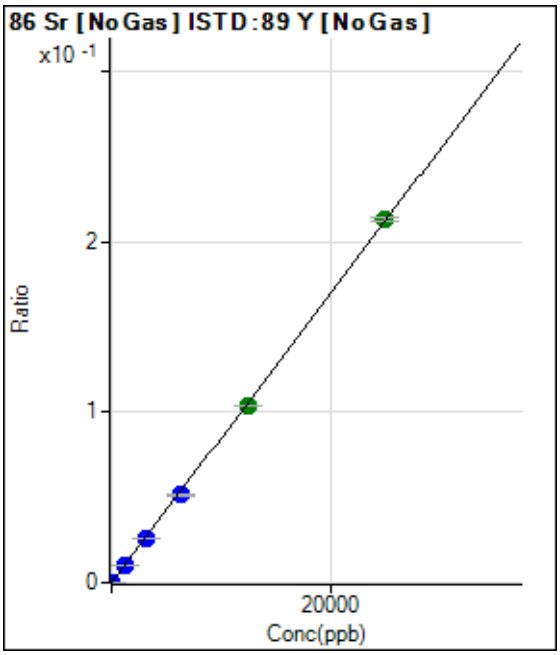
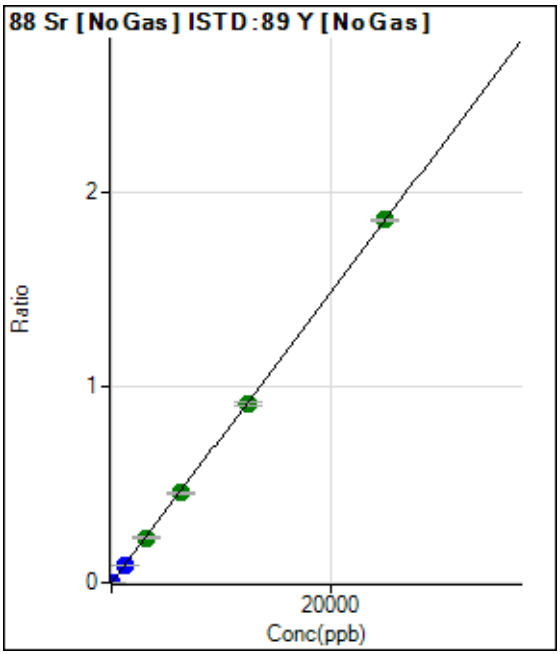


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	385.56	0.0000	P	13.3
2	☐	1.000	23.765	3578.25	0.0002	P	0.5
3	☐	1250.000	1188.074	159870.32	0.0101	P	1.1
4	☐	3125.000	3043.497	402672.13	0.0258	P	1.4
5	☐	6250.000	6100.495	765931.44	0.0516	P	1.5
6	☐	12500.000	12281.526	1507658.36	0.1039	A	0.5
7	☐	25000.000	25159.896	3088031.41	0.2129	A	1.0
8	☐			10859.62	0.0008	P	0.1

y = 8.4602E-006 * x + 2.4315E-005
R = 0.9999
DL = 1.149
BEC = 2.874

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	211.11	0.0000	P	5.3
2	☐	1.000	23.738	28130.25	0.0018	P	0.2
3	☐	1250.000	1189.947	1398774.60	0.0882	P	1.7
4	☐	3125.000	3100.287	3588200.40	0.2297	A	1.7
5	☐	6250.000	6213.787	6828705.45	0.4603	A	1.1
6	☐	12500.000	12358.790	13280856.89	0.9155	A	1.4
7	☐	25000.000	25085.749	26956367.38	1.8583	A	0.5
8	☐			92453.63	0.0065	P	1.6

y = 7.4076E-005 * x + 1.3304E-005
R = 1.0000
DL = 0.02857
BEC = 0.1796

Weight: <None>
Min Conc: 0

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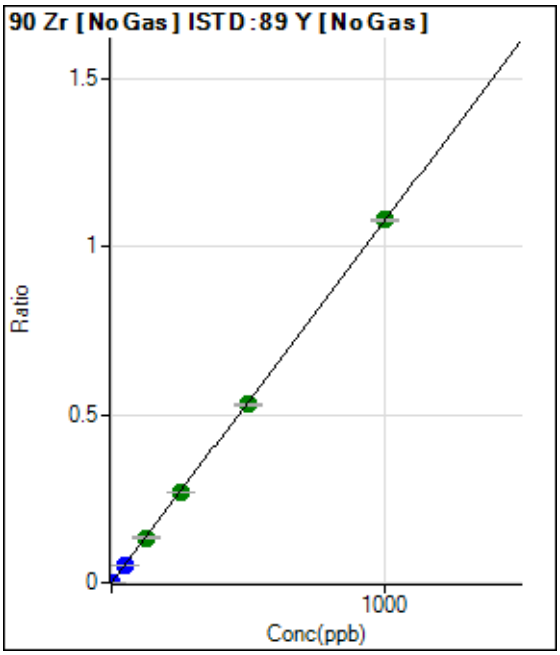
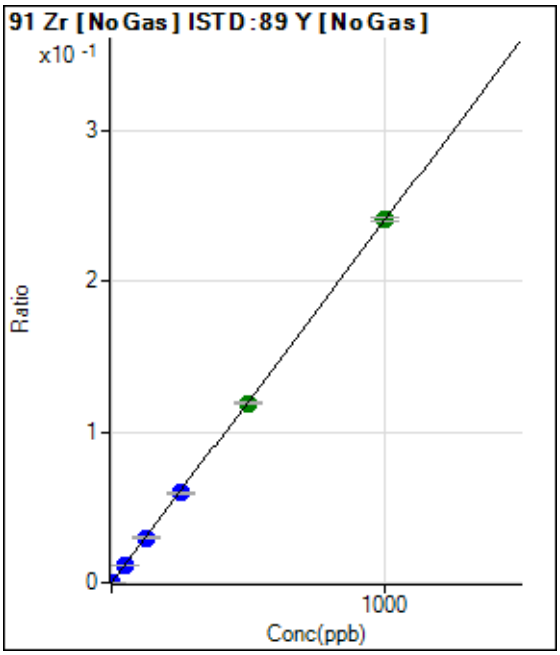


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	483.35	0.0000	P	10.7
2	☐	1.000	0.963	16930.94	0.0011	P	1.7
3	☐	50.000	47.800	816711.83	0.0515	P	1.9
4	☐	125.000	124.621	2095861.93	0.1342	A	2.0
5	☐	250.000	249.820	3988822.13	0.2689	A	1.2
6	☐	500.000	493.389	7703665.86	0.5310	A	0.8
7	☐	1000.000	1003.508	15667376.57	1.0801	A	0.7
8	☐			33586.17	0.0024	P	4.4

y = 0.0011 * x + 3.0405E-005
R = 1.0000
DL = 0.009065
BEC = 0.02825

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	103.33	0.0000	P	26.1
2	☐	1.000	0.980	3837.21	0.0002	P	5.5
3	☐	50.000	47.861	182379.01	0.0115	P	1.5
4	☐	125.000	123.938	464863.54	0.0298	P	1.9
5	☐	250.000	247.328	880705.20	0.0594	P	1.5
6	☐	500.000	496.450	1728723.01	0.1192	A	1.4
7	☐	1000.000	1002.683	3491226.47	0.2407	A	1.0
8	☐			7418.60	0.0005	P	4.7

y = 2.4003E-004 * x + 6.5290E-006
R = 1.0000
DL = 0.02128
BEC = 0.0272

Weight: <None>
Min Conc: 0

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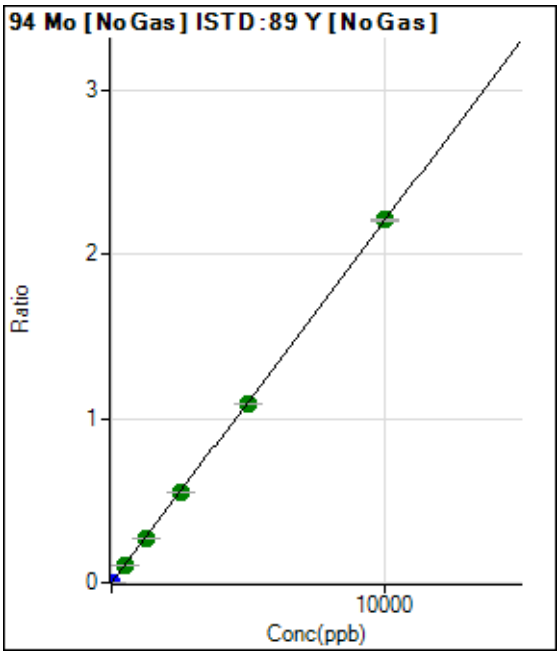
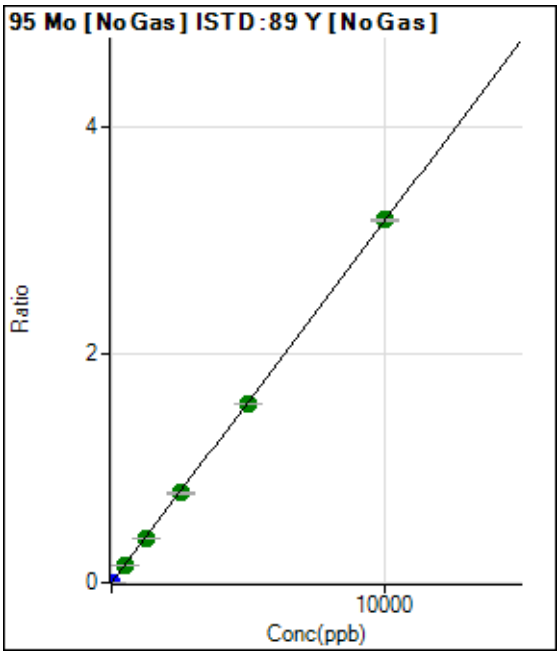


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	232.23	0.0000	P	8.5
2	☐	5.000	5.769	20414.30	0.0013	P	0.4
3	☐	500.000	483.801	1691558.62	0.1066	A	1.6
4	☐	1250.000	1235.236	4252140.74	0.2722	A	2.1
5	☐	2500.000	2490.940	8141877.94	0.5489	A	1.3
6	☐	5000.000	4945.265	15807029.49	1.0896	A	0.8
7	☐	10000.000	10032.287	32065352.85	2.2105	A	0.6
8	☐			26950.59	0.0019	P	11.2

y = 2.2034E-004 * x + 1.4613E-005
R = 1.0000
DL = 0.01687
BEC = 0.06632

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	135.56	0.0000	P	10.7
2	☐	5.000	4.917	24904.55	0.0016	P	1.3
3	☐	500.000	483.744	2435084.10	0.1535	A	2.3
4	☐	1250.000	1237.840	6135771.23	0.3927	A	1.6
5	☐	2500.000	2476.807	11656332.88	0.7858	A	1.4
6	☐	5000.000	4945.737	22762283.83	1.5691	A	0.9
7	☐	10000.000	10035.262	46184987.65	3.1838	A	0.2
8	☐			24238.26	0.0017	P	16.7

y = 3.1726E-004 * x + 8.5464E-006
R = 1.0000
DL = 0.008645
BEC = 0.02694

Weight: <None>
Min Conc: 0

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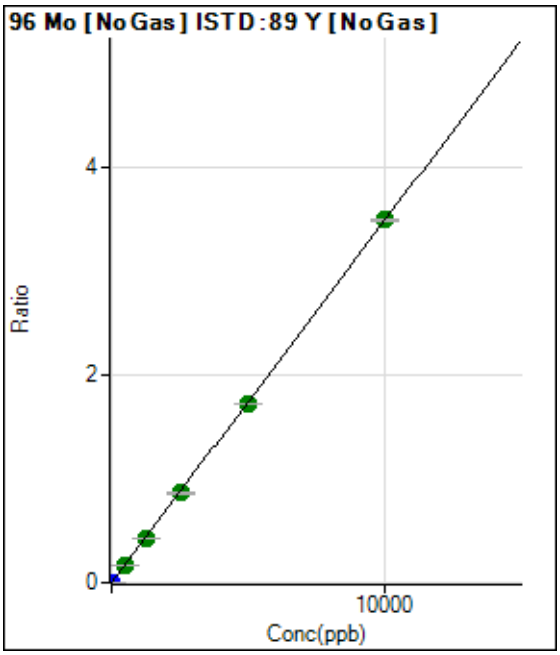
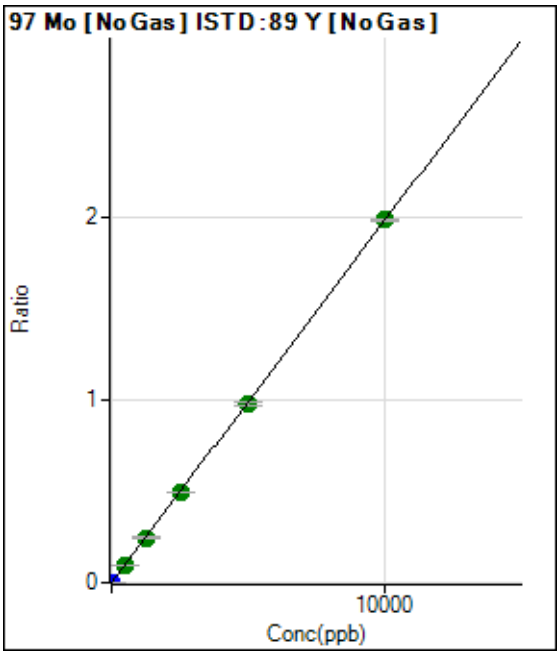


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	193.34	0.0000	P	15.2
2	☐	5.000	5.013	27931.14	0.0018	P	1.2
3	☐	500.000	482.085	2665916.04	0.1680	A	1.0
4	☐	1250.000	1234.193	6720095.73	0.4301	A	1.6
5	☐	2500.000	2487.162	12856711.75	0.8668	A	1.7
6	☐	5000.000	4954.103	25045417.13	1.7265	A	0.5
7	☐	10000.000	10029.030	50699254.25	3.4950	A	0.5
8	☐			37510.80	0.0026	P	12.7

y = 3.4849E-004 * x + 1.2161E-005
R = 1.0000
DL = 0.0159
BEC = 0.03489

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0000	P	32.3
2	☐	5.000	4.999	15835.31	0.0010	P	0.2
3	☐	500.000	479.005	1506970.86	0.0950	A	1.4
4	☐	1250.000	1242.160	3847771.43	0.2463	A	1.8
5	☐	2500.000	2504.073	7364802.88	0.4965	A	1.4
6	☐	5000.000	4942.652	14215981.32	0.9800	A	1.2
7	☐	10000.000	10029.685	28846145.40	1.9886	A	0.6
8	☐			15066.94	0.0011	P	18.7

y = 1.9827E-004 * x + 6.2980E-006
R = 1.0000
DL = 0.03076
BEC = 0.03177

Weight: <None>
Min Conc: 0

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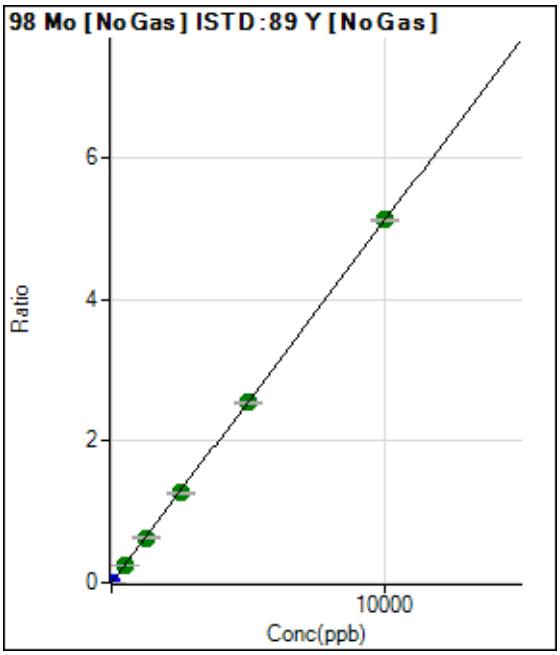
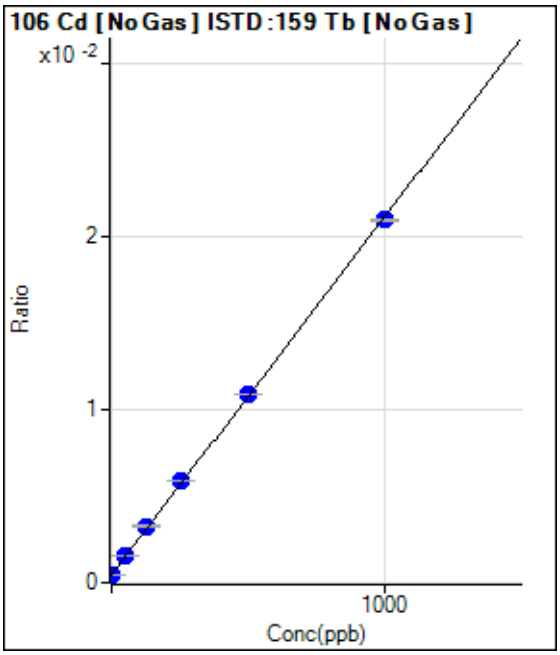


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	218.89	0.0000	P	11.2
2	☐	5.000	4.931	40263.08	0.0025	P	1.0
3	☐	500.000	482.480	3915405.88	0.2468	A	2.0
4	☐	1250.000	1241.424	9919255.48	0.6349	A	2.2
5	☐	2500.000	2481.050	18824390.97	1.2690	A	1.0
6	☐	5000.000	4972.318	36892040.28	2.5431	A	0.8
7	☐	10000.000	10020.527	74343114.45	5.1250	A	0.9
8	☐			38209.94	0.0027	P	18.4

y = 5.1145E-004 * x + 1.3786E-005
R = 1.0000
DL = 0.00906
BEC = 0.02695

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5233.22	0.0004	P	2.2
2	☐	1.000	1.151	5506.64	0.0005	P	3.9
3	☐	50.000	55.616	18959.14	0.0016	P	1.1
4	☐	125.000	135.620	39246.18	0.0032	P	2.2
5	☐	250.000	261.985	69704.87	0.0059	P	0.8
6	☐	500.000	505.949	129517.61	0.0109	P	0.7
7	☐	1000.000	992.421	252049.76	0.0210	P	0.4
8	☐			5040.92	0.0004	P	5.6

y = 2.0665E-005 * x + 4.4188E-004
R = 0.9999
DL = 1.402
BEC = 21.38

Weight: <None>
Min Conc: 0

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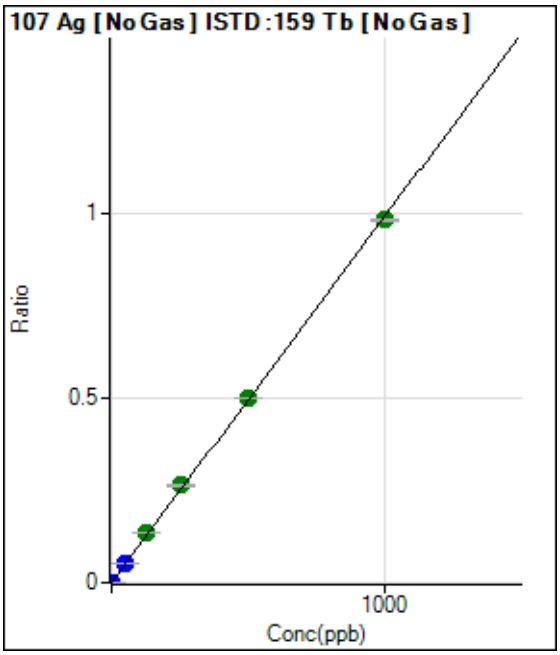
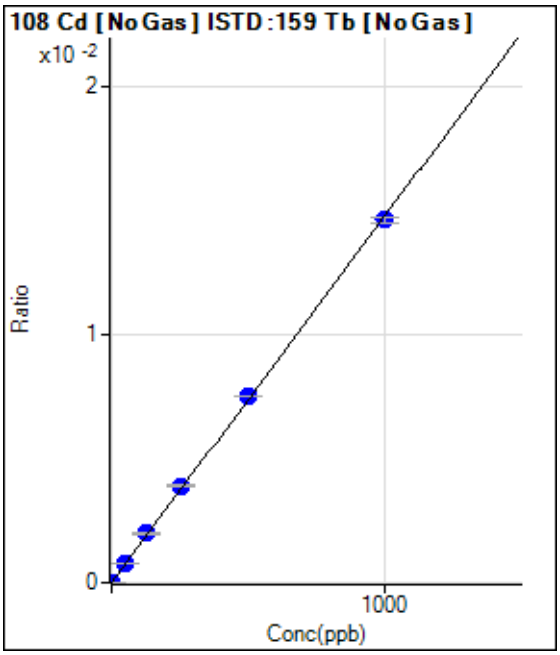


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	85.56	0.0000	P	28.7
2	☐	1.000	1.057	12445.44	0.0011	P	1.0
3	☐	50.000	53.691	632526.07	0.0531	P	0.9
4	☐	125.000	136.804	1636264.11	0.1353	A	1.5
5	☐	250.000	265.661	3126286.45	0.2626	A	0.6
6	☐	500.000	505.646	5941184.15	0.4999	A	0.5
7	☐	1000.000	991.602	11793989.54	0.9803	A	0.5
8	☐			5773.45	0.0005	P	19.3

y = 9.8860E-004 * x + 7.2267E-006
R = 0.9998
DL = 0.006305
BEC = 0.00731

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.66	0.0000	P	33.9
2	☐	1.000	1.091	206.67	0.0000	P	12.8
3	☐	50.000	52.730	9276.36	0.0008	P	2.4
4	☐	125.000	134.006	23906.42	0.0020	P	3.1
5	☐	250.000	263.718	46280.17	0.0039	P	1.4
6	☐	500.000	509.207	89211.88	0.0075	P	0.9
7	☐	1000.000	990.705	175681.51	0.0146	P	1.7
8	☐			152.22	0.0000	P	13.3

y = 1.4739E-005 * x + 1.4049E-006
R = 0.9998
DL = 0.09681
BEC = 0.09532

Weight: <None>
Min Conc: 0

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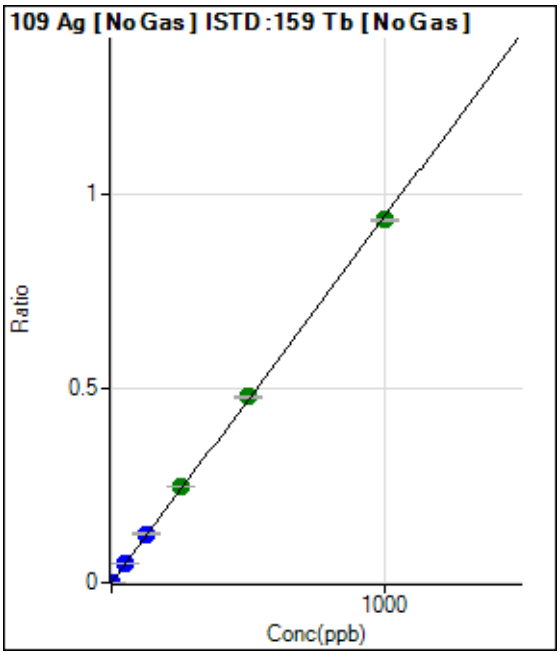
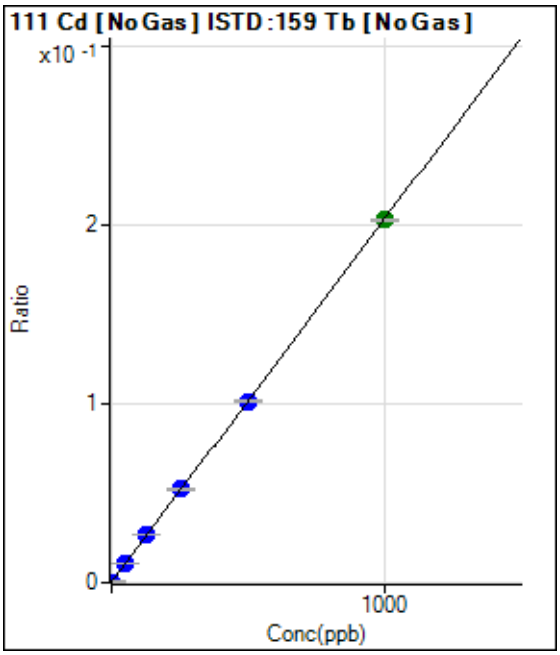


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	28.89	0.0000	P	16.8
2	☐	1.000	1.037	11550.23	0.0010	P	1.3
3	☐	50.000	52.837	591828.85	0.0497	P	1.3
4	☐	125.000	132.904	1511261.70	0.1249	P	2.2
5	☐	250.000	263.388	2947319.68	0.2476	A	0.7
6	☐	500.000	508.440	5680474.71	0.4779	A	0.6
7	☐	1000.000	991.303	11210744.28	0.9319	A	0.9
8	☐			5415.54	0.0005	P	19.7

y = 9.4002E-004 * x + 2.4370E-006
R = 0.9998
DL = 0.001308
BEC = 0.002593

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3658.25	0.0003	P	2.2
2	☐	1.000	1.125	6350.25	0.0005	P	3.1
3	☐	50.000	52.728	131119.40	0.0110	P	0.5
4	☐	125.000	132.235	328216.87	0.0271	P	1.7
5	☐	250.000	256.724	623507.23	0.0524	P	1.7
6	☐	500.000	498.693	1205886.51	0.1015	P	1.2
7	☐	1000.000	997.932	2439020.72	0.2027	A	0.7
8	☐			4621.05	0.0004	P	10.4

y = 2.0284E-004 * x + 3.0889E-004
R = 1.0000
DL = 0.1012
BEC = 1.523

Weight: <None>
Min Conc: 0

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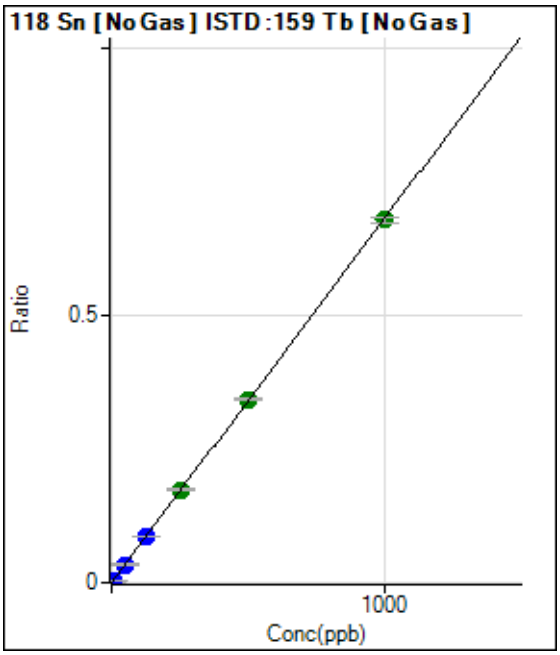
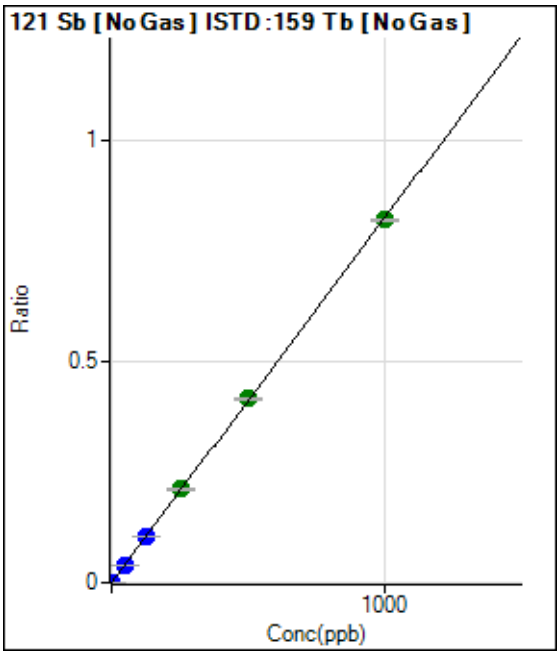


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1388.97	0.0001	P	4.4
2	☐	5.000	5.095	42476.89	0.0036	P	0.6
3	☐	50.000	49.935	407244.73	0.0342	P	1.0
4	☐	125.000	126.445	1044732.15	0.0864	P	2.2
5	☐	250.000	256.014	2080048.03	0.1747	A	0.8
6	☐	500.000	503.799	4085632.30	0.3438	A	1.3
7	☐	1000.000	996.419	8178179.11	0.6798	A	1.4
8	☐			5441.09	0.0005	P	15.4

y = 6.8211E-004 * x + 1.1726E-004
R = 1.0000
DL = 0.0228
BEC = 0.1719

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0000	P	19.9
2	☐	2.000	2.037	19851.53	0.0017	P	0.9
3	☐	50.000	49.577	486000.22	0.0408	P	1.1
4	☐	125.000	125.876	1252623.85	0.1036	P	2.5
5	☐	250.000	257.234	2518811.28	0.2116	A	1.5
6	☐	500.000	505.174	4939225.80	0.4156	A	1.1
7	☐	1000.000	995.516	9852949.23	0.8190	A	0.5
8	☐			7269.70	0.0006	P	15.0

y = 8.2266E-004 * x + 3.2844E-006
R = 0.9999
DL = 0.002381
BEC = 0.003992

Weight: <None>
Min Conc: 0

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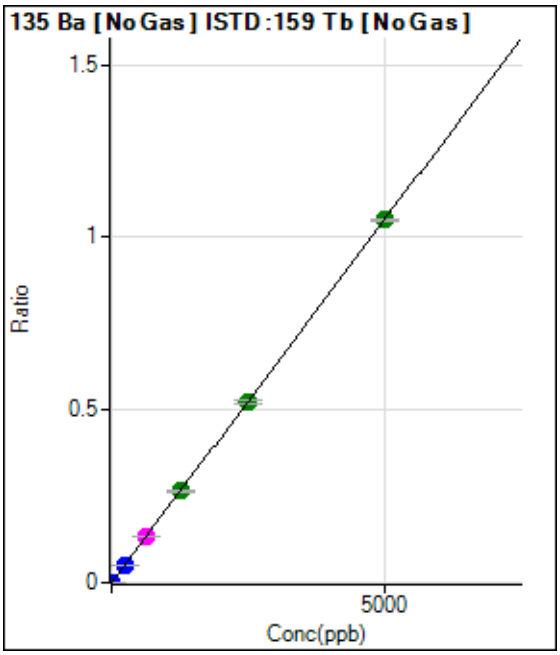
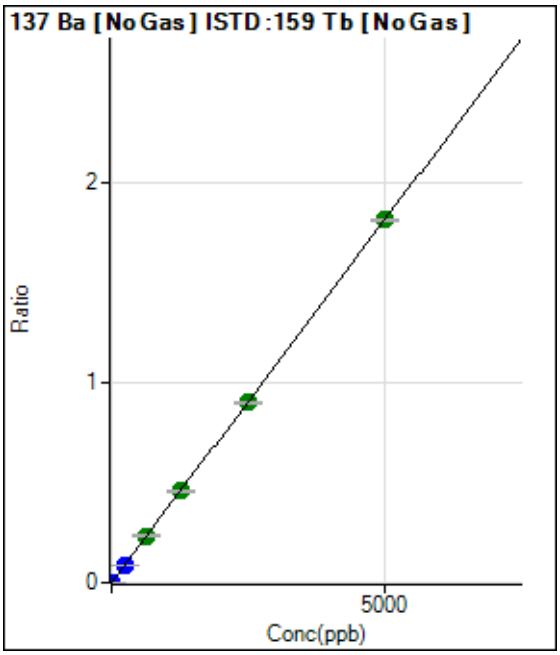


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	62.22	0.0000	P	5.5
2	☐	10.000	10.100	25171.16	0.0021	P	1.3
3	☐	250.000	242.907	608603.50	0.0511	P	1.1
4	☐	625.000	634.454	1613812.46	0.1334	M	2.9
5	☐	1250.000	1265.495	3167238.98	0.2661	A	2.6
6	☐	2500.000	2494.158	6232587.89	0.5244	A	1.7
7	☐	5000.000	4998.220	12643646.48	1.0509	A	0.4
8	☐			8958.45	0.0008	P	10.6

y = 2.1026E-004 * x + 5.2533E-006
R = 1.0000
DL = 0.004104
BEC = 0.02498

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	115.56	0.0000	P	16.2
2	☐	10.000	10.188	43838.39	0.0037	P	0.9
3	☐	250.000	243.161	1051752.26	0.0883	P	1.0
4	☐	625.000	642.460	2820732.32	0.2332	A	2.7
5	☐	1250.000	1263.264	5458086.72	0.4585	A	1.0
6	☐	2500.000	2480.442	10700410.68	0.9003	A	1.0
7	☐	5000.000	5004.622	21854641.62	1.8166	A	0.7
8	☐			15904.64	0.0014	P	12.1

y = 3.6297E-004 * x + 9.7634E-006
R = 1.0000
DL = 0.0131
BEC = 0.0269

Weight: <None>
Min Conc: 0

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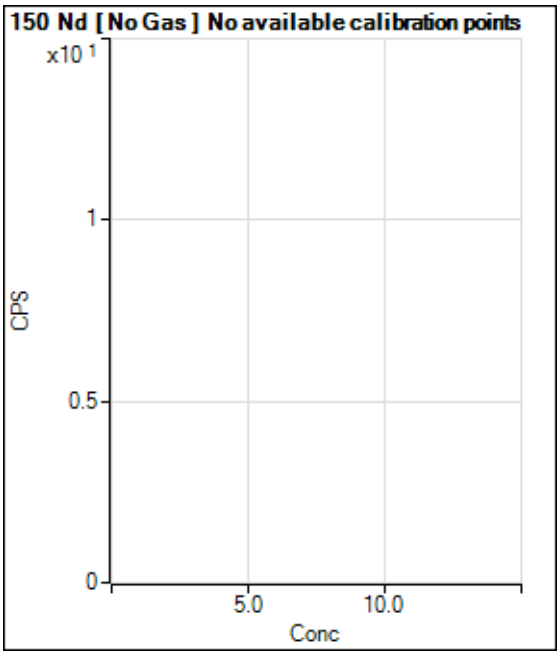
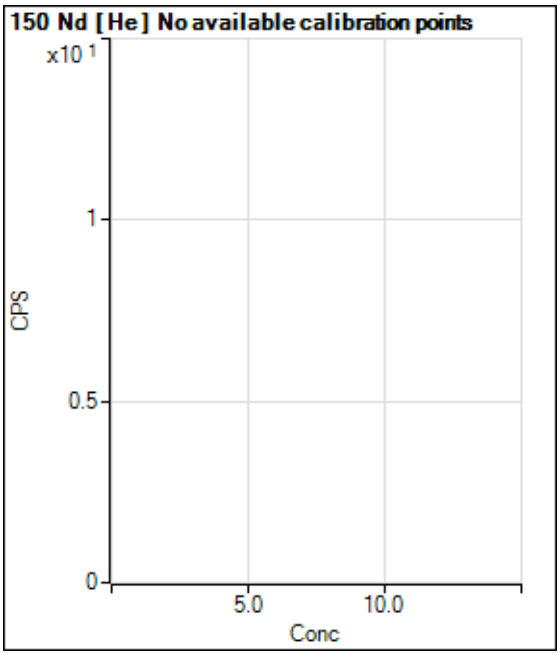


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			4.44		P	114.
2	☐			10.00		P	88.2
3	☐			58.89		P	14.2
4	☐			127.78		P	14.4
5	☐			217.78		P	15.1
6	☐			465.57		P	5.4
7	☐			845.59		P	4.5
8	☐			181.11		P	10.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			1.11		P	173.
2	☐			3.33		P	100.
3	☐			17.78		P	65.8
4	☐			35.56		P	39.0
5	☐			80.00		P	20.8
6	☐			156.67		P	16.6
7	☐			303.34		P	4.0
8	☐			140.00		P	10.4

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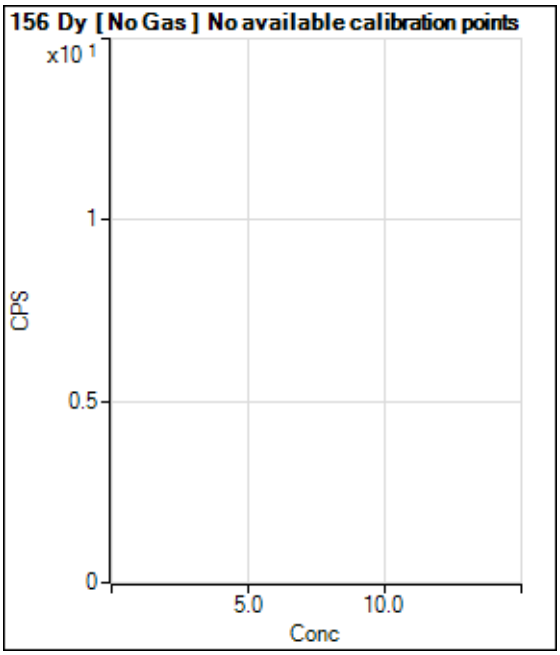
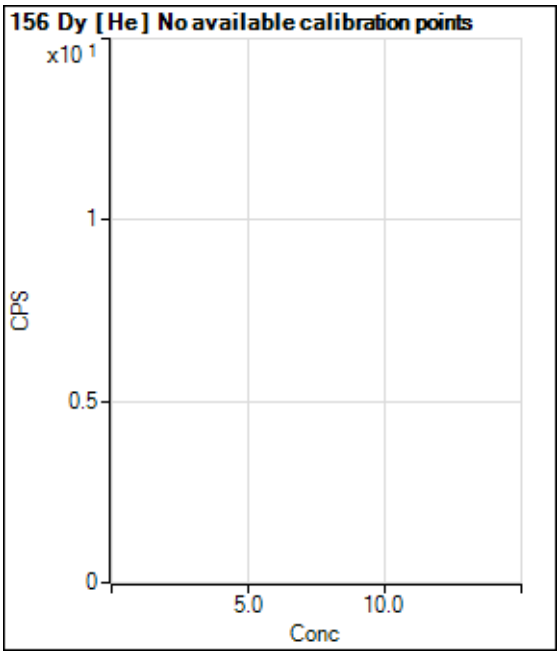


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			10.00		P	66.7
2	☐			10.00		P	88.2
3	☐			26.67		P	37.5
4	☐			44.44		P	41.3
5	☐			82.22		P	23.8
6	☐			153.34		P	11.5
7	☐			296.67		P	3.0
8	☐			370.01		P	10.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			3.33		P	100.
2	☐			13.34		P	43.3
3	☐			63.33		P	22.9
4	☐			106.67		P	18.7
5	☐			203.34		P	13.4
6	☐			477.79		P	9.5
7	☐			840.03		P	4.3
8	☐			370.01		P	5.6

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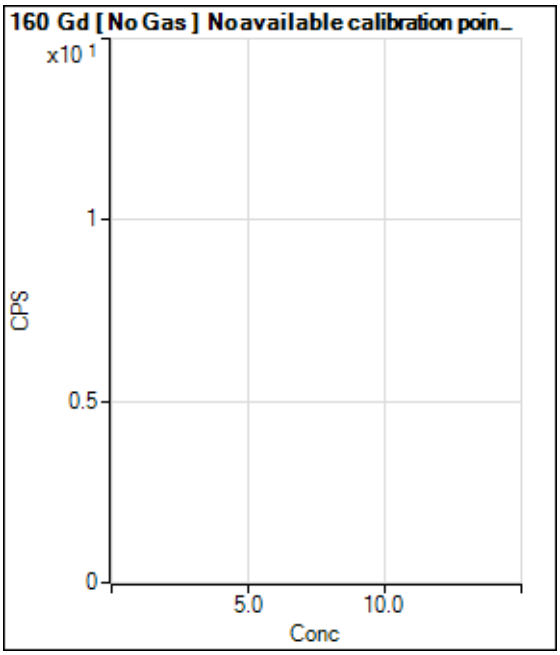
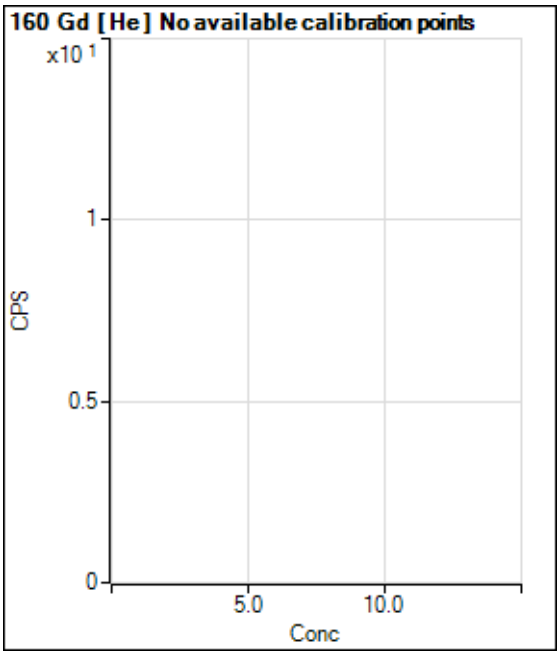


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			41.11		P	16.9
2	☐			44.45		P	15.6
3	☐			60.00		P	16.7
4	☐			64.44		P	25.5
5	☐			92.22		P	30.7
6	☐			121.11		P	6.9
7	☐			190.00		P	11.5
8	☐			376.68		P	13.1



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			471.13		P	4.8
2	☐			465.57		P	19.4
3	☐			461.13		P	4.2
4	☐			470.01		P	6.2
5	☐			493.35		P	8.9
6	☐			463.35		P	11.2
7	☐			552.24		P	8.0
8	☐			747.81		P	9.1

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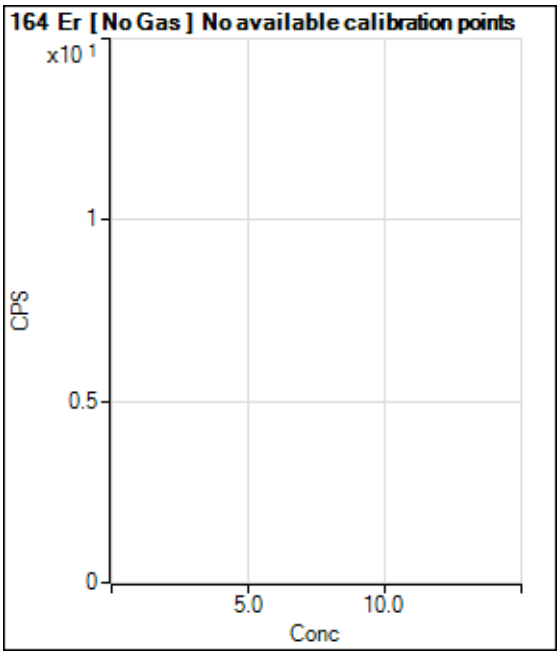
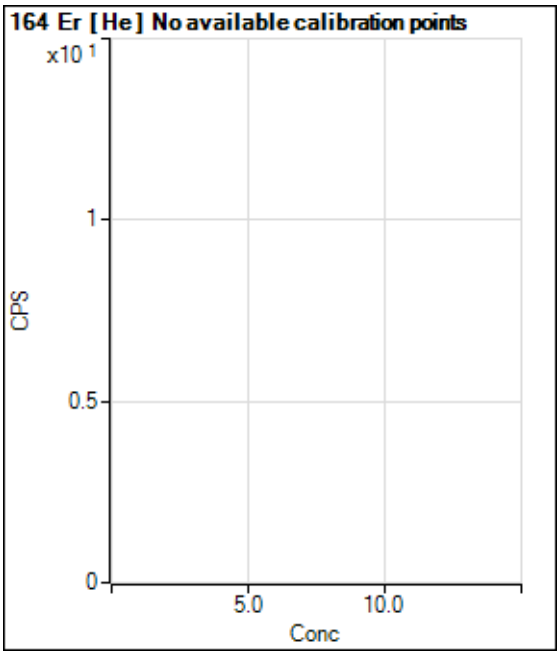


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			60.00		P	20.0
2	☐			52.22		P	13.3
3	☐			68.89		P	2.8
4	☐			87.78		P	8.8
5	☐			100.00		P	26.0
6	☐			151.11		P	18.0
7	☐			278.89		P	15.2
8	☐			418.90		P	7.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			38.89		P	40.5
2	☐			52.22		P	37.4
3	☐			58.89		P	22.9
4	☐			44.45		P	15.6
5	☐			77.78		P	13.1
6	☐			112.22		P	6.9
7	☐			180.00		P	1.9
8	☐			342.23		P	5.6

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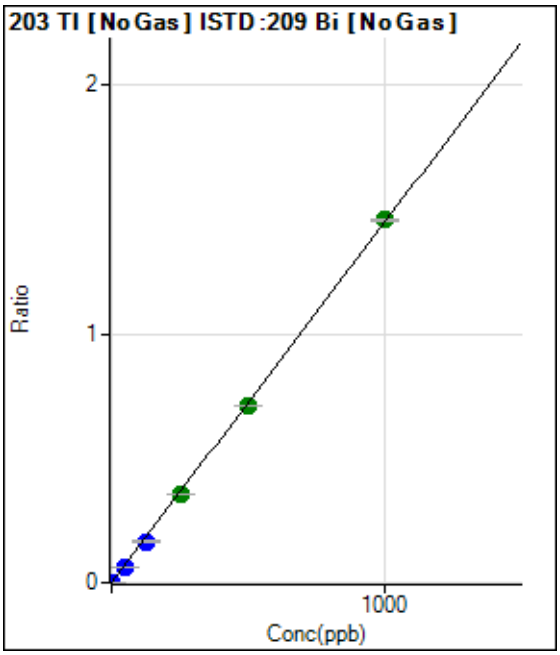
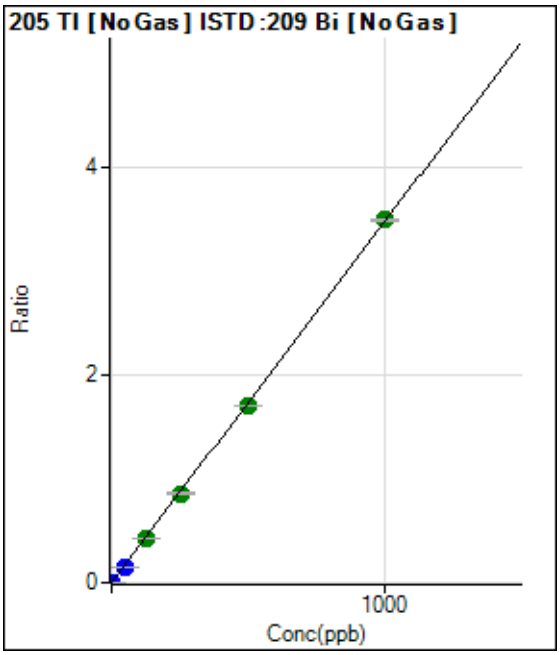


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	141.11	0.0000	P	15.2
2	☐	1.000	0.885	9353.28	0.0013	P	0.8
3	☐	50.000	44.061	462377.06	0.0638	P	1.5
4	☐	125.000	113.822	1230321.68	0.1648	P	2.5
5	☐	250.000	246.580	2639981.52	0.3570	A	0.6
6	☐	500.000	491.208	5253392.94	0.7111	A	0.6
7	☐	1000.000	1006.945	10648944.49	1.4578	A	0.4
8	☐			4720.89	0.0007	P	24.8

y = 0.0014 * x + 1.9888E-005
R = 0.9999
DL = 0.006283
BEC = 0.01374

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	291.12	0.0000	P	17.6
2	☐	1.000	0.866	21927.75	0.0031	P	1.2
3	☐	50.000	43.600	1098384.87	0.1516	P	1.7
4	☐	125.000	120.984	3139876.20	0.4205	A	1.5
5	☐	250.000	246.347	6331427.47	0.8562	A	1.5
6	☐	500.000	490.251	12587200.37	1.7039	A	0.5
7	☐	1000.000	1006.610	25557325.17	3.4985	A	0.5
8	☐			10955.77	0.0017	P	21.3

y = 0.0035 * x + 4.1070E-005
R = 0.9999
DL = 0.00623
BEC = 0.01182

Weight: <None>
Min Conc: 0

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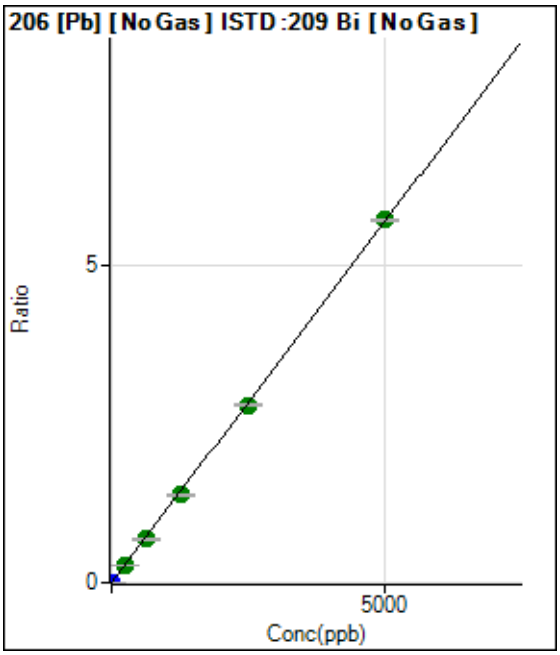
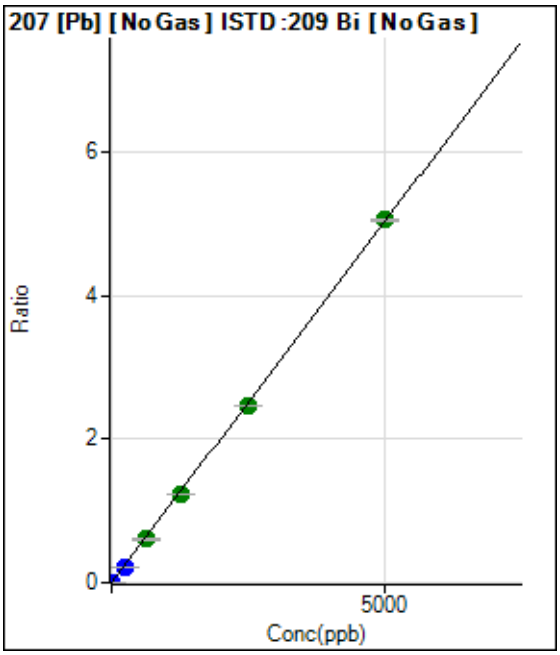


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	627.80	0.0001	P	6.8
2	☐	1.000	0.915	8092.48	0.0011	P	3.1
3	☐	250.000	233.821	1920912.96	0.2651	A	0.5
4	☐	625.000	604.729	5117317.53	0.6854	A	2.2
5	☐	1250.000	1219.978	10224824.15	1.3826	A	1.2
6	☐	2500.000	2460.268	20598120.25	2.7882	A	1.2
7	☐	5000.000	5030.714	41646987.99	5.7012	A	0.4
8	☐			19022.62	0.0030	P	17.8

y = 0.0011 * x + 8.8542E-005
R = 0.9999
DL = 0.016
BEC = 0.07813

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	541.13	0.0001	P	2.9
2	☐	1.000	0.902	7061.89	0.0010	P	2.5
3	☐	250.000	218.651	1591505.69	0.2196	P	1.1
4	☐	625.000	605.372	4538794.86	0.6079	A	2.0
5	☐	1250.000	1225.647	9101208.13	1.2307	A	0.7
6	☐	2500.000	2461.854	18260707.09	2.4720	A	0.1
7	☐	5000.000	5029.182	36887527.23	5.0497	A	0.6
8	☐			16320.14	0.0026	P	18.8

y = 0.0010 * x + 7.6301E-005
R = 0.9999
DL = 0.006686
BEC = 0.07599

Weight: <None>
Min Conc: 0

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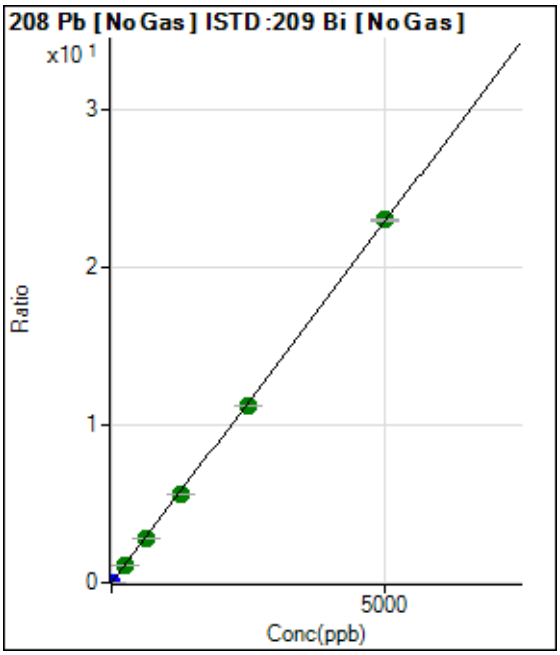
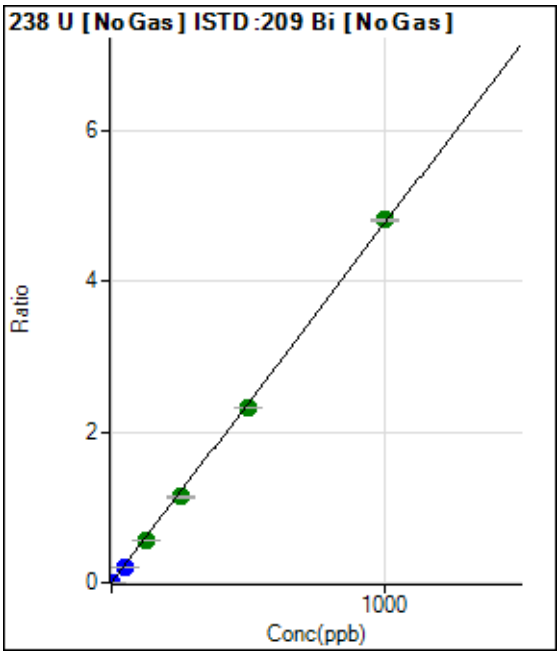


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2463.45	0.0003	P	6.0
2	☐	1.000	0.909	32382.07	0.0045	P	2.0
3	☐	250.000	231.691	7684759.63	1.0604	A	1.1
4	☐	625.000	606.645	20726523.34	2.7760	A	1.9
5	☐	1250.000	1225.297	41462815.56	5.6066	A	0.5
6	☐	2500.000	2458.293	83093572.79	11.2482	A	0.3
7	☐	5000.000	5030.239	168130233.8	23.0160	A	0.4
8	☐			75393.13	0.0119	P	18.0

y = 0.0046 * x + 3.4742E-004
R = 0.9999
DL = 0.01356
BEC = 0.07593

Weight: <None>
Min Conc: 0



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	74.44	0.0000	P	48.2
2	☐	1.000	0.840	28871.22	0.0040	P	0.1
3	☐	50.000	41.043	1417722.23	0.1956	P	1.4
4	☐	125.000	116.641	4150704.49	0.5560	A	2.6
5	☐	250.000	238.999	8424344.74	1.1392	A	1.2
6	☐	500.000	487.653	17171006.69	2.3244	A	0.4
7	☐	1000.000	1010.417	35181966.42	4.8161	A	0.4
8	☐			13651.78	0.0021	P	21.1

y = 0.0048 * x + 1.0512E-005
R = 0.9998
DL = 0.003186
BEC = 0.002205

Weight: <None>
Min Conc: 0

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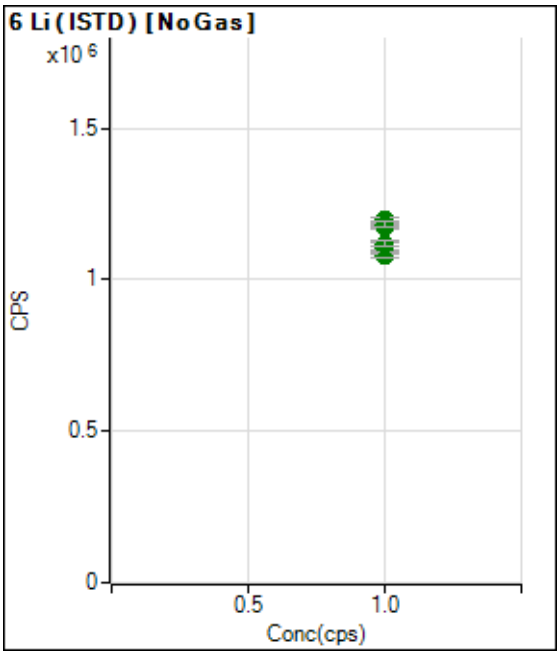
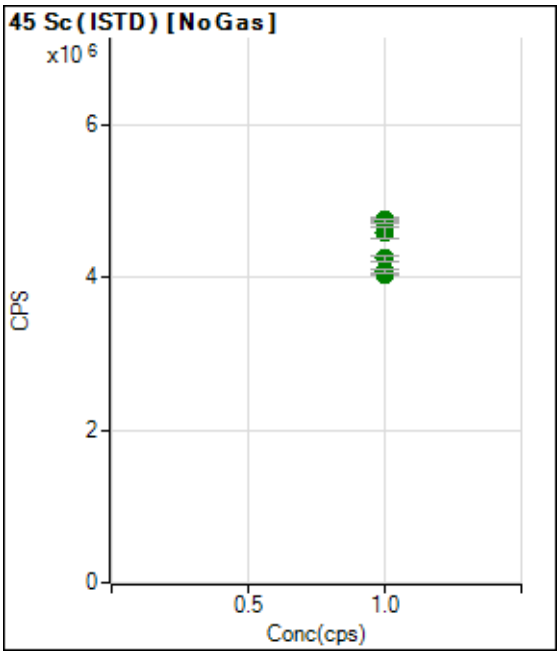


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1094306.95		A	0.5
2	☐	1.000		1081102.86		A	1.1
3	☐	1.000		1107810.16		A	2.3
4	☐	1.000		1175878.03		A	0.9
5	☐	1.000		1181028.34		A	0.6
6	☐	1.000		1197799.65		A	1.4
7	☐	1.000		1183078.16		A	1.4
8	☐	1.000		1120272.28		A	1.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4752899.48		A	1.0
2	☐	1.000		4723591.46		A	0.4
3	☐	1.000		4735877.08		A	1.4
4	☐	1.000		4587141.81		A	2.9
5	☐	1.000		4244976.01		A	2.1
6	☐	1.000		4053909.10		A	0.1
7	☐	1.000		4042926.85		A	0.0
8	☐	1.000		4073477.34		A	1.4

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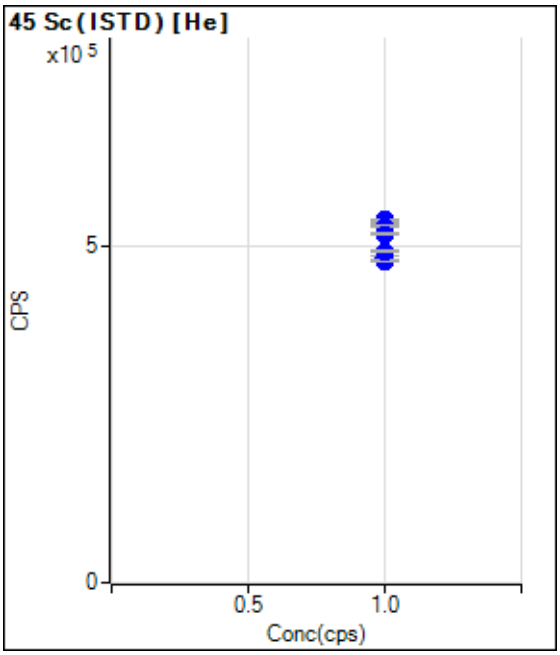
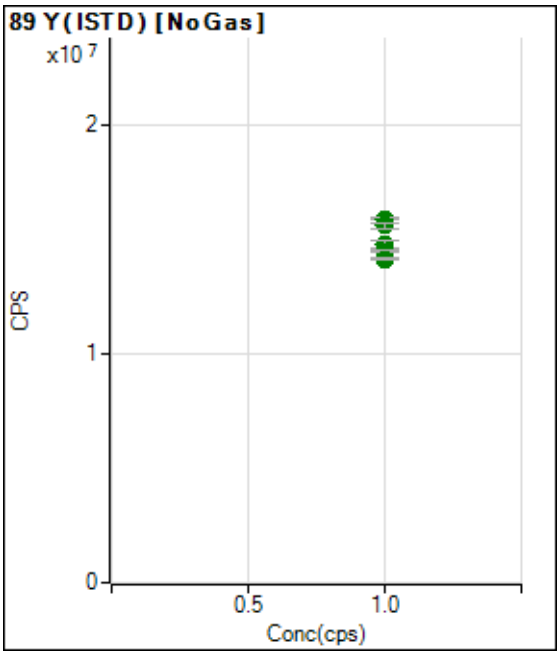


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		536225.88		P	0.4
2	☐	1.000		540251.02		P	0.5
3	☐	1.000		530352.76		P	0.4
4	☐	1.000		518649.81		P	0.6
5	☐	1.000		484234.38		P	1.2
6	☐	1.000		477699.94		P	0.2
7	☐	1.000		480359.37		P	0.3
8	☐	1.000		493303.97		P	0.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15877093.51		A	1.9
2	☐	1.000		15877354.35		A	0.1
3	☐	1.000		15868415.46		A	1.2
4	☐	1.000		15626232.82		A	1.7
5	☐	1.000		14836629.36		A	2.2
6	☐	1.000		14506899.64		A	0.4
7	☐	1.000		14506405.20		A	0.7
8	☐	1.000		14162797.01		A	0.6

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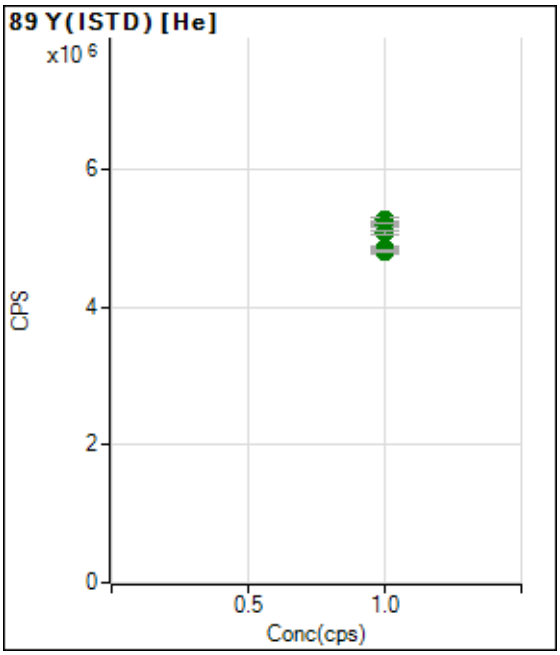
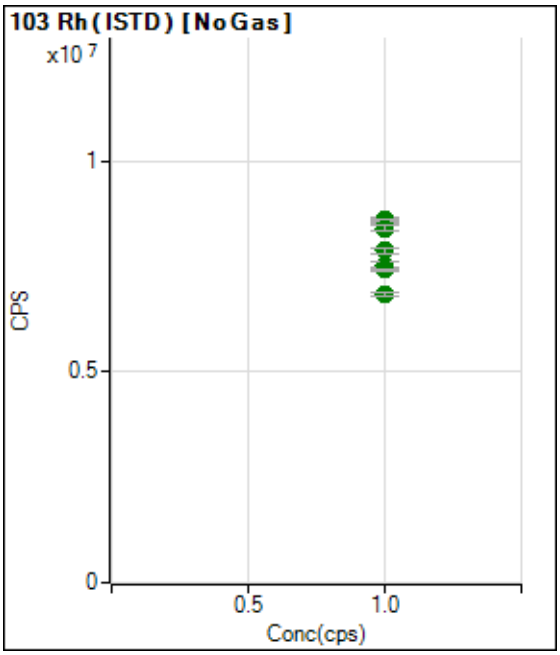
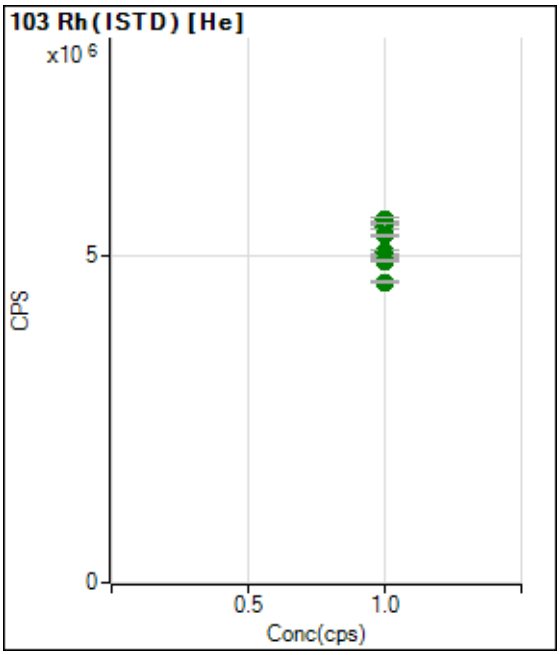


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5227078.60		A	1.4
2	☐	1.000		5270452.77		A	1.4
3	☐	1.000		5205011.21		A	1.2
4	☐	1.000		5082887.49		A	0.9
5	☐	1.000		4872314.55		A	0.3
6	☐	1.000		4803596.18		A	0.6
7	☐	1.000		4863842.95		A	0.5
8	☐	1.000		4826228.75		A	0.5



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8584727.51		A	1.4
2	☐	1.000		8609272.86		A	1.5
3	☐	1.000		8596786.75		A	0.3
4	☐	1.000		8414921.05		A	2.0
5	☐	1.000		7872037.87		A	2.1
6	☐	1.000		7551338.71		A	1.7
7	☐	1.000		7415253.85		A	0.5
8	☐	1.000		6836461.70		A	1.5

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7



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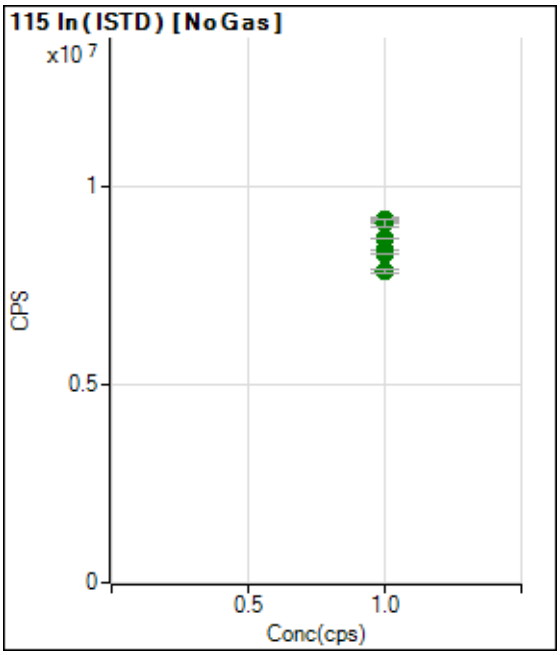
1	☐	1.000		5512469.36		A	0.8
2	☐	1.000		5557992.76		A	1.3
3	☐	1.000		5458740.68		A	1.4
4	☐	1.000		5318094.12		A	0.7
5	☐	1.000		5063118.47		A	1.2
6	☐	1.000		5003898.19		A	0.5
7	☐	1.000		4931893.61		A	0.9
8	☐	1.000		4608106.49		A	0.9



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9124502.01		A	0.3
2	☐	1.000		9163196.12		A	1.7
3	☐	1.000		9173721.51		A	0.9
4	☐	1.000		9072745.96		A	2.2
5	☐	1.000		8696720.93		A	0.4
6	☐	1.000		8416389.21		A	0.5
7	☐	1.000		8309800.82		A	0.2
8	☐	1.000		7874993.13		A	1.2

Reviewed By:Eman
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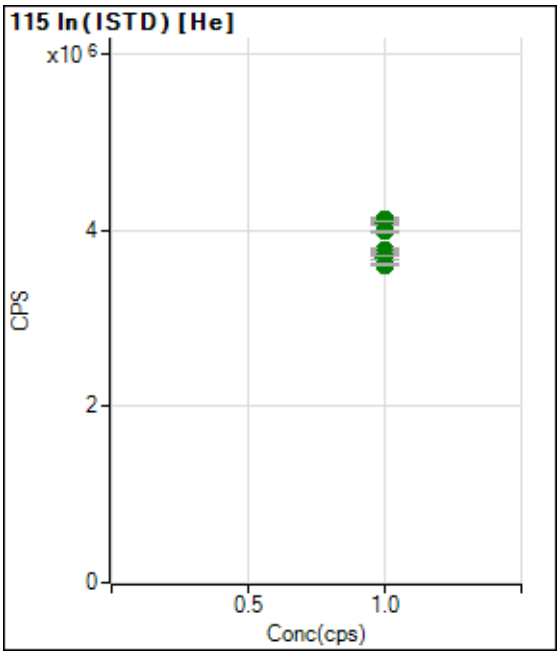

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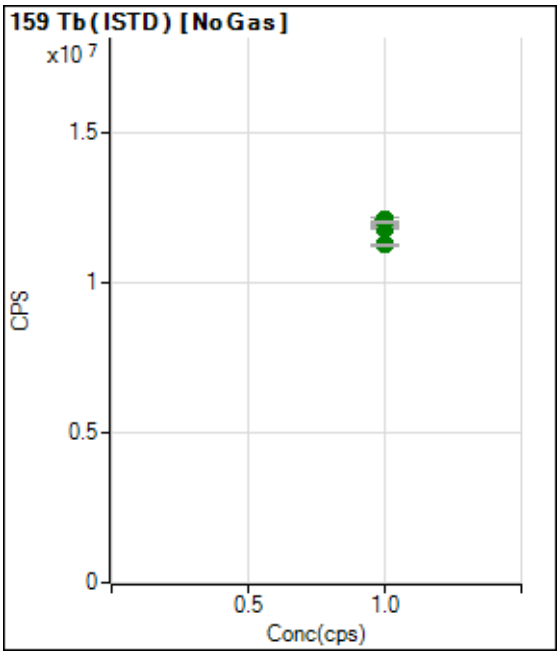
1	☐	1.000		4116030.70		A	1.3
2	☐	1.000		4120190.64		A	0.5
3	☐	1.000		4079812.07		A	1.1
4	☐	1.000		3988009.97		A	0.7
5	☐	1.000		3784073.01		A	0.6
6	☐	1.000		3743790.06		A	0.3
7	☐	1.000		3692121.15		A	0.8
8	☐	1.000		3611102.79		A	0.3



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11841771.22		A	0.9
2	☐	1.000		11823989.27		A	0.7
3	☐	1.000		11915433.30		A	0.4
4	☐	1.000		12099660.93		A	1.9
5	☐	1.000		11903703.85		A	1.0
6	☐	1.000		11885208.71		A	0.6
7	☐	1.000		12030999.68		A	0.5
8	☐	1.000		11278060.67		A	0.5

Reviewed By:Eman
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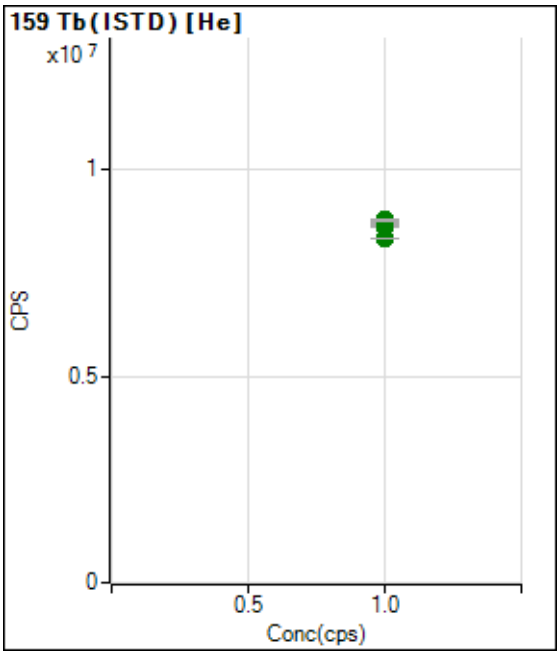
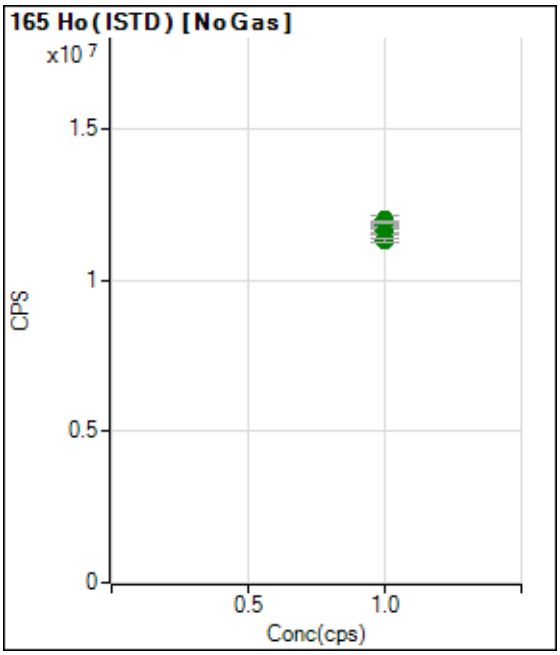


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8626397.72		A	0.5
2	☐	1.000		8652015.84		A	0.4
3	☐	1.000		8720301.53		A	0.5
4	☐	1.000		8741976.40		A	0.9
5	☐	1.000		8630591.26		A	0.5
6	☐	1.000		8716953.06		A	0.6
7	☐	1.000		8782472.23		A	0.8
8	☐	1.000		8330541.12		A	0.4



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11622799.82		A	1.2
2	☐	1.000		11617170.10		A	1.7
3	☐	1.000		11831901.77		A	0.3
4	☐	1.000		11985772.18		A	2.0
5	☐	1.000		11772920.79		A	0.2
6	☐	1.000		11799863.30		A	0.9
7	☐	1.000		11919096.21		A	0.2
8	☐	1.000		11300927.61		A	1.2

Reviewed By:Eman
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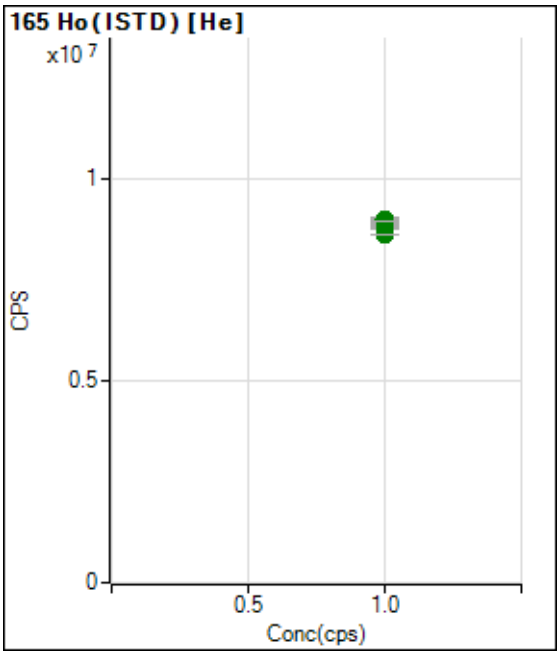
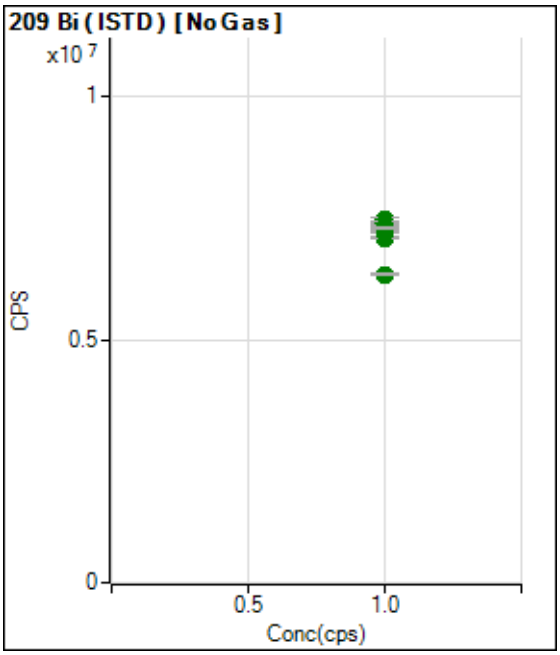


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8781980.91		A	0.4
2	☐	1.000		8867128.83		A	0.4
3	☐	1.000		8919450.56		A	1.4
4	☐	1.000		8961922.71		A	0.9
5	☐	1.000		8860476.05		A	0.6
6	☐	1.000		8965214.52		A	1.2
7	☐	1.000		8932317.99		A	0.3
8	☐	1.000		8585733.62		A	0.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		7092126.01		A	0.6
2	☐	1.000		7188312.05		A	0.1
3	☐	1.000		7246932.53		A	0.5
4	☐	1.000		7467442.74		A	1.5
5	☐	1.000		7395335.93		A	1.0
6	☐	1.000		7387149.96		A	1.2
7	☐	1.000		7305018.78		A	0.6
8	☐	1.000		6348631.16		A	0.2

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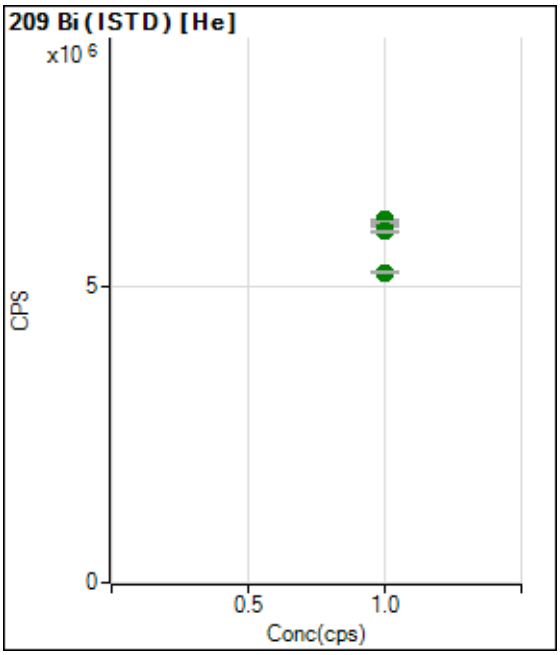


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		5994938.18		A	0.0
2	☐	1.000		6020745.05		A	0.7
3	☐	1.000		6066476.02		A	0.1
4	☐	1.000		6112976.86		A	0.2
5	☐	1.000		6123001.37		A	0.3
6	☐	1.000		6082896.64		A	0.5
7	☐	1.000		5927646.02		A	0.4
8	☐	1.000		5237048.36		A	0.2

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7
ClientSampleId :TUNE001

US EPA Tune Check Report

Operator Name	Jaswal
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\P7020225 MS.b
Acq. Date-Time	2025-02-02 13:51:44
Report Comment	---
Instrument Name	G8403A JP14410463

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		6022	60215.58			0.597	5.000
24		84784	847843.98			0.588	5.000
25		10889	108888.52			0.303	5.000
26		12442	124417.46			0.491	5.000
59		85335	853349.74			1.128	5.000
113		12700	127001.97			0.230	5.000
115		158502	1585015.98			0.269	5.000
206		35026	350260.00			0.652	5.000
207		30697	306972.06			0.629	5.000
208		72969	729690.44			0.456	5.000
220		0	2.60			43.853	

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

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	6012	5970	6048	6015	6063
24	84083	85428	84666	84701	85044
25	10851	10861	10911	10893	10929
26	12388	12371	12454	12483	12514
59	85222	86797	85546	84174	84935
113	12684	12665	12692	12736	12724
115	159246	158244	158471	158273	158274
206	34787	34767	35168	35185	35223
207	30640	30421	30669	30923	30833
208	72485	72757	73181	73211	73212

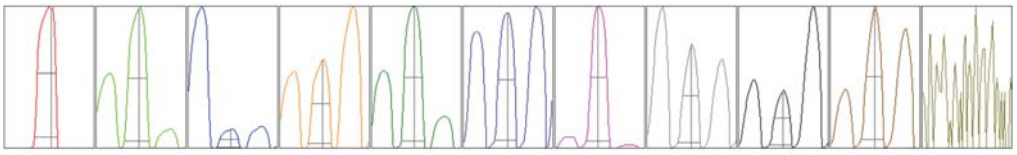
Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7
ClientSampleId :TUNE001

US EPA Tune Check Report

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	9794.14	9.10	8.90 - 9.10	
24	141810.10	23.95	23.90 - 24.10	
25	18375.56	24.95	24.90 - 25.10	
26	21258.11	25.95	25.90 - 26.10	
59	146724.83	58.95	58.90 - 59.10	
113	23449.79	113.00	112.90 - 113.10	
115	297881.98	114.95	114.90 - 115.10	
206	69766.43	206.00	205.90 - 206.10	
207	59838.48	207.00	206.90 - 207.10	
208	145001.34	208.00	207.90 - 208.10	
220	0.00	220.00	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.62	0.768	0.900	
24	0.64	0.828	0.900	
25	0.62	0.747	0.900	
26	0.62	0.780	0.900	
59	0.61	0.781	0.900	
113	0.56	0.736	0.900	
115	0.53	0.781	0.900	
206	0.52	0.744	0.900	
207	0.53	0.755	0.900	
208	0.52	0.765	0.900	
220	0.35	0.350		

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

Tune Parameters

Plasma Parameters

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

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7
ClientSampleId :TUNE001

US EPA Tune Check Report

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

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.2 V	Deflect	14.8 V
Extract 2	-140.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-60 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	140 V		

QP Parameters

Mass Gain	139	Axis Gain	0.9976	QP Bias	-3.0 V
Mass Offset	129	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	0.2 mm		

EM

Discriminator	4.8 mV	Analog HV	2267 V	Pulse HV	1066 V

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		32133	321333.04			2.105	
89		83981	839805.90			2.335	
205		36354	363538.30			1.940	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	32608	32461	30950	32214	32434
89	85675	84068	80650	84429	85081
205	36937	36519	35144	36424	36746

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.82 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.7 V	Deflect	3.4 V

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7
ClientSampleId :TUNE001

US EPA Tune Check Report

Extract 2	-120.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-60 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.9 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		

QP Parameters

Mass Gain	139	Axis Gain	0.9976	QP Bias	-13.0 V
Mass Offset	129	Axis Offset	0.11		

Hardware Settings

Torch

Torch H	0.1 mm	Torch V	0.2 mm

EM

Discriminator	4.8 mV	Analog HV	2267 V	Pulse HV	1066 V

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:25:31	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.09	-0.01	0.11	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	0.00	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	-0.02	0.02	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.04	-0.02	-0.02	0.00	N/A	ppb
Cadmium	106-1	0.26	0.27	-0.54	0.00	N/A	ppb
Cadmium	111-1	0.02	0.02	-0.04	0.00	N/A	ppb
Calcium	43-1	-2.57	1.80	0.77	0.00	N/A	ppb
Calcium	44-1	0.30	-0.60	0.30	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	0.00	0.00	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.02	-0.02	0.00	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	0.04	-0.12	0.08	0.00	N/A	ppb
Iron	57-2	-0.45	-0.67	1.12	0.00	N/A	ppb
Iron	54-2	0.09	-0.07	-0.02	0.00	N/A	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:25:31	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.00	0.01	0.00	0.00	N/A	ppb
Lead	207-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	208-1	0.00	0.01	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.23	-0.10	-0.12	0.00	N/A	ppb
Manganese	55-2	0.00	-0.01	0.01	0.00	N/A	ppb
Molybdenum	94-1	0.00	0.00	-0.01	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	-0.01	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	-0.06	-0.06	0.12	0.00	N/A	ppb
Phosphorus	31-2	-20.04	-18.10	-16.65	-18.26		ppb
Potassium	39-2	2.57	-1.51	-1.06	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.13	-0.24	0.37	0.00	N/A	ppb
Selenium	77-2	-0.05	-0.05	0.11	0.00	N/A	ppb
Selenium	78-2	-0.59	-0.43	1.02	0.00	N/A	ppb
Silicon	28-1	-1.70	3.13	-1.43	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	0.80	-0.20	-0.60	0.00	N/A	ppb
Strontium	86-1	-0.40	0.37	0.03	0.00	N/A	ppb
Strontium	88-1	-0.01	0.01	0.00	0.00	N/A	ppb
Sulfur	34-1	-11.01	-35.46	91.61	15.05	448.09	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	0.00	-0.01	0.00	N/A	ppb
Titanium	47-1	-0.01	0.01	0.00	0.00	N/A	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:25:31	DataFile Name :	004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	-0.05	0.06	-0.01	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	-0.01	0.00	0.01	0.00	N/A	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:28:50	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19.52	19.23	18.94	19.23	1.52	ppb
Antimony	121-1	2.03	2.06	2.02	2.04	0.88	ppb
Arsenic	75-2	1.12	1.13	1.21	1.15	4.56	ppb
Barium	135-1	9.95	10.17	10.17	10.10	1.26	ppb
Barium	137-1	10.19	10.28	10.10	10.19	0.88	ppb
Beryllium	9-1	1.10	1.09	1.11	1.10	0.73	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.92	1.16	1.20	1.09	13.94	ppb
Cadmium	106-1	2.06	0.32	1.07	1.15	75.84	ppb
Cadmium	111-1	1.21	1.04	1.12	1.12	7.37	ppb
Calcium	43-1	525.93	532.23	524.43	527.53	0.78	ppb
Calcium	44-1	521.64	533.24	530.26	528.38	1.14	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.11	2.02	2.05	2.06	2.15	ppb
Cobalt	59-2	1.10	1.05	1.05	1.07	2.40	ppb
Copper	63-2	2.50	2.37	2.42	2.43	2.72	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	54.85	54.36	53.99	54.40	0.79	ppb
Iron	57-2	57.68	54.27	57.88	56.61	3.58	ppb
Iron	54-2	57.74	56.79	54.89	56.47	2.56	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:28:50	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.88	0.93	0.94	0.92	3.35	ppb
Lead	207-1	0.88	0.93	0.90	0.90	2.70	ppb
Lead	208-1	0.89	0.92	0.92	0.91	2.15	ppb
Lithium	6-1				99		%
Magnesium	24-2	496.69	494.38	491.00	494.02	0.58	ppb
Manganese	55-2	1.00	1.02	1.02	1.01	1.38	ppb
Molybdenum	94-1	5.76	5.80	5.75	5.77	0.42	ppb
Molybdenum	95-1	4.88	4.88	4.99	4.92	1.28	ppb
Molybdenum	96-1	4.99	5.08	4.96	5.01	1.22	ppb
Molybdenum	97-1	5.01	4.99	5.00	5.00	0.20	ppb
Molybdenum	98-1	4.98	4.88	4.94	4.93	0.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.03	0.88	1.03	0.98	8.91	ppb
Phosphorus	31-2	21.28	16.42	17.08	18.26	14.43	ppb
Potassium	39-2	524.39	518.57	518.93	520.63	0.63	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				99		%
Scandium	45-2				101		%
Selenium	82-1	4.49	5.33	5.66	5.16	11.60	ppb
Selenium	77-2	3.28	6.05	4.93	4.75	29.31	ppb
Selenium	78-2	4.77	6.75	6.94	6.16	19.57	ppb
Silicon	28-1	3.74	3.67	3.55	3.65	2.67	ppb
Silver	107-1	1.06	1.06	1.04	1.06	1.04	ppb
Silver	109-1	1.05	1.02	1.04	1.04	1.30	ppb
Sodium	23-2	498.75	490.53	495.22	494.83	0.83	ppb
Strontium	86-1	23.60	23.85	23.85	23.76	0.61	ppb
Strontium	88-1	23.68	23.74	23.79	23.74	0.23	ppb
Sulfur	34-1	-32.17	-3.34	-9.63	-15.05		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.88	0.89	0.89	0.89	0.83	ppb
Thallium	205-1	0.86	0.87	0.88	0.87	1.19	ppb
Tin	118-1	5.10	5.12	5.06	5.09	0.59	ppb
Titanium	47-1	5.31	5.17	5.01	5.16	2.95	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:28:50	DataFile Name :	005CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.84	0.84	0.84	0.84	0.07	ppb
Vanadium	51-2	5.07	5.05	5.00	5.04	0.75	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	5.11	5.27	5.28	5.22	1.82	ppb
Zirconium	90-1	0.96	0.98	0.95	0.96	1.74	ppb
Zirconium	91-1	0.99	0.92	1.03	0.98	5.69	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:32:07	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	968.96	944.85	955.01	956.27	1.27	ppb
Antimony	121-1	48.97	49.85	49.91	49.58	1.06	ppb
Arsenic	75-2	50.57	50.12	51.19	50.63	1.06	ppb
Barium	135-1	239.77	244.75	244.20	242.91	1.13	ppb
Barium	137-1	240.51	243.94	245.03	243.16	0.97	ppb
Beryllium	9-1	54.70	54.58	53.63	54.30	1.08	ppb
Bismuth	209-1				102		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	51.30	53.36	53.53	52.73	2.36	ppb
Cadmium	106-1	54.63	56.19	56.02	55.62	1.54	ppb
Cadmium	111-1	52.40	52.93	52.85	52.73	0.55	ppb
Calcium	43-1	5030.86	4965.49	5004.33	5000.23	0.66	ppb
Calcium	44-1	4753.86	4752.68	4759.18	4755.24	0.07	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	49.41	49.32	49.07	49.27	0.35	ppb
Cobalt	59-2	49.59	49.26	49.38	49.41	0.34	ppb
Copper	63-2	509.24	504.08	508.03	507.12	0.53	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				102		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	2497.92	2472.82	2489.97	2486.90	0.52	ppb
Iron	57-2	2585.98	2560.15	2567.43	2571.19	0.52	ppb
Iron	54-2	2622.35	2603.84	2626.48	2617.56	0.46	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:32:07	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	232.42	234.44	234.60	233.82	0.52	ppb
Lead	207-1	216.05	219.30	220.60	218.65	1.07	ppb
Lead	208-1	229.01	231.92	234.14	231.69	1.11	ppb
Lithium	6-1				101		%
Magnesium	24-2	4692.27	4714.16	4808.15	4738.19	1.30	ppb
Manganese	55-2	490.50	473.87	485.32	483.23	1.76	ppb
Molybdenum	94-1	474.77	489.12	487.51	483.80	1.63	ppb
Molybdenum	95-1	473.12	495.09	483.02	483.74	2.27	ppb
Molybdenum	96-1	476.65	483.78	485.82	482.08	1.00	ppb
Molybdenum	97-1	471.78	485.42	479.81	479.01	1.43	ppb
Molybdenum	98-1	472.74	491.54	483.17	482.48	1.95	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	50.55	50.99	51.48	51.01	0.91	ppb
Phosphorus	31-2	990.48	967.55	1017.50	991.84	2.52	ppb
Potassium	39-2	2417.41	2379.34	2338.55	2378.43	1.66	ppb
Rhodium	103-1				100		%
Rhodium	103-2				99		%
Scandium	45-1				100		%
Scandium	45-2				99		%
Selenium	82-1	49.10	50.96	50.13	50.06	1.86	ppb
Selenium	77-2	47.32	47.81	51.27	48.80	4.42	ppb
Selenium	78-2	48.39	49.93	52.21	50.18	3.83	ppb
Silicon	28-1	53.23	52.52	54.40	53.38	1.78	ppb
Silver	107-1	53.11	54.00	53.96	53.69	0.94	ppb
Silver	109-1	52.19	52.80	53.52	52.84	1.26	ppb
Sodium	23-2	4801.99	4839.26	4844.73	4828.66	0.48	ppb
Strontium	86-1	1173.05	1196.92	1194.24	1188.07	1.10	ppb
Strontium	88-1	1168.54	1209.84	1191.46	1189.95	1.74	ppb
Sulfur	34-1	791.76	810.03	873.48	825.09	5.20	ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	43.32	44.33	44.53	44.06	1.47	ppb
Thallium	205-1	42.78	43.88	44.15	43.60	1.66	ppb
Tin	118-1	49.37	50.33	50.11	49.94	1.00	ppb
Titanium	47-1	482.67	481.89	490.15	484.91	0.94	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:32:07	DataFile Name :	006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	40.42	41.13	41.58	41.04	1.43	ppb
Vanadium	51-2	49.06	48.45	49.95	49.15	1.53	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	489.39	484.75	487.53	487.22	0.48	ppb
Zirconium	90-1	46.77	48.28	48.35	47.80	1.87	ppb
Zirconium	91-1	47.04	48.23	48.31	47.86	1.49	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:35:10	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2400.10	2451.28	2449.61	2433.66	1.19	ppb
Antimony	121-1	122.33	127.99	127.31	125.88	2.46	ppb
Arsenic	75-2	129.88	126.60	127.47	127.98	1.33	ppb
Barium	135-1	624.83	622.65	655.88	634.45	2.93	ppb
Barium	137-1	622.30	650.79	654.29	642.46	2.73	ppb
Beryllium	9-1	132.36	133.76	135.27	133.80	1.09	ppb
Bismuth	209-1				105		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	129.59	137.82	134.60	134.01	3.09	ppb
Cadmium	106-1	131.61	138.09	137.17	135.62	2.59	ppb
Cadmium	111-1	129.61	133.69	133.40	132.23	1.72	ppb
Calcium	43-1	12339.69	12959.51	13158.05	12819.08	3.33	ppb
Calcium	44-1	11837.30	12278.43	12414.55	12176.76	2.48	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	124.49	126.35	127.07	125.97	1.06	ppb
Cobalt	59-2	124.64	125.59	125.71	125.31	0.47	ppb
Copper	63-2	1278.07	1277.26	1296.42	1283.92	0.84	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				99		%
Indium	115-2				97		%
Iron	56-2	6351.16	6330.82	6462.34	6381.44	1.11	ppb
Iron	57-2	6475.89	6552.85	6584.99	6537.91	0.86	ppb
Iron	54-2	6314.30	6395.71	6668.70	6459.57	2.87	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:35:10	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	589.85	610.14	614.20	604.73	2.16	ppb
Lead	207-1	591.66	610.07	614.40	605.37	1.99	ppb
Lead	208-1	593.69	610.96	615.29	606.65	1.88	ppb
Lithium	6-1				107		%
Magnesium	24-2	11942.10	12132.25	12222.04	12098.80	1.18	ppb
Manganese	55-2	1221.70	1241.70	1248.58	1237.33	1.13	ppb
Molybdenum	94-1	1205.02	1250.70	1249.98	1235.24	2.12	ppb
Molybdenum	95-1	1215.89	1253.34	1244.29	1237.84	1.58	ppb
Molybdenum	96-1	1214.78	1253.34	1234.46	1234.19	1.56	ppb
Molybdenum	97-1	1217.23	1257.38	1251.87	1242.16	1.75	ppb
Molybdenum	98-1	1209.28	1256.55	1258.45	1241.42	2.24	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	128.79	129.49	129.76	129.35	0.39	ppb
Phosphorus	31-2	2492.99	2486.73	2580.55	2520.09	2.08	ppb
Potassium	39-2	6054.19	6038.91	6152.31	6081.80	1.01	ppb
Rhodium	103-1				98		%
Rhodium	103-2				96		%
Scandium	45-1				97		%
Scandium	45-2				97		%
Selenium	82-1	125.80	130.82	130.74	129.12	2.22	ppb
Selenium	77-2	129.30	133.64	132.24	131.73	1.68	ppb
Selenium	78-2	131.48	126.59	127.16	128.41	2.08	ppb
Silicon	28-1	127.15	134.44	133.56	131.72	3.02	ppb
Silver	107-1	134.80	139.01	136.59	136.80	1.55	ppb
Silver	109-1	129.56	134.30	134.85	132.90	2.19	ppb
Sodium	23-2	12267.87	12459.55	12514.21	12413.88	1.04	ppb
Strontium	86-1	2996.28	3072.19	3062.02	3043.50	1.35	ppb
Strontium	88-1	3038.97	3127.20	3134.69	3100.29	1.72	ppb
Sulfur	34-1	2072.49	2323.61	2381.50	2259.20	7.27	ppb
Terbium	159-1				102		%
Terbium	159-2				101		%
Thallium	203-1	111.13	113.60	116.74	113.82	2.47	ppb
Thallium	205-1	118.91	122.05	121.99	120.98	1.48	ppb
Tin	118-1	123.35	127.52	128.47	126.45	2.15	ppb
Titanium	47-1	1208.09	1244.25	1260.29	1237.54	2.16	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:35:10	DataFile Name :	007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	113.46	117.07	119.39	116.64	2.56	ppb
Vanadium	51-2	123.08	124.80	125.54	124.48	1.01	ppb
Yttrium	89-1				98		%
Yttrium	89-2				97		%
Zinc	66-2	1237.31	1250.69	1255.51	1247.84	0.76	ppb
Zirconium	90-1	121.83	126.26	125.77	124.62	1.95	ppb
Zirconium	91-1	121.26	125.18	125.38	123.94	1.88	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:38:06	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4873.68	5064.21	4784.72	4907.53	2.91	ppb
Antimony	121-1	252.84	260.61	258.25	257.23	1.55	ppb
Arsenic	75-2	253.32	253.25	250.64	252.40	0.61	ppb
Barium	135-1	1255.34	1302.29	1238.85	1265.49	2.60	ppb
Barium	137-1	1253.88	1278.07	1257.84	1263.26	1.03	ppb
Beryllium	9-1	262.39	263.42	259.40	261.73	0.80	ppb
Bismuth	209-1				104		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	259.44	266.76	264.95	263.72	1.45	ppb
Cadmium	106-1	261.54	264.38	260.04	261.98	0.84	ppb
Cadmium	111-1	253.06	261.66	255.45	256.72	1.73	ppb
Calcium	43-1	25716.77	25758.34	26063.31	25846.14	0.73	ppb
Calcium	44-1	24434.06	24502.73	24998.76	24645.18	1.25	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	253.67	254.44	253.23	253.78	0.24	ppb
Cobalt	59-2	253.40	255.89	249.34	252.88	1.31	ppb
Copper	63-2	2556.50	2611.76	2529.23	2565.83	1.64	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				95		%
Indium	115-2				92		%
Iron	56-2	12788.15	13007.61	12698.35	12831.37	1.24	ppb
Iron	57-2	13205.69	13344.20	13088.35	13212.75	0.97	ppb
Iron	54-2	13061.41	13186.93	13222.53	13156.96	0.64	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:38:06	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1205.09	1221.66	1233.18	1219.98	1.16	ppb
Lead	207-1	1220.42	1221.65	1234.87	1225.65	0.65	ppb
Lead	208-1	1217.67	1228.19	1230.03	1225.30	0.54	ppb
Lithium	6-1				108		%
Magnesium	24-2	24645.24	24944.02	24341.28	24643.51	1.22	ppb
Manganese	55-2	2514.95	2557.04	2490.28	2520.76	1.34	ppb
Molybdenum	94-1	2455.56	2500.25	2517.01	2490.94	1.28	ppb
Molybdenum	95-1	2445.24	2473.21	2511.97	2476.81	1.35	ppb
Molybdenum	96-1	2450.53	2479.32	2531.63	2487.16	1.65	ppb
Molybdenum	97-1	2464.28	2514.76	2533.18	2504.07	1.42	ppb
Molybdenum	98-1	2454.86	2483.38	2504.91	2481.05	1.01	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	259.09	262.52	257.32	259.64	1.02	ppb
Phosphorus	31-2	5076.43	5089.36	4993.07	5052.95	1.03	ppb
Potassium	39-2	12180.46	12151.93	11854.49	12062.29	1.50	ppb
Rhodium	103-1				92		%
Rhodium	103-2				92		%
Scandium	45-1				89		%
Scandium	45-2				90		%
Selenium	82-1	251.47	254.29	257.17	254.31	1.12	ppb
Selenium	77-2	264.26	241.05	250.97	252.09	4.62	ppb
Selenium	78-2	257.10	255.75	253.80	255.55	0.65	ppb
Silicon	28-1	258.20	259.41	261.96	259.86	0.74	ppb
Silver	107-1	263.99	266.25	266.74	265.66	0.55	ppb
Silver	109-1	264.19	264.74	261.23	263.39	0.72	ppb
Sodium	23-2	25469.34	25734.55	24975.33	25393.08	1.52	ppb
Strontium	86-1	6024.16	6077.54	6199.78	6100.49	1.48	ppb
Strontium	88-1	6132.21	6259.53	6249.62	6213.79	1.14	ppb
Sulfur	34-1	4834.69	4702.15	4824.53	4787.12	1.54	ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	247.80	245.11	246.83	246.58	0.55	ppb
Thallium	205-1	247.06	242.42	249.55	246.35	1.47	ppb
Tin	118-1	253.73	257.78	256.54	256.01	0.81	ppb
Titanium	47-1	2476.00	2481.10	2504.08	2487.06	0.60	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:38:06	DataFile Name :	008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	235.87	239.35	241.77	239.00	1.24	ppb
Vanadium	51-2	249.36	252.31	250.56	250.74	0.59	ppb
Yttrium	89-1				93		%
Yttrium	89-2				93		%
Zinc	66-2	2566.77	2582.74	2533.82	2561.11	0.97	ppb
Zirconium	90-1	247.05	249.23	253.17	249.82	1.24	ppb
Zirconium	91-1	243.66	247.49	250.83	247.33	1.45	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:40:52	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9847.87	9769.65	9871.19	9829.57	0.54	ppb
Antimony	121-1	499.66	505.37	510.49	505.17	1.07	ppb
Arsenic	75-2	507.48	502.93	505.80	505.40	0.46	ppb
Barium	135-1	2449.94	2497.38	2535.15	2494.16	1.71	ppb
Barium	137-1	2457.71	2476.15	2507.47	2480.44	1.01	ppb
Beryllium	9-1	505.71	512.39	496.71	504.94	1.56	ppb
Bismuth	209-1				104		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	507.55	505.73	514.33	509.21	0.89	ppb
Cadmium	106-1	502.21	509.38	506.26	505.95	0.71	ppb
Cadmium	111-1	494.22	496.67	505.19	498.69	1.15	ppb
Calcium	43-1	51474.77	51698.68	51802.87	51658.77	0.32	ppb
Calcium	44-1	49328.13	49630.35	49407.00	49455.16	0.32	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	496.61	508.03	498.82	501.15	1.21	ppb
Cobalt	59-2	508.58	508.33	506.82	507.91	0.19	ppb
Copper	63-2	5094.00	5047.25	5066.34	5069.20	0.46	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				92		%
Indium	115-2				91		%
Iron	56-2	25787.88	25914.39	25952.78	25885.02	0.33	ppb
Iron	57-2	25425.00	26031.63	25233.07	25563.23	1.63	ppb
Iron	54-2	26016.74	26272.98	26201.82	26163.85	0.51	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:40:52	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2433.52	2490.08	2457.21	2460.27	1.15	ppb
Lead	207-1	2459.76	2465.98	2459.83	2461.85	0.15	ppb
Lead	208-1	2451.46	2459.08	2464.34	2458.29	0.26	ppb
Lithium	6-1				109		%
Magnesium	24-2	49277.89	49292.91	48862.54	49144.45	0.50	ppb
Manganese	55-2	5061.41	5034.68	5110.72	5068.93	0.76	ppb
Molybdenum	94-1	4903.47	4951.18	4981.15	4945.27	0.79	ppb
Molybdenum	95-1	4909.82	4933.36	4994.03	4945.74	0.88	ppb
Molybdenum	96-1	4941.81	4939.96	4980.53	4954.10	0.46	ppb
Molybdenum	97-1	4908.63	4910.13	5009.19	4942.65	1.17	ppb
Molybdenum	98-1	4971.79	4930.80	5014.37	4972.32	0.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	509.23	511.30	508.06	509.53	0.32	ppb
Phosphorus	31-2	9934.08	10045.72	9940.29	9973.36	0.63	ppb
Potassium	39-2	24222.20	24053.84	24092.97	24123.00	0.37	ppb
Rhodium	103-1				88		%
Rhodium	103-2				91		%
Scandium	45-1				85		%
Scandium	45-2				89		%
Selenium	82-1	498.91	502.77	504.40	502.03	0.56	ppb
Selenium	77-2	505.10	493.04	499.74	499.29	1.21	ppb
Selenium	78-2	524.60	511.64	505.85	514.03	1.87	ppb
Silicon	28-1	513.45	512.40	510.98	512.28	0.24	ppb
Silver	107-1	503.98	504.28	508.68	505.65	0.52	ppb
Silver	109-1	505.14	509.91	510.27	508.44	0.56	ppb
Sodium	23-2	50898.95	50568.90	50158.24	50542.03	0.73	ppb
Strontium	86-1	12246.80	12238.46	12359.31	12281.53	0.55	ppb
Strontium	88-1	12206.58	12324.65	12545.13	12358.79	1.39	ppb
Sulfur	34-1	9837.12	9895.63	9754.06	9828.94	0.72	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	490.04	489.21	494.38	491.21	0.57	ppb
Thallium	205-1	488.70	493.06	488.99	490.25	0.50	ppb
Tin	118-1	496.62	505.79	508.99	503.80	1.28	ppb
Titanium	47-1	4928.36	4958.53	4946.46	4944.45	0.31	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:40:52	DataFile Name :	009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	485.78	487.59	489.58	487.65	0.39	ppb
Vanadium	51-2	495.51	511.54	499.72	502.26	1.66	ppb
Yttrium	89-1				91		%
Yttrium	89-2				92		%
Zinc	66-2	5070.74	5096.91	5074.11	5080.59	0.28	ppb
Zirconium	90-1	489.12	493.85	497.19	493.39	0.82	ppb
Zirconium	91-1	491.17	494.15	504.03	496.45	1.36	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:43:39	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19828.33	19813.50	19513.05	19718.29	0.90	ppb
Antimony	121-1	989.76	998.41	998.38	995.52	0.50	ppb
Arsenic	75-2	997.54	991.60	999.74	996.29	0.42	ppb
Barium	135-1	4985.63	5019.34	4989.69	4998.22	0.37	ppb
Barium	137-1	4964.45	5034.27	5015.15	5004.62	0.72	ppb
Beryllium	9-1	980.37	1004.40	995.07	993.28	1.22	ppb
Bismuth	209-1				103		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	971.37	1001.61	999.14	990.70	1.69	ppb
Cadmium	106-1	992.32	988.59	996.35	992.42	0.39	ppb
Cadmium	111-1	995.36	992.82	1005.62	997.93	0.68	ppb
Calcium	43-1	99541.83	100104.45	98663.71	99436.66	0.73	ppb
Calcium	44-1	98995.24	99685.48	99077.22	99252.65	0.38	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1006.93	997.47	990.78	998.39	0.81	ppb
Cobalt	59-2	998.62	990.09	997.24	995.32	0.46	ppb
Copper	63-2	9914.24	10041.10	9877.70	9944.35	0.86	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				91		%
Indium	115-2				90		%
Iron	56-2	51150.15	50855.49	50751.34	50918.99	0.41	ppb
Iron	57-2	50650.95	50409.58	50657.18	50572.57	0.28	ppb
Iron	54-2	51967.45	51562.26	51154.99	51561.57	0.79	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:43:39	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5022.00	5017.82	5052.31	5030.71	0.37	ppb
Lead	207-1	5030.48	5000.43	5056.64	5029.18	0.56	ppb
Lead	208-1	5021.79	5017.43	5051.50	5030.24	0.37	ppb
Lithium	6-1				108		%
Magnesium	24-2	98001.10	97924.69	97101.91	97675.90	0.51	ppb
Manganese	55-2	10018.85	9939.36	9930.08	9962.77	0.49	ppb
Molybdenum	94-1	10096.98	10002.59	9997.29	10032.29	0.56	ppb
Molybdenum	95-1	10060.49	10028.42	10016.87	10035.26	0.23	ppb
Molybdenum	96-1	10079.44	9986.65	10021.01	10029.03	0.47	ppb
Molybdenum	97-1	10096.94	9978.95	10013.17	10029.69	0.61	ppb
Molybdenum	98-1	10115.54	9944.30	10001.74	10020.53	0.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	990.67	994.81	991.22	992.23	0.23	ppb
Phosphorus	31-2	20050.08	19953.05	19990.80	19997.98	0.24	ppb
Potassium	39-2	48499.91	48274.00	48135.80	48303.24	0.38	ppb
Rhodium	103-1				86		%
Rhodium	103-2				89		%
Scandium	45-1				85		%
Scandium	45-2				90		%
Selenium	82-1	1007.15	993.52	991.50	997.39	0.85	ppb
Selenium	77-2	1006.58	979.37	1011.20	999.05	1.72	ppb
Selenium	78-2	1009.05	970.30	994.12	991.16	1.97	ppb
Silicon	28-1	1001.43	985.21	984.71	990.45	0.96	ppb
Silver	107-1	986.36	995.40	993.04	991.60	0.47	ppb
Silver	109-1	983.11	990.39	1000.41	991.30	0.88	ppb
Sodium	23-2	100917.01	100991.06	99357.92	100422.00	0.92	ppb
Strontium	86-1	25419.25	25126.37	24934.06	25159.90	0.97	ppb
Strontium	88-1	25219.86	25043.31	24994.08	25085.75	0.47	ppb
Sulfur	34-1	20200.66	20137.24	20194.89	20177.60	0.17	ppb
Terbium	159-1				102		%
Terbium	159-2				102		%
Thallium	203-1	1010.92	1007.04	1002.87	1006.95	0.40	ppb
Thallium	205-1	1002.65	1012.76	1004.42	1006.61	0.54	ppb
Tin	118-1	980.42	1000.89	1007.94	996.42	1.43	ppb
Titanium	47-1	10021.25	10042.60	10036.12	10033.32	0.11	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:43:39	DataFile Name :	010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1012.47	1012.89	1005.90	1010.42	0.39	ppb
Vanadium	51-2	1001.82	1003.45	991.10	998.79	0.67	ppb
Yttrium	89-1				91		%
Yttrium	89-2				93		%
Zinc	66-2	9979.77	9998.83	9857.42	9945.34	0.77	ppb
Zirconium	90-1	1009.94	1003.79	996.80	1003.51	0.65	ppb
Zirconium	91-1	1014.62	996.63	996.80	1002.68	1.03	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:46:23	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	99965.94	100547.14	99727.23	100080.10	0.42	ppb
Antimony	121-1	0.91	0.76	0.67	0.78	15.11	ppb
Arsenic	75-2	0.87	0.88	0.69	0.81	13.09	ppb
Barium	135-1	4.19	3.67	3.40	3.75	10.63	ppb
Barium	137-1	4.35	3.81	3.41	3.86	12.23	ppb
Beryllium	9-1	0.79	0.57	0.55	0.64	21.31	ppb
Bismuth	209-1				90		%
Bismuth	209-2				87		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.85	0.92	0.69	0.82	14.79	ppb
Cadmium	106-1	1.56	-0.84	0.03	0.25	486.26	ppb
Cadmium	111-1	0.74	0.39	0.36	0.50	42.19	ppb
Calcium	43-1	498337.16	501238.79	500113.49	499896.48	0.29	ppb
Calcium	44-1	497995.89	501892.65	500808.05	500232.20	0.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.60	2.30	2.10	2.33	10.84	ppb
Cobalt	59-2	2.87	2.94	2.87	2.90	1.39	ppb
Copper	63-2	3.27	3.22	3.01	3.17	4.34	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				97		%
Holmium	165-2				98		%
Indium	115-1				86		%
Indium	115-2				88		%
Iron	56-2	249321.98	249673.76	250128.19	249707.98	0.16	ppb
Iron	57-2	248933.05	252071.73	248352.07	249785.61	0.80	ppb
Iron	54-2	249173.47	249882.46	249540.17	249532.04	0.14	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:46:23	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	3.08	2.46	2.16	2.57	18.31	ppb
Lead	207-1	3.00	2.40	2.05	2.48	19.38	ppb
Lead	208-1	3.02	2.44	2.09	2.52	18.54	ppb
Lithium	6-1				102		%
Magnesium	24-2	498800.02	500578.35	502364.19	500580.85	0.36	ppb
Manganese	55-2	7.55	7.43	7.12	7.37	3.03	ppb
Molybdenum	94-1	9.62	8.40	7.70	8.57	11.28	ppb
Molybdenum	95-1	6.33	5.23	4.55	5.37	16.76	ppb
Molybdenum	96-1	8.60	7.41	6.69	7.57	12.76	ppb
Molybdenum	97-1	6.40	5.22	4.40	5.34	18.79	ppb
Molybdenum	98-1	6.28	5.12	4.35	5.25	18.46	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.03	3.54	3.73	3.77	6.50	ppb
Phosphorus	31-2	-15.27	-7.61	-5.60	-9.49		ppb
Potassium	39-2	251345.59	248978.35	251039.02	250454.32	0.51	ppb
Rhodium	103-1				80		%
Rhodium	103-2				84		%
Scandium	45-1				86		%
Scandium	45-2				92		%
Selenium	82-1	1.27	0.81	1.58	1.22	31.74	ppb
Selenium	77-2	0.47	0.12	0.12	0.24	85.91	ppb
Selenium	78-2	-0.64	1.44	-0.99	-0.06		ppb
Silicon	28-1	-2.60	-2.92	-3.02	-2.85		ppb
Silver	107-1	0.61	0.50	0.42	0.51	19.53	ppb
Silver	109-1	0.62	0.49	0.42	0.51	19.85	ppb
Sodium	23-2	496848.83	502375.98	500312.04	499845.62	0.56	ppb
Strontium	86-1	87.63	87.84	87.81	87.76	0.13	ppb
Strontium	88-1	89.11	88.40	86.34	87.95	1.63	ppb
Sulfur	34-1	-640.95	-534.27	-340.39	-505.21		ppb
Terbium	159-1				95		%
Terbium	159-2				97		%
Thallium	203-1	0.64	0.47	0.39	0.50	25.46	ppb
Thallium	205-1	0.60	0.47	0.39	0.48	21.78	ppb
Tin	118-1	0.66	0.49	0.45	0.54	20.33	ppb
Titanium	47-1	5.98	4.75	4.25	4.99	17.77	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:46:23	DataFile Name :	011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.55	0.44	0.36	0.45	21.25	ppb
Vanadium	51-2	0.53	0.49	0.46	0.49	7.63	ppb
Yttrium	89-1				89		%
Yttrium	89-2				92		%
Zinc	66-2	6.12	6.01	5.85	5.99	2.20	ppb
Zirconium	90-1	2.27	2.18	2.08	2.18	4.44	ppb
Zirconium	91-1	2.26	2.14	2.06	2.16	4.76	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICV001	Instrumnet Name :	P7
Client Sample ID :	ICV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:51:36	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	499.37	496.88	494.99	497.08	0.44	ppb
Antimony	121-1	204.07	207.60	210.60	207.42	1.57	ppb
Arsenic	75-2	210.57	213.04	209.62	211.08	0.84	ppb
Barium	135-1	101.01	104.12	103.13	102.76	1.55	ppb
Barium	137-1	101.75	103.42	103.91	103.03	1.10	ppb
Beryllium	9-1	105.41	107.76	105.73	106.30	1.20	ppb
Bismuth	209-1				105		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	97.92	96.34	97.75	97.34	0.89	ppb
Cadmium	106-1	92.04	94.89	94.54	93.82	1.65	ppb
Cadmium	111-1	104.39	107.08	108.94	106.80	2.14	ppb
Calcium	43-1	2390.55	2301.43	2223.86	2305.28	3.62	ppb
Calcium	44-1	2402.14	2310.50	2269.51	2327.38	2.92	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	104.16	102.91	102.24	103.10	0.94	ppb
Cobalt	59-2	103.05	102.67	102.69	102.80	0.21	ppb
Copper	63-2	107.34	107.82	106.08	107.08	0.84	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				103		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	2123.14	2139.94	2113.88	2125.65	0.62	ppb
Iron	57-2	2176.57	2182.58	2153.27	2170.81	0.71	ppb
Iron	54-2	2289.21	2297.71	2261.21	2282.71	0.84	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICV001	Instrumnet Name :	P7
Client Sample ID :	ICV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:51:36	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	192.38	192.23	194.28	192.97	0.59	ppb
Lead	207-1	181.06	179.84	183.31	181.40	0.97	ppb
Lead	208-1	194.79	193.59	195.74	194.71	0.55	ppb
Lithium	6-1				113		%
Magnesium	24-2	1185.88	1175.38	1154.71	1171.99	1.35	ppb
Manganese	55-2	102.37	101.69	102.36	102.14	0.38	ppb
Molybdenum	94-1	1.16	0.71	0.51	0.79	42.06	ppb
Molybdenum	95-1	1.17	0.67	0.54	0.80	41.57	ppb
Molybdenum	96-1	1.16	0.73	0.61	0.83	34.62	ppb
Molybdenum	97-1	1.05	0.67	0.58	0.77	32.41	ppb
Molybdenum	98-1	1.16	0.69	0.57	0.80	38.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	108.71	107.32	106.51	107.52	1.04	ppb
Phosphorus	31-2	-12.03	-12.66	-14.91	-13.20		ppb
Potassium	39-2	1982.86	1986.39	1959.79	1976.35	0.73	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				96		%
Scandium	45-2				99		%
Selenium	82-1	209.02	214.55	215.20	212.92	1.60	ppb
Selenium	77-2	216.62	226.50	215.14	219.42	2.81	ppb
Selenium	78-2	213.73	220.04	212.27	215.35	1.92	ppb
Silicon	28-1	-4.03	-4.02	-4.14	-4.06		ppb
Silver	107-1	49.74	51.19	52.05	51.00	2.29	ppb
Silver	109-1	49.67	50.90	51.12	50.56	1.54	ppb
Sodium	23-2	2050.91	2097.24	2094.47	2080.87	1.25	ppb
Strontium	86-1	8.04	7.66	7.13	7.61	6.02	ppb
Strontium	88-1	8.61	7.37	7.25	7.74	9.72	ppb
Sulfur	34-1	-199.23	-158.65	-247.60	-201.83		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	197.93	197.67	197.26	197.62	0.17	ppb
Thallium	205-1	196.93	197.18	196.84	196.98	0.09	ppb
Tin	118-1	0.12	0.06	0.05	0.08	49.14	ppb
Titanium	47-1	1.05	0.48	0.37	0.64	57.48	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICV001	Instrumnet Name :	P7
Client Sample ID :	ICV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:51:36	DataFile Name :	012ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.08	0.04	0.03	0.05	59.69	ppb
Vanadium	51-2	100.08	99.56	98.49	99.38	0.82	ppb
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	206.50	204.07	202.55	204.38	0.98	ppb
Zirconium	90-1	0.13	0.07	0.06	0.08	44.09	ppb
Zirconium	91-1	0.15	0.12	0.09	0.12	23.08	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICB001	Instrumnet Name :	P7
Client Sample ID :	ICB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:55:10	DataFile Name :	013CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1.10	1.07	0.90	1.03	10.70	ppb
Antimony	121-1	0.16	0.13	0.12	0.14	15.95	ppb
Arsenic	75-2	0.03	0.04	0.05	0.04	22.46	ppb
Barium	135-1	0.05	0.06	0.05	0.05	9.40	ppb
Barium	137-1	0.05	0.05	0.03	0.05	24.83	ppb
Beryllium	9-1	0.13	0.07	0.08	0.09	33.37	ppb
Bismuth	209-1				103		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.02	0.02	-0.04	0.00		ppb
Cadmium	106-1	-0.33	-0.81	0.22	-0.31		ppb
Cadmium	111-1	0.05	-0.01	0.06	0.03	110.08	ppb
Calcium	43-1	6.90	3.41	4.56	4.95	35.87	ppb
Calcium	44-1	6.59	5.22	3.29	5.03	32.95	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.04	0.01	0.02	49.48	ppb
Cobalt	59-2	0.03	0.01	0.02	0.02	46.21	ppb
Copper	63-2	0.00	-0.03	0.02	0.00		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	3.95	3.38	3.14	3.49	11.84	ppb
Iron	57-2	0.38	0.70	0.99	0.69	43.65	ppb
Iron	54-2	4.32	3.53	3.84	3.90	10.15	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICB001	Instrumnet Name :	P7
Client Sample ID :	ICB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:55:10	DataFile Name :	013CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.17	0.15	0.12	0.14	18.87	ppb
Lead	207-1	0.14	0.14	0.11	0.13	11.98	ppb
Lead	208-1	0.16	0.14	0.12	0.14	13.79	ppb
Lithium	6-1				112		%
Magnesium	24-2	5.42	4.36	4.58	4.78	11.69	ppb
Manganese	55-2	0.05	0.02	0.02	0.03	51.25	ppb
Molybdenum	94-1	0.07	0.07	0.07	0.07	6.28	ppb
Molybdenum	95-1	0.08	0.06	0.06	0.07	18.94	ppb
Molybdenum	96-1	0.08	0.06	0.06	0.07	14.03	ppb
Molybdenum	97-1	0.07	0.05	0.06	0.06	11.36	ppb
Molybdenum	98-1	0.07	0.06	0.06	0.06	15.70	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.37	-0.26	-0.18	-0.27		ppb
Phosphorus	31-2	-17.01	-13.70	-15.79	-15.50		ppb
Potassium	39-2	-2.59	-1.82	-1.96	-2.13		ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				96		%
Scandium	45-2				99		%
Selenium	82-1	-0.54	-0.19	-0.02	-0.25		ppb
Selenium	77-2	-0.05	-0.05	0.11	0.00		ppb
Selenium	78-2	0.28	0.30	-1.57	-0.33		ppb
Silicon	28-1	-3.94	-4.02	-4.10	-4.02		ppb
Silver	107-1	0.05	0.04	0.03	0.04	18.93	ppb
Silver	109-1	0.05	0.04	0.03	0.04	21.67	ppb
Sodium	23-2	28.83	28.06	28.32	28.41	1.37	ppb
Strontium	86-1	-0.04	0.04	-0.27	-0.09		ppb
Strontium	88-1	0.03	0.06	0.05	0.05	28.65	ppb
Sulfur	34-1	-220.07	-243.35	-259.45	-240.96		ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	0.10	0.07	0.05	0.08	31.99	ppb
Thallium	205-1	0.09	0.07	0.06	0.07	26.91	ppb
Tin	118-1	0.02	0.01	0.00	0.01	105.23	ppb
Titanium	47-1	0.03	0.04	0.03	0.03	23.58	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICB001	Instrumnet Name :	P7
Client Sample ID :	ICB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:55:10	DataFile Name :	013CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	56.86	ppb
Vanadium	51-2	0.01	0.02	0.02	0.02	27.92	ppb
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	0.17	0.05	0.10	0.11	53.84	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	39.63	ppb
Zirconium	91-1	0.00	0.01	0.01	0.01	47.75	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSA001	Instrumnet Name :	P7
Client Sample ID :	ICSA001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:01:48	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	88590.01	87943.01	87787.57	88106.86	0.48	ppb
Antimony	121-1	1.05	1.02	1.07	1.04	2.35	ppb
Arsenic	75-2	0.34	0.32	0.33	0.33	2.82	ppb
Barium	135-1	1.32	1.31	1.34	1.32	1.42	ppb
Barium	137-1	1.37	1.37	1.32	1.35	1.98	ppb
Beryllium	9-1	0.30	0.33	0.27	0.30	10.25	ppb
Bismuth	209-1				99		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	8.49	7.70	8.66	8.29	6.16	ppb
Cadmium	106-1	-1.56	-2.59	-2.46	-2.20		ppb
Cadmium	111-1	0.19	0.26	0.15	0.20	27.69	ppb
Calcium	43-1	94535.36	96761.71	94802.55	95366.54	1.27	ppb
Calcium	44-1	93815.69	96829.30	95479.24	95374.74	1.58	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.45	19.23	19.32	19.33	0.57	ppb
Cobalt	59-2	1.25	1.21	1.21	1.22	1.80	ppb
Copper	63-2	7.31	7.38	7.38	7.36	0.57	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				102		%
Indium	115-1				94		%
Indium	115-2				93		%
Iron	56-2	101574.69	100380.62	101700.73	101218.68	0.72	ppb
Iron	57-2	100520.95	98313.72	98863.58	99232.75	1.16	ppb
Iron	54-2	102082.48	100918.32	100249.32	101083.37	0.92	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSA001	Instrumnet Name :	P7
Client Sample ID :	ICSA001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:01:48	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4.88	4.73	4.71	4.77	1.91	ppb
Lead	207-1	4.31	4.18	4.14	4.21	2.15	ppb
Lead	208-1	4.55	4.39	4.35	4.43	2.44	ppb
Lithium	6-1				110		%
Magnesium	24-2	89825.46	89279.91	88639.28	89248.22	0.67	ppb
Manganese	55-2	7.76	7.64	7.60	7.66	1.08	ppb
Molybdenum	94-1	1525.45	1550.03	1551.05	1542.18	0.94	ppb
Molybdenum	95-1	1872.96	1914.61	1890.51	1892.69	1.10	ppb
Molybdenum	96-1	1834.12	1888.56	1848.05	1856.91	1.52	ppb
Molybdenum	97-1	1839.46	1899.93	1888.04	1875.81	1.71	ppb
Molybdenum	98-1	1852.81	1922.21	1873.63	1882.88	1.89	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	4.52	4.40	4.64	4.52	2.69	ppb
Phosphorus	31-2	101024.71	99381.10	99816.46	100074.09	0.85	ppb
Potassium	39-2	94887.22	93544.28	94066.50	94166.00	0.72	ppb
Rhodium	103-1				88		%
Rhodium	103-2				91		%
Scandium	45-1				89		%
Scandium	45-2				93		%
Selenium	82-1	-0.08	0.45	0.19	0.19	142.43	ppb
Selenium	77-2	0.11	0.27	-0.05	0.11	147.53	ppb
Selenium	78-2	-1.38	-1.13	-0.53	-1.01		ppb
Silicon	28-1	-3.96	-3.73	-3.71	-3.80		ppb
Silver	107-1	0.05	0.04	0.03	0.04	28.85	ppb
Silver	109-1	0.05	0.04	0.04	0.05	17.37	ppb
Sodium	23-2	97402.41	95592.71	96691.90	96562.34	0.94	ppb
Strontium	86-1	751.62	780.15	759.87	763.88	1.92	ppb
Strontium	88-1	756.56	774.78	773.81	768.38	1.33	ppb
Sulfur	34-1	102506.19	102729.78	102232.48	102489.48	0.24	ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	0.17	0.16	0.16	0.16	4.35	ppb
Thallium	205-1	0.16	0.17	0.15	0.16	4.97	ppb
Tin	118-1	0.42	0.41	0.36	0.40	8.22	ppb
Titanium	47-1	1910.00	1988.34	1972.76	1957.03	2.12	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSA001	Instrumnet Name :	P7
Client Sample ID :	ICSA001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:01:48	DataFile Name :	015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.02	0.01	0.01	9.75	ppb
Vanadium	51-2	0.20	0.21	0.21	0.21	3.57	ppb
Yttrium	89-1				93		%
Yttrium	89-2				96		%
Zinc	66-2	10.51	10.46	10.87	10.61	2.09	ppb
Zirconium	90-1	0.03	0.02	0.02	0.02	25.99	ppb
Zirconium	91-1	0.02	0.00	0.02	0.02	61.33	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSAB001	Instrumnet Name :	P7
Client Sample ID :	ICSAB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:04:51	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	88934.77	89745.23	89204.94	89294.98	0.46	ppb
Antimony	121-1	20.27	20.18	20.06	20.17	0.52	ppb
Arsenic	75-2	20.08	19.91	20.47	20.15	1.44	ppb
Barium	135-1	21.03	21.16	20.47	20.89	1.75	ppb
Barium	137-1	21.07	21.37	20.71	21.05	1.56	ppb
Beryllium	9-1	19.63	19.77	20.12	19.84	1.27	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	24.73	25.79	24.96	25.16	2.22	ppb
Cadmium	106-1	14.91	14.23	13.71	14.28	4.22	ppb
Cadmium	111-1	19.58	19.01	18.90	19.17	1.91	ppb
Calcium	43-1	97613.64	99425.99	99527.54	98855.72	1.09	ppb
Calcium	44-1	97944.50	98357.52	98792.34	98364.79	0.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	38.64	39.35	39.32	39.10	1.03	ppb
Cobalt	59-2	20.54	21.03	20.79	20.79	1.16	ppb
Copper	63-2	26.64	27.24	27.16	27.01	1.20	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				96		%
Indium	115-2				96		%
Iron	56-2	101158.58	102593.12	103789.07	102513.59	1.28	ppb
Iron	57-2	100681.47	102466.89	101922.61	101690.32	0.90	ppb
Iron	54-2	101572.52	104354.15	102782.31	102902.99	1.36	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSAB001	Instrumnet Name :	P7
Client Sample ID :	ICSAB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:04:51	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	23.66	23.90	23.86	23.81	0.55	ppb
Lead	207-1	22.18	22.42	22.49	22.36	0.73	ppb
Lead	208-1	22.54	22.83	22.94	22.77	0.92	ppb
Lithium	6-1				108		%
Magnesium	24-2	89940.66	90603.39	89442.73	89995.59	0.65	ppb
Manganese	55-2	27.32	27.54	27.47	27.44	0.41	ppb
Molybdenum	94-1	1555.80	1550.03	1595.93	1567.25	1.60	ppb
Molybdenum	95-1	1894.38	1893.40	1948.11	1911.96	1.64	ppb
Molybdenum	96-1	1836.86	1861.47	1919.14	1872.49	2.26	ppb
Molybdenum	97-1	1891.60	1912.83	1946.82	1917.09	1.45	ppb
Molybdenum	98-1	1885.04	1902.74	1973.41	1920.40	2.43	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	23.59	24.63	24.31	24.18	2.20	ppb
Phosphorus	31-2	100572.28	100224.02	101042.44	100612.91	0.41	ppb
Potassium	39-2	96159.54	97300.19	95376.84	96278.86	1.00	ppb
Rhodium	103-1				90		%
Rhodium	103-2				93		%
Scandium	45-1				90		%
Scandium	45-2				94		%
Selenium	82-1	19.63	18.25	20.09	19.32	4.96	ppb
Selenium	77-2	18.77	20.83	18.10	19.23	7.42	ppb
Selenium	78-2	18.34	18.09	19.37	18.60	3.63	ppb
Silicon	28-1	-3.34	-3.14	-3.12	-3.20		ppb
Silver	107-1	18.51	19.01	18.62	18.71	1.42	ppb
Silver	109-1	18.64	18.74	18.28	18.55	1.30	ppb
Sodium	23-2	97731.43	98743.51	97516.10	97997.01	0.67	ppb
Strontium	86-1	777.53	772.05	803.28	784.29	2.13	ppb
Strontium	88-1	778.98	778.92	801.28	786.39	1.64	ppb
Sulfur	34-1	104483.99	105196.73	103247.17	104309.30	0.95	ppb
Terbium	159-1				102		%
Terbium	159-2				104		%
Thallium	203-1	18.30	18.76	18.67	18.57	1.30	ppb
Thallium	205-1	18.24	18.57	18.66	18.49	1.22	ppb
Tin	118-1	0.21	0.20	0.18	0.20	7.51	ppb
Titanium	47-1	1967.68	2061.73	2013.43	2014.28	2.33	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSAB001	Instrumnet Name :	P7
Client Sample ID :	ICSAB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:04:51	DataFile Name :	016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.01	0.01	0.01	3.33	ppb
Vanadium	51-2	19.68	19.53	19.47	19.56	0.56	ppb
Yttrium	89-1				96		%
Yttrium	89-2				97		%
Zinc	66-2	30.57	30.06	30.20	30.28	0.88	ppb
Zirconium	90-1	0.04	0.02	0.01	0.02	49.36	ppb
Zirconium	91-1	0.03	0.02	0.01	0.02	35.09	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV001	Instrumnet Name :	P7
Client Sample ID :	CCV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:07:57	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49628.27	49536.46	49441.63	49535.45	0.19	ppb
Antimony	121-1	469.52	497.71	502.10	489.78	3.61	ppb
Arsenic	75-2	507.54	517.42	514.31	513.09	0.99	ppb
Barium	135-1	2434.45	2527.35	2548.58	2503.46	2.42	ppb
Barium	137-1	2413.04	2511.09	2569.07	2497.74	3.16	ppb
Beryllium	9-1	479.14	490.91	486.10	485.38	1.22	ppb
Bismuth	209-1				101		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	475.68	500.52	514.30	496.83	3.94	ppb
Cadmium	106-1	485.88	498.83	514.78	499.83	2.90	ppb
Cadmium	111-1	469.81	489.01	499.60	486.14	3.11	ppb
Calcium	43-1	236097.26	250521.99	247262.85	244627.37	3.09	ppb
Calcium	44-1	238692.46	251958.97	249622.38	246757.94	2.87	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	509.58	507.52	507.84	508.32	0.22	ppb
Cobalt	59-2	512.46	515.49	513.82	513.92	0.29	ppb
Copper	63-2	5034.28	5045.04	4995.08	5024.80	0.52	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				105		%
Holmium	165-2				102		%
Indium	115-1				94		%
Indium	115-2				92		%
Iron	56-2	128867.44	129320.33	127870.70	128686.16	0.58	ppb
Iron	57-2	127633.07	128784.07	126461.44	127626.19	0.91	ppb
Iron	54-2	128712.26	129789.57	127897.72	128799.85	0.74	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV001	Instrumnet Name :	P7
Client Sample ID :	CCV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:07:57	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2449.85	2540.23	2593.86	2527.98	2.88	ppb
Lead	207-1	2432.91	2538.36	2589.94	2520.40	3.18	ppb
Lead	208-1	2439.51	2554.59	2591.56	2528.55	3.14	ppb
Lithium	6-1				107		%
Magnesium	24-2	251993.98	249821.04	252028.29	251281.10	0.50	ppb
Manganese	55-2	5010.51	5015.12	4949.21	4991.61	0.74	ppb
Molybdenum	94-1	4812.47	5045.72	5052.07	4970.09	2.75	ppb
Molybdenum	95-1	4809.19	5068.99	5044.15	4974.11	2.88	ppb
Molybdenum	96-1	4838.02	5032.01	5077.59	4982.54	2.55	ppb
Molybdenum	97-1	4850.65	5001.82	5057.78	4970.08	2.16	ppb
Molybdenum	98-1	4851.32	4998.21	5080.30	4976.61	2.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	500.30	503.70	498.63	500.88	0.52	ppb
Phosphorus	31-2	9958.27	9979.95	9875.67	9937.96	0.55	ppb
Potassium	39-2	123684.39	124002.32	123931.18	123872.63	0.13	ppb
Rhodium	103-1				89		%
Rhodium	103-2				88		%
Scandium	45-1				92		%
Scandium	45-2				93		%
Selenium	82-1	473.73	498.27	504.59	492.20	3.31	ppb
Selenium	77-2	490.34	498.29	499.02	495.88	0.97	ppb
Selenium	78-2	495.37	506.19	493.33	498.30	1.39	ppb
Silicon	28-1	496.39	514.82	512.22	507.81	1.96	ppb
Silver	107-1	469.53	489.62	491.96	483.70	2.55	ppb
Silver	109-1	464.93	490.67	498.22	484.61	3.60	ppb
Sodium	23-2	253050.88	254308.11	252809.67	253389.56	0.32	ppb
Strontium	86-1	12151.34	12678.64	12712.05	12514.01	2.51	ppb
Strontium	88-1	12134.97	12649.37	12710.77	12498.37	2.53	ppb
Sulfur	34-1	8818.34	9439.99	9404.46	9220.93	3.79	ppb
Terbium	159-1				104		%
Terbium	159-2				101		%
Thallium	203-1	495.99	512.05	516.25	508.10	2.10	ppb
Thallium	205-1	493.05	509.77	521.67	508.16	2.83	ppb
Tin	118-1	478.31	500.83	504.26	494.47	2.85	ppb
Titanium	47-1	4751.95	4933.32	4924.96	4870.08	2.10	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV001	Instrumnet Name :	P7
Client Sample ID :	CCV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:07:57	DataFile Name :	017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	497.23	523.77	523.32	514.77	2.95	ppb
Vanadium	51-2	510.94	515.50	501.35	509.26	1.42	ppb
Yttrium	89-1				96		%
Yttrium	89-2				95		%
Zinc	66-2	4908.58	4944.64	4883.89	4912.37	0.62	ppb
Zirconium	90-1	485.78	512.52	511.92	503.41	3.03	ppb
Zirconium	91-1	484.47	509.99	510.85	501.77	2.99	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB001	Instrumnet Name :	P7
Client Sample ID :	CCB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:14:13	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8.72	7.89	7.47	8.03	7.97	ppb
Antimony	121-1	0.07	0.06	0.05	0.06	16.24	ppb
Arsenic	75-2	0.02	0.02	0.00	0.02	62.87	ppb
Barium	135-1	0.17	0.14	0.13	0.15	14.97	ppb
Barium	137-1	0.16	0.14	0.11	0.14	18.85	ppb
Beryllium	9-1	0.12	0.07	0.09	0.09	24.21	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.07	0.03	0.00	0.03	108.55	ppb
Cadmium	106-1	-0.01	-3.33	-1.76	-1.70		ppb
Cadmium	111-1	0.03	-0.21	-0.09	-0.09		ppb
Calcium	43-1	42.26	23.37	21.24	28.95	39.97	ppb
Calcium	44-1	40.29	22.30	18.84	27.14	42.41	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	0.01	0.01	0.01	43.32	ppb
Cobalt	59-2	0.02	0.02	0.01	0.02	26.71	ppb
Copper	63-2	0.12	0.14	0.12	0.13	8.78	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	12.90	12.65	11.15	12.23	7.76	ppb
Iron	57-2	9.45	10.80	6.84	9.03	22.28	ppb
Iron	54-2	13.49	14.61	12.01	13.37	9.74	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB001	Instrumnet Name :	P7
Client Sample ID :	CCB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:14:13	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.62	0.23	0.19	0.35	68.37	ppb
Lead	207-1	0.75	0.22	0.23	0.40	75.66	ppb
Lead	208-1	0.74	0.23	0.21	0.39	77.06	ppb
Lithium	6-1				112		%
Magnesium	24-2	16.32	15.71	13.91	15.31	8.20	ppb
Manganese	55-2	0.19	0.19	0.17	0.18	4.72	ppb
Molybdenum	94-1	0.60	0.52	0.42	0.51	18.29	ppb
Molybdenum	95-1	0.60	0.47	0.45	0.50	16.55	ppb
Molybdenum	96-1	0.60	0.48	0.41	0.50	19.04	ppb
Molybdenum	97-1	0.64	0.49	0.42	0.52	21.72	ppb
Molybdenum	98-1	0.61	0.45	0.45	0.50	18.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.26	-0.32	-0.45	-0.34		ppb
Phosphorus	31-2	-15.65	-13.67	-14.17	-14.49		ppb
Potassium	39-2	5.45	5.00	2.01	4.16	45.05	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				93		%
Scandium	45-2				97		%
Selenium	82-1	-0.03	0.17	0.05	0.06	162.14	ppb
Selenium	77-2	-0.05	0.27	-0.05	0.05	345.52	ppb
Selenium	78-2	-1.01	-1.77	-0.46	-1.08		ppb
Silicon	28-1	-4.21	-4.15	-4.21	-4.19		ppb
Silver	107-1	0.06	0.06	0.05	0.05	12.12	ppb
Silver	109-1	0.06	0.05	0.04	0.05	23.49	ppb
Sodium	23-2	49.38	47.98	46.83	48.06	2.66	ppb
Strontium	86-1	0.30	0.57	0.59	0.49	33.74	ppb
Strontium	88-1	1.02	0.74	0.66	0.80	23.43	ppb
Sulfur	34-1	-520.53	-495.04	-512.02	-509.20		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	0.08	0.08	0.07	0.08	8.34	ppb
Thallium	205-1	0.11	0.07	0.07	0.09	23.38	ppb
Tin	118-1	0.11	0.01	0.03	0.05	116.59	ppb
Titanium	47-1	0.83	0.53	0.37	0.58	40.47	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB001	Instrumnet Name :	P7
Client Sample ID :	CCB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:14:13	DataFile Name :	019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.09	0.02	0.02	0.04	86.37	ppb
Vanadium	51-2	0.01	0.03	0.03	0.02	34.72	ppb
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	0.24	0.35	0.20	0.26	29.24	ppb
Zirconium	90-1	0.05	0.04	0.03	0.04	23.88	ppb
Zirconium	91-1	0.05	0.03	0.02	0.03	44.49	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BL	Instrumnet Name :	P7
Client Sample ID :	PBS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:17:31	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4.44	3.91	3.29	3.88	14.74	ppb
Antimony	121-1	0.03	0.03	0.02	0.03	10.84	ppb
Arsenic	75-2	-0.01	0.00	0.02	0.00	8412.15	ppb
Barium	135-1	0.05	0.06	0.04	0.05	25.58	ppb
Barium	137-1	0.05	0.05	0.05	0.05	6.68	ppb
Beryllium	9-1	0.04	0.03	0.05	0.04	28.62	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.04	-0.04	0.00	-0.03		ppb
Cadmium	106-1	-0.78	-2.26	-0.98	-1.34		ppb
Cadmium	111-1	-0.04	-0.14	-0.05	-0.08		ppb
Calcium	43-1	5.70	10.82	0.53	5.68	90.54	ppb
Calcium	44-1	8.98	7.62	7.25	7.95	11.48	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	-0.01	0.01	0.00		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	129.88	ppb
Copper	63-2	0.00	0.02	-0.01	0.00	283.05	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				103		%
Indium	115-1				102		%
Indium	115-2				100		%
Iron	56-2	5.91	5.53	5.00	5.48	8.37	ppb
Iron	57-2	2.28	2.84	2.64	2.59	10.99	ppb
Iron	54-2	5.79	6.02	5.39	5.73	5.56	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BL	Instrumnet Name :	P7
Client Sample ID :	PBS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:17:31	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.13	0.13	0.14	0.13	5.26	ppb
Lead	207-1	0.11	0.13	0.11	0.12	8.19	ppb
Lead	208-1	0.12	0.12	0.12	0.12	1.98	ppb
Lithium	6-1				111		%
Magnesium	24-2	6.73	6.97	5.92	6.54	8.38	ppb
Manganese	55-2	0.06	0.04	0.04	0.05	28.59	ppb
Molybdenum	94-1	0.22	0.20	0.19	0.20	7.26	ppb
Molybdenum	95-1	0.23	0.21	0.18	0.21	10.37	ppb
Molybdenum	96-1	0.22	0.23	0.17	0.21	15.36	ppb
Molybdenum	97-1	0.23	0.21	0.18	0.21	13.13	ppb
Molybdenum	98-1	0.22	0.21	0.19	0.21	7.45	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.43	-0.38	-0.40	-0.40		ppb
Phosphorus	31-2	-13.29	-15.54	-12.15	-13.66		ppb
Potassium	39-2	-1.30	-3.29	-1.93	-2.17		ppb
Rhodium	103-1				99		%
Rhodium	103-2				101		%
Scandium	45-1				95		%
Scandium	45-2				98		%
Selenium	82-1	-0.33	0.32	0.04	0.01	3161.48	ppb
Selenium	77-2	0.26	-0.05	-0.05	0.05	353.22	ppb
Selenium	78-2	-0.34	0.03	1.47	0.39	248.46	ppb
Silicon	28-1	-4.17	-4.27	-4.22	-4.22		ppb
Silver	107-1	0.02	0.02	0.01	0.02	24.86	ppb
Silver	109-1	0.02	0.02	0.02	0.02	4.84	ppb
Sodium	23-2	31.41	29.73	28.89	30.01	4.28	ppb
Strontium	86-1	0.29	0.19	-0.26	0.07	414.02	ppb
Strontium	88-1	0.32	0.24	0.26	0.27	16.59	ppb
Sulfur	34-1	-445.91	-417.16	-425.99	-429.69		ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.05	0.05	0.04	0.05	11.32	ppb
Thallium	205-1	0.05	0.05	0.05	0.05	6.35	ppb
Tin	118-1	-0.01	-0.01	-0.01	-0.01		ppb
Titanium	47-1	0.23	0.23	0.17	0.21	16.10	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BL	Instrumnet Name :	P7
Client Sample ID :	PBS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:17:31	DataFile Name :	020CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.01	0.01	0.01	11.51	ppb
Vanadium	51-2	0.01	0.01	0.01	0.01	47.03	ppb
Yttrium	89-1				99		%
Yttrium	89-2				100		%
Zinc	66-2	0.16	0.04	0.13	0.11	55.75	ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	3.82	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	58.31	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BS	Instrumnet Name :	P7
Client Sample ID :	LCS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:20:50	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	39.43	39.49	39.62	39.51	0.25	ppb
Antimony	121-1	3.78	3.88	3.86	3.84	1.36	ppb
Arsenic	75-2	1.98	2.17	2.00	2.05	5.05	ppb
Barium	135-1	19.36	19.46	18.99	19.27	1.28	ppb
Barium	137-1	18.99	18.97	19.09	19.02	0.36	ppb
Beryllium	9-1	1.94	2.00	2.02	1.99	2.02	ppb
Bismuth	209-1				109		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.15	2.11	2.32	2.19	4.88	ppb
Cadmium	106-1	1.25	0.86	-0.23	0.63	121.68	ppb
Cadmium	111-1	2.00	1.91	1.89	1.93	3.00	ppb
Calcium	43-1	992.16	1018.51	990.38	1000.35	1.57	ppb
Calcium	44-1	1004.82	1014.27	1021.44	1013.51	0.82	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.76	3.82	3.88	3.82	1.59	ppb
Cobalt	59-2	2.01	1.98	2.03	2.01	1.34	ppb
Copper	63-2	4.34	4.38	4.33	4.35	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				104		%
Indium	115-1				102		%
Indium	115-2				100		%
Iron	56-2	421.54	419.34	408.45	416.44	1.68	ppb
Iron	57-2	423.76	428.62	431.03	427.80	0.87	ppb
Iron	54-2	435.80	434.09	432.76	434.22	0.35	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BS	Instrumnet Name :	P7
Client Sample ID :	LCS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:20:50	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.87	1.91	1.97	1.92	2.63	ppb
Lead	207-1	1.83	1.83	1.87	1.84	1.21	ppb
Lead	208-1	1.84	1.87	1.89	1.87	1.59	ppb
Lithium	6-1				113		%
Magnesium	24-2	918.34	915.36	915.44	916.38	0.18	ppb
Manganese	55-2	2.14	1.95	2.05	2.05	4.58	ppb
Molybdenum	94-1	11.01	11.41	11.05	11.16	1.99	ppb
Molybdenum	95-1	9.43	9.61	9.51	9.52	0.95	ppb
Molybdenum	96-1	9.61	9.85	9.45	9.64	2.12	ppb
Molybdenum	97-1	9.71	10.05	9.68	9.81	2.08	ppb
Molybdenum	98-1	9.38	9.64	9.52	9.52	1.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.75	1.72	1.57	1.68	5.61	ppb
Phosphorus	31-2	32.16	32.86	31.42	32.15	2.24	ppb
Potassium	39-2	1011.92	1026.37	1009.84	1016.05	0.89	ppb
Rhodium	103-1				100		%
Rhodium	103-2				102		%
Scandium	45-1				96		%
Scandium	45-2				99		%
Selenium	82-1	10.17	10.14	9.56	9.96	3.45	ppb
Selenium	77-2	8.42	9.03	10.56	9.33	11.81	ppb
Selenium	78-2	9.93	10.51	9.00	9.81	7.75	ppb
Silicon	28-1	-2.85	-2.75	-2.69	-2.76		ppb
Silver	107-1	1.97	1.97	2.01	1.98	1.21	ppb
Silver	109-1	1.97	1.96	1.98	1.97	0.59	ppb
Sodium	23-2	990.67	990.66	982.98	988.11	0.45	ppb
Strontium	86-1	45.50	46.18	45.81	45.83	0.74	ppb
Strontium	88-1	44.62	46.50	45.07	45.40	2.16	ppb
Sulfur	34-1	-323.47	-283.75	-277.57	-294.93		ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	1.76	1.79	1.79	1.78	1.10	ppb
Thallium	205-1	1.71	1.75	1.77	1.75	1.64	ppb
Tin	118-1	9.51	9.53	9.58	9.54	0.38	ppb
Titanium	47-1	2.37	2.32	2.55	2.42	4.94	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BS	Instrumnet Name :	P7
Client Sample ID :	LCS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:20:50	DataFile Name :	021LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.68	1.66	1.71	1.68	1.31	ppb
Vanadium	51-2	9.91	9.97	9.97	9.95	0.35	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	9.86	10.31	9.97	10.04	2.35	ppb
Zirconium	90-1	1.84	1.91	1.86	1.87	2.04	ppb
Zirconium	91-1	1.81	1.94	1.87	1.87	3.40	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BL	Instrumnet Name :	P7
Client Sample ID :	PBS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:24:05	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.21	-0.01	0.07	0.09	124.08	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	13.78	ppb
Arsenic	75-2	0.00	0.01	-0.02	0.00		ppb
Barium	135-1	0.01	0.01	0.00	0.01	158.44	ppb
Barium	137-1	0.00	0.01	0.01	0.01	70.27	ppb
Beryllium	9-1	0.04	0.02	0.00	0.02	98.50	ppb
Bismuth	209-1				104		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.02	-0.02	-0.06	-0.02		ppb
Cadmium	106-1	-0.79	-0.38	-0.36	-0.51		ppb
Cadmium	111-1	-0.05	-0.02	-0.02	-0.03		ppb
Calcium	43-1	-2.06	-3.59	-2.71	-2.78		ppb
Calcium	44-1	-0.17	-3.23	-3.27	-2.22		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.00	-0.03	-0.01		ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	-0.11	-0.11	-0.06	-0.09		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				104		%
Indium	115-1				99		%
Indium	115-2				101		%
Iron	56-2	0.27	0.18	0.30	0.25	26.44	ppb
Iron	57-2	-0.83	-2.58	-1.82	-1.74		ppb
Iron	54-2	-0.48	0.03	0.44	0.00		ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BL	Instrumnet Name :	P7
Client Sample ID :	PBS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:24:05	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.06	0.04	0.04	0.05	21.40	ppb
Lead	207-1	0.07	0.06	0.05	0.06	15.53	ppb
Lead	208-1	0.07	0.05	0.05	0.05	18.30	ppb
Lithium	6-1				108		%
Magnesium	24-2	0.71	0.44	0.51	0.55	24.53	ppb
Manganese	55-2	-0.02	-0.02	-0.02	-0.02		ppb
Molybdenum	94-1	0.05	0.05	0.03	0.04	19.72	ppb
Molybdenum	95-1	0.02	0.03	0.02	0.02	17.59	ppb
Molybdenum	96-1	0.02	0.01	0.03	0.02	38.19	ppb
Molybdenum	97-1	0.02	0.00	0.01	0.01	75.97	ppb
Molybdenum	98-1	0.02	0.02	0.01	0.02	24.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.29	-0.43	-0.30	-0.34		ppb
Phosphorus	31-2	-14.79	-19.72	-18.32	-17.61		ppb
Potassium	39-2	-5.05	-4.90	-4.24	-4.73		ppb
Rhodium	103-1				97		%
Rhodium	103-2				102		%
Scandium	45-1				94		%
Scandium	45-2				98		%
Selenium	82-1	-0.26	0.00	0.35	0.03	1056.33	ppb
Selenium	77-2	-0.05	-0.05	-0.05	-0.05		ppb
Selenium	78-2	-1.32	-0.98	0.64	-0.55		ppb
Silicon	28-1	-2.99	-4.11	-4.34	-3.81		ppb
Silver	107-1	0.02	0.01	0.01	0.01	28.79	ppb
Silver	109-1	0.02	0.01	0.02	0.02	23.50	ppb
Sodium	23-2	15.92	16.20	15.96	16.02	0.94	ppb
Strontium	86-1	0.02	-0.04	0.42	0.13	190.53	ppb
Strontium	88-1	0.03	0.00	0.01	0.02	111.26	ppb
Sulfur	34-1	227.19	-275.13	-318.93	-122.29		ppb
Terbium	159-1				100		%
Terbium	159-2				104		%
Thallium	203-1	0.04	0.04	0.03	0.04	11.78	ppb
Thallium	205-1	0.04	0.03	0.04	0.03	6.99	ppb
Tin	118-1	0.00	-0.01	-0.03	-0.01		ppb
Titanium	47-1	0.01	-0.01	0.01	0.00	956.30	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BL	Instrumnet Name :	P7
Client Sample ID :	PBS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:24:05	DataFile Name :	022CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00		ppb
Vanadium	51-2	0.00	0.01	0.00	0.00	71.75	ppb
Yttrium	89-1				97		%
Yttrium	89-2				100		%
Zinc	66-2	0.03	-0.01	-0.02	0.00		ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	31.40	ppb
Zirconium	91-1	0.01	0.01	0.01	0.01	16.44	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BS	Instrumnet Name :	P7
Client Sample ID :	LCS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:27:25	DataFile Name :	023LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	38.93	38.68	37.66	38.42	1.76	ppb
Antimony	121-1	3.73	3.83	3.96	3.84	2.95	ppb
Arsenic	75-2	2.14	1.89	2.10	2.04	6.63	ppb
Barium	135-1	19.08	19.00	19.06	19.05	0.23	ppb
Barium	137-1	18.97	19.59	19.32	19.29	1.60	ppb
Beryllium	9-1	2.02	2.02	1.96	2.00	1.52	ppb
Bismuth	209-1				107		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.82	2.14	1.94	1.96	8.31	ppb
Cadmium	106-1	1.31	1.40	0.07	0.93	80.07	ppb
Cadmium	111-1	1.96	2.01	1.89	1.95	3.08	ppb
Calcium	43-1	971.76	1021.71	1012.07	1001.85	2.64	ppb
Calcium	44-1	978.23	1015.73	1011.05	1001.67	2.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.85	3.73	3.79	3.79	1.60	ppb
Cobalt	59-2	1.99	1.96	2.02	1.99	1.43	ppb
Copper	63-2	4.27	4.16	4.36	4.26	2.44	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				103		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	56-2	414.84	412.07	413.56	413.49	0.34	ppb
Iron	57-2	427.12	419.36	411.67	419.38	1.84	ppb
Iron	54-2	428.30	433.44	424.78	428.84	1.02	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BS	Instrumnet Name :	P7
Client Sample ID :	LCS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:27:25	DataFile Name :	023LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.82	1.84	1.89	1.85	2.02	ppb
Lead	207-1	1.77	1.82	1.85	1.82	2.23	ppb
Lead	208-1	1.81	1.83	1.89	1.84	2.32	ppb
Lithium	6-1				110		%
Magnesium	24-2	917.02	909.82	906.77	911.21	0.58	ppb
Manganese	55-2	1.97	2.02	2.00	2.00	1.39	ppb
Molybdenum	94-1	10.96	11.28	11.22	11.16	1.55	ppb
Molybdenum	95-1	9.29	9.67	9.42	9.46	2.04	ppb
Molybdenum	96-1	9.43	9.69	9.64	9.59	1.40	ppb
Molybdenum	97-1	9.43	9.54	9.44	9.47	0.63	ppb
Molybdenum	98-1	9.44	9.56	9.52	9.51	0.63	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.59	1.71	1.76	1.69	5.39	ppb
Phosphorus	31-2	33.03	30.46	29.41	30.97	6.02	ppb
Potassium	39-2	1017.30	1010.79	1010.44	1012.84	0.38	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				96		%
Scandium	45-2				99		%
Selenium	82-1	9.70	9.77	10.48	9.98	4.32	ppb
Selenium	77-2	9.69	12.32	8.78	10.26	17.93	ppb
Selenium	78-2	9.49	8.80	8.98	9.09	3.96	ppb
Silicon	28-1	-2.79	-2.34	-2.48	-2.54		ppb
Silver	107-1	1.97	2.06	2.05	2.02	2.46	ppb
Silver	109-1	1.92	2.01	2.01	1.98	2.69	ppb
Sodium	23-2	974.76	977.53	969.34	973.88	0.43	ppb
Strontium	86-1	44.59	45.57	43.25	44.47	2.61	ppb
Strontium	88-1	44.63	45.74	45.71	45.36	1.39	ppb
Sulfur	34-1	-268.37	-133.14	-112.26	-171.26		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	1.73	1.78	1.76	1.76	1.55	ppb
Thallium	205-1	1.72	1.74	1.76	1.74	0.97	ppb
Tin	118-1	9.38	9.66	9.60	9.54	1.54	ppb
Titanium	47-1	2.35	2.36	2.43	2.38	1.92	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BS	Instrumnet Name :	P7
Client Sample ID :	LCS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:27:25	DataFile Name :	023LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.62	1.68	1.69	1.67	2.21	ppb
Vanadium	51-2	9.84	9.88	9.71	9.81	0.92	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	10.02	10.46	9.91	10.13	2.84	ppb
Zirconium	90-1	1.83	1.90	1.90	1.87	2.00	ppb
Zirconium	91-1	1.80	1.85	1.80	1.82	1.55	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:30:42	DataFile Name :	024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	29279.24	29814.99	29360.84	29485.02	0.98	ppb
Antimony	121-1	0.58	0.58	0.61	0.59	2.77	ppb
Arsenic	75-2	152.65	155.12	153.00	153.59	0.87	ppb
Barium	135-1	202.84	209.23	211.29	207.79	2.12	ppb
Barium	137-1	204.77	210.53	212.51	209.27	1.92	ppb
Beryllium	9-1	3.77	3.98	3.99	3.91	3.07	ppb
Bismuth	209-1				113		%
Bismuth	209-2				109		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	74.26	78.22	76.01	76.17	2.60	ppb
Cadmium	106-1	55.25	54.68	53.96	54.63	1.19	ppb
Cadmium	111-1	1.96	1.70	1.71	1.79	8.28	ppb
Calcium	43-1	26690.88	27391.78	27493.39	27192.01	1.61	ppb
Calcium	44-1	25700.30	26315.16	26456.84	26157.43	1.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1072.07	1072.83	1075.50	1073.46	0.17	ppb
Cobalt	59-2	15.88	16.08	16.17	16.05	0.94	ppb
Copper	63-2	1821.16	1826.71	1826.05	1824.64	0.17	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				109		%
Indium	115-1				103		%
Indium	115-2				101		%
Iron	56-2	60200.34	60763.22	60402.45	60455.34	0.47	ppb
Iron	57-2	59135.98	59457.26	59291.07	59294.77	0.27	ppb
Iron	54-2	60697.74	61424.69	61422.72	61181.72	0.69	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:30:42	DataFile Name :	024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	541.76	555.97	556.73	551.48	1.53	ppb
Lead	207-1	503.35	522.96	515.22	513.84	1.92	ppb
Lead	208-1	517.92	534.06	531.45	527.81	1.64	ppb
Lithium	6-1				123		%
Magnesium	24-2	4928.87	4974.91	4915.68	4939.82	0.63	ppb
Manganese	55-2	2518.15	2558.14	2546.19	2540.83	0.81	ppb
Molybdenum	94-1	3.99	3.98	4.17	4.04	2.63	ppb
Molybdenum	95-1	3.39	3.44	3.49	3.44	1.44	ppb
Molybdenum	96-1	3.82	4.06	4.16	4.01	4.30	ppb
Molybdenum	97-1	3.40	3.44	3.40	3.41	0.69	ppb
Molybdenum	98-1	3.34	3.48	3.46	3.43	2.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	178.33	180.13	178.69	179.05	0.53	ppb
Phosphorus	31-2	1980.90	2011.28	2011.82	2001.33	0.88	ppb
Potassium	39-2	1638.53	1672.51	1652.63	1654.56	1.03	ppb
Rhodium	103-1				102		%
Rhodium	103-2				105		%
Scandium	45-1				100		%
Scandium	45-2				103		%
Selenium	82-1	1.46	1.61	1.55	1.54	5.15	ppb
Selenium	77-2	5.11	5.13	5.91	5.38	8.50	ppb
Selenium	78-2	1.24	0.87	2.30	1.47	50.45	ppb
Silicon	28-1	232.60	242.87	242.23	239.24	2.40	ppb
Silver	107-1	2.57	2.59	2.64	2.60	1.41	ppb
Silver	109-1	2.59	2.56	2.59	2.58	0.78	ppb
Sodium	23-2	4203.02	4222.99	4175.54	4200.52	0.57	ppb
Strontium	86-1	4611.88	4787.42	4869.78	4756.36	2.77	ppb
Strontium	88-1	4741.79	4903.64	4948.81	4864.75	2.24	ppb
Sulfur	34-1	4311.56	4470.13	4380.38	4387.36	1.81	ppb
Terbium	159-1				109		%
Terbium	159-2				108		%
Thallium	203-1	0.35	0.35	0.35	0.35	0.68	ppb
Thallium	205-1	0.35	0.34	0.35	0.35	1.41	ppb
Tin	118-1	1052.11	1091.41	1088.90	1077.47	2.04	ppb
Titanium	47-1	471.78	480.79	489.47	480.68	1.84	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:30:42	DataFile Name :	024SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.00	2.10	2.08	2.06	2.47	ppb
Vanadium	51-2	32.82	32.66	32.95	32.81	0.43	ppb
Yttrium	89-1				106		%
Yttrium	89-2				108		%
Zinc	66-2	221.50	226.72	224.20	224.14	1.16	ppb
Zirconium	90-1	0.65	0.66	0.68	0.66	2.21	ppb
Zirconium	91-1	0.70	0.71	0.69	0.70	1.01	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:33:46	DataFile Name :	025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	30603.78	30995.49	30680.25	30759.84	0.68	ppb
Antimony	121-1	0.59	0.62	0.62	0.61	2.57	ppb
Arsenic	75-2	162.61	163.03	160.21	161.95	0.94	ppb
Barium	135-1	212.11	213.98	216.19	214.09	0.95	ppb
Barium	137-1	213.28	216.72	217.12	215.71	0.98	ppb
Beryllium	9-1	4.13	4.00	4.08	4.07	1.55	ppb
Bismuth	209-1				112		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	82.33	79.53	79.54	80.47	2.01	ppb
Cadmium	106-1	58.32	56.36	57.43	57.37	1.71	ppb
Cadmium	111-1	1.92	1.92	2.03	1.96	3.25	ppb
Calcium	43-1	27246.04	27772.16	28171.39	27729.86	1.67	ppb
Calcium	44-1	26453.34	26721.12	26965.88	26713.45	0.96	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1144.76	1146.30	1137.33	1142.79	0.42	ppb
Cobalt	59-2	16.88	16.93	16.72	16.84	0.64	ppb
Copper	63-2	1929.83	1939.10	1928.14	1932.36	0.31	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				110		%
Holmium	165-2				107		%
Indium	115-1				102		%
Indium	115-2				100		%
Iron	56-2	64227.99	64190.65	63610.77	64009.80	0.54	ppb
Iron	57-2	62852.62	62330.00	62334.22	62505.62	0.48	ppb
Iron	54-2	64712.22	65266.97	64443.48	64807.56	0.65	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:33:46	DataFile Name :	025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	577.94	596.08	597.48	590.50	1.85	ppb
Lead	207-1	539.97	557.47	553.09	550.18	1.66	ppb
Lead	208-1	555.39	567.94	568.29	563.87	1.30	ppb
Lithium	6-1				120		%
Magnesium	24-2	5246.49	5332.23	5204.99	5261.24	1.23	ppb
Manganese	55-2	2631.88	2630.01	2604.28	2622.06	0.59	ppb
Molybdenum	94-1	4.08	4.26	4.36	4.24	3.30	ppb
Molybdenum	95-1	3.40	3.62	3.65	3.56	3.98	ppb
Molybdenum	96-1	4.09	4.30	4.28	4.22	2.76	ppb
Molybdenum	97-1	3.53	3.56	3.60	3.57	0.97	ppb
Molybdenum	98-1	3.53	3.62	3.64	3.60	1.72	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	188.22	188.20	188.12	188.18	0.03	ppb
Phosphorus	31-2	2077.67	2102.44	2069.54	2083.22	0.82	ppb
Potassium	39-2	1745.26	1773.92	1756.78	1758.65	0.82	ppb
Rhodium	103-1				102		%
Rhodium	103-2				104		%
Scandium	45-1				99		%
Scandium	45-2				102		%
Selenium	82-1	0.61	1.45	1.09	1.05	40.15	ppb
Selenium	77-2	5.51	4.91	5.91	5.45	9.23	ppb
Selenium	78-2	0.08	2.00	0.31	0.80	131.54	ppb
Silicon	28-1	246.17	249.79	255.03	250.33	1.78	ppb
Silver	107-1	2.68	2.75	2.75	2.73	1.36	ppb
Silver	109-1	2.62	2.67	2.69	2.66	1.38	ppb
Sodium	23-2	4328.77	4313.43	4314.20	4318.80	0.20	ppb
Strontium	86-1	4783.69	4967.02	4954.59	4901.77	2.09	ppb
Strontium	88-1	4919.51	5042.19	4992.72	4984.81	1.24	ppb
Sulfur	34-1	4127.11	4182.86	4207.21	4172.39	0.98	ppb
Terbium	159-1				109		%
Terbium	159-2				107		%
Thallium	203-1	0.32	0.32	0.32	0.32	0.50	ppb
Thallium	205-1	0.29	0.31	0.31	0.30	3.25	ppb
Tin	118-1	1132.83	1116.97	1138.65	1129.48	0.99	ppb
Titanium	47-1	494.51	507.30	511.71	504.50	1.77	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:33:46	DataFile Name :	025SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.17	2.20	2.22	2.20	1.16	ppb
Vanadium	51-2	34.69	34.98	34.98	34.88	0.49	ppb
Yttrium	89-1				106		%
Yttrium	89-2				107		%
Zinc	66-2	235.23	238.03	233.73	235.66	0.93	ppb
Zirconium	90-1	0.65	0.69	0.71	0.68	4.15	ppb
Zirconium	91-1	0.73	0.72	0.76	0.74	3.14	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LX5	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:36:46	DataFile Name :	026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6219.71	6138.85	6230.34	6196.30	0.81	ppb
Antimony	121-1	0.14	0.14	0.15	0.14	2.76	ppb
Arsenic	75-2	32.09	31.65	31.63	31.79	0.81	ppb
Barium	135-1	43.64	43.17	42.41	43.07	1.45	ppb
Barium	137-1	44.10	43.62	42.77	43.49	1.55	ppb
Beryllium	9-1	0.94	0.83	0.86	0.88	6.14	ppb
Bismuth	209-1				107		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	16.15	16.11	16.68	16.31	1.96	ppb
Cadmium	106-1	11.22	9.87	9.42	10.17	9.24	ppb
Cadmium	111-1	0.39	0.25	0.22	0.29	32.07	ppb
Calcium	43-1	5580.05	5617.44	5719.73	5639.07	1.28	ppb
Calcium	44-1	5459.64	5308.62	5470.15	5412.81	1.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	217.46	216.54	219.20	217.73	0.62	ppb
Cobalt	59-2	3.32	3.31	3.28	3.31	0.57	ppb
Copper	63-2	380.54	381.73	386.55	382.94	0.83	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	12209.30	12193.06	12373.83	12258.73	0.82	ppb
Iron	57-2	12403.36	12262.81	12461.98	12376.05	0.83	ppb
Iron	54-2	12439.14	12535.77	12458.84	12477.92	0.41	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LX5	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:36:46	DataFile Name :	026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	109.68	107.50	107.17	108.12	1.26	ppb
Lead	207-1	100.20	97.78	97.32	98.43	1.57	ppb
Lead	208-1	108.40	104.99	105.73	106.37	1.69	ppb
Lithium	6-1				110		%
Magnesium	24-2	1027.10	1023.88	1022.73	1024.57	0.22	ppb
Manganese	55-2	517.52	516.02	520.29	517.94	0.42	ppb
Molybdenum	94-1	0.87	0.90	1.22	1.00	19.31	ppb
Molybdenum	95-1	0.76	0.74	1.24	0.91	31.19	ppb
Molybdenum	96-1	0.90	0.84	1.21	0.98	20.34	ppb
Molybdenum	97-1	0.72	0.68	0.98	0.79	20.19	ppb
Molybdenum	98-1	0.74	0.70	0.98	0.80	18.95	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	36.98	36.98	37.81	37.26	1.29	ppb
Phosphorus	31-2	388.95	408.42	378.65	392.01	3.86	ppb
Potassium	39-2	333.75	336.75	341.61	337.37	1.18	ppb
Rhodium	103-1				99		%
Rhodium	103-2				102		%
Scandium	45-1				95		%
Scandium	45-2				99		%
Selenium	82-1	0.48	0.07	0.36	0.30	68.26	ppb
Selenium	77-2	1.67	0.89	1.05	1.20	34.05	ppb
Selenium	78-2	-0.07	0.94	-0.13	0.25	244.90	ppb
Silicon	28-1	49.16	49.09	50.26	49.50	1.33	ppb
Silver	107-1	0.55	0.56	0.54	0.55	2.05	ppb
Silver	109-1	0.53	0.54	0.55	0.54	1.72	ppb
Sodium	23-2	875.98	871.62	884.54	877.38	0.75	ppb
Strontium	86-1	1010.46	994.58	992.05	999.03	1.00	ppb
Strontium	88-1	1007.86	997.59	1007.86	1004.44	0.59	ppb
Sulfur	34-1	-63.39	-42.34	22.62	-27.70		ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.08	0.08	0.08	0.08	1.01	ppb
Thallium	205-1	0.08	0.06	0.08	0.07	11.76	ppb
Tin	118-1	226.90	220.86	221.28	223.01	1.51	ppb
Titanium	47-1	99.04	99.11	99.28	99.14	0.13	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LX5	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:36:46	DataFile Name :	026SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.44	0.43	0.41	0.43	3.48	ppb
Vanadium	51-2	6.59	6.65	6.62	6.62	0.41	ppb
Yttrium	89-1				100		%
Yttrium	89-2				102		%
Zinc	66-2	46.68	47.19	46.95	46.94	0.54	ppb
Zirconium	90-1	0.16	0.16	0.20	0.17	11.46	ppb
Zirconium	91-1	0.17	0.16	0.19	0.17	6.62	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:39:56	DataFile Name :	027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	30168.16	30062.73	30595.45	30275.45	0.93	ppb
Antimony	121-1	13.57	13.68	13.89	13.71	1.18	ppb
Arsenic	75-2	176.33	179.77	181.20	179.10	1.40	ppb
Barium	135-1	621.15	623.37	624.62	623.05	0.28	ppb
Barium	137-1	617.61	626.29	627.16	623.69	0.85	ppb
Beryllium	9-1	13.34	13.15	13.21	13.23	0.72	ppb
Bismuth	209-1				111		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	91.78	95.57	94.30	93.88	2.06	ppb
Cadmium	106-1	65.87	67.80	68.26	67.31	1.88	ppb
Cadmium	111-1	11.20	11.44	11.51	11.38	1.41	ppb
Calcium	43-1	26878.06	26843.17	26718.84	26813.36	0.31	ppb
Calcium	44-1	26000.70	25626.11	25592.27	25739.69	0.88	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1058.84	1053.79	1040.77	1051.13	0.89	ppb
Cobalt	59-2	112.77	111.88	113.37	112.67	0.67	ppb
Copper	63-2	2016.21	2017.69	2025.14	2019.68	0.24	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	64896.55	64446.34	64639.64	64660.85	0.35	ppb
Iron	57-2	63751.22	63460.13	63192.82	63468.06	0.44	ppb
Iron	54-2	65775.22	65199.43	65400.38	65458.34	0.45	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:39:56	DataFile Name :	027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	617.55	622.94	623.57	621.35	0.53	ppb
Lead	207-1	577.87	577.19	573.49	576.18	0.41	ppb
Lead	208-1	591.32	593.15	590.17	591.55	0.25	ppb
Lithium	6-1				117		%
Magnesium	24-2	5371.33	5327.55	5362.32	5353.73	0.43	ppb
Manganese	55-2	2497.93	2465.56	2485.34	2482.94	0.66	ppb
Molybdenum	94-1	4.41	4.42	4.39	4.41	0.29	ppb
Molybdenum	95-1	3.75	3.69	3.67	3.70	1.12	ppb
Molybdenum	96-1	4.39	4.26	4.30	4.31	1.54	ppb
Molybdenum	97-1	3.74	3.74	3.81	3.76	1.02	ppb
Molybdenum	98-1	3.70	3.60	3.69	3.66	1.54	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	281.59	278.95	283.45	281.33	0.80	ppb
Phosphorus	31-2	1998.21	2039.09	2058.03	2031.78	1.50	ppb
Potassium	39-2	1754.27	1765.35	1767.79	1762.47	0.41	ppb
Rhodium	103-1				99		%
Rhodium	103-2				102		%
Scandium	45-1				98		%
Scandium	45-2				100		%
Selenium	82-1	4.86	4.16	4.64	4.55	7.94	ppb
Selenium	77-2	7.62	8.45	8.40	8.16	5.71	ppb
Selenium	78-2	3.64	5.62	3.54	4.27	27.61	ppb
Silicon	28-1	233.65	228.65	226.30	229.54	1.63	ppb
Silver	107-1	12.10	12.26	12.25	12.20	0.71	ppb
Silver	109-1	12.06	12.27	12.45	12.26	1.58	ppb
Sodium	23-2	4096.39	4097.87	4129.18	4107.81	0.45	ppb
Strontium	86-1	4726.47	4723.20	4740.25	4729.97	0.19	ppb
Strontium	88-1	4872.74	4855.03	4841.49	4856.42	0.32	ppb
Sulfur	34-1	3756.54	3659.19	3621.53	3679.09	1.89	ppb
Terbium	159-1				107		%
Terbium	159-2				106		%
Thallium	203-1	8.20	8.17	8.30	8.22	0.80	ppb
Thallium	205-1	8.11	8.22	8.22	8.18	0.76	ppb
Tin	118-1	1146.55	1163.68	1178.31	1162.85	1.37	ppb
Titanium	47-1	555.33	555.18	549.34	553.28	0.62	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:39:56	DataFile Name :	027SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.21	2.28	2.29	2.26	1.77	ppb
Vanadium	51-2	131.60	131.82	130.98	131.47	0.33	ppb
Yttrium	89-1				104		%
Yttrium	89-2				105		%
Zinc	66-2	321.64	321.71	327.25	323.53	0.99	ppb
Zirconium	90-1	0.73	0.69	0.73	0.72	2.89	ppb
Zirconium	91-1	0.80	0.72	0.74	0.75	5.18	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09	Instrumnet Name :	P7
Client Sample ID :	A6342	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:42:57	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11492.88	11587.43	11756.03	11612.11	1.15	ppb
Antimony	121-1	0.07	0.05	0.05	0.06	14.74	ppb
Arsenic	75-2	6.40	6.54	6.33	6.42	1.65	ppb
Barium	135-1	46.78	47.86	48.49	47.71	1.81	ppb
Barium	137-1	47.29	48.40	48.49	48.06	1.39	ppb
Beryllium	9-1	0.66	0.66	0.57	0.63	7.74	ppb
Bismuth	209-1				106		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.35	0.30	0.16	0.27	35.20	ppb
Cadmium	106-1	-1.26	-0.81	-1.80	-1.29		ppb
Cadmium	111-1	0.01	0.01	-0.04	-0.01		ppb
Calcium	43-1	1561.06	1618.03	1600.79	1593.29	1.83	ppb
Calcium	44-1	1560.30	1589.38	1596.60	1582.10	1.21	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	30.25	30.64	30.34	30.41	0.68	ppb
Cobalt	59-2	4.87	4.88	4.98	4.91	1.30	ppb
Copper	63-2	11.37	11.49	11.22	11.36	1.20	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				102		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	12052.29	12151.12	11982.39	12061.93	0.70	ppb
Iron	57-2	12146.68	12146.36	12077.26	12123.44	0.33	ppb
Iron	54-2	12274.98	12471.06	12146.56	12297.54	1.33	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09	Instrumnet Name :	P7
Client Sample ID :	A6342	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:42:57	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	160.05	163.90	165.64	163.20	1.75	ppb
Lead	207-1	159.19	163.65	165.93	162.92	2.10	ppb
Lead	208-1	165.87	171.66	172.12	169.88	2.05	ppb
Lithium	6-1				106		%
Magnesium	24-2	3607.37	3668.97	3754.50	3676.95	2.01	ppb
Manganese	55-2	144.32	144.86	144.45	144.54	0.19	ppb
Molybdenum	94-1	2.28	2.23	2.35	2.28	2.64	ppb
Molybdenum	95-1	0.44	0.47	0.50	0.47	5.58	ppb
Molybdenum	96-1	0.77	0.78	0.82	0.79	3.20	ppb
Molybdenum	97-1	0.47	0.48	0.51	0.49	3.66	ppb
Molybdenum	98-1	0.48	0.48	0.48	0.48	0.68	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	16.75	17.02	17.36	17.04	1.81	ppb
Phosphorus	31-2	364.78	349.24	355.46	356.49	2.19	ppb
Potassium	39-2	1074.17	1085.42	1078.15	1079.25	0.53	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				95		%
Scandium	45-2				99		%
Selenium	82-1	0.57	0.43	0.25	0.42	38.82	ppb
Selenium	77-2	2.94	3.31	3.53	3.26	9.10	ppb
Selenium	78-2	0.76	0.52	-0.16	0.38	126.96	ppb
Silicon	28-1	47.25	41.31	40.86	43.14	8.26	ppb
Silver	107-1	0.08	0.07	0.06	0.07	10.74	ppb
Silver	109-1	0.08	0.07	0.08	0.07	8.37	ppb
Sodium	23-2	193.85	193.99	191.39	193.08	0.76	ppb
Strontium	86-1	194.04	201.33	200.10	198.49	1.97	ppb
Strontium	88-1	197.13	199.12	199.95	198.73	0.73	ppb
Sulfur	34-1	-766.00	-821.65	-810.01	-799.22		ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	0.19	0.18	0.20	0.19	3.51	ppb
Thallium	205-1	0.19	0.20	0.19	0.19	3.24	ppb
Tin	118-1	1.24	0.94	0.81	1.00	21.95	ppb
Titanium	47-1	445.12	456.46	458.73	453.44	1.61	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09	Instrumnet Name :	P7
Client Sample ID :	A6342	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:42:57	DataFile Name :	028SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.88	1.92	1.95	1.92	1.80	ppb
Vanadium	51-2	26.60	26.37	26.63	26.53	0.54	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	44.09	46.09	45.21	45.13	2.21	ppb
Zirconium	90-1	1.04	1.04	1.04	1.04	0.25	ppb
Zirconium	91-1	0.99	1.03	1.00	1.00	2.02	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-10	Instrumnet Name :	P7
Client Sample ID :	A6342D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:46:09	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11718.67	11916.60	11809.21	11814.83	0.84	ppb
Antimony	121-1	0.04	0.05	0.05	0.04	6.88	ppb
Arsenic	75-2	6.95	6.87	6.59	6.80	2.82	ppb
Barium	135-1	49.39	48.10	48.82	48.77	1.32	ppb
Barium	137-1	49.23	48.07	48.54	48.61	1.20	ppb
Beryllium	9-1	0.56	0.66	0.64	0.62	8.43	ppb
Bismuth	209-1				106		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.19	0.24	0.20	0.21	12.26	ppb
Cadmium	106-1	-0.68	-2.63	-1.27	-1.52		ppb
Cadmium	111-1	0.07	-0.09	0.01	0.00		ppb
Calcium	43-1	1634.11	1628.17	1616.17	1626.15	0.56	ppb
Calcium	44-1	1600.65	1626.41	1616.16	1614.40	0.80	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	31.29	30.41	30.51	30.73	1.57	ppb
Cobalt	59-2	4.93	4.94	4.97	4.95	0.40	ppb
Copper	63-2	11.29	10.96	11.02	11.09	1.59	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				103		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	12201.95	12063.12	12163.99	12143.02	0.59	ppb
Iron	57-2	12208.78	12209.13	12371.34	12263.08	0.76	ppb
Iron	54-2	12092.30	12132.37	12532.78	12252.48	1.99	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-10	Instrumnet Name :	P7
Client Sample ID :	A6342D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:46:09	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	171.05	173.71	172.10	172.29	0.78	ppb
Lead	207-1	169.17	170.93	171.77	170.62	0.78	ppb
Lead	208-1	177.18	177.86	180.02	178.35	0.83	ppb
Lithium	6-1				106		%
Magnesium	24-2	3696.96	3771.37	3788.09	3752.14	1.29	ppb
Manganese	55-2	147.64	145.78	148.43	147.29	0.92	ppb
Molybdenum	94-1	2.29	2.34	2.31	2.32	1.12	ppb
Molybdenum	95-1	0.52	0.51	0.55	0.53	3.70	ppb
Molybdenum	96-1	0.83	0.80	0.84	0.82	2.58	ppb
Molybdenum	97-1	0.51	0.51	0.53	0.52	2.48	ppb
Molybdenum	98-1	0.52	0.53	0.55	0.53	2.89	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	17.23	17.15	17.26	17.21	0.31	ppb
Phosphorus	31-2	376.74	368.56	377.39	374.23	1.31	ppb
Potassium	39-2	1100.55	1091.47	1096.87	1096.29	0.42	ppb
Rhodium	103-1				98		%
Rhodium	103-2				101		%
Scandium	45-1				95		%
Scandium	45-2				98		%
Selenium	82-1	0.30	0.78	0.36	0.48	54.54	ppb
Selenium	77-2	2.16	2.75	3.72	2.88	27.46	ppb
Selenium	78-2	1.29	0.89	-0.37	0.60	143.06	ppb
Silicon	28-1	46.76	47.86	47.96	47.53	1.41	ppb
Silver	107-1	0.06	0.05	0.05	0.06	7.54	ppb
Silver	109-1	0.05	0.06	0.05	0.06	6.32	ppb
Sodium	23-2	194.48	186.53	191.54	190.85	2.11	ppb
Strontium	86-1	200.70	203.12	201.71	201.84	0.60	ppb
Strontium	88-1	203.83	202.46	205.20	203.83	0.67	ppb
Sulfur	34-1	-978.81	-949.16	-942.55	-956.84		ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.19	0.21	0.20	0.20	4.97	ppb
Thallium	205-1	0.19	0.19	0.19	0.19	1.40	ppb
Tin	118-1	0.32	0.28	0.28	0.29	8.77	ppb
Titanium	47-1	464.91	470.37	469.46	468.25	0.62	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-10	Instrumnet Name :	P7
Client Sample ID :	A6342D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:46:09	DataFile Name :	029SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.94	1.95	1.98	1.96	1.27	ppb
Vanadium	51-2	26.91	26.90	27.31	27.04	0.86	ppb
Yttrium	89-1				100		%
Yttrium	89-2				102		%
Zinc	66-2	45.05	45.84	46.60	45.83	1.69	ppb
Zirconium	90-1	1.01	1.02	1.03	1.02	0.71	ppb
Zirconium	91-1	1.01	1.04	1.07	1.04	2.64	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09LX5	Instrumnet Name :	P7
Client Sample ID :	A6342L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:49:20	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2422.09	2421.12	2387.67	2410.29	0.81	ppb
Antimony	121-1	0.02	0.01	0.02	0.01	25.30	ppb
Arsenic	75-2	1.36	1.34	1.24	1.31	4.98	ppb
Barium	135-1	9.58	9.97	9.93	9.83	2.18	ppb
Barium	137-1	9.65	10.03	9.98	9.88	2.04	ppb
Beryllium	9-1	0.11	0.13	0.16	0.13	18.83	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.08	-0.02	-0.02	-0.04		ppb
Cadmium	106-1	-1.57	-2.16	-3.71	-2.48		ppb
Cadmium	111-1	-0.08	-0.14	-0.25	-0.16		ppb
Calcium	43-1	325.27	324.49	335.29	328.35	1.83	ppb
Calcium	44-1	317.23	327.12	331.68	325.35	2.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	6.48	6.36	6.30	6.38	1.44	ppb
Cobalt	59-2	1.04	1.05	1.09	1.06	2.36	ppb
Copper	63-2	2.26	2.21	2.12	2.20	3.10	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	56-2	2552.48	2534.52	2525.82	2537.60	0.54	ppb
Iron	57-2	2615.20	2551.95	2546.79	2571.31	1.48	ppb
Iron	54-2	2634.68	2604.43	2622.92	2620.67	0.58	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09LX5	Instrumnet Name :	P7
Client Sample ID :	A6342L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:49:20	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	33.27	34.44	33.77	33.83	1.73	ppb
Lead	207-1	33.27	34.38	34.40	34.01	1.90	ppb
Lead	208-1	33.12	34.19	33.80	33.70	1.61	ppb
Lithium	6-1				108		%
Magnesium	24-2	776.36	764.11	763.63	768.04	0.94	ppb
Manganese	55-2	30.73	30.46	30.22	30.47	0.85	ppb
Molybdenum	94-1	0.46	0.43	0.48	0.46	5.54	ppb
Molybdenum	95-1	0.09	0.12	0.11	0.10	11.97	ppb
Molybdenum	96-1	0.16	0.14	0.16	0.16	6.25	ppb
Molybdenum	97-1	0.10	0.11	0.11	0.11	4.55	ppb
Molybdenum	98-1	0.10	0.11	0.11	0.11	6.54	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.26	3.35	3.23	3.28	1.91	ppb
Phosphorus	31-2	64.81	70.92	61.74	65.83	7.10	ppb
Potassium	39-2	227.46	220.82	216.68	221.66	2.45	ppb
Rhodium	103-1				100		%
Rhodium	103-2				102		%
Scandium	45-1				96		%
Scandium	45-2				98		%
Selenium	82-1	-0.37	0.17	0.33	0.05	780.72	ppb
Selenium	77-2	0.42	0.41	0.74	0.53	35.64	ppb
Selenium	78-2	0.48	-1.37	-0.36	-0.42		ppb
Silicon	28-1	7.39	8.47	8.49	8.12	7.75	ppb
Silver	107-1	0.01	0.01	0.02	0.01	27.60	ppb
Silver	109-1	0.02	0.02	0.02	0.02	6.72	ppb
Sodium	23-2	48.01	47.10	46.67	47.26	1.44	ppb
Strontium	86-1	39.08	41.95	44.65	41.90	6.65	ppb
Strontium	88-1	40.61	42.26	42.16	41.68	2.21	ppb
Sulfur	34-1	-1667.26	-1689.27	-1614.83	-1657.12		ppb
Terbium	159-1				105		%
Terbium	159-2				104		%
Thallium	203-1	0.04	0.05	0.05	0.05	11.04	ppb
Thallium	205-1	0.05	0.05	0.05	0.05	6.06	ppb
Tin	118-1	0.05	0.06	0.08	0.06	18.41	ppb
Titanium	47-1	92.49	95.24	96.36	94.69	2.10	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09LX5	Instrumnet Name :	P7
Client Sample ID :	A6342L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:49:20	DataFile Name :	030SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.38	0.40	0.41	0.40	2.81	ppb
Vanadium	51-2	5.78	5.58	5.58	5.64	2.02	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	9.22	9.56	9.52	9.43	1.98	ppb
Zirconium	90-1	0.20	0.22	0.21	0.21	3.91	ppb
Zirconium	91-1	0.18	0.21	0.21	0.20	8.04	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-11	Instrumnet Name :	P7
Client Sample ID :	A6342S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:52:37	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10661.94	10676.21	10681.29	10673.15	0.09	ppb
Antimony	121-1	15.47	15.86	16.04	15.79	1.85	ppb
Arsenic	75-2	14.51	15.65	15.36	15.17	3.88	ppb
Barium	135-1	409.44	420.73	424.33	418.16	1.86	ppb
Barium	137-1	432.70	440.98	440.88	438.18	1.08	ppb
Beryllium	9-1	10.02	10.07	9.53	9.88	3.00	ppb
Bismuth	209-1				111		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	9.17	8.71	9.47	9.12	4.21	ppb
Cadmium	106-1	7.20	6.43	7.31	6.98	6.86	ppb
Cadmium	111-1	9.67	9.82	9.73	9.74	0.74	ppb
Calcium	43-1	1412.74	1482.76	1464.98	1453.50	2.50	ppb
Calcium	44-1	1412.03	1483.03	1464.05	1453.03	2.53	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	66.41	67.06	67.50	66.99	0.81	ppb
Cobalt	59-2	100.79	101.71	102.79	101.76	0.98	ppb
Copper	63-2	61.45	61.86	61.44	61.58	0.39	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				104		%
Indium	115-2				101		%
Iron	56-2	11591.89	11696.63	11820.75	11703.09	0.98	ppb
Iron	57-2	11629.80	11730.87	11908.92	11756.53	1.20	ppb
Iron	54-2	11663.56	11893.99	11835.68	11797.74	1.02	ppb
Krypton	83-1						cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-11	Instrumnet Name :	P7
Client Sample ID :	A6342S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:52:37	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	90.18	92.83	93.99	92.33	2.11	ppb
Lead	207-1	89.65	92.42	92.28	91.45	1.71	ppb
Lead	208-1	94.14	96.13	95.97	95.41	1.16	ppb
Lithium	6-1				113		%
Magnesium	24-2	3429.29	3490.21	3418.05	3445.85	1.13	ppb
Manganese	55-2	228.41	229.26	229.92	229.20	0.33	ppb
Molybdenum	94-1	1.01	0.99	1.01	1.00	1.58	ppb
Molybdenum	95-1	0.49	0.46	0.54	0.50	8.16	ppb
Molybdenum	96-1	0.66	0.65	0.66	0.66	1.10	ppb
Molybdenum	97-1	0.56	0.46	0.49	0.50	10.56	ppb
Molybdenum	98-1	0.48	0.51	0.49	0.49	2.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	116.13	117.25	117.87	117.08	0.76	ppb
Phosphorus	31-2	343.54	337.78	323.59	334.97	3.07	ppb
Potassium	39-2	1028.47	1043.11	1057.72	1043.10	1.40	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				97		%
Scandium	45-2				100		%
Selenium	82-1	3.63	3.26	3.47	3.45	5.33	ppb
Selenium	77-2	6.97	7.25	7.64	7.29	4.58	ppb
Selenium	78-2	2.95	3.63	3.76	3.45	12.58	ppb
Silicon	28-1	113.94	120.70	128.92	121.19	6.19	ppb
Silver	107-1	9.36	9.68	9.95	9.66	3.05	ppb
Silver	109-1	9.28	9.65	9.77	9.57	2.62	ppb
Sodium	23-2	196.04	201.85	205.45	201.11	2.36	ppb
Strontium	86-1	180.76	179.39	181.92	180.69	0.70	ppb
Strontium	88-1	176.96	181.34	181.16	179.82	1.38	ppb
Sulfur	34-1	-1385.32	-1296.15	-1345.62	-1342.36		ppb
Terbium	159-1				107		%
Terbium	159-2				106		%
Thallium	203-1	8.34	8.64	8.75	8.58	2.51	ppb
Thallium	205-1	8.35	8.65	8.65	8.55	2.00	ppb
Tin	118-1	1.02	0.96	1.00	0.99	3.16	ppb
Titanium	47-1	516.75	538.20	533.02	529.32	2.11	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-11	Instrumnet Name :	P7
Client Sample ID :	A6342S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:52:37	DataFile Name :	031SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.60	1.65	1.67	1.64	2.25	ppb
Vanadium	51-2	120.76	120.34	121.04	120.71	0.29	ppb
Yttrium	89-1				104		%
Yttrium	89-2				103		%
Zinc	66-2	140.46	142.50	143.15	142.04	0.99	ppb
Zirconium	90-1	0.34	0.35	0.34	0.34	1.95	ppb
Zirconium	91-1	0.35	0.38	0.33	0.35	6.87	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:55:49	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10795.82	10742.78	10585.32	10707.98	1.02	ppb
Antimony	121-1	0.68	0.71	0.72	0.70	3.01	ppb
Arsenic	75-2	35.36	35.50	34.70	35.19	1.21	ppb
Barium	135-1	48.00	48.37	49.04	48.47	1.08	ppb
Barium	137-1	47.90	48.53	49.32	48.58	1.46	ppb
Beryllium	9-1	0.55	0.62	0.57	0.58	5.61	ppb
Bismuth	209-1				112		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	206.43	214.05	215.67	212.05	2.33	ppb
Cadmium	106-1	149.10	151.68	147.24	149.34	1.49	ppb
Cadmium	111-1	0.27	0.03	-0.36	-0.02		ppb
Calcium	43-1	1218.25	1179.22	1233.50	1210.32	2.31	ppb
Calcium	44-1	1199.86	1190.05	1225.61	1205.17	1.52	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1601.99	1603.90	1572.74	1592.88	1.10	ppb
Cobalt	59-2	6.18	6.31	6.13	6.20	1.50	ppb
Copper	63-2	1188.24	1200.02	1168.98	1185.75	1.32	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				99		%
Indium	115-2				96		%
Iron	56-2	23466.48	23648.69	23166.10	23427.09	1.04	ppb
Iron	57-2	22977.77	22912.78	22475.37	22788.64	1.20	ppb
Iron	54-2	24581.99	24557.46	24203.17	24447.54	0.87	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:55:49	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	393.46	394.91	396.80	395.06	0.42	ppb
Lead	207-1	356.40	365.85	368.77	363.68	1.78	ppb
Lead	208-1	370.39	375.38	377.54	374.43	0.98	ppb
Lithium	6-1				113		%
Magnesium	24-2	3110.98	3064.13	3029.01	3068.04	1.34	ppb
Manganese	55-2	220.69	219.01	215.75	218.48	1.15	ppb
Molybdenum	94-1	2.22	2.22	2.15	2.20	1.86	ppb
Molybdenum	95-1	1.80	1.81	1.75	1.79	1.78	ppb
Molybdenum	96-1	2.01	2.01	2.02	2.01	0.41	ppb
Molybdenum	97-1	1.79	1.81	1.75	1.78	1.62	ppb
Molybdenum	98-1	1.77	1.82	1.77	1.79	1.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	33.36	32.65	32.71	32.91	1.19	ppb
Phosphorus	31-2	992.79	996.76	1023.15	1004.23	1.64	ppb
Potassium	39-2	1330.37	1328.98	1298.82	1319.39	1.35	ppb
Rhodium	103-1				101		%
Rhodium	103-2				104		%
Scandium	45-1				96		%
Scandium	45-2				99		%
Selenium	82-1	0.45	0.54	0.95	0.65	40.48	ppb
Selenium	77-2	2.26	3.38	4.08	3.24	28.29	ppb
Selenium	78-2	1.31	1.19	-0.50	0.67	151.60	ppb
Silicon	28-1	112.24	112.32	113.79	112.79	0.77	ppb
Silver	107-1	4.71	4.75	4.80	4.76	1.01	ppb
Silver	109-1	4.68	4.75	4.74	4.72	0.78	ppb
Sodium	23-2	148.86	152.12	146.90	149.29	1.77	ppb
Strontium	86-1	120.38	120.67	118.64	119.90	0.92	ppb
Strontium	88-1	120.28	120.90	119.68	120.29	0.51	ppb
Sulfur	34-1	-1377.16	-1416.20	-1348.67	-1380.68		ppb
Terbium	159-1				107		%
Terbium	159-2				106		%
Thallium	203-1	0.15	0.14	0.15	0.15	2.53	ppb
Thallium	205-1	0.15	0.15	0.15	0.15	1.38	ppb
Tin	118-1	2354.92	2357.29	2363.02	2358.41	0.18	ppb
Titanium	47-1	646.90	639.45	655.31	647.22	1.23	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:55:49	DataFile Name :	032SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.65	1.70	1.67	1.67	1.53	ppb
Vanadium	51-2	26.81	26.97	26.47	26.75	0.96	ppb
Yttrium	89-1				103		%
Yttrium	89-2				103		%
Zinc	66-2	55.42	55.46	54.33	55.07	1.16	ppb
Zirconium	90-1	0.41	0.38	0.39	0.39	3.85	ppb
Zirconium	91-1	0.43	0.37	0.38	0.39	7.76	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-09	Instrumnet Name :	P7
Client Sample ID :	A6307	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:58:55	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	30350.24	29972.71	30005.42	30109.46	0.69	ppb
Antimony	121-1	1.05	1.10	1.03	1.06	3.52	ppb
Arsenic	75-2	78.47	78.94	78.22	78.54	0.47	ppb
Barium	135-1	51.65	52.90	50.81	51.79	2.03	ppb
Barium	137-1	52.12	53.22	51.20	52.18	1.95	ppb
Beryllium	9-1	2.31	2.20	2.43	2.32	4.86	ppb
Bismuth	209-1				115		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.98	1.54	2.12	1.88	15.96	ppb
Cadmium	106-1	2.96	0.99	1.47	1.81	56.87	ppb
Cadmium	111-1	0.61	0.54	0.52	0.56	8.43	ppb
Calcium	43-1	2777.33	2792.36	2719.78	2763.16	1.39	ppb
Calcium	44-1	2779.27	2758.13	2700.39	2745.93	1.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	65.44	64.79	64.60	64.94	0.68	ppb
Cobalt	59-2	38.23	38.47	38.34	38.34	0.31	ppb
Copper	63-2	30.53	30.70	30.37	30.53	0.53	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				112		%
Holmium	165-2				107		%
Indium	115-1				106		%
Indium	115-2				101		%
Iron	56-2	32980.51	32637.05	32401.27	32672.94	0.89	ppb
Iron	57-2	32071.03	32453.97	32101.07	32208.69	0.66	ppb
Iron	54-2	33096.54	32447.11	32272.43	32605.36	1.33	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-09	Instrumnet Name :	P7
Client Sample ID :	A6307	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:58:55	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	123.94	123.32	120.93	122.73	1.29	ppb
Lead	207-1	116.70	116.69	113.30	115.56	1.69	ppb
Lead	208-1	124.66	123.90	121.17	123.24	1.49	ppb
Lithium	6-1				115		%
Magnesium	24-2	3175.87	3166.48	3145.46	3162.60	0.49	ppb
Manganese	55-2	524.42	520.71	512.42	519.18	1.18	ppb
Molybdenum	94-1	2.93	2.98	2.88	2.93	1.86	ppb
Molybdenum	95-1	2.43	2.59	2.43	2.48	3.65	ppb
Molybdenum	96-1	2.75	2.83	2.64	2.74	3.43	ppb
Molybdenum	97-1	2.57	2.59	2.50	2.55	1.87	ppb
Molybdenum	98-1	2.49	2.49	2.46	2.48	0.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	27.64	28.14	27.93	27.91	0.90	ppb
Phosphorus	31-2	1771.45	1804.00	1714.93	1763.46	2.56	ppb
Potassium	39-2	1101.49	1102.44	1091.06	1098.33	0.57	ppb
Rhodium	103-1				103		%
Rhodium	103-2				103		%
Scandium	45-1				98		%
Scandium	45-2				101		%
Selenium	82-1	3.40	3.64	3.35	3.46	4.48	ppb
Selenium	77-2	19.94	17.04	19.12	18.70	7.98	ppb
Selenium	78-2	4.35	4.78	4.89	4.67	6.10	ppb
Silicon	28-1	134.72	133.67	131.07	133.16	1.41	ppb
Silver	107-1	0.50	0.50	0.47	0.49	2.89	ppb
Silver	109-1	0.50	0.49	0.50	0.49	1.17	ppb
Sodium	23-2	649.58	644.44	643.29	645.77	0.52	ppb
Strontium	86-1	452.45	468.42	452.78	457.88	1.99	ppb
Strontium	88-1	463.76	471.66	452.27	462.56	2.11	ppb
Sulfur	34-1	1902.82	1818.18	1662.82	1794.61	6.78	ppb
Terbium	159-1				111		%
Terbium	159-2				108		%
Thallium	203-1	0.19	0.20	0.20	0.19	3.17	ppb
Thallium	205-1	0.18	0.19	0.19	0.19	2.18	ppb
Tin	118-1	13.58	13.34	13.99	13.64	2.41	ppb
Titanium	47-1	414.40	415.32	403.02	410.92	1.67	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-09	Instrumnet Name :	P7
Client Sample ID :	A6307	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:58:55	DataFile Name :	033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	9.76	9.65	9.52	9.64	1.24	ppb
Vanadium	51-2	48.13	48.01	47.67	47.94	0.51	ppb
Yttrium	89-1				115		%
Yttrium	89-2				113		%
Zinc	66-2	54.27	55.43	54.60	54.76	1.09	ppb
Zirconium	90-1	0.50	0.50	0.47	0.49	2.73	ppb
Zirconium	91-1	0.49	0.50	0.50	0.49	1.79	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:02:05	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3320.93	3294.37	3325.07	3313.46	0.50	ppb
Antimony	121-1	1.73	1.59	1.69	1.67	4.24	ppb
Arsenic	75-2	68.52	69.17	68.28	68.66	0.68	ppb
Barium	135-1	37.47	35.03	36.09	36.20	3.38	ppb
Barium	137-1	37.40	35.34	36.13	36.29	2.87	ppb
Beryllium	9-1	0.17	0.15	0.09	0.13	30.67	ppb
Bismuth	209-1				113		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1259.42	1173.02	1202.77	1211.74	3.62	ppb
Cadmium	106-1	904.00	838.22	851.37	864.53	4.03	ppb
Cadmium	111-1	0.49	0.21	-0.37	0.11	388.05	ppb
Calcium	43-1	2508.42	2396.61	2397.66	2434.23	2.64	ppb
Calcium	44-1	2523.92	2364.93	2415.67	2434.84	3.34	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8787.52	8720.59	8729.35	8745.82	0.42	ppb
Cobalt	59-2	2.28	2.43	2.33	2.35	3.19	ppb
Copper	63-2	418.01	410.21	403.35	410.52	1.79	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				102		%
Indium	115-1				72		%
Indium	115-2				65		%
Iron	56-2	21342.13	21563.69	21353.67	21419.83	0.58	ppb
Iron	57-2	20971.34	21339.05	21248.30	21186.23	0.90	ppb
Iron	54-2	27383.08	27666.09	27369.92	27473.03	0.61	ppb
Krypton	83-1						cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:02:05	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	635.57	589.38	609.78	611.57	3.78	ppb
Lead	207-1	571.18	534.86	554.37	553.47	3.28	ppb
Lead	208-1	595.24	553.15	576.93	575.11	3.67	ppb
Lithium	6-1				110		%
Magnesium	24-2	859.55	857.56	868.12	861.75	0.65	ppb
Manganese	55-2	89.16	89.61	90.98	89.92	1.06	ppb
Molybdenum	94-1	5.63	5.25	5.33	5.40	3.71	ppb
Molybdenum	95-1	5.71	5.33	5.32	5.45	4.03	ppb
Molybdenum	96-1	5.87	5.41	5.53	5.60	4.27	ppb
Molybdenum	97-1	5.72	5.15	5.27	5.38	5.54	ppb
Molybdenum	98-1	5.75	5.37	5.38	5.50	3.96	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	17.70	18.23	17.97	17.97	1.47	ppb
Phosphorus	31-2	1762.69	1761.82	1758.74	1761.08	0.12	ppb
Potassium	39-2	793.03	797.00	796.69	795.57	0.28	ppb
Rhodium	103-1				96		%
Rhodium	103-2				96		%
Scandium	45-1				88		%
Scandium	45-2				87		%
Selenium	82-1	1.08	0.14	0.79	0.67	72.08	ppb
Selenium	77-2	1.46	2.03	0.98	1.49	35.07	ppb
Selenium	78-2	-1.16	0.00	-0.45	-0.53		ppb
Silicon	28-1	91.83	83.97	87.44	87.75	4.49	ppb
Silver	107-1	17.44	16.35	16.86	16.88	3.23	ppb
Silver	109-1	17.19	16.12	16.59	16.63	3.22	ppb
Sodium	23-2	230.90	230.85	235.60	232.45	1.17	ppb
Strontium	86-1	234.60	215.52	217.49	222.53	4.71	ppb
Strontium	88-1	235.07	216.57	219.72	223.78	4.42	ppb
Sulfur	34-1	-282.45	-512.53	-324.09	-373.02		ppb
Terbium	159-1				105		%
Terbium	159-2				101		%
Thallium	203-1	0.09	0.09	0.09	0.09	3.29	ppb
Thallium	205-1	0.10	0.08	0.09	0.09	8.15	ppb
Tin	118-1	14226.91	13403.76	13620.56	13750.41	3.10	ppb
Titanium	47-1	465.57	434.88	439.45	446.63	3.71	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:02:05	DataFile Name :	034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.62	0.57	0.59	0.59	4.72	ppb
Vanadium	51-2	27.62	27.61	27.92	27.71	0.63	ppb
Yttrium	89-1				96		%
Yttrium	89-2				93		%
Zinc	66-2	33.03	33.40	34.30	33.58	1.95	ppb
Zirconium	90-1	0.51	0.48	0.49	0.49	2.96	ppb
Zirconium	91-1	0.50	0.47	0.49	0.49	3.79	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-11	Instrumnet Name :	P7
Client Sample ID :	A6309	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:05:13	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4897.68	4850.44	4901.79	4883.30	0.58	ppb
Antimony	121-1	0.44	0.39	0.42	0.42	6.18	ppb
Arsenic	75-2	20.42	21.13	21.38	20.98	2.36	ppb
Barium	135-1	37.84	37.42	38.36	37.87	1.23	ppb
Barium	137-1	37.58	38.13	38.85	38.19	1.67	ppb
Beryllium	9-1	0.34	0.28	0.28	0.30	12.56	ppb
Bismuth	209-1				108		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.52	0.84	1.01	1.12	31.47	ppb
Cadmium	106-1	-0.47	-1.16	-1.53	-1.05		ppb
Cadmium	111-1	0.23	0.20	0.21	0.21	8.76	ppb
Calcium	43-1	2073.19	2064.69	2028.12	2055.33	1.17	ppb
Calcium	44-1	2037.66	2073.15	2055.55	2055.45	0.86	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	30.24	29.87	29.07	29.72	2.01	ppb
Cobalt	59-2	7.87	7.90	7.86	7.88	0.25	ppb
Copper	63-2	40.32	40.22	39.96	40.17	0.46	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				100		%
Indium	115-1				95		%
Indium	115-2				95		%
Iron	56-2	18543.26	18462.33	18191.92	18399.17	1.00	ppb
Iron	57-2	18074.63	18472.56	17596.85	18048.01	2.43	ppb
Iron	54-2	18513.72	18473.38	18229.48	18405.53	0.84	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-11	Instrumnet Name :	P7
Client Sample ID :	A6309	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:05:13	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	27.77	27.91	28.23	27.97	0.84	ppb
Lead	207-1	25.78	26.05	25.83	25.88	0.55	ppb
Lead	208-1	26.48	26.79	26.73	26.67	0.61	ppb
Lithium	6-1				110		%
Magnesium	24-2	2012.33	1963.42	1960.70	1978.81	1.47	ppb
Manganese	55-2	186.06	184.46	182.61	184.38	0.94	ppb
Molybdenum	94-1	1.60	1.69	1.66	1.65	2.67	ppb
Molybdenum	95-1	1.23	1.23	1.23	1.23	0.36	ppb
Molybdenum	96-1	1.40	1.40	1.42	1.41	0.77	ppb
Molybdenum	97-1	1.27	1.22	1.21	1.23	2.69	ppb
Molybdenum	98-1	1.17	1.20	1.20	1.19	1.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	21.82	21.22	20.79	21.28	2.44	ppb
Phosphorus	31-2	593.10	600.15	612.82	602.02	1.66	ppb
Potassium	39-2	663.20	677.71	666.30	669.07	1.14	ppb
Rhodium	103-1				92		%
Rhodium	103-2				97		%
Scandium	45-1				83		%
Scandium	45-2				90		%
Selenium	82-1	-0.02	0.61	1.05	0.55	98.18	ppb
Selenium	77-2	3.65	3.12	2.29	3.02	22.72	ppb
Selenium	78-2	-0.46	0.44	-1.94	-0.65		ppb
Silicon	28-1	98.56	103.58	101.26	101.13	2.49	ppb
Silver	107-1	0.50	0.47	0.49	0.48	3.42	ppb
Silver	109-1	0.49	0.46	0.46	0.47	3.27	ppb
Sodium	23-2	433.21	427.31	424.85	428.46	1.00	ppb
Strontium	86-1	244.76	246.10	245.72	245.53	0.28	ppb
Strontium	88-1	247.28	252.50	251.93	250.57	1.14	ppb
Sulfur	34-1	-1021.16	-905.36	-1010.41	-978.98		ppb
Terbium	159-1				101		%
Terbium	159-2				100		%
Thallium	203-1	0.10	0.11	0.11	0.11	3.93	ppb
Thallium	205-1	0.11	0.11	0.11	0.11	1.90	ppb
Tin	118-1	10.61	10.71	11.56	10.96	4.74	ppb
Titanium	47-1	253.98	259.33	259.22	257.51	1.19	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-11	Instrumnet Name :	P7
Client Sample ID :	A6309	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:05:13	DataFile Name :	035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.19	1.17	1.16	1.18	1.33	ppb
Vanadium	51-2	14.37	14.50	14.07	14.31	1.52	ppb
Yttrium	89-1				93		%
Yttrium	89-2				95		%
Zinc	66-2	116.06	118.47	115.68	116.74	1.30	ppb
Zirconium	90-1	0.35	0.35	0.35	0.35	1.02	ppb
Zirconium	91-1	0.32	0.36	0.32	0.33	7.54	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-12	Instrumnet Name :	P7
Client Sample ID :	A6320	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:08:26	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12286.59	12348.05	12425.07	12353.24	0.56	ppb
Antimony	121-1	0.03	0.04	0.05	0.04	20.84	ppb
Arsenic	75-2	4.67	4.53	4.59	4.59	1.59	ppb
Barium	135-1	36.80	38.10	37.77	37.56	1.80	ppb
Barium	137-1	37.16	38.03	37.97	37.72	1.29	ppb
Beryllium	9-1	0.60	0.64	0.59	0.61	4.99	ppb
Bismuth	209-1				109		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.13	0.17	0.24	0.18	33.04	ppb
Cadmium	106-1	-1.35	-1.06	-2.34	-1.58		ppb
Cadmium	111-1	-0.08	-0.04	-0.16	-0.09		ppb
Calcium	43-1	1472.17	1524.13	1502.07	1499.45	1.74	ppb
Calcium	44-1	1510.32	1521.69	1523.16	1518.39	0.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	27.34	27.05	26.96	27.11	0.73	ppb
Cobalt	59-2	5.90	5.96	5.89	5.91	0.65	ppb
Copper	63-2	10.31	10.17	10.29	10.26	0.73	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				98		%
Indium	115-2				96		%
Iron	56-2	10340.95	10429.89	10303.03	10357.96	0.63	ppb
Iron	57-2	10358.35	10397.97	10299.20	10351.84	0.48	ppb
Iron	54-2	10525.23	10484.24	10238.96	10416.14	1.49	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-12	Instrumnet Name :	P7
Client Sample ID :	A6320	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:08:26	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	7.69	7.86	7.85	7.80	1.28	ppb
Lead	207-1	7.03	7.04	7.12	7.07	0.69	ppb
Lead	208-1	7.26	7.42	7.39	7.36	1.20	ppb
Lithium	6-1				111		%
Magnesium	24-2	2999.49	3005.98	3059.60	3021.69	1.09	ppb
Manganese	55-2	82.72	82.01	81.63	82.12	0.67	ppb
Molybdenum	94-1	0.81	0.81	0.77	0.80	3.41	ppb
Molybdenum	95-1	0.18	0.18	0.17	0.18	2.43	ppb
Molybdenum	96-1	0.35	0.33	0.30	0.33	7.30	ppb
Molybdenum	97-1	0.21	0.15	0.19	0.18	16.49	ppb
Molybdenum	98-1	0.16	0.20	0.17	0.18	10.00	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	18.53	17.97	18.04	18.18	1.65	ppb
Phosphorus	31-2	391.26	388.71	388.69	389.55	0.38	ppb
Potassium	39-2	751.44	752.82	750.08	751.45	0.18	ppb
Rhodium	103-1				95		%
Rhodium	103-2				99		%
Scandium	45-1				88		%
Scandium	45-2				93		%
Selenium	82-1	0.05	0.12	0.34	0.17	86.74	ppb
Selenium	77-2	2.39	1.74	2.41	2.18	17.57	ppb
Selenium	78-2	0.53	0.23	-2.22	-0.49		ppb
Silicon	28-1	145.02	147.55	151.09	147.88	2.06	ppb
Silver	107-1	0.07	0.07	0.07	0.07	6.30	ppb
Silver	109-1	0.07	0.08	0.09	0.08	8.61	ppb
Sodium	23-2	266.68	263.98	265.30	265.32	0.51	ppb
Strontium	86-1	178.98	185.12	178.62	180.91	2.02	ppb
Strontium	88-1	184.87	188.67	185.14	186.22	1.14	ppb
Sulfur	34-1	-1279.17	-1323.43	-1333.40	-1312.00		ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	0.10	0.12	0.11	0.11	6.69	ppb
Thallium	205-1	0.11	0.11	0.11	0.11	1.49	ppb
Tin	118-1	1.33	1.47	1.62	1.47	9.61	ppb
Titanium	47-1	491.47	498.63	498.96	496.35	0.85	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-12	Instrumnet Name :	P7
Client Sample ID :	A6320	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:08:26	DataFile Name :	036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.85	0.87	0.85	0.86	1.22	ppb
Vanadium	51-2	17.16	17.31	17.08	17.18	0.68	ppb
Yttrium	89-1				97		%
Yttrium	89-2				98		%
Zinc	66-2	33.11	33.53	33.40	33.35	0.65	ppb
Zirconium	90-1	0.34	0.36	0.36	0.36	3.30	ppb
Zirconium	91-1	0.37	0.38	0.37	0.37	1.21	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:11:41	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13753.83	13864.11	13756.16	13791.37	0.46	ppb
Antimony	121-1	0.22	0.21	0.20	0.21	4.75	ppb
Arsenic	75-2	42.22	40.92	42.74	41.96	2.24	ppb
Barium	135-1	91.31	94.16	90.40	91.96	2.13	ppb
Barium	137-1	92.08	95.40	91.62	93.03	2.21	ppb
Beryllium	9-1	0.73	0.86	0.71	0.77	10.43	ppb
Bismuth	209-1				107		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	54.68	57.30	53.87	55.29	3.24	ppb
Cadmium	106-1	37.88	36.78	35.36	36.67	3.46	ppb
Cadmium	111-1	0.21	0.00	0.05	0.08	129.70	ppb
Calcium	43-1	2458.01	2580.48	2495.64	2511.38	2.50	ppb
Calcium	44-1	2481.95	2598.42	2502.22	2527.53	2.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3209.88	3228.40	3183.44	3207.24	0.70	ppb
Cobalt	59-2	7.55	7.51	7.57	7.54	0.39	ppb
Copper	63-2	2251.25	2255.81	2260.32	2255.79	0.20	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				101		%
Indium	115-1				95		%
Indium	115-2				92		%
Iron	56-2	17103.40	17016.99	16921.40	17013.93	0.54	ppb
Iron	57-2	17046.03	16731.86	16792.82	16856.90	0.99	ppb
Iron	54-2	19243.46	19260.60	18939.23	19147.76	0.94	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:11:41	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	144.11	147.31	144.33	145.25	1.23	ppb
Lead	207-1	130.88	133.39	129.45	131.24	1.52	ppb
Lead	208-1	141.44	144.23	140.40	142.02	1.40	ppb
Lithium	6-1				111		%
Magnesium	24-2	3471.28	3419.13	3361.30	3417.24	1.61	ppb
Manganese	55-2	258.96	257.06	255.01	257.01	0.77	ppb
Molybdenum	94-1	2.12	2.06	2.09	2.09	1.38	ppb
Molybdenum	95-1	1.49	1.50	1.49	1.49	0.31	ppb
Molybdenum	96-1	1.67	1.74	1.68	1.70	2.17	ppb
Molybdenum	97-1	1.43	1.51	1.47	1.47	2.73	ppb
Molybdenum	98-1	1.46	1.57	1.46	1.50	4.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	66.12	65.22	65.40	65.58	0.73	ppb
Phosphorus	31-2	784.15	784.25	788.07	785.49	0.28	ppb
Potassium	39-2	1341.30	1336.94	1328.54	1335.59	0.49	ppb
Rhodium	103-1				92		%
Rhodium	103-2				97		%
Scandium	45-1				86		%
Scandium	45-2				91		%
Selenium	82-1	0.47	1.04	1.25	0.92	43.61	ppb
Selenium	77-2	5.55	4.85	4.26	4.89	13.25	ppb
Selenium	78-2	1.30	0.23	-0.44	0.36	242.59	ppb
Silicon	28-1	139.32	146.77	139.14	141.74	3.07	ppb
Silver	107-1	2.87	3.01	2.89	2.93	2.60	ppb
Silver	109-1	2.86	3.01	2.85	2.91	3.03	ppb
Sodium	23-2	406.04	410.68	408.35	408.35	0.57	ppb
Strontium	86-1	476.42	492.11	472.61	480.38	2.15	ppb
Strontium	88-1	480.78	499.88	478.96	486.54	2.38	ppb
Sulfur	34-1	541.28	696.43	562.15	599.95	14.03	ppb
Terbium	159-1				101		%
Terbium	159-2				102		%
Thallium	203-1	0.18	0.19	0.19	0.19	1.60	ppb
Thallium	205-1	0.20	0.19	0.20	0.20	1.04	ppb
Tin	118-1	828.11	848.81	821.42	832.78	1.71	ppb
Titanium	47-1	398.97	411.89	397.60	402.82	1.96	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:11:41	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	3.97	4.04	3.93	3.98	1.43	ppb
Vanadium	51-2	26.52	26.72	26.56	26.60	0.40	ppb
Yttrium	89-1				95		%
Yttrium	89-2				97		%
Zinc	66-2	74.46	75.44	73.98	74.63	1.00	ppb
Zirconium	90-1	0.47	0.49	0.46	0.48	2.96	ppb
Zirconium	91-1	0.43	0.45	0.50	0.46	8.46	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:14:47	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19099.11	20475.63	19534.19	19702.97	3.57	ppb
Antimony	121-1	0.97	0.99	0.98	0.98	1.41	ppb
Arsenic	75-2	295.02	310.22	295.95	300.40	2.84	ppb
Barium	135-1	268.52	274.79	276.04	273.12	1.47	ppb
Barium	137-1	268.69	275.33	276.13	273.38	1.49	ppb
Beryllium	9-1	2.67	2.64	2.64	2.65	0.72	ppb
Bismuth	209-1				108		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	33.33	34.02	31.56	32.97	3.86	ppb
Cadmium	106-1	24.91	24.61	24.59	24.70	0.71	ppb
Cadmium	111-1	2.75	2.69	2.87	2.77	3.32	ppb
Calcium	43-1	13821.14	14134.88	14307.21	14087.74	1.75	ppb
Calcium	44-1	13312.04	13615.21	13566.25	13497.83	1.21	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2798.30	2956.04	2845.76	2866.70	2.82	ppb
Cobalt	59-2	35.48	37.57	36.04	36.37	2.97	ppb
Copper	63-2	1560.40	1645.17	1621.92	1609.16	2.72	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				102		%
Indium	115-1				96		%
Indium	115-2				93		%
Iron	56-2	171851.74	182528.32	175925.43	176768.50	3.05	ppb
Iron	57-2	168869.78	178082.41	171689.90	172880.69	2.73	ppb
Iron	54-2	171849.34	182052.37	175557.61	176486.44	2.93	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:14:47	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	239.87	239.92	241.93	240.58	0.49	ppb
Lead	207-1	201.87	204.89	205.94	204.23	1.03	ppb
Lead	208-1	222.92	227.47	227.37	225.92	1.15	ppb
Lithium	6-1				111		%
Magnesium	24-2	5064.81	5361.00	5170.47	5198.76	2.89	ppb
Manganese	55-2	2092.24	2254.24	2179.47	2175.32	3.73	ppb
Molybdenum	94-1	5.46	5.52	5.47	5.49	0.62	ppb
Molybdenum	95-1	4.28	4.41	4.35	4.34	1.52	ppb
Molybdenum	96-1	5.69	5.79	5.78	5.75	0.92	ppb
Molybdenum	97-1	4.28	4.33	4.47	4.36	2.24	ppb
Molybdenum	98-1	4.24	4.31	4.40	4.32	1.91	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	130.77	137.55	132.59	133.64	2.63	ppb
Phosphorus	31-2	3036.98	3178.43	3075.64	3097.02	2.36	ppb
Potassium	39-2	2273.79	2457.61	2289.74	2340.38	4.35	ppb
Rhodium	103-1				93		%
Rhodium	103-2				96		%
Scandium	45-1				87		%
Scandium	45-2				90		%
Selenium	82-1	1.64	2.05	1.98	1.89	11.53	ppb
Selenium	77-2	8.27	10.07	7.70	8.68	14.23	ppb
Selenium	78-2	1.67	3.73	2.61	2.67	38.57	ppb
Silicon	28-1	455.48	465.17	468.28	462.98	1.44	ppb
Silver	107-1	3.16	3.24	3.27	3.22	1.88	ppb
Silver	109-1	3.16	3.24	3.31	3.24	2.37	ppb
Sodium	23-2	1999.41	2148.15	2084.00	2077.19	3.59	ppb
Strontium	86-1	2139.85	2194.30	2208.74	2180.96	1.67	ppb
Strontium	88-1	2211.03	2272.91	2259.04	2247.66	1.44	ppb
Sulfur	34-1	5481.66	5689.68	5754.74	5642.02	2.53	ppb
Terbium	159-1				104		%
Terbium	159-2				102		%
Thallium	203-1	0.43	0.44	0.46	0.44	2.80	ppb
Thallium	205-1	0.45	0.46	0.45	0.45	1.32	ppb
Tin	118-1	479.96	485.93	483.37	483.09	0.62	ppb
Titanium	47-1	697.59	717.87	725.60	713.69	2.03	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:14:47	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	5.80	6.01	6.01	5.94	2.02	ppb
Vanadium	51-2	72.76	77.19	73.90	74.62	3.08	ppb
Yttrium	89-1				99		%
Yttrium	89-2				100		%
Zinc	66-2	494.47	525.86	503.36	507.89	3.19	ppb
Zirconium	90-1	0.98	1.03	1.04	1.01	3.18	ppb
Zirconium	91-1	1.00	1.09	1.09	1.06	4.82	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:17:51	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8132.60	8219.25	8159.67	8170.50	0.54	ppb
Antimony	121-1	0.22	0.22	0.23	0.23	1.87	ppb
Arsenic	75-2	11.84	11.72	11.79	11.78	0.51	ppb
Barium	135-1	52.13	54.11	54.69	53.64	2.51	ppb
Barium	137-1	52.74	54.44	55.16	54.12	2.29	ppb
Beryllium	9-1	0.51	0.56	0.59	0.55	7.30	ppb
Bismuth	209-1				108		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	38.36	40.68	40.23	39.76	3.09	ppb
Cadmium	106-1	27.01	26.05	27.35	26.81	2.52	ppb
Cadmium	111-1	0.26	0.09	0.19	0.18	48.48	ppb
Calcium	43-1	2023.48	2089.01	2116.23	2076.24	2.30	ppb
Calcium	44-1	2049.98	2109.13	2102.96	2087.36	1.56	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1562.33	1556.14	1552.91	1557.13	0.31	ppb
Cobalt	59-2	5.08	4.98	5.08	5.05	1.13	ppb
Copper	63-2	2629.83	2610.54	2632.86	2624.41	0.46	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				100		%
Indium	115-1				97		%
Indium	115-2				94		%
Iron	56-2	10233.17	10228.46	10181.00	10214.21	0.28	ppb
Iron	57-2	10355.97	10209.11	10374.37	10313.15	0.88	ppb
Iron	54-2	11600.65	11324.40	11355.41	11426.82	1.32	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:17:51	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	181.72	189.96	187.02	186.23	2.24	ppb
Lead	207-1	159.06	165.44	164.04	162.85	2.06	ppb
Lead	208-1	175.27	182.41	180.79	179.49	2.09	ppb
Lithium	6-1				110		%
Magnesium	24-2	1876.59	1859.13	1871.47	1869.06	0.48	ppb
Manganese	55-2	117.72	116.49	117.83	117.35	0.64	ppb
Molybdenum	94-1	1.96	1.95	1.89	1.94	1.95	ppb
Molybdenum	95-1	1.58	1.49	1.50	1.52	3.11	ppb
Molybdenum	96-1	1.64	1.72	1.73	1.70	3.09	ppb
Molybdenum	97-1	1.53	1.56	1.52	1.54	1.39	ppb
Molybdenum	98-1	1.51	1.54	1.56	1.54	1.66	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	188.31	185.10	186.12	186.51	0.88	ppb
Phosphorus	31-2	574.20	576.31	562.84	571.12	1.27	ppb
Potassium	39-2	839.42	823.55	844.29	835.75	1.30	ppb
Rhodium	103-1				95		%
Rhodium	103-2				97		%
Scandium	45-1				89		%
Scandium	45-2				91		%
Selenium	82-1	0.53	1.18	1.39	1.03	43.18	ppb
Selenium	77-2	7.60	5.85	4.90	6.12	22.37	ppb
Selenium	78-2	2.46	0.80	1.03	1.43	63.08	ppb
Silicon	28-1	111.45	115.99	114.93	114.12	2.09	ppb
Silver	107-1	3.05	3.12	3.16	3.11	1.83	ppb
Silver	109-1	3.08	3.06	3.11	3.09	0.89	ppb
Sodium	23-2	399.76	395.38	398.30	397.81	0.56	ppb
Strontium	86-1	364.02	370.92	374.97	369.97	1.50	ppb
Strontium	88-1	364.57	373.67	374.70	370.98	1.50	ppb
Sulfur	34-1	2495.32	2623.75	2538.36	2552.48	2.56	ppb
Terbium	159-1				103		%
Terbium	159-2				101		%
Thallium	203-1	0.13	0.14	0.16	0.14	10.66	ppb
Thallium	205-1	0.13	0.13	0.14	0.13	3.91	ppb
Tin	118-1	454.85	464.92	467.64	462.47	1.46	ppb
Titanium	47-1	295.43	306.25	306.04	302.57	2.04	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:17:51	DataFile Name :	039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.69	4.87	4.77	4.77	1.85	ppb
Vanadium	51-2	15.19	14.98	14.98	15.05	0.80	ppb
Yttrium	89-1				98		%
Yttrium	89-2				97		%
Zinc	66-2	303.13	297.76	299.07	299.98	0.93	ppb
Zirconium	90-1	0.37	0.41	0.41	0.40	5.94	ppb
Zirconium	91-1	0.42	0.42	0.40	0.41	4.00	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-16	Instrumnet Name :	P7
Client Sample ID :	A6324	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:20:57	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	22180.64	22567.72	22123.82	22290.73	1.08	ppb
Antimony	121-1	0.83	0.80	0.87	0.83	4.47	ppb
Arsenic	75-2	82.45	83.06	81.34	82.28	1.06	ppb
Barium	135-1	256.10	258.80	260.78	258.56	0.91	ppb
Barium	137-1	256.54	260.63	261.71	259.62	1.05	ppb
Beryllium	9-1	1.93	1.87	1.59	1.80	9.89	ppb
Bismuth	209-1				108		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.48	1.52	1.83	1.61	12.09	ppb
Cadmium	106-1	-0.08	0.51	0.49	0.31	110.47	ppb
Cadmium	111-1	1.19	1.22	1.16	1.19	2.53	ppb
Calcium	43-1	35048.85	35203.33	35257.58	35169.92	0.31	ppb
Calcium	44-1	33579.21	33834.19	33843.09	33752.16	0.44	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	51.46	51.70	51.28	51.48	0.41	ppb
Cobalt	59-2	12.76	12.90	12.79	12.82	0.59	ppb
Copper	63-2	35.82	35.92	35.42	35.72	0.74	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				101		%
Indium	115-1				99		%
Indium	115-2				95		%
Iron	56-2	30627.07	30889.64	30252.52	30589.74	1.05	ppb
Iron	57-2	30368.80	30296.26	30148.15	30271.07	0.37	ppb
Iron	54-2	30679.71	31076.24	30210.71	30655.55	1.41	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-16	Instrumnet Name :	P7
Client Sample ID :	A6324	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:20:57	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	94.98	97.19	96.73	96.30	1.21	ppb
Lead	207-1	88.61	90.09	90.53	89.74	1.12	ppb
Lead	208-1	94.37	92.95	96.63	94.65	1.96	ppb
Lithium	6-1				111		%
Magnesium	24-2	6626.98	6753.20	6735.09	6705.09	1.02	ppb
Manganese	55-2	253.58	255.89	253.30	254.26	0.56	ppb
Molybdenum	94-1	7.13	7.27	7.22	7.21	0.97	ppb
Molybdenum	95-1	4.03	4.06	4.07	4.05	0.50	ppb
Molybdenum	96-1	4.60	4.68	4.58	4.62	1.12	ppb
Molybdenum	97-1	4.06	3.98	4.12	4.05	1.74	ppb
Molybdenum	98-1	4.11	4.01	4.05	4.06	1.23	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	68.54	70.12	68.41	69.02	1.38	ppb
Phosphorus	31-2	1483.80	1438.37	1449.50	1457.23	1.62	ppb
Potassium	39-2	1716.82	1733.65	1716.57	1722.35	0.57	ppb
Rhodium	103-1				95		%
Rhodium	103-2				97		%
Scandium	45-1				89		%
Scandium	45-2				92		%
Selenium	82-1	4.40	4.17	3.96	4.18	5.32	ppb
Selenium	77-2	13.49	14.61	15.45	14.52	6.78	ppb
Selenium	78-2	4.22	6.09	5.10	5.14	18.29	ppb
Silicon	28-1	159.38	160.66	161.22	160.42	0.59	ppb
Silver	107-1	0.50	0.51	0.51	0.51	1.68	ppb
Silver	109-1	0.51	0.50	0.50	0.50	1.05	ppb
Sodium	23-2	2261.55	2311.74	2289.28	2287.52	1.10	ppb
Strontium	86-1	5217.58	5326.06	5237.35	5260.33	1.10	ppb
Strontium	88-1	5338.12	5405.35	5329.58	5357.68	0.77	ppb
Sulfur	34-1	7300.80	7610.04	7745.68	7552.18	3.02	ppb
Terbium	159-1				104		%
Terbium	159-2				102		%
Thallium	203-1	0.65	0.62	0.63	0.64	2.22	ppb
Thallium	205-1	0.64	0.64	0.64	0.64	0.41	ppb
Tin	118-1	2.97	2.98	2.86	2.94	2.22	ppb
Titanium	47-1	561.94	565.30	571.15	566.13	0.82	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-16	Instrumnet Name :	P7
Client Sample ID :	A6324	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:20:57	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	51.41	53.39	52.90	52.57	1.96	ppb
Vanadium	51-2	68.88	69.32	68.28	68.83	0.76	ppb
Yttrium	89-1				102		%
Yttrium	89-2				103		%
Zinc	66-2	115.71	117.00	118.64	117.12	1.25	ppb
Zirconium	90-1	2.12	2.18	2.15	2.15	1.34	ppb
Zirconium	91-1	2.15	2.24	2.18	2.19	1.98	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV002	Instrumnet Name :	P7
Client Sample ID :	CCV002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:24:07	DataFile Name :	041CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49132.02	50774.89	50905.88	50270.93	1.97	ppb
Antimony	121-1	490.36	495.01	500.21	495.19	0.99	ppb
Arsenic	75-2	508.90	542.91	531.91	527.91	3.29	ppb
Barium	135-1	2476.89	2501.84	2499.17	2492.63	0.55	ppb
Barium	137-1	2449.90	2495.96	2494.60	2480.15	1.06	ppb
Beryllium	9-1	479.34	494.28	491.47	488.36	1.63	ppb
Bismuth	209-1				102		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	488.88	497.01	493.44	493.11	0.83	ppb
Cadmium	106-1	496.56	494.37	496.06	495.67	0.23	ppb
Cadmium	111-1	479.49	488.07	491.66	486.41	1.29	ppb
Calcium	43-1	249483.54	252106.62	251092.23	250894.13	0.53	ppb
Calcium	44-1	248962.04	250663.09	251566.76	250397.30	0.53	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	504.68	527.68	530.74	521.03	2.73	ppb
Cobalt	59-2	514.87	544.20	544.87	534.65	3.20	ppb
Copper	63-2	5073.36	5319.86	5354.53	5249.25	2.92	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				98		%
Indium	115-1				91		%
Indium	115-2				86		%
Iron	56-2	129184.81	134818.98	136744.03	133582.61	2.94	ppb
Iron	57-2	128825.51	134233.50	134384.72	132481.24	2.39	ppb
Iron	54-2	129032.94	133855.74	136622.63	133170.44	2.88	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV002	Instrumnet Name :	P7
Client Sample ID :	CCV002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:24:07	DataFile Name :	041CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2496.23	2540.39	2517.19	2517.94	0.88	ppb
Lead	207-1	2468.22	2526.97	2552.81	2516.00	1.72	ppb
Lead	208-1	2497.55	2548.84	2532.24	2526.21	1.04	ppb
Lithium	6-1				102		%
Magnesium	24-2	250015.39	260096.00	260268.90	256793.43	2.29	ppb
Manganese	55-2	4998.61	5198.92	5295.40	5164.31	2.93	ppb
Molybdenum	94-1	5052.66	4983.42	5046.96	5027.68	0.76	ppb
Molybdenum	95-1	5034.19	4951.36	5048.11	5011.22	1.04	ppb
Molybdenum	96-1	5004.32	4986.93	5065.07	5018.77	0.82	ppb
Molybdenum	97-1	5002.65	4964.53	5026.68	4997.95	0.63	ppb
Molybdenum	98-1	5009.94	4973.36	5056.02	5013.11	0.83	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	506.08	532.59	529.70	522.79	2.78	ppb
Phosphorus	31-2	9779.21	10223.47	10240.88	10081.19	2.60	ppb
Potassium	39-2	122249.02	127683.90	128314.56	126082.49	2.64	ppb
Rhodium	103-1				85		%
Rhodium	103-2				86		%
Scandium	45-1				86		%
Scandium	45-2				87		%
Selenium	82-1	491.52	489.50	493.82	491.61	0.44	ppb
Selenium	77-2	484.48	518.51	497.71	500.23	3.43	ppb
Selenium	78-2	486.16	519.98	509.81	505.32	3.43	ppb
Silicon	28-1	510.16	522.92	523.32	518.80	1.44	ppb
Silver	107-1	477.17	481.69	477.39	478.75	0.53	ppb
Silver	109-1	475.00	480.41	487.49	480.97	1.30	ppb
Sodium	23-2	252851.63	262971.27	264500.32	260107.74	2.43	ppb
Strontium	86-1	12702.25	12434.92	12766.95	12634.71	1.39	ppb
Strontium	88-1	12591.14	12637.45	12640.47	12623.02	0.22	ppb
Sulfur	34-1	9336.32	9332.18	9347.81	9338.77	0.09	ppb
Terbium	159-1				102		%
Terbium	159-2				98		%
Thallium	203-1	504.28	512.87	506.57	507.91	0.88	ppb
Thallium	205-1	500.47	509.31	511.01	506.93	1.12	ppb
Tin	118-1	488.29	494.78	501.31	494.79	1.32	ppb
Titanium	47-1	4939.73	5001.80	4983.82	4975.12	0.64	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV002	Instrumnet Name :	P7
Client Sample ID :	CCV002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:24:07	DataFile Name :	041CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	506.52	515.89	519.06	513.82	1.27	ppb
Vanadium	51-2	516.01	533.69	531.02	526.91	1.81	ppb
Yttrium	89-1				92		%
Yttrium	89-2				90		%
Zinc	66-2	5087.81	5349.99	5322.39	5253.40	2.74	ppb
Zirconium	90-1	502.94	508.17	514.28	508.46	1.12	ppb
Zirconium	91-1	505.24	495.67	509.58	503.50	1.41	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB002	Instrumnet Name :	P7
Client Sample ID :	CCB002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:29:40	DataFile Name :	042CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3.72	2.96	3.26	3.31	11.65	ppb
Antimony	121-1	0.12	0.11	0.10	0.11	10.37	ppb
Arsenic	75-2	0.01	0.02	-0.01	0.00	355.41	ppb
Barium	135-1	0.29	0.22	0.20	0.24	18.91	ppb
Barium	137-1	0.28	0.22	0.19	0.23	20.06	ppb
Beryllium	9-1	0.06	0.11	0.07	0.08	36.86	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.02	0.02	0.00	0.00		ppb
Cadmium	106-1	-3.90	-3.14	-3.63	-3.56		ppb
Cadmium	111-1	-0.23	-0.16	-0.22	-0.20		ppb
Calcium	43-1	25.97	26.78	19.44	24.06	16.74	ppb
Calcium	44-1	29.22	24.68	20.04	24.65	18.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.08	0.05	0.08	0.07	24.74	ppb
Cobalt	59-2	0.04	0.02	0.02	0.03	30.34	ppb
Copper	63-2	0.28	0.32	0.27	0.29	8.38	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				97		%
Indium	115-2				96		%
Iron	56-2	10.21	9.33	8.52	9.35	9.01	ppb
Iron	57-2	7.05	5.72	5.88	6.22	11.69	ppb
Iron	54-2	9.76	9.73	8.90	9.47	5.18	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB002	Instrumnet Name :	P7
Client Sample ID :	CCB002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:29:40	DataFile Name :	042CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.35	0.32	0.27	0.31	13.90	ppb
Lead	207-1	0.34	0.31	0.26	0.30	12.35	ppb
Lead	208-1	0.34	0.31	0.27	0.31	11.64	ppb
Lithium	6-1				106		%
Magnesium	24-2	16.22	14.28	12.66	14.39	12.37	ppb
Manganese	55-2	0.34	0.33	0.34	0.34	1.96	ppb
Molybdenum	94-1	0.67	0.58	0.54	0.60	11.20	ppb
Molybdenum	95-1	0.60	0.54	0.44	0.53	15.12	ppb
Molybdenum	96-1	0.61	0.52	0.49	0.54	12.20	ppb
Molybdenum	97-1	0.61	0.56	0.47	0.55	12.77	ppb
Molybdenum	98-1	0.61	0.55	0.47	0.54	12.98	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.05	-0.21	-0.12	-0.13		ppb
Phosphorus	31-2	-18.00	-18.98	-17.46	-18.15		ppb
Potassium	39-2	1.89	0.06	1.29	1.08	86.04	ppb
Rhodium	103-1				94		%
Rhodium	103-2				98		%
Scandium	45-1				87		%
Scandium	45-2				91		%
Selenium	82-1	0.15	-0.31	0.02	-0.04		ppb
Selenium	77-2	0.11	-0.05	0.11	0.06	168.05	ppb
Selenium	78-2	-1.13	-0.40	-0.80	-0.78		ppb
Silicon	28-1	-4.50	-4.40	-4.47	-4.46		ppb
Silver	107-1	0.07	0.07	0.06	0.07	9.07	ppb
Silver	109-1	0.08	0.07	0.06	0.07	15.36	ppb
Sodium	23-2	48.05	43.77	43.11	44.98	5.96	ppb
Strontium	86-1	1.32	1.39	0.94	1.22	19.98	ppb
Strontium	88-1	1.54	1.42	1.24	1.40	10.96	ppb
Sulfur	34-1	-739.03	-662.24	-694.93	-698.74		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.09	0.08	0.07	0.08	16.58	ppb
Thallium	205-1	0.09	0.08	0.07	0.08	14.73	ppb
Tin	118-1	0.05	0.05	0.06	0.06	4.81	ppb
Titanium	47-1	0.53	0.49	0.41	0.47	12.90	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB002	Instrumnet Name :	P7
Client Sample ID :	CCB002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:29:40	DataFile Name :	042CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.05	0.04	0.04	0.04	19.84	ppb
Vanadium	51-2	0.04	0.03	0.03	0.03	10.24	ppb
Yttrium	89-1				94		%
Yttrium	89-2				96		%
Zinc	66-2	0.43	0.25	0.39	0.36	25.98	ppb
Zirconium	90-1	0.08	0.08	0.08	0.08	3.29	ppb
Zirconium	91-1	0.08	0.07	0.08	0.08	8.73	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-01	Instrumnet Name :	P7
Client Sample ID :	A6313	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:32:55	DataFile Name :	043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9592.72	9530.90	9462.14	9528.59	0.69	ppb
Antimony	121-1	59.96	62.51	63.64	62.03	3.04	ppb
Arsenic	75-2	431.44	439.75	430.35	433.85	1.19	ppb
Barium	135-1	840.28	852.60	866.21	853.03	1.52	ppb
Barium	137-1	828.63	848.65	846.22	841.17	1.30	ppb
Beryllium	9-1	343.69	347.70	355.80	349.06	1.77	ppb
Bismuth	209-1				111		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	229.84	233.32	236.68	233.28	1.47	ppb
Cadmium	106-1	222.48	231.75	231.96	228.73	2.37	ppb
Cadmium	111-1	250.90	259.71	259.40	256.67	1.95	ppb
Calcium	43-1	13104.27	13448.59	13344.47	13299.11	1.33	ppb
Calcium	44-1	12398.00	12896.67	12687.37	12660.68	1.98	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	571.53	567.48	574.40	571.14	0.61	ppb
Cobalt	59-2	422.57	430.28	421.60	424.82	1.12	ppb
Copper	63-2	311.66	313.27	311.64	312.19	0.30	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				96		%
Iron	56-2	11682.44	11658.85	11585.65	11642.31	0.43	ppb
Iron	57-2	11704.96	11708.90	11689.63	11701.16	0.09	ppb
Iron	54-2	11913.60	12062.05	11987.53	11987.73	0.62	ppb
Krypton	83-1						cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-01	Instrumnet Name :	P7
Client Sample ID :	A6313	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:32:55	DataFile Name :	043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	354.61	364.45	361.30	360.12	1.40	ppb
Lead	207-1	338.92	344.57	338.78	340.76	0.97	ppb
Lead	208-1	342.63	352.42	349.74	348.26	1.45	ppb
Lithium	6-1				114		%
Magnesium	24-2	3484.91	3536.93	3495.26	3505.70	0.79	ppb
Manganese	55-2	977.61	987.44	992.95	986.00	0.79	ppb
Molybdenum	94-1	103.74	109.80	110.68	108.07	3.50	ppb
Molybdenum	95-1	97.68	101.84	103.38	100.97	2.92	ppb
Molybdenum	96-1	98.23	101.73	102.97	100.98	2.43	ppb
Molybdenum	97-1	98.13	101.67	103.30	101.03	2.61	ppb
Molybdenum	98-1	97.27	101.59	103.36	100.74	3.11	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	279.12	280.18	278.27	279.19	0.34	ppb
Phosphorus	31-2	493.48	503.34	527.22	508.01	3.41	ppb
Potassium	39-2	2756.80	2700.63	2683.39	2713.61	1.41	ppb
Rhodium	103-1				94		%
Rhodium	103-2				97		%
Scandium	45-1				89		%
Scandium	45-2				92		%
Selenium	82-1	215.68	225.44	230.20	223.77	3.31	ppb
Selenium	77-2	232.30	227.05	221.81	227.06	2.31	ppb
Selenium	78-2	223.44	234.82	227.21	228.49	2.54	ppb
Silicon	28-1	117.51	119.26	118.13	118.30	0.75	ppb
Silver	107-1	78.92	81.66	82.62	81.07	2.37	ppb
Silver	109-1	78.13	80.45	81.70	80.09	2.26	ppb
Sodium	23-2	1077.13	1081.65	1064.98	1074.59	0.80	ppb
Strontium	86-1	11934.21	12281.74	12461.01	12225.65	2.19	ppb
Strontium	88-1	11872.54	12328.84	12422.54	12207.97	2.41	ppb
Sulfur	34-1	-844.55	-862.76	-985.07	-897.46		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	388.09	403.57	401.49	397.71	2.11	ppb
Thallium	205-1	391.15	397.13	399.60	395.96	1.10	ppb
Tin	118-1	74.05	76.83	77.03	75.97	2.19	ppb
Titanium	47-1	438.79	455.46	454.83	449.69	2.10	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-01	Instrumnet Name :	P7
Client Sample ID :	A6313	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:32:55	DataFile Name :	043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	393.85	399.55	408.19	400.53	1.80	ppb
Vanadium	51-2	269.90	271.75	271.07	270.91	0.34	ppb
Yttrium	89-1				99		%
Yttrium	89-2				99		%
Zinc	66-2	938.39	939.58	930.36	936.11	0.54	ppb
Zirconium	90-1	13.43	14.10	14.34	13.96	3.36	ppb
Zirconium	91-1	13.59	14.16	14.04	13.93	2.14	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-02	Instrumnet Name :	P7
Client Sample ID :	A6314	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:35:54	DataFile Name :	044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10150.98	10174.19	10211.88	10179.02	0.30	ppb
Antimony	121-1	45.80	51.27	52.39	49.82	7.08	ppb
Arsenic	75-2	370.26	357.36	357.21	361.61	2.07	ppb
Barium	135-1	717.11	798.51	811.81	775.81	6.61	ppb
Barium	137-1	717.37	797.11	811.41	775.30	6.54	ppb
Beryllium	9-1	244.63	276.52	274.73	265.29	6.75	ppb
Bismuth	209-1				114		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	256.76	281.72	289.24	275.91	6.16	ppb
Cadmium	106-1	247.33	277.62	282.67	269.20	7.10	ppb
Cadmium	111-1	278.90	313.68	317.40	303.33	7.00	ppb
Calcium	43-1	11395.94	12845.11	12905.82	12382.29	6.90	ppb
Calcium	44-1	10868.80	12210.98	12461.76	11847.18	7.23	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	375.62	368.23	373.09	372.31	1.01	ppb
Cobalt	59-2	386.03	393.11	396.53	391.89	1.37	ppb
Copper	63-2	659.68	657.36	648.13	655.06	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				108		%
Holmium	165-2				103		%
Indium	115-1				101		%
Indium	115-2				96		%
Iron	56-2	12461.77	12565.79	12504.92	12510.83	0.42	ppb
Iron	57-2	12618.16	12682.31	12670.82	12657.10	0.27	ppb
Iron	54-2	13022.19	12829.37	12843.50	12898.35	0.83	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-02	Instrumnet Name :	P7
Client Sample ID :	A6314	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:35:54	DataFile Name :	044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	527.63	589.40	583.23	566.75	6.00	ppb
Lead	207-1	488.86	552.61	556.61	532.70	7.14	ppb
Lead	208-1	501.05	565.46	567.92	544.81	6.96	ppb
Lithium	6-1				118		%
Magnesium	24-2	3800.82	3804.28	3759.62	3788.24	0.66	ppb
Manganese	55-2	1069.30	1064.35	1062.13	1065.26	0.34	ppb
Molybdenum	94-1	205.17	230.99	236.27	224.14	7.42	ppb
Molybdenum	95-1	220.55	247.42	252.80	240.26	7.19	ppb
Molybdenum	96-1	219.94	245.65	250.75	238.78	6.92	ppb
Molybdenum	97-1	224.35	251.23	255.17	243.58	6.89	ppb
Molybdenum	98-1	227.41	254.78	257.32	246.50	6.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	454.06	453.44	454.30	453.93	0.10	ppb
Phosphorus	31-2	571.44	574.17	564.00	569.87	0.92	ppb
Potassium	39-2	2743.62	2737.62	2775.14	2752.12	0.73	ppb
Rhodium	103-1				98		%
Rhodium	103-2				97		%
Scandium	45-1				93		%
Scandium	45-2				93		%
Selenium	82-1	351.79	398.17	407.76	385.90	7.76	ppb
Selenium	77-2	421.01	397.19	408.36	408.85	2.91	ppb
Selenium	78-2	415.47	403.12	399.27	405.96	2.08	ppb
Silicon	28-1	58.23	68.89	68.19	65.10	9.16	ppb
Silver	107-1	72.38	81.50	82.40	78.76	7.03	ppb
Silver	109-1	72.21	81.24	82.50	78.65	7.13	ppb
Sodium	23-2	1091.80	1089.18	1085.13	1088.70	0.31	ppb
Strontium	86-1	4704.80	5310.48	5378.44	5131.24	7.23	ppb
Strontium	88-1	4866.88	5431.24	5485.28	5261.14	6.51	ppb
Sulfur	34-1	-1428.72	-1103.87	-1040.59	-1191.06		ppb
Terbium	159-1				107		%
Terbium	159-2				102		%
Thallium	203-1	208.59	231.84	229.72	223.38	5.75	ppb
Thallium	205-1	209.83	235.23	232.03	225.70	6.13	ppb
Tin	118-1	95.42	106.44	108.71	103.52	6.86	ppb
Titanium	47-1	536.49	612.06	611.92	586.82	7.43	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-02	Instrumnet Name :	P7
Client Sample ID :	A6314	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:35:54	DataFile Name :	044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	122.02	135.49	135.32	130.94	5.90	ppb
Vanadium	51-2	393.03	389.16	393.53	391.91	0.61	ppb
Yttrium	89-1				102		%
Yttrium	89-2				98		%
Zinc	66-2	517.06	522.31	512.58	517.32	0.94	ppb
Zirconium	90-1	13.31	15.09	15.31	14.57	7.53	ppb
Zirconium	91-1	13.57	15.28	15.31	14.72	6.77	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-03	Instrumnet Name :	P7
Client Sample ID :	A6325	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:38:50	DataFile Name :	045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20480.49	20792.68	20618.59	20630.59	0.76	ppb
Antimony	121-1	0.75	0.67	0.69	0.71	5.86	ppb
Arsenic	75-2	8.36	8.06	8.08	8.16	2.04	ppb
Barium	135-1	137.80	137.73	135.93	137.15	0.77	ppb
Barium	137-1	137.72	138.76	137.10	137.86	0.61	ppb
Beryllium	9-1	3.17	3.20	3.33	3.23	2.69	ppb
Bismuth	209-1				109		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.07	1.21	0.63	0.97	31.26	ppb
Cadmium	106-1	0.03	0.46	-0.42	0.02	1863.00	ppb
Cadmium	111-1	0.86	0.80	0.76	0.81	6.05	ppb
Calcium	43-1	18296.29	18418.75	18707.91	18474.32	1.14	ppb
Calcium	44-1	17623.21	17748.91	18009.34	17793.82	1.11	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	41.95	41.89	42.34	42.06	0.58	ppb
Cobalt	59-2	4.15	4.02	4.06	4.08	1.59	ppb
Copper	63-2	48.49	48.01	48.74	48.41	0.78	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				106		%
Indium	115-1				98		%
Indium	115-2				98		%
Iron	56-2	12800.14	12565.84	12486.68	12617.55	1.29	ppb
Iron	57-2	12860.01	12742.09	12857.86	12819.99	0.53	ppb
Iron	54-2	12702.16	12693.97	12798.63	12731.59	0.46	ppb
Krypton	83-1						cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-03	Instrumnet Name :	P7
Client Sample ID :	A6325	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:38:50	DataFile Name :	045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	174.54	176.35	176.22	175.70	0.58	ppb
Lead	207-1	164.12	166.45	166.58	165.72	0.83	ppb
Lead	208-1	174.98	178.72	177.45	177.05	1.08	ppb
Lithium	6-1				110		%
Magnesium	24-2	1986.26	1988.93	1998.00	1991.06	0.31	ppb
Manganese	55-2	167.61	166.56	169.41	167.86	0.86	ppb
Molybdenum	94-1	3.46	3.41	3.27	3.38	2.82	ppb
Molybdenum	95-1	1.86	1.84	1.76	1.82	2.86	ppb
Molybdenum	96-1	2.17	2.11	2.09	2.12	2.10	ppb
Molybdenum	97-1	1.79	1.91	1.80	1.84	3.69	ppb
Molybdenum	98-1	1.79	1.85	1.80	1.81	1.56	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	19.28	19.06	19.25	19.20	0.61	ppb
Phosphorus	31-2	2137.07	2087.39	2080.32	2101.59	1.47	ppb
Potassium	39-2	1031.71	1012.45	1031.90	1025.35	1.09	ppb
Rhodium	103-1				95		%
Rhodium	103-2				100		%
Scandium	45-1				90		%
Scandium	45-2				95		%
Selenium	82-1	3.47	3.84	2.91	3.41	13.68	ppb
Selenium	77-2	16.25	9.56	13.38	13.07	25.68	ppb
Selenium	78-2	4.71	2.85	3.36	3.64	26.35	ppb
Silicon	28-1	57.22	58.26	72.23	62.57	13.40	ppb
Silver	107-1	0.38	0.37	0.36	0.37	2.30	ppb
Silver	109-1	0.40	0.39	0.35	0.38	6.73	ppb
Sodium	23-2	454.77	453.92	456.38	455.03	0.27	ppb
Strontium	86-1	3385.11	3433.37	3438.04	3418.84	0.86	ppb
Strontium	88-1	3460.60	3536.25	3563.47	3520.11	1.51	ppb
Sulfur	34-1	3575.62	3712.67	3773.69	3687.33	2.75	ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.52	0.50	0.45	0.49	7.29	ppb
Thallium	205-1	0.54	0.48	0.45	0.49	9.31	ppb
Tin	118-1	0.88	0.83	0.84	0.85	3.27	ppb
Titanium	47-1	124.37	125.98	127.20	125.85	1.13	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-03	Instrumnet Name :	P7
Client Sample ID :	A6325	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:38:50	DataFile Name :	045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	9.16	9.23	9.18	9.19	0.40	ppb
Vanadium	51-2	30.05	30.18	30.30	30.18	0.42	ppb
Yttrium	89-1				100		%
Yttrium	89-2				104		%
Zinc	66-2	105.21	104.70	105.50	105.14	0.38	ppb
Zirconium	90-1	1.01	1.02	1.01	1.01	0.62	ppb
Zirconium	91-1	1.07	0.96	1.01	1.01	5.50	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-04	Instrumnet Name :	P7
Client Sample ID :	A6326	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:42:03	DataFile Name :	046SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5634.40	5651.16	5802.28	5695.95	1.62	ppb
Antimony	121-1	0.07	0.07	0.08	0.07	4.19	ppb
Arsenic	75-2	1.39	1.50	1.50	1.46	4.38	ppb
Barium	135-1	40.45	39.87	39.44	39.92	1.27	ppb
Barium	137-1	40.44	40.39	40.21	40.35	0.30	ppb
Beryllium	9-1	0.91	0.80	0.88	0.87	6.29	ppb
Bismuth	209-1				106		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.35	0.27	0.26	0.29	16.02	ppb
Cadmium	106-1	-0.69	-1.97	-1.26	-1.30		ppb
Cadmium	111-1	0.19	0.13	0.21	0.18	22.35	ppb
Calcium	43-1	2403.00	2388.58	2355.44	2382.34	1.02	ppb
Calcium	44-1	2408.21	2393.33	2363.52	2388.35	0.95	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	18.71	18.68	18.88	18.76	0.56	ppb
Cobalt	59-2	1.97	2.01	2.05	2.01	1.94	ppb
Copper	63-2	4.37	4.34	4.46	4.39	1.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				102		%
Indium	115-1				96		%
Indium	115-2				97		%
Iron	56-2	2736.81	2762.65	2701.60	2733.69	1.12	ppb
Iron	57-2	2774.49	2782.31	2770.77	2775.86	0.21	ppb
Iron	54-2	2829.72	2819.67	2841.08	2830.16	0.38	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-04	Instrumnet Name :	P7
Client Sample ID :	A6326	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:42:03	DataFile Name :	046SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	12.58	12.47	12.40	12.48	0.71	ppb
Lead	207-1	11.84	11.58	11.56	11.66	1.34	ppb
Lead	208-1	12.05	11.94	11.88	11.95	0.72	ppb
Lithium	6-1				107		%
Magnesium	24-2	618.45	631.11	624.66	624.74	1.01	ppb
Manganese	55-2	126.93	127.28	127.39	127.20	0.19	ppb
Molybdenum	94-1	0.88	0.96	0.92	0.92	4.35	ppb
Molybdenum	95-1	0.68	0.64	0.61	0.64	5.20	ppb
Molybdenum	96-1	0.75	0.69	0.72	0.72	4.44	ppb
Molybdenum	97-1	0.62	0.65	0.63	0.63	1.90	ppb
Molybdenum	98-1	0.66	0.63	0.64	0.64	2.12	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.83	8.87	9.09	8.93	1.57	ppb
Phosphorus	31-2	484.57	500.46	486.62	490.55	1.76	ppb
Potassium	39-2	440.39	443.25	438.93	440.86	0.50	ppb
Rhodium	103-1				93		%
Rhodium	103-2				98		%
Scandium	45-1				88		%
Scandium	45-2				93		%
Selenium	82-1	1.93	2.39	2.39	2.24	11.75	ppb
Selenium	77-2	4.32	4.55	5.34	4.74	11.25	ppb
Selenium	78-2	0.83	2.82	0.91	1.52	73.97	ppb
Silicon	28-1	49.54	49.54	48.64	49.24	1.05	ppb
Silver	107-1	0.13	0.14	0.13	0.13	4.07	ppb
Silver	109-1	0.13	0.14	0.13	0.13	3.03	ppb
Sodium	23-2	81.78	83.09	81.10	81.99	1.24	ppb
Strontium	86-1	343.31	338.10	325.42	335.61	2.74	ppb
Strontium	88-1	341.23	334.62	335.31	337.05	1.08	ppb
Sulfur	34-1	-330.39	-497.90	-578.62	-468.97		ppb
Terbium	159-1				100		%
Terbium	159-2				102		%
Thallium	203-1	0.10	0.11	0.10	0.10	6.88	ppb
Thallium	205-1	0.12	0.11	0.10	0.11	5.42	ppb
Tin	118-1	0.28	0.28	0.25	0.27	5.15	ppb
Titanium	47-1	61.29	60.67	60.47	60.81	0.71	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-04	Instrumnet Name :	P7
Client Sample ID :	A6326	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:42:03	DataFile Name :	046SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	4.11	4.12	4.00	4.07	1.59	ppb
Vanadium	51-2	5.32	5.47	5.49	5.43	1.67	ppb
Yttrium	89-1				95		%
Yttrium	89-2				98		%
Zinc	66-2	23.87	23.20	23.94	23.67	1.74	ppb
Zirconium	90-1	0.24	0.49	0.23	0.32	47.12	ppb
Zirconium	91-1	0.23	0.25	0.22	0.23	5.74	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-05	Instrumnet Name :	P7
Client Sample ID :	A6331	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:45:17	DataFile Name :	047SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	23798.83	24104.05	24278.23	24060.37	1.01	ppb
Antimony	121-1	0.91	0.95	0.94	0.93	2.46	ppb
Arsenic	75-2	52.12	50.22	50.90	51.08	1.89	ppb
Barium	135-1	128.37	133.59	132.50	131.49	2.09	ppb
Barium	137-1	128.03	133.75	133.06	131.61	2.37	ppb
Beryllium	9-1	1.80	1.85	1.82	1.82	1.46	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.05	2.49	2.23	2.26	9.86	ppb
Cadmium	106-1	2.42	1.64	1.47	1.84	27.73	ppb
Cadmium	111-1	1.78	1.74	1.74	1.75	1.32	ppb
Calcium	43-1	39348.76	41068.63	41218.23	40545.21	2.56	ppb
Calcium	44-1	37911.35	39741.76	39781.16	39144.76	2.73	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	52.86	52.76	52.53	52.72	0.32	ppb
Cobalt	59-2	19.32	19.36	19.14	19.28	0.61	ppb
Copper	63-2	36.15	36.05	35.45	35.88	1.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				99		%
Indium	115-2				99		%
Iron	56-2	45751.30	46013.87	45619.45	45794.87	0.44	ppb
Iron	57-2	45378.81	45505.98	45249.71	45378.17	0.28	ppb
Iron	54-2	45792.77	46118.78	46369.50	46093.68	0.63	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-05	Instrumnet Name :	P7
Client Sample ID :	A6331	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:45:17	DataFile Name :	047SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	92.23	95.40	95.17	94.27	1.88	ppb
Lead	207-1	86.96	89.89	88.82	88.56	1.67	ppb
Lead	208-1	88.71	91.57	91.39	90.56	1.77	ppb
Lithium	6-1				113		%
Magnesium	24-2	8561.19	8764.23	8690.28	8671.90	1.18	ppb
Manganese	55-2	780.51	792.86	792.26	788.55	0.88	ppb
Molybdenum	94-1	12.44	12.98	12.75	12.72	2.13	ppb
Molybdenum	95-1	1.16	1.20	1.21	1.19	2.11	ppb
Molybdenum	96-1	2.75	2.77	2.74	2.75	0.65	ppb
Molybdenum	97-1	1.14	1.21	1.17	1.17	3.25	ppb
Molybdenum	98-1	1.13	1.15	1.19	1.16	2.44	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	58.54	59.49	58.72	58.91	0.85	ppb
Phosphorus	31-2	1931.21	1955.72	1898.55	1928.49	1.49	ppb
Potassium	39-2	1831.72	1826.47	1827.28	1828.49	0.15	ppb
Rhodium	103-1				97		%
Rhodium	103-2				99		%
Scandium	45-1				95		%
Scandium	45-2				98		%
Selenium	82-1	5.48	5.88	6.15	5.84	5.75	ppb
Selenium	77-2	13.25	15.05	14.64	14.31	6.58	ppb
Selenium	78-2	6.91	6.40	6.52	6.61	3.99	ppb
Silicon	28-1	64.90	69.41	68.40	67.57	3.50	ppb
Silver	107-1	0.57	0.61	0.59	0.59	2.82	ppb
Silver	109-1	0.59	0.62	0.61	0.60	2.58	ppb
Sodium	23-2	251.45	252.70	253.00	252.38	0.32	ppb
Strontium	86-1	3552.82	3679.53	3690.55	3640.97	2.10	ppb
Strontium	88-1	3652.79	3742.68	3800.95	3732.14	2.00	ppb
Sulfur	34-1	7412.75	8029.07	8029.02	7823.62	4.55	ppb
Terbium	159-1				106		%
Terbium	159-2				105		%
Thallium	203-1	0.35	0.35	0.37	0.36	2.58	ppb
Thallium	205-1	0.35	0.36	0.35	0.35	0.95	ppb
Tin	118-1	0.64	0.69	0.66	0.66	3.85	ppb
Titanium	47-1	668.67	706.63	707.66	694.32	3.20	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-05	Instrumnet Name :	P7
Client Sample ID :	A6331	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:45:17	DataFile Name :	047SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	8.33	8.61	8.58	8.51	1.85	ppb
Vanadium	51-2	61.53	61.58	62.00	61.70	0.42	ppb
Yttrium	89-1				104		%
Yttrium	89-2				105		%
Zinc	66-2	217.34	219.15	217.07	217.85	0.52	ppb
Zirconium	90-1	6.34	6.55	6.58	6.49	2.03	ppb
Zirconium	91-1	6.32	6.70	6.58	6.53	3.02	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-06	Instrumnet Name :	P7
Client Sample ID :	A6332	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:48:29	DataFile Name :	048SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12638.40	12608.18	12425.93	12557.50	0.92	ppb
Antimony	121-1	0.14	0.13	0.16	0.15	9.91	ppb
Arsenic	75-2	23.39	23.48	23.13	23.33	0.78	ppb
Barium	135-1	42.26	43.19	43.67	43.04	1.67	ppb
Barium	137-1	42.28	43.44	43.94	43.22	1.98	ppb
Beryllium	9-1	0.66	0.59	0.66	0.63	6.43	ppb
Bismuth	209-1				106		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.41	0.20	0.68	0.43	55.05	ppb
Cadmium	106-1	-0.49	-0.97	-1.36	-0.94		ppb
Cadmium	111-1	0.19	0.19	0.13	0.17	20.32	ppb
Calcium	43-1	4469.22	4671.26	4625.95	4588.81	2.31	ppb
Calcium	44-1	4295.47	4502.62	4457.97	4418.69	2.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	32.86	32.78	32.91	32.85	0.21	ppb
Cobalt	59-2	8.84	8.86	8.65	8.79	1.31	ppb
Copper	63-2	10.06	9.99	9.78	9.94	1.49	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				102		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				98		%
Iron	56-2	16270.84	16290.48	16149.57	16236.96	0.47	ppb
Iron	57-2	16087.96	16080.77	15721.31	15963.35	1.31	ppb
Iron	54-2	16122.30	16597.52	16021.11	16246.98	1.89	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-06	Instrumnet Name :	P7
Client Sample ID :	A6332	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:48:29	DataFile Name :	048SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	27.21	27.69	27.43	27.44	0.88	ppb
Lead	207-1	25.53	26.09	25.70	25.77	1.11	ppb
Lead	208-1	26.12	26.56	26.47	26.38	0.86	ppb
Lithium	6-1				110		%
Magnesium	24-2	3927.99	3963.31	3849.64	3913.65	1.49	ppb
Manganese	55-2	282.70	286.02	282.33	283.68	0.72	ppb
Molybdenum	94-1	4.99	4.99	4.90	4.96	1.10	ppb
Molybdenum	95-1	0.69	0.74	0.70	0.71	3.76	ppb
Molybdenum	96-1	1.24	1.40	1.28	1.31	6.10	ppb
Molybdenum	97-1	0.70	0.65	0.68	0.67	3.31	ppb
Molybdenum	98-1	0.71	0.72	0.72	0.72	1.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	27.18	27.90	27.80	27.63	1.42	ppb
Phosphorus	31-2	509.24	517.92	519.64	515.60	1.08	ppb
Potassium	39-2	384.34	388.14	382.75	385.08	0.72	ppb
Rhodium	103-1				96		%
Rhodium	103-2				99		%
Scandium	45-1				92		%
Scandium	45-2				97		%
Selenium	82-1	1.34	0.77	1.18	1.10	26.56	ppb
Selenium	77-2	5.48	3.77	4.48	4.58	18.79	ppb
Selenium	78-2	1.50	1.24	-0.22	0.84	110.47	ppb
Silicon	28-1	57.08	59.15	59.84	58.69	2.44	ppb
Silver	107-1	0.16	0.18	0.19	0.18	6.55	ppb
Silver	109-1	0.16	0.17	0.19	0.18	7.31	ppb
Sodium	23-2	99.59	101.43	99.93	100.32	0.98	ppb
Strontium	86-1	590.83	608.54	599.18	599.52	1.48	ppb
Strontium	88-1	594.83	613.49	612.44	606.92	1.73	ppb
Sulfur	34-1	29.65	26.90	-81.67	-8.37		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.13	0.13	0.13	0.13	1.69	ppb
Thallium	205-1	0.14	0.14	0.13	0.13	2.28	ppb
Tin	118-1	0.21	0.21	0.18	0.20	8.01	ppb
Titanium	47-1	404.73	421.86	420.00	415.53	2.26	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-06	Instrumnet Name :	P7
Client Sample ID :	A6332	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:48:29	DataFile Name :	048SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	5.40	5.53	5.52	5.48	1.28	ppb
Vanadium	51-2	26.53	27.23	26.94	26.90	1.30	ppb
Yttrium	89-1				98		%
Yttrium	89-2				101		%
Zinc	66-2	52.78	53.31	53.29	53.12	0.56	ppb
Zirconium	90-1	2.43	2.41	2.47	2.44	1.28	ppb
Zirconium	91-1	2.34	2.47	2.55	2.45	4.28	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-07	Instrumnet Name :	P7
Client Sample ID :	A6333	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:51:39	DataFile Name :	049SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	40056.48	40211.79	40007.87	40092.05	0.27	ppb
Antimony	121-1	0.71	0.75	0.76	0.74	3.93	ppb
Arsenic	75-2	80.18	78.44	77.89	78.83	1.52	ppb
Barium	135-1	152.05	164.66	165.80	160.84	4.75	ppb
Barium	137-1	153.05	164.67	166.27	161.33	4.47	ppb
Beryllium	9-1	2.26	2.47	2.40	2.38	4.51	ppb
Bismuth	209-1				108		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.15	2.24	2.65	2.34	11.44	ppb
Cadmium	106-1	1.54	3.13	2.88	2.52	33.90	ppb
Cadmium	111-1	1.57	1.85	1.94	1.79	10.54	ppb
Calcium	43-1	19840.69	21661.23	21504.27	21002.06	4.80	ppb
Calcium	44-1	19082.40	20552.47	20715.71	20116.86	4.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	94.64	94.82	96.64	95.37	1.16	ppb
Cobalt	59-2	30.65	30.34	31.03	30.67	1.13	ppb
Copper	63-2	38.70	38.82	39.06	38.86	0.47	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				102		%
Indium	115-2				99		%
Iron	56-2	59815.91	59208.75	60036.44	59687.03	0.72	ppb
Iron	57-2	58308.54	58129.66	58648.78	58362.33	0.45	ppb
Iron	54-2	59804.03	59671.31	60237.03	59904.12	0.49	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-07	Instrumnet Name :	P7
Client Sample ID :	A6333	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:51:39	DataFile Name :	049SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	136.10	144.18	147.62	142.63	4.15	ppb
Lead	207-1	127.54	134.45	138.79	133.59	4.25	ppb
Lead	208-1	136.32	144.42	149.15	143.30	4.53	ppb
Lithium	6-1				114		%
Magnesium	24-2	10476.71	10421.15	10565.67	10487.84	0.70	ppb
Manganese	55-2	1451.83	1437.88	1442.59	1444.10	0.49	ppb
Molybdenum	94-1	13.51	14.96	14.81	14.43	5.53	ppb
Molybdenum	95-1	3.01	3.14	3.19	3.11	2.87	ppb
Molybdenum	96-1	4.52	4.85	5.03	4.80	5.38	ppb
Molybdenum	97-1	2.81	3.15	3.30	3.09	8.14	ppb
Molybdenum	98-1	2.94	3.17	3.16	3.09	4.14	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	91.90	91.69	92.47	92.02	0.44	ppb
Phosphorus	31-2	2873.31	2883.70	2862.37	2873.12	0.37	ppb
Potassium	39-2	1021.65	1027.70	1046.62	1031.99	1.26	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				102		%
Selenium	82-1	4.14	4.09	4.81	4.34	9.32	ppb
Selenium	77-2	19.74	17.26	20.46	19.16	8.76	ppb
Selenium	78-2	7.25	5.57	6.68	6.50	13.15	ppb
Silicon	28-1	60.37	68.48	67.35	65.40	6.72	ppb
Silver	107-1	0.67	0.69	0.71	0.69	2.28	ppb
Silver	109-1	0.64	0.69	0.73	0.69	6.76	ppb
Sodium	23-2	436.86	440.00	445.48	440.78	0.99	ppb
Strontium	86-1	2431.96	2608.86	2629.73	2556.85	4.25	ppb
Strontium	88-1	2494.93	2714.84	2682.64	2630.81	4.51	ppb
Sulfur	34-1	5972.33	6788.35	6795.84	6518.84	7.26	ppb
Terbium	159-1				107		%
Terbium	159-2				106		%
Thallium	203-1	0.38	0.41	0.41	0.40	4.49	ppb
Thallium	205-1	0.38	0.40	0.41	0.40	3.30	ppb
Tin	118-1	0.45	0.49	0.48	0.47	3.41	ppb
Titanium	47-1	1010.43	1118.20	1089.90	1072.84	5.21	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-07	Instrumnet Name :	P7
Client Sample ID :	A6333	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:51:39	DataFile Name :	049SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	33.23	35.27	36.11	34.87	4.25	ppb
Vanadium	51-2	78.68	77.93	79.01	78.54	0.70	ppb
Yttrium	89-1				110		%
Yttrium	89-2				111		%
Zinc	66-2	211.80	211.53	215.47	212.94	1.03	ppb
Zirconium	90-1	6.14	6.71	6.73	6.52	5.11	ppb
Zirconium	91-1	6.12	6.74	6.67	6.51	5.20	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-08	Instrumnet Name :	P7
Client Sample ID :	A6334	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:54:48	DataFile Name :	050SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	42608.38	42326.54	42179.75	42371.56	0.51	ppb
Antimony	121-1	0.62	0.62	0.63	0.62	0.84	ppb
Arsenic	75-2	71.46	73.16	73.02	72.55	1.31	ppb
Barium	135-1	169.57	170.61	168.41	169.53	0.65	ppb
Barium	137-1	169.43	171.98	170.57	170.66	0.75	ppb
Beryllium	9-1	2.35	2.47	2.32	2.38	3.30	ppb
Bismuth	209-1				106		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.94	2.09	2.15	2.06	5.33	ppb
Cadmium	106-1	3.23	2.36	2.66	2.75	16.07	ppb
Cadmium	111-1	1.66	1.65	1.60	1.64	1.94	ppb
Calcium	43-1	20841.63	21080.83	21040.06	20987.50	0.61	ppb
Calcium	44-1	19936.23	20638.37	20188.33	20254.31	1.76	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	100.08	100.31	99.96	100.12	0.17	ppb
Cobalt	59-2	31.54	31.06	31.43	31.34	0.82	ppb
Copper	63-2	37.08	36.47	36.85	36.80	0.84	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	56-2	61793.65	61495.71	62026.54	61771.97	0.43	ppb
Iron	57-2	61581.10	60693.15	60802.88	61025.71	0.79	ppb
Iron	54-2	62309.16	61965.34	62686.72	62320.41	0.58	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-08	Instrumnet Name :	P7
Client Sample ID :	A6334	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:54:48	DataFile Name :	050SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	135.45	139.56	139.36	138.12	1.68	ppb
Lead	207-1	128.57	129.98	131.65	130.06	1.19	ppb
Lead	208-1	138.06	139.60	141.03	139.56	1.06	ppb
Lithium	6-1				111		%
Magnesium	24-2	11155.18	11062.43	10972.26	11063.29	0.83	ppb
Manganese	55-2	1429.88	1421.89	1424.72	1425.50	0.28	ppb
Molybdenum	94-1	14.01	14.35	14.31	14.22	1.30	ppb
Molybdenum	95-1	2.67	2.64	2.61	2.64	1.16	ppb
Molybdenum	96-1	4.29	4.37	4.37	4.34	1.08	ppb
Molybdenum	97-1	2.63	2.66	2.66	2.65	0.75	ppb
Molybdenum	98-1	2.59	2.67	2.60	2.62	1.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	94.68	93.84	94.07	94.20	0.46	ppb
Phosphorus	31-2	3043.70	3032.67	3086.11	3054.16	0.92	ppb
Potassium	39-2	1116.27	1103.40	1117.12	1112.27	0.69	ppb
Rhodium	103-1				97		%
Rhodium	103-2				100		%
Scandium	45-1				98		%
Scandium	45-2				102		%
Selenium	82-1	4.10	4.49	3.70	4.10	9.65	ppb
Selenium	77-2	21.05	18.73	23.11	20.96	10.46	ppb
Selenium	78-2	6.52	7.60	6.90	7.00	7.85	ppb
Silicon	28-1	70.60	73.83	77.85	74.09	4.90	ppb
Silver	107-1	0.75	0.72	0.75	0.74	2.41	ppb
Silver	109-1	0.73	0.75	0.75	0.74	1.20	ppb
Sodium	23-2	443.90	436.86	441.24	440.67	0.81	ppb
Strontium	86-1	2489.28	2551.51	2545.42	2528.74	1.36	ppb
Strontium	88-1	2572.51	2602.50	2613.54	2596.18	0.82	ppb
Sulfur	34-1	5978.84	6050.62	5965.47	5998.31	0.76	ppb
Terbium	159-1				106		%
Terbium	159-2				106		%
Thallium	203-1	0.38	0.39	0.37	0.38	2.95	ppb
Thallium	205-1	0.38	0.38	0.38	0.38	0.62	ppb
Tin	118-1	0.52	0.52	0.52	0.52	0.67	ppb
Titanium	47-1	1140.28	1159.73	1179.65	1159.89	1.70	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-08	Instrumnet Name :	P7
Client Sample ID :	A6334	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:54:48	DataFile Name :	050SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	33.21	33.59	33.96	33.59	1.12	ppb
Vanadium	51-2	80.90	79.58	80.45	80.31	0.84	ppb
Yttrium	89-1				109		%
Yttrium	89-2				112		%
Zinc	66-2	206.26	202.31	205.86	204.81	1.06	ppb
Zirconium	90-1	6.68	6.75	6.67	6.70	0.60	ppb
Zirconium	91-1	6.64	6.91	6.73	6.76	2.00	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-01	Instrumnet Name :	P7
Client Sample ID :	A6301	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:57:57	DataFile Name :	051SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21867.62	21266.64	21647.43	21593.90	1.41	ppb
Antimony	121-1	0.81	0.84	0.81	0.82	1.88	ppb
Arsenic	75-2	456.80	450.88	450.54	452.74	0.78	ppb
Barium	135-1	96.60	98.41	97.19	97.40	0.95	ppb
Barium	137-1	96.99	97.83	97.11	97.31	0.47	ppb
Beryllium	9-1	4.06	4.06	4.15	4.09	1.33	ppb
Bismuth	209-1				110		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	53.36	50.93	50.38	51.56	3.08	ppb
Cadmium	106-1	36.36	35.31	34.49	35.38	2.64	ppb
Cadmium	111-1	1.64	1.72	1.66	1.67	2.39	ppb
Calcium	43-1	19387.05	19344.28	19232.78	19321.37	0.41	ppb
Calcium	44-1	18525.81	18636.22	18637.88	18599.97	0.35	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	885.13	888.64	890.89	888.22	0.33	ppb
Cobalt	59-2	6.50	6.47	6.36	6.44	1.14	ppb
Copper	63-2	3570.75	3577.26	3474.73	3540.91	1.62	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				102		%
Indium	115-2				99		%
Iron	56-2	87768.70	87119.66	85907.74	86932.03	1.09	ppb
Iron	57-2	85506.12	85861.78	84262.62	85210.17	0.99	ppb
Iron	54-2	88548.83	88842.55	87566.48	88319.29	0.76	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-01	Instrumnet Name :	P7
Client Sample ID :	A6301	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:57:57	DataFile Name :	051SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	140.39	141.21	140.59	140.73	0.30	ppb
Lead	207-1	124.23	124.54	125.42	124.73	0.50	ppb
Lead	208-1	136.23	136.10	136.39	136.24	0.10	ppb
Lithium	6-1				111		%
Magnesium	24-2	2562.77	2550.60	2539.09	2550.82	0.46	ppb
Manganese	55-2	390.62	389.44	384.29	388.12	0.87	ppb
Molybdenum	94-1	5.04	5.10	4.98	5.04	1.12	ppb
Molybdenum	95-1	4.61	4.82	4.87	4.77	2.91	ppb
Molybdenum	96-1	5.52	5.52	5.50	5.52	0.17	ppb
Molybdenum	97-1	4.82	4.85	4.96	4.88	1.47	ppb
Molybdenum	98-1	4.73	4.80	4.80	4.77	0.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	259.02	260.96	256.58	258.85	0.85	ppb
Phosphorus	31-2	2803.80	2749.98	2791.06	2781.61	1.01	ppb
Potassium	39-2	1020.02	1017.23	1017.55	1018.27	0.15	ppb
Rhodium	103-1				100		%
Rhodium	103-2				102		%
Scandium	45-1				96		%
Scandium	45-2				98		%
Selenium	82-1	1.47	1.52	1.57	1.52	3.19	ppb
Selenium	77-2	3.84	4.30	3.66	3.93	8.34	ppb
Selenium	78-2	1.92	0.57	1.14	1.21	55.77	ppb
Silicon	28-1	128.78	125.83	127.68	127.43	1.17	ppb
Silver	107-1	12.34	12.49	12.45	12.43	0.63	ppb
Silver	109-1	12.30	12.34	12.27	12.31	0.26	ppb
Sodium	23-2	502.76	504.80	500.21	502.59	0.46	ppb
Strontium	86-1	2545.47	2575.42	2530.86	2550.58	0.89	ppb
Strontium	88-1	2584.81	2651.67	2612.26	2616.25	1.28	ppb
Sulfur	34-1	7278.33	7146.95	7106.29	7177.19	1.25	ppb
Terbium	159-1				107		%
Terbium	159-2				106		%
Thallium	203-1	0.28	0.28	0.29	0.28	2.07	ppb
Thallium	205-1	0.30	0.28	0.28	0.29	4.79	ppb
Tin	118-1	318.59	317.62	309.79	315.33	1.53	ppb
Titanium	47-1	321.28	318.15	317.12	318.85	0.68	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-01	Instrumnet Name :	P7
Client Sample ID :	A6301	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:57:57	DataFile Name :	051SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.63	1.62	1.64	1.63	0.59	ppb
Vanadium	51-2	34.60	34.96	34.55	34.70	0.64	ppb
Yttrium	89-1				104		%
Yttrium	89-2				103		%
Zinc	66-2	1189.47	1188.66	1184.02	1187.39	0.25	ppb
Zirconium	90-1	0.58	0.59	0.58	0.59	1.33	ppb
Zirconium	91-1	0.67	0.67	0.67	0.67	0.30	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:01:04	DataFile Name :	052SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	17616.95	17449.21	17237.28	17434.48	1.09	ppb
Antimony	121-1	0.90	0.90	0.91	0.90	0.61	ppb
Arsenic	75-2	40.69	42.06	40.80	41.18	1.85	ppb
Barium	135-1	350.67	361.40	361.63	357.90	1.75	ppb
Barium	137-1	368.00	377.60	375.12	373.57	1.33	ppb
Beryllium	9-1	2.22	2.21	2.28	2.24	1.60	ppb
Bismuth	209-1				110		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	15.33	16.87	18.06	16.76	8.19	ppb
Cadmium	106-1	11.80	11.78	10.79	11.46	5.05	ppb
Cadmium	111-1	1.35	1.39	1.29	1.34	3.72	ppb
Calcium	43-1	37370.40	39412.81	38899.44	38560.88	2.76	ppb
Calcium	44-1	36302.37	38313.37	37711.58	37442.44	2.76	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1060.51	1064.88	1067.94	1064.44	0.35	ppb
Cobalt	59-2	284.68	288.72	287.12	286.84	0.71	ppb
Copper	63-2	2379.03	2373.74	2313.91	2355.56	1.54	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				105		%
Indium	115-1				101		%
Indium	115-2				97		%
Iron	56-2	125644.06	125532.18	125465.72	125547.32	0.07	ppb
Iron	57-2	124774.93	122987.59	121894.98	123219.16	1.18	ppb
Iron	54-2	126495.11	127065.46	126965.08	126841.88	0.24	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:01:04	DataFile Name :	052SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	100.08	102.07	102.70	101.62	1.35	ppb
Lead	207-1	91.25	92.68	93.80	92.58	1.38	ppb
Lead	208-1	98.51	99.55	101.15	99.74	1.33	ppb
Lithium	6-1				110		%
Magnesium	24-2	2278.48	2280.95	2265.26	2274.89	0.37	ppb
Manganese	55-2	29298.09	29259.78	29294.57	29284.14	0.07	ppb
Molybdenum	94-1	3.82	3.90	3.90	3.88	1.14	ppb
Molybdenum	95-1	4.32	4.35	4.32	4.33	0.49	ppb
Molybdenum	96-1	4.67	4.84	4.80	4.77	1.87	ppb
Molybdenum	97-1	3.66	3.79	3.73	3.72	1.76	ppb
Molybdenum	98-1	3.64	3.82	3.74	3.73	2.47	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	720.86	723.30	715.62	719.92	0.54	ppb
Phosphorus	31-2	1884.46	1928.01	1917.06	1909.84	1.19	ppb
Potassium	39-2	2166.58	2157.01	2198.33	2173.98	0.99	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				93		%
Scandium	45-2				94		%
Selenium	82-1	1.49	1.26	1.40	1.38	8.61	ppb
Selenium	77-2	8.82	6.53	8.02	7.79	14.95	ppb
Selenium	78-2	0.93	1.22	-0.19	0.65	114.02	ppb
Silicon	28-1	139.10	142.99	139.89	140.66	1.46	ppb
Silver	107-1	3.05	3.17	3.16	3.13	2.10	ppb
Silver	109-1	3.09	3.14	3.12	3.11	0.81	ppb
Sodium	23-2	825.28	826.99	821.26	824.51	0.36	ppb
Strontium	86-1	4456.17	4565.32	4612.10	4544.53	1.76	ppb
Strontium	88-1	4610.11	4665.62	4750.18	4675.30	1.51	ppb
Sulfur	34-1	3331.07	3622.11	3549.13	3500.77	4.33	ppb
Terbium	159-1				107		%
Terbium	159-2				104		%
Thallium	203-1	0.70	0.72	0.74	0.72	2.93	ppb
Thallium	205-1	0.69	0.71	0.71	0.70	1.49	ppb
Tin	118-1	69.06	71.07	71.55	70.56	1.87	ppb
Titanium	47-1	192.86	203.32	201.12	199.10	2.77	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:01:04	DataFile Name :	052SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.56	2.58	2.66	2.60	1.99	ppb
Vanadium	51-2	25.03	25.24	25.01	25.09	0.51	ppb
Yttrium	89-1				105		%
Yttrium	89-2				103		%
Zinc	66-2	206.17	206.35	203.44	205.32	0.79	ppb
Zirconium	90-1	0.40	0.41	0.42	0.41	2.90	ppb
Zirconium	91-1	0.38	0.42	0.46	0.42	10.63	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-03	Instrumnet Name :	P7
Client Sample ID :	A6303	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:04:07	DataFile Name :	053SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6826.15	7087.19	7009.37	6974.24	1.92	ppb
Antimony	121-1	0.18	0.23	0.22	0.21	11.79	ppb
Arsenic	75-2	41.59	42.04	41.74	41.79	0.55	ppb
Barium	135-1	22.53	28.49	28.24	26.42	12.77	ppb
Barium	137-1	23.07	28.33	28.76	26.72	11.85	ppb
Beryllium	9-1	0.34	0.39	0.40	0.38	9.01	ppb
Bismuth	209-1				117		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.93	1.58	1.23	1.25	26.23	ppb
Cadmium	106-1	-1.28	-1.35	-2.80	-1.81		ppb
Cadmium	111-1	0.07	0.09	-0.01	0.05	105.22	ppb
Calcium	43-1	1680.66	2118.17	2145.45	1981.43	13.16	ppb
Calcium	44-1	1671.69	2103.89	2129.79	1968.46	13.07	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	172.70	175.03	174.62	174.11	0.71	ppb
Cobalt	59-2	13.06	13.12	13.15	13.11	0.36	ppb
Copper	63-2	90.93	91.60	91.49	91.34	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				112		%
Holmium	165-2				104		%
Indium	115-1				107		%
Indium	115-2				99		%
Iron	56-2	17852.70	18000.26	17840.28	17897.75	0.50	ppb
Iron	57-2	17578.71	17464.34	17380.13	17474.39	0.57	ppb
Iron	54-2	17938.44	18052.45	17985.80	17992.23	0.32	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-03	Instrumnet Name :	P7
Client Sample ID :	A6303	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:04:07	DataFile Name :	053SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	42.11	52.23	53.85	49.40	12.88	ppb
Lead	207-1	39.00	47.91	49.23	45.38	12.26	ppb
Lead	208-1	39.99	49.43	50.95	46.79	12.69	ppb
Lithium	6-1				114		%
Magnesium	24-2	2022.29	2055.90	2030.81	2036.33	0.86	ppb
Manganese	55-2	521.29	513.15	508.17	514.20	1.29	ppb
Molybdenum	94-1	1.71	2.15	2.13	1.99	12.41	ppb
Molybdenum	95-1	1.65	2.03	2.04	1.91	11.53	ppb
Molybdenum	96-1	1.72	2.23	2.20	2.05	14.12	ppb
Molybdenum	97-1	1.61	2.03	2.02	1.89	12.58	ppb
Molybdenum	98-1	1.55	2.00	2.00	1.85	14.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	27.04	28.34	27.94	27.77	2.39	ppb
Phosphorus	31-2	382.82	413.98	398.31	398.37	3.91	ppb
Potassium	39-2	546.06	557.23	550.65	551.32	1.02	ppb
Rhodium	103-1				104		%
Rhodium	103-2				102		%
Scandium	45-1				97		%
Scandium	45-2				97		%
Selenium	82-1	0.20	0.07	0.64	0.30	99.06	ppb
Selenium	77-2	2.32	3.07	2.00	2.46	22.45	ppb
Selenium	78-2	-0.28	1.10	0.29	0.37	187.45	ppb
Silicon	28-1	80.90	105.64	107.90	98.15	15.26	ppb
Silver	107-1	0.14	0.15	0.16	0.15	5.96	ppb
Silver	109-1	0.13	0.14	0.13	0.13	5.62	ppb
Sodium	23-2	171.18	175.94	173.66	173.59	1.37	ppb
Strontium	86-1	234.20	293.09	300.12	275.80	13.13	ppb
Strontium	88-1	236.29	297.24	302.34	278.62	13.19	ppb
Sulfur	34-1	-1604.54	-965.93	-1031.93	-1200.80		ppb
Terbium	159-1				112		%
Terbium	159-2				104		%
Thallium	203-1	0.10	0.12	0.12	0.11	7.21	ppb
Thallium	205-1	0.11	0.11	0.11	0.11	1.37	ppb
Tin	118-1	9.39	11.70	11.80	10.96	12.46	ppb
Titanium	47-1	284.68	365.85	368.35	339.63	14.02	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-03	Instrumnet Name :	P7
Client Sample ID :	A6303	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:04:07	DataFile Name :	053SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.94	1.17	1.17	1.09	12.39	ppb
Vanadium	51-2	18.93	19.25	19.10	19.09	0.83	ppb
Yttrium	89-1				106		%
Yttrium	89-2				102		%
Zinc	66-2	67.47	68.13	68.94	68.18	1.08	ppb
Zirconium	90-1	0.21	0.27	0.29	0.26	16.85	ppb
Zirconium	91-1	0.23	0.25	0.27	0.25	8.52	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-04	Instrumnet Name :	P7
Client Sample ID :	A6304	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:07:19	DataFile Name :	054SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6922.32	6905.78	6928.07	6918.72	0.17	ppb
Antimony	121-1	0.17	0.23	0.23	0.21	17.24	ppb
Arsenic	75-2	51.78	52.11	53.91	52.60	2.18	ppb
Barium	135-1	22.22	27.98	28.88	26.36	13.72	ppb
Barium	137-1	22.19	28.11	28.67	26.32	13.65	ppb
Beryllium	9-1	0.29	0.34	0.45	0.36	22.60	ppb
Bismuth	209-1				119		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.92	1.25	1.24	1.13	16.39	ppb
Cadmium	106-1	-0.38	-1.93	-1.54	-1.29		ppb
Cadmium	111-1	0.12	0.09	0.08	0.10	24.24	ppb
Calcium	43-1	1681.61	2214.66	2204.09	2033.45	14.99	ppb
Calcium	44-1	1699.13	2178.17	2234.45	2037.25	14.44	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	158.61	158.07	157.97	158.22	0.22	ppb
Cobalt	59-2	11.41	11.52	11.42	11.45	0.51	ppb
Copper	63-2	82.76	83.47	83.13	83.12	0.42	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				115		%
Holmium	165-2				106		%
Indium	115-1				111		%
Indium	115-2				101		%
Iron	56-2	20688.39	20333.80	20447.84	20490.01	0.88	ppb
Iron	57-2	20187.56	19964.72	19857.87	20003.38	0.84	ppb
Iron	54-2	20622.55	20712.55	20499.12	20611.41	0.52	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-04	Instrumnet Name :	P7
Client Sample ID :	A6304	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:07:19	DataFile Name :	054SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	37.09	47.60	48.46	44.38	14.26	ppb
Lead	207-1	34.06	43.79	44.82	40.89	14.51	ppb
Lead	208-1	35.09	45.12	46.06	42.09	14.44	ppb
Lithium	6-1				115		%
Magnesium	24-2	1986.82	1980.05	1985.28	1984.05	0.18	ppb
Manganese	55-2	460.37	447.65	455.26	454.43	1.41	ppb
Molybdenum	94-1	2.26	2.81	2.90	2.66	12.95	ppb
Molybdenum	95-1	2.18	2.88	2.89	2.65	15.25	ppb
Molybdenum	96-1	2.35	2.96	3.04	2.79	13.63	ppb
Molybdenum	97-1	2.20	2.86	2.84	2.64	14.20	ppb
Molybdenum	98-1	2.28	2.88	2.91	2.69	13.20	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	28.10	27.89	28.04	28.01	0.38	ppb
Phosphorus	31-2	410.40	405.28	406.49	407.39	0.66	ppb
Potassium	39-2	528.99	533.70	529.37	530.68	0.49	ppb
Rhodium	103-1				110		%
Rhodium	103-2				104		%
Scandium	45-1				104		%
Scandium	45-2				100		%
Selenium	82-1	0.14	0.73	0.50	0.46	64.52	ppb
Selenium	77-2	3.28	2.09	3.04	2.80	22.44	ppb
Selenium	78-2	-0.22	0.33	1.02	0.38	166.14	ppb
Silicon	28-1	73.85	96.73	98.79	89.79	15.42	ppb
Silver	107-1	0.09	0.12	0.13	0.11	19.28	ppb
Silver	109-1	0.10	0.13	0.13	0.12	16.11	ppb
Sodium	23-2	123.57	124.36	126.24	124.72	1.10	ppb
Strontium	86-1	233.42	300.02	305.54	279.66	14.35	ppb
Strontium	88-1	236.15	301.91	305.73	281.27	13.91	ppb
Sulfur	34-1	-1887.99	-1267.88	-1204.74	-1453.53		ppb
Terbium	159-1				115		%
Terbium	159-2				105		%
Thallium	203-1	0.08	0.10	0.10	0.09	12.22	ppb
Thallium	205-1	0.08	0.10	0.11	0.09	12.50	ppb
Tin	118-1	8.66	11.04	11.50	10.40	14.64	ppb
Titanium	47-1	271.39	346.33	356.19	324.64	14.29	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-04	Instrumnet Name :	P7
Client Sample ID :	A6304	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:07:19	DataFile Name :	054SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.92	1.17	1.18	1.09	13.66	ppb
Vanadium	51-2	18.85	18.94	18.92	18.90	0.25	ppb
Yttrium	89-1				112		%
Yttrium	89-2				105		%
Zinc	66-2	65.03	65.13	65.37	65.18	0.27	ppb
Zirconium	90-1	0.19	0.25	0.25	0.23	14.62	ppb
Zirconium	91-1	0.20	0.23	0.26	0.23	12.51	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-12	Instrumnet Name :	P7
Client Sample ID :	A6343	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:10:30	DataFile Name :	055SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13602.86	13657.96	13575.08	13611.97	0.31	ppb
Antimony	121-1	0.06	0.06	0.05	0.06	7.72	ppb
Arsenic	75-2	8.61	8.55	8.70	8.62	0.90	ppb
Barium	135-1	32.97	37.95	39.05	36.66	8.84	ppb
Barium	137-1	33.54	37.95	38.60	36.70	7.51	ppb
Beryllium	9-1	0.40	0.56	0.43	0.46	17.81	ppb
Bismuth	209-1				112		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.25	0.07	0.16	0.16	57.12	ppb
Cadmium	106-1	-2.31	-1.63	-2.49	-2.14		ppb
Cadmium	111-1	-0.03	0.05	-0.02	0.00	7422.37	ppb
Calcium	43-1	1135.09	1298.59	1292.37	1242.02	7.46	ppb
Calcium	44-1	1119.72	1312.63	1312.61	1248.32	8.92	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	25.28	25.61	25.15	25.35	0.93	ppb
Cobalt	59-2	3.08	3.11	3.10	3.10	0.38	ppb
Copper	63-2	5.71	6.13	5.68	5.84	4.35	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				104		%
Indium	115-1				106		%
Indium	115-2				100		%
Iron	56-2	10629.21	10630.88	10574.67	10611.59	0.30	ppb
Iron	57-2	10665.59	10807.03	10653.48	10708.70	0.80	ppb
Iron	54-2	10691.83	10751.05	10587.71	10676.86	0.77	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-12	Instrumnet Name :	P7
Client Sample ID :	A6343	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:10:30	DataFile Name :	055SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	38.25	42.58	43.87	41.57	7.08	ppb
Lead	207-1	35.51	40.35	40.55	38.80	7.36	ppb
Lead	208-1	36.42	40.87	41.76	39.68	7.20	ppb
Lithium	6-1				106		%
Magnesium	24-2	2526.71	2560.57	2523.15	2536.81	0.81	ppb
Manganese	55-2	97.04	97.25	97.09	97.13	0.11	ppb
Molybdenum	94-1	1.26	1.43	1.44	1.38	7.11	ppb
Molybdenum	95-1	0.54	0.63	0.58	0.58	7.67	ppb
Molybdenum	96-1	0.67	0.76	0.76	0.73	7.20	ppb
Molybdenum	97-1	0.53	0.61	0.62	0.59	9.17	ppb
Molybdenum	98-1	0.53	0.60	0.61	0.58	7.74	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	11.44	11.54	11.01	11.33	2.49	ppb
Phosphorus	31-2	405.63	430.89	436.55	424.36	3.88	ppb
Potassium	39-2	512.97	510.26	511.99	511.74	0.27	ppb
Rhodium	103-1				104		%
Rhodium	103-2				102		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	0.60	1.13	0.86	0.86	30.51	ppb
Selenium	77-2	2.33	1.68	3.25	2.42	32.62	ppb
Selenium	78-2	0.55	0.13	0.17	0.28	80.57	ppb
Silicon	28-1	77.26	91.10	90.54	86.30	9.08	ppb
Silver	107-1	0.06	0.07	0.07	0.07	7.91	ppb
Silver	109-1	0.06	0.07	0.08	0.07	17.53	ppb
Sodium	23-2	405.26	409.64	399.19	404.70	1.30	ppb
Strontium	86-1	198.12	230.48	236.49	221.70	9.31	ppb
Strontium	88-1	201.64	236.41	240.73	226.26	9.47	ppb
Sulfur	34-1	-1278.41	-834.44	-856.26	-989.70		ppb
Terbium	159-1				108		%
Terbium	159-2				104		%
Thallium	203-1	0.14	0.18	0.18	0.17	12.65	ppb
Thallium	205-1	0.15	0.17	0.16	0.16	3.52	ppb
Tin	118-1	0.22	0.29	0.28	0.26	13.60	ppb
Titanium	47-1	272.94	319.66	318.29	303.63	8.76	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-12	Instrumnet Name :	P7
Client Sample ID :	A6343	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:10:30	DataFile Name :	055SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.15	1.29	1.31	1.25	6.99	ppb
Vanadium	51-2	22.59	22.65	22.58	22.61	0.18	ppb
Yttrium	89-1				105		%
Yttrium	89-2				101		%
Zinc	66-2	40.01	39.87	40.03	39.97	0.22	ppb
Zirconium	90-1	0.47	0.52	0.54	0.51	7.73	ppb
Zirconium	91-1	0.44	0.55	0.51	0.50	11.52	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-13	Instrumnet Name :	P7
Client Sample ID :	A6344	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:13:45	DataFile Name :	056SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6033.75	5819.22	5773.26	5875.41	2.37	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	7.94	ppb
Arsenic	75-2	7.72	7.60	7.60	7.64	0.89	ppb
Barium	135-1	35.61	35.81	36.16	35.86	0.78	ppb
Barium	137-1	35.40	35.84	36.14	35.79	1.04	ppb
Beryllium	9-1	0.30	0.35	0.39	0.35	12.47	ppb
Bismuth	209-1				109		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.23	0.19	0.40	0.27	39.20	ppb
Cadmium	106-1	-2.23	-3.22	-2.53	-2.66		ppb
Cadmium	111-1	0.05	-0.03	0.04	0.02	198.02	ppb
Calcium	43-1	2525.98	2544.02	2594.46	2554.82	1.39	ppb
Calcium	44-1	2547.97	2580.57	2583.63	2570.72	0.77	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13.47	13.36	13.27	13.37	0.75	ppb
Cobalt	59-2	5.25	5.27	5.31	5.28	0.61	ppb
Copper	63-2	5.34	5.24	5.20	5.26	1.33	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	6821.79	6804.08	6760.94	6795.61	0.46	ppb
Iron	57-2	6839.30	6852.58	6795.61	6829.16	0.44	ppb
Iron	54-2	6818.21	7044.57	6809.81	6890.86	1.93	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-13	Instrumnet Name :	P7
Client Sample ID :	A6344	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:13:45	DataFile Name :	056SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	13.87	14.19	14.12	14.06	1.19	ppb
Lead	207-1	12.82	13.05	13.33	13.06	1.95	ppb
Lead	208-1	13.23	13.53	13.55	13.44	1.37	ppb
Lithium	6-1				103		%
Magnesium	24-2	1645.33	1653.72	1635.32	1644.79	0.56	ppb
Manganese	55-2	116.31	116.63	115.06	116.00	0.72	ppb
Molybdenum	94-1	1.43	1.55	1.49	1.49	3.94	ppb
Molybdenum	95-1	0.34	0.32	0.35	0.34	3.74	ppb
Molybdenum	96-1	0.52	0.51	0.52	0.52	0.72	ppb
Molybdenum	97-1	0.33	0.33	0.32	0.33	1.14	ppb
Molybdenum	98-1	0.34	0.34	0.33	0.34	1.36	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	11.21	10.93	10.91	11.02	1.51	ppb
Phosphorus	31-2	333.33	322.09	310.35	321.92	3.57	ppb
Potassium	39-2	529.16	525.72	523.96	526.28	0.50	ppb
Rhodium	103-1				99		%
Rhodium	103-2				102		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	0.46	1.03	0.56	0.68	45.14	ppb
Selenium	77-2	1.70	2.19	2.15	2.01	13.48	ppb
Selenium	78-2	0.49	-0.06	1.37	0.60	120.49	ppb
Silicon	28-1	53.30	52.05	54.37	53.24	2.18	ppb
Silver	107-1	0.05	0.04	0.06	0.05	11.24	ppb
Silver	109-1	0.06	0.05	0.05	0.05	3.60	ppb
Sodium	23-2	117.57	118.15	116.50	117.41	0.71	ppb
Strontium	86-1	216.45	223.42	223.79	221.22	1.87	ppb
Strontium	88-1	218.39	223.56	225.67	222.54	1.68	ppb
Sulfur	34-1	-665.81	-593.29	-597.78	-618.96		ppb
Terbium	159-1				105		%
Terbium	159-2				104		%
Thallium	203-1	0.11	0.11	0.12	0.11	4.13	ppb
Thallium	205-1	0.11	0.11	0.12	0.11	6.42	ppb
Tin	118-1	0.16	0.15	0.17	0.16	8.45	ppb
Titanium	47-1	193.12	195.62	195.99	194.91	0.80	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-13	Instrumnet Name :	P7
Client Sample ID :	A6344	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:13:45	DataFile Name :	056SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.09	2.14	2.14	2.13	1.48	ppb
Vanadium	51-2	11.86	11.77	11.80	11.81	0.39	ppb
Yttrium	89-1				101		%
Yttrium	89-2				101		%
Zinc	66-2	55.30	54.54	54.63	54.82	0.76	ppb
Zirconium	90-1	0.66	0.68	0.68	0.67	1.88	ppb
Zirconium	91-1	0.60	0.72	0.65	0.66	9.60	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-14	Instrumnet Name :	P7
Client Sample ID :	A6345	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:16:57	DataFile Name :	057SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8871.96	8938.87	8949.86	8920.23	0.47	ppb
Antimony	121-1	0.02	0.03	0.03	0.03	16.49	ppb
Arsenic	75-2	6.43	6.83	6.75	6.67	3.23	ppb
Barium	135-1	51.59	55.24	55.80	54.21	4.22	ppb
Barium	137-1	52.50	55.78	56.00	54.76	3.59	ppb
Beryllium	9-1	0.41	0.49	0.43	0.44	9.98	ppb
Bismuth	209-1				108		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.22	0.35	0.26	0.27	23.78	ppb
Cadmium	106-1	-2.16	-2.81	-2.05	-2.34		ppb
Cadmium	111-1	0.04	0.00	0.05	0.03	85.90	ppb
Calcium	43-1	1918.80	2078.74	2077.84	2025.13	4.55	ppb
Calcium	44-1	1899.20	2077.59	2058.46	2011.75	4.87	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.71	20.56	20.92	20.73	0.88	ppb
Cobalt	59-2	5.32	5.28	5.25	5.28	0.65	ppb
Copper	63-2	5.79	5.64	5.84	5.76	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				105		%
Holmium	165-2				103		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	9369.88	9446.51	9468.55	9428.31	0.55	ppb
Iron	57-2	9425.02	9455.30	9484.35	9454.89	0.31	ppb
Iron	54-2	9472.23	9489.31	9428.54	9463.36	0.33	ppb
Krypton	83-1						cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-14	Instrumnet Name :	P7
Client Sample ID :	A6345	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:16:57	DataFile Name :	057SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	15.98	16.98	17.03	16.67	3.55	ppb
Lead	207-1	14.83	15.84	15.91	15.53	3.88	ppb
Lead	208-1	15.23	16.27	16.33	15.94	3.88	ppb
Lithium	6-1				106		%
Magnesium	24-2	2501.55	2510.95	2524.55	2512.35	0.46	ppb
Manganese	55-2	164.00	163.42	164.38	163.93	0.30	ppb
Molybdenum	94-1	1.73	1.92	1.91	1.86	5.80	ppb
Molybdenum	95-1	0.41	0.41	0.42	0.41	0.71	ppb
Molybdenum	96-1	0.63	0.68	0.65	0.66	3.65	ppb
Molybdenum	97-1	0.43	0.41	0.45	0.43	4.95	ppb
Molybdenum	98-1	0.40	0.41	0.44	0.42	5.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	12.99	12.77	12.83	12.87	0.89	ppb
Phosphorus	31-2	251.51	264.57	250.38	255.49	3.09	ppb
Potassium	39-2	661.38	661.85	671.16	664.80	0.83	ppb
Rhodium	103-1				99		%
Rhodium	103-2				101		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	0.79	0.84	0.53	0.72	23.25	ppb
Selenium	77-2	4.08	2.19	2.20	2.82	38.46	ppb
Selenium	78-2	0.06	1.36	-0.01	0.47	164.52	ppb
Silicon	28-1	61.33	66.51	72.59	66.81	8.44	ppb
Silver	107-1	0.04	0.05	0.04	0.04	10.34	ppb
Silver	109-1	0.05	0.05	0.05	0.05	3.76	ppb
Sodium	23-2	167.81	166.17	166.59	166.86	0.51	ppb
Strontium	86-1	291.43	311.27	314.51	305.74	4.09	ppb
Strontium	88-1	291.40	314.39	317.43	307.74	4.62	ppb
Sulfur	34-1	-1122.62	-892.17	-889.14	-967.97		ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.14	0.16	0.15	0.15	7.32	ppb
Thallium	205-1	0.14	0.14	0.15	0.15	4.65	ppb
Tin	118-1	0.18	0.22	0.20	0.20	11.05	ppb
Titanium	47-1	264.31	287.47	284.92	278.90	4.55	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-14	Instrumnet Name :	P7
Client Sample ID :	A6345	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:16:57	DataFile Name :	057SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.24	2.40	2.35	2.33	3.54	ppb
Vanadium	51-2	16.03	16.35	16.19	16.19	0.98	ppb
Yttrium	89-1				101		%
Yttrium	89-2				100		%
Zinc	66-2	41.23	41.88	42.09	41.73	1.08	ppb
Zirconium	90-1	0.77	0.82	0.87	0.82	5.81	ppb
Zirconium	91-1	0.86	0.84	0.82	0.84	1.97	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-15	Instrumnet Name :	P7
Client Sample ID :	A6346	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:20:11	DataFile Name :	058SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	7547.69	7647.12	7585.96	7593.59	0.66	ppb
Antimony	121-1	0.04	0.05	0.05	0.04	12.17	ppb
Arsenic	75-2	8.16	8.07	8.51	8.25	2.85	ppb
Barium	135-1	43.61	46.72	48.28	46.20	5.15	ppb
Barium	137-1	43.29	47.85	48.61	46.58	6.18	ppb
Beryllium	9-1	0.40	0.40	0.41	0.41	1.93	ppb
Bismuth	209-1				109		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.46	0.31	0.11	0.29	59.52	ppb
Cadmium	106-1	-2.34	-2.33	-1.39	-2.02		ppb
Cadmium	111-1	0.04	0.07	0.11	0.07	48.49	ppb
Calcium	43-1	1885.58	2058.35	2079.70	2007.88	5.30	ppb
Calcium	44-1	1880.60	2075.30	2062.65	2006.18	5.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.50	19.40	19.26	19.39	0.62	ppb
Cobalt	59-2	5.89	6.01	5.92	5.94	1.10	ppb
Copper	63-2	9.83	9.96	9.64	9.81	1.65	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				98		%
Iron	56-2	10543.50	10638.06	10508.66	10563.41	0.63	ppb
Iron	57-2	10671.44	10667.19	10516.78	10618.47	0.83	ppb
Iron	54-2	10738.83	10636.94	10697.27	10691.02	0.48	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-15	Instrumnet Name :	P7
Client Sample ID :	A6346	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:20:11	DataFile Name :	058SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	13.62	15.34	15.25	14.74	6.57	ppb
Lead	207-1	12.80	14.39	14.14	13.78	6.20	ppb
Lead	208-1	13.12	14.66	14.48	14.09	5.98	ppb
Lithium	6-1				107		%
Magnesium	24-2	2599.06	2605.81	2575.11	2593.33	0.62	ppb
Manganese	55-2	233.02	232.16	229.70	231.63	0.74	ppb
Molybdenum	94-1	2.60	3.01	2.81	2.81	7.22	ppb
Molybdenum	95-1	0.44	0.50	0.54	0.49	10.63	ppb
Molybdenum	96-1	0.76	0.86	0.87	0.83	7.49	ppb
Molybdenum	97-1	0.45	0.51	0.52	0.49	7.03	ppb
Molybdenum	98-1	0.49	0.53	0.50	0.50	4.47	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	14.72	14.53	14.81	14.69	1.00	ppb
Phosphorus	31-2	397.41	390.74	384.76	390.97	1.62	ppb
Potassium	39-2	1216.08	1210.81	1200.33	1209.08	0.66	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	0.48	0.22	0.79	0.50	57.73	ppb
Selenium	77-2	4.03	3.13	4.77	3.98	20.72	ppb
Selenium	78-2	0.44	0.31	0.46	0.40	20.60	ppb
Silicon	28-1	64.96	73.14	89.83	75.97	16.68	ppb
Silver	107-1	0.05	0.06	0.04	0.05	13.09	ppb
Silver	109-1	0.04	0.05	0.05	0.05	11.65	ppb
Sodium	23-2	179.40	176.31	172.83	176.18	1.86	ppb
Strontium	86-1	223.50	246.62	247.65	239.26	5.71	ppb
Strontium	88-1	225.83	249.54	251.07	242.15	5.85	ppb
Sulfur	34-1	-1209.81	-959.44	-881.97	-1017.07		ppb
Terbium	159-1				106		%
Terbium	159-2				104		%
Thallium	203-1	0.14	0.16	0.17	0.16	9.10	ppb
Thallium	205-1	0.15	0.16	0.16	0.16	5.85	ppb
Tin	118-1	0.17	0.22	0.22	0.20	15.60	ppb
Titanium	47-1	321.13	356.13	356.65	344.64	5.91	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-15	Instrumnet Name :	P7
Client Sample ID :	A6346	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:20:11	DataFile Name :	058SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.11	2.39	2.33	2.28	6.42	ppb
Vanadium	51-2	18.73	18.49	18.21	18.48	1.42	ppb
Yttrium	89-1				101		%
Yttrium	89-2				101		%
Zinc	66-2	47.07	46.49	45.79	46.45	1.38	ppb
Zirconium	90-1	1.24	1.38	1.39	1.34	6.26	ppb
Zirconium	91-1	1.29	1.33	1.38	1.33	3.56	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-16	Instrumnet Name :	P7
Client Sample ID :	A6347	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:23:23	DataFile Name :	059SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15393.97	15414.82	15337.28	15382.03	0.26	ppb
Antimony	121-1	0.02	0.02	0.03	0.02	13.56	ppb
Arsenic	75-2	3.45	3.80	3.49	3.58	5.35	ppb
Barium	135-1	51.89	55.83	56.91	54.88	4.81	ppb
Barium	137-1	52.91	56.30	56.16	55.12	3.48	ppb
Beryllium	9-1	0.54	0.52	0.62	0.56	9.23	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.14	0.07	0.20	0.14	48.80	ppb
Cadmium	106-1	-2.47	-2.28	-2.25	-2.33		ppb
Cadmium	111-1	-0.06	-0.06	-0.06	-0.06		ppb
Calcium	43-1	1269.36	1364.40	1356.51	1330.09	3.97	ppb
Calcium	44-1	1260.34	1342.10	1353.85	1318.76	3.86	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	41.00	40.12	40.53	40.55	1.08	ppb
Cobalt	59-2	5.79	5.57	5.67	5.67	1.93	ppb
Copper	63-2	3.26	3.00	3.07	3.11	4.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				102		%
Indium	115-2				99		%
Iron	56-2	17095.89	16997.96	16911.54	17001.80	0.54	ppb
Iron	57-2	16727.87	16541.33	16669.25	16646.15	0.57	ppb
Iron	54-2	17158.22	17023.09	16971.20	17050.84	0.57	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-16	Instrumnet Name :	P7
Client Sample ID :	A6347	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:23:23	DataFile Name :	059SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	24.77	26.01	26.65	25.81	3.71	ppb
Lead	207-1	22.69	23.78	24.73	23.74	4.30	ppb
Lead	208-1	23.48	24.60	25.43	24.50	4.00	ppb
Lithium	6-1				107		%
Magnesium	24-2	4516.46	4547.62	4534.26	4532.78	0.34	ppb
Manganese	55-2	161.65	160.16	160.44	160.75	0.49	ppb
Molybdenum	94-1	1.69	1.81	1.75	1.75	3.57	ppb
Molybdenum	95-1	0.32	0.36	0.39	0.36	10.23	ppb
Molybdenum	96-1	0.56	0.66	0.63	0.62	7.72	ppb
Molybdenum	97-1	0.34	0.37	0.38	0.36	5.38	ppb
Molybdenum	98-1	0.32	0.35	0.38	0.35	8.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	16.69	16.69	16.81	16.73	0.41	ppb
Phosphorus	31-2	152.61	166.82	159.95	159.80	4.45	ppb
Potassium	39-2	550.65	540.12	545.42	545.40	0.97	ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	0.29	0.66	0.92	0.62	51.12	ppb
Selenium	77-2	2.62	2.52	2.19	2.44	9.18	ppb
Selenium	78-2	-0.21	-0.13	-0.39	-0.24		ppb
Silicon	28-1	58.23	60.95	61.62	60.27	2.98	ppb
Silver	107-1	0.05	0.05	0.05	0.05	5.73	ppb
Silver	109-1	0.05	0.05	0.05	0.05	9.09	ppb
Sodium	23-2	171.69	169.33	170.37	170.46	0.69	ppb
Strontium	86-1	186.40	202.00	201.98	196.80	4.58	ppb
Strontium	88-1	190.80	206.95	206.70	201.48	4.59	ppb
Sulfur	34-1	-1638.83	-1477.84	-1461.59	-1526.09		ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.21	0.22	0.22	0.22	3.83	ppb
Thallium	205-1	0.22	0.23	0.23	0.23	2.16	ppb
Tin	118-1	0.22	0.25	0.23	0.24	6.40	ppb
Titanium	47-1	524.31	555.24	561.71	547.09	3.65	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-16	Instrumnet Name :	P7
Client Sample ID :	A6347	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:23:23	DataFile Name :	059SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.64	1.76	1.76	1.72	3.90	ppb
Vanadium	51-2	28.82	28.48	28.98	28.76	0.89	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	43.09	42.73	43.32	43.05	0.69	ppb
Zirconium	90-1	0.77	0.83	0.83	0.81	4.02	ppb
Zirconium	91-1	0.74	0.85	0.81	0.80	6.72	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:26:37	DataFile Name :	060SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	14524.00	14485.14	14194.62	14401.26	1.25	ppb
Antimony	121-1	0.27	0.26	0.27	0.27	2.38	ppb
Arsenic	75-2	74.34	74.09	74.11	74.18	0.18	ppb
Barium	135-1	100.80	100.46	98.88	100.05	1.03	ppb
Barium	137-1	101.34	100.00	99.35	100.23	1.01	ppb
Beryllium	9-1	1.95	1.96	2.01	1.97	1.52	ppb
Bismuth	209-1				109		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	35.82	36.56	36.86	36.41	1.48	ppb
Cadmium	106-1	24.59	25.20	23.63	24.47	3.24	ppb
Cadmium	111-1	0.77	0.86	0.62	0.75	16.33	ppb
Calcium	43-1	12976.00	13080.94	13111.00	13055.98	0.54	ppb
Calcium	44-1	12544.97	12637.63	12527.52	12570.04	0.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	525.10	521.23	525.10	523.81	0.43	ppb
Cobalt	59-2	7.86	8.01	7.79	7.89	1.42	ppb
Copper	63-2	915.40	927.98	883.01	908.80	2.55	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	29638.36	29381.75	29320.59	29446.90	0.57	ppb
Iron	57-2	29267.93	28903.55	28601.07	28924.18	1.15	ppb
Iron	54-2	30005.44	29637.72	29644.03	29762.39	0.71	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:26:37	DataFile Name :	060SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	273.31	270.72	273.82	272.62	0.61	ppb
Lead	207-1	251.12	246.02	252.07	249.74	1.30	ppb
Lead	208-1	259.79	256.04	259.44	258.42	0.80	ppb
Lithium	6-1				108		%
Magnesium	24-2	2360.57	2370.69	2301.65	2344.30	1.59	ppb
Manganese	55-2	1248.76	1247.91	1238.95	1245.21	0.44	ppb
Molybdenum	94-1	2.01	2.02	1.98	2.00	0.96	ppb
Molybdenum	95-1	1.69	1.68	1.65	1.67	1.36	ppb
Molybdenum	96-1	1.89	1.90	1.92	1.91	0.88	ppb
Molybdenum	97-1	1.61	1.71	1.67	1.66	3.12	ppb
Molybdenum	98-1	1.64	1.65	1.61	1.63	1.47	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	88.48	88.73	87.34	88.18	0.84	ppb
Phosphorus	31-2	950.22	895.85	936.44	927.50	3.05	ppb
Potassium	39-2	786.18	786.36	789.16	787.23	0.21	ppb
Rhodium	103-1				98		%
Rhodium	103-2				101		%
Scandium	45-1				93		%
Scandium	45-2				96		%
Selenium	82-1	0.89	0.95	1.10	0.98	10.88	ppb
Selenium	77-2	2.15	3.43	2.48	2.69	24.79	ppb
Selenium	78-2	0.07	-0.15	-0.88	-0.32		ppb
Silicon	28-1	119.63	118.30	118.16	118.70	0.69	ppb
Silver	107-1	1.24	1.21	1.21	1.22	1.10	ppb
Silver	109-1	1.22	1.24	1.21	1.22	1.22	ppb
Sodium	23-2	2037.40	2020.10	1934.06	1997.19	2.77	ppb
Strontium	86-1	2301.43	2298.38	2303.37	2301.06	0.11	ppb
Strontium	88-1	2373.35	2364.18	2382.67	2373.40	0.39	ppb
Sulfur	34-1	665.49	729.53	747.47	714.16	6.03	ppb
Terbium	159-1				105		%
Terbium	159-2				105		%
Thallium	203-1	0.12	0.13	0.12	0.12	3.23	ppb
Thallium	205-1	0.13	0.12	0.13	0.13	3.96	ppb
Tin	118-1	521.07	517.00	520.36	519.48	0.42	ppb
Titanium	47-1	230.21	232.36	231.61	231.39	0.47	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:26:37	DataFile Name :	060SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.99	1.01	1.00	1.00	0.99	ppb
Vanadium	51-2	15.89	15.84	15.62	15.78	0.92	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	110.14	112.91	110.97	111.34	1.28	ppb
Zirconium	90-1	0.31	0.32	0.32	0.32	2.42	ppb
Zirconium	91-1	0.32	0.33	0.31	0.32	3.21	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:29:38	DataFile Name :	061SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15367.06	15618.52	15307.98	15431.19	1.07	ppb
Antimony	121-1	0.29	0.29	0.31	0.30	3.96	ppb
Arsenic	75-2	80.27	81.86	80.10	80.74	1.20	ppb
Barium	135-1	105.80	107.93	109.65	107.79	1.79	ppb
Barium	137-1	106.15	109.62	110.25	108.67	2.03	ppb
Beryllium	9-1	2.11	2.11	2.11	2.11	0.18	ppb
Bismuth	209-1				109		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	39.50	40.91	41.58	40.66	2.60	ppb
Cadmium	106-1	25.97	28.61	29.06	27.88	5.99	ppb
Cadmium	111-1	0.86	0.98	1.03	0.96	9.24	ppb
Calcium	43-1	13523.87	13937.90	14045.49	13835.75	1.99	ppb
Calcium	44-1	13124.65	13513.14	13495.32	13377.70	1.64	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	586.66	593.05	591.98	590.56	0.58	ppb
Cobalt	59-2	8.57	8.62	8.53	8.58	0.51	ppb
Copper	63-2	986.39	1010.57	989.52	995.49	1.32	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				104		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	32352.76	32862.23	32252.87	32489.29	1.01	ppb
Iron	57-2	32311.46	32411.91	31964.58	32229.32	0.73	ppb
Iron	54-2	32527.93	33217.47	32248.75	32664.72	1.53	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:29:38	DataFile Name :	061SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	299.23	304.26	308.70	304.06	1.56	ppb
Lead	207-1	275.80	281.76	283.27	280.28	1.41	ppb
Lead	208-1	284.39	286.59	293.92	288.30	1.73	ppb
Lithium	6-1				107		%
Magnesium	24-2	2554.35	2582.25	2555.77	2564.13	0.61	ppb
Manganese	55-2	1329.64	1326.88	1319.18	1325.24	0.41	ppb
Molybdenum	94-1	2.02	2.16	2.18	2.12	4.16	ppb
Molybdenum	95-1	1.73	1.80	1.82	1.78	2.75	ppb
Molybdenum	96-1	2.03	2.13	2.10	2.08	2.47	ppb
Molybdenum	97-1	1.72	1.86	1.87	1.82	4.65	ppb
Molybdenum	98-1	1.74	1.83	1.85	1.81	3.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	95.78	97.80	95.59	96.39	1.27	ppb
Phosphorus	31-2	982.19	1011.19	967.37	986.92	2.26	ppb
Potassium	39-2	887.87	885.58	881.60	885.02	0.36	ppb
Rhodium	103-1				99		%
Rhodium	103-2				101		%
Scandium	45-1				93		%
Scandium	45-2				96		%
Selenium	82-1	0.40	0.80	0.99	0.73	41.52	ppb
Selenium	77-2	1.82	2.96	1.96	2.25	27.81	ppb
Selenium	78-2	-0.50	-1.05	-0.62	-0.72		ppb
Silicon	28-1	122.64	128.15	128.85	126.55	2.69	ppb
Silver	107-1	1.34	1.36	1.37	1.36	0.83	ppb
Silver	109-1	1.32	1.37	1.37	1.35	2.01	ppb
Sodium	23-2	2121.69	2105.56	2109.31	2112.18	0.40	ppb
Strontium	86-1	2379.33	2462.23	2479.56	2440.37	2.20	ppb
Strontium	88-1	2488.81	2593.86	2560.76	2547.81	2.11	ppb
Sulfur	34-1	981.83	1137.46	1086.58	1068.62	7.43	ppb
Terbium	159-1				105		%
Terbium	159-2				104		%
Thallium	203-1	0.14	0.13	0.13	0.13	2.49	ppb
Thallium	205-1	0.13	0.13	0.12	0.13	1.94	ppb
Tin	118-1	566.21	586.90	593.34	582.15	2.43	ppb
Titanium	47-1	253.78	261.86	260.86	258.83	1.70	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:29:38	DataFile Name :	061SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.11	1.12	1.12	1.12	0.77	ppb
Vanadium	51-2	17.45	17.99	17.49	17.64	1.68	ppb
Yttrium	89-1				101		%
Yttrium	89-2				102		%
Zinc	66-2	119.50	121.80	118.61	119.97	1.37	ppb
Zirconium	90-1	0.35	0.36	0.35	0.35	0.64	ppb
Zirconium	91-1	0.35	0.37	0.36	0.36	2.19	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LDLX10	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	10
Date & Time Acquired :	2025-02-02 17:32:39	DataFile Name :	062SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3214.22	3154.31	3154.75	3174.43	1.09	ppb
Antimony	121-1	0.06	0.06	0.06	0.06	5.03	ppb
Arsenic	75-2	16.81	16.36	16.96	16.71	1.87	ppb
Barium	135-1	20.02	22.42	22.67	21.71	6.74	ppb
Barium	137-1	20.34	22.60	22.67	21.87	6.07	ppb
Beryllium	9-1	0.40	0.44	0.45	0.43	6.01	ppb
Bismuth	209-1				110		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	7.63	8.14	9.15	8.31	9.33	ppb
Cadmium	106-1	3.39	4.61	3.07	3.69	22.10	ppb
Cadmium	111-1	0.04	0.10	-0.05	0.03	240.22	ppb
Calcium	43-1	2579.21	2924.23	2917.61	2807.02	7.03	ppb
Calcium	44-1	2591.70	2858.75	2900.38	2783.61	6.02	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	116.75	115.31	114.58	115.55	0.95	ppb
Cobalt	59-2	1.74	1.78	1.74	1.75	1.39	ppb
Copper	63-2	198.14	195.67	194.48	196.09	0.95	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				103		%
Indium	115-1				102		%
Indium	115-2				98		%
Iron	56-2	6573.99	6454.75	6430.74	6486.49	1.18	ppb
Iron	57-2	6607.13	6531.60	6513.52	6550.75	0.76	ppb
Iron	54-2	6612.44	6580.30	6643.97	6612.24	0.48	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LDLX10	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	10
Date & Time Acquired :	2025-02-02 17:32:39	DataFile Name :	062SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	51.27	55.65	56.51	54.48	5.16	ppb
Lead	207-1	45.86	50.80	50.71	49.12	5.75	ppb
Lead	208-1	47.74	52.42	52.73	50.96	5.49	ppb
Lithium	6-1				106		%
Magnesium	24-2	532.62	525.86	530.36	529.62	0.65	ppb
Manganese	55-2	269.91	268.64	268.28	268.94	0.32	ppb
Molybdenum	94-1	0.41	0.45	0.49	0.45	9.27	ppb
Molybdenum	95-1	0.31	0.37	0.40	0.36	12.49	ppb
Molybdenum	96-1	0.38	0.45	0.42	0.42	8.43	ppb
Molybdenum	97-1	0.32	0.36	0.37	0.35	7.83	ppb
Molybdenum	98-1	0.32	0.38	0.37	0.36	8.02	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	18.94	18.88	19.15	18.99	0.75	ppb
Phosphorus	31-2	193.75	193.42	191.61	192.92	0.60	ppb
Potassium	39-2	173.91	170.88	170.84	171.88	1.02	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				94		%
Scandium	45-2				95		%
Selenium	82-1	-0.05	0.44	0.16	0.19	132.57	ppb
Selenium	77-2	0.90	0.75	0.75	0.80	10.93	ppb
Selenium	78-2	-0.57	-1.58	-1.09	-1.08		ppb
Silicon	28-1	21.51	26.12	25.59	24.41	10.33	ppb
Silver	107-1	0.25	0.28	0.27	0.27	5.78	ppb
Silver	109-1	0.23	0.26	0.28	0.26	9.14	ppb
Sodium	23-2	449.24	442.58	439.79	443.87	1.09	ppb
Strontium	86-1	461.24	513.37	510.71	495.11	5.93	ppb
Strontium	88-1	465.20	523.94	520.00	503.04	6.53	ppb
Sulfur	34-1	-1373.25	-993.32	-929.99	-1098.85		ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.02	0.03	0.02	0.02	15.71	ppb
Thallium	205-1	0.02	0.03	0.03	0.03	11.58	ppb
Tin	118-1	100.31	112.21	112.03	108.18	6.30	ppb
Titanium	47-1	46.08	50.36	51.22	49.22	5.59	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LDLX10	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	10
Date & Time Acquired :	2025-02-02 17:32:39	DataFile Name :	062SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.19	0.22	0.22	0.21	7.31	ppb
Vanadium	51-2	3.64	3.55	3.59	3.59	1.28	ppb
Yttrium	89-1				101		%
Yttrium	89-2				100		%
Zinc	66-2	25.82	25.29	25.24	25.45	1.28	ppb
Zirconium	90-1	0.07	0.07	0.08	0.07	4.62	ppb
Zirconium	91-1	0.07	0.06	0.07	0.07	7.21	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:35:53	DataFile Name :	063SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15467.97	15331.84	14935.89	15245.23	1.81	ppb
Antimony	121-1	6.64	6.80	6.82	6.75	1.47	ppb
Arsenic	75-2	88.62	88.76	89.04	88.81	0.24	ppb
Barium	135-1	290.78	292.35	292.78	291.97	0.36	ppb
Barium	137-1	293.68	291.98	293.94	293.20	0.36	ppb
Beryllium	9-1	6.67	6.79	6.59	6.68	1.48	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	46.02	47.28	47.66	46.99	1.83	ppb
Cadmium	106-1	34.12	32.89	33.26	33.42	1.90	ppb
Cadmium	111-1	5.79	5.42	5.60	5.60	3.25	ppb
Calcium	43-1	13198.33	13569.71	13523.97	13430.67	1.51	ppb
Calcium	44-1	12721.03	12912.51	13037.65	12890.40	1.24	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	531.82	530.02	530.54	530.79	0.17	ppb
Cobalt	59-2	56.08	56.52	55.28	55.96	1.13	ppb
Copper	63-2	1044.41	1059.92	1009.05	1037.79	2.51	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				106		%
Holmium	165-2				105		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	32253.00	32804.92	32192.58	32416.83	1.04	ppb
Iron	57-2	31878.26	32370.45	31556.85	31935.19	1.28	ppb
Iron	54-2	32437.36	33158.98	32781.39	32792.58	1.10	ppb
Krypton	83-1						cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:35:53	DataFile Name :	063SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	302.33	306.37	313.89	307.53	1.91	ppb
Lead	207-1	281.03	280.29	285.50	282.27	1.00	ppb
Lead	208-1	290.54	291.89	296.97	293.14	1.16	ppb
Lithium	6-1				107		%
Magnesium	24-2	2636.78	2629.90	2530.60	2599.09	2.29	ppb
Manganese	55-2	1236.23	1264.89	1241.80	1247.64	1.22	ppb
Molybdenum	94-1	2.16	2.14	2.15	2.15	0.54	ppb
Molybdenum	95-1	1.85	1.89	1.83	1.86	1.79	ppb
Molybdenum	96-1	2.11	2.19	2.16	2.15	2.03	ppb
Molybdenum	97-1	1.80	1.87	1.84	1.83	1.83	ppb
Molybdenum	98-1	1.82	1.83	1.82	1.82	0.55	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	142.94	144.26	139.93	142.38	1.56	ppb
Phosphorus	31-2	1044.73	962.98	979.38	995.70	4.34	ppb
Potassium	39-2	874.80	866.22	864.16	868.39	0.65	ppb
Rhodium	103-1				99		%
Rhodium	103-2				102		%
Scandium	45-1				93		%
Scandium	45-2				97		%
Selenium	82-1	2.20	1.89	2.82	2.30	20.54	ppb
Selenium	77-2	3.37	2.92	4.62	3.64	24.12	ppb
Selenium	78-2	1.43	0.32	2.19	1.31	71.73	ppb
Silicon	28-1	113.42	116.07	117.06	115.52	1.63	ppb
Silver	107-1	6.08	6.01	6.12	6.07	0.88	ppb
Silver	109-1	5.85	5.99	6.13	5.99	2.38	ppb
Sodium	23-2	2049.45	2068.57	1970.19	2029.40	2.57	ppb
Strontium	86-1	2350.19	2398.10	2347.43	2365.24	1.20	ppb
Strontium	88-1	2425.77	2466.46	2434.45	2442.23	0.88	ppb
Sulfur	34-1	964.68	1085.43	1071.15	1040.42	6.34	ppb
Terbium	159-1				104		%
Terbium	159-2				105		%
Thallium	203-1	4.00	4.01	4.17	4.06	2.43	ppb
Thallium	205-1	3.97	3.96	4.08	4.00	1.60	ppb
Tin	118-1	583.35	577.37	582.20	580.97	0.55	ppb
Titanium	47-1	272.23	279.32	279.00	276.85	1.45	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:35:53	DataFile Name :	063SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.11	1.09	1.13	1.11	1.68	ppb
Vanadium	51-2	64.63	65.26	64.70	64.86	0.53	ppb
Yttrium	89-1				101		%
Yttrium	89-2				103		%
Zinc	66-2	164.43	164.76	160.35	163.18	1.51	ppb
Zirconium	90-1	0.36	0.36	0.36	0.36	0.44	ppb
Zirconium	91-1	0.38	0.41	0.36	0.38	6.14	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08DLX2	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:38:56	DataFile Name :	064SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5456.50	5428.41	5418.70	5434.54	0.36	ppb
Antimony	121-1	0.34	0.33	0.37	0.35	5.41	ppb
Arsenic	75-2	17.45	17.54	18.28	17.76	2.55	ppb
Barium	135-1	23.62	23.17	24.17	23.65	2.10	ppb
Barium	137-1	23.67	23.29	24.13	23.69	1.77	ppb
Beryllium	9-1	0.34	0.25	0.27	0.28	17.15	ppb
Bismuth	209-1				110		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	102.86	99.39	105.74	102.66	3.09	ppb
Cadmium	106-1	70.09	68.31	72.02	70.14	2.64	ppb
Cadmium	111-1	-0.18	-0.14	-0.19	-0.17		ppb
Calcium	43-1	570.25	608.01	605.06	594.44	3.53	ppb
Calcium	44-1	595.80	595.16	602.04	597.67	0.64	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	801.29	803.93	804.45	803.22	0.21	ppb
Cobalt	59-2	3.07	3.07	3.08	3.07	0.29	ppb
Copper	63-2	599.27	599.15	610.27	602.90	1.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				104		%
Indium	115-1				101		%
Indium	115-2				97		%
Iron	56-2	11873.65	11840.60	11914.00	11876.08	0.31	ppb
Iron	57-2	11768.94	11729.98	11768.34	11755.75	0.19	ppb
Iron	54-2	12413.30	12597.76	12492.92	12501.33	0.74	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08DLX2	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:38:56	DataFile Name :	064SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	178.45	179.63	182.81	180.29	1.25	ppb
Lead	207-1	160.12	161.42	164.27	161.94	1.31	ppb
Lead	208-1	174.62	175.85	179.66	176.71	1.49	ppb
Lithium	6-1				104		%
Magnesium	24-2	1493.19	1502.61	1497.97	1497.92	0.31	ppb
Manganese	55-2	110.84	110.43	110.67	110.65	0.19	ppb
Molybdenum	94-1	1.12	1.06	1.06	1.08	3.16	ppb
Molybdenum	95-1	0.83	0.87	0.87	0.86	2.76	ppb
Molybdenum	96-1	0.95	1.02	1.05	1.00	5.05	ppb
Molybdenum	97-1	0.89	0.88	0.85	0.87	2.60	ppb
Molybdenum	98-1	0.88	0.88	0.91	0.89	2.06	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	16.21	16.24	16.49	16.31	0.93	ppb
Phosphorus	31-2	481.38	492.06	475.15	482.86	1.77	ppb
Potassium	39-2	655.24	665.45	658.28	659.66	0.79	ppb
Rhodium	103-1				100		%
Rhodium	103-2				102		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	-0.10	0.59	0.04	0.18	205.42	ppb
Selenium	77-2	1.21	1.52	0.90	1.21	25.44	ppb
Selenium	78-2	-1.29	-0.15	-0.03	-0.49		ppb
Silicon	28-1	53.55	54.14	55.59	54.42	1.93	ppb
Silver	107-1	2.31	2.33	2.40	2.35	2.09	ppb
Silver	109-1	2.33	2.28	2.41	2.34	2.80	ppb
Sodium	23-2	65.46	65.07	64.21	64.91	0.98	ppb
Strontium	86-1	58.18	60.61	60.38	59.73	2.25	ppb
Strontium	88-1	60.08	61.41	61.54	61.01	1.33	ppb
Sulfur	34-1	-1406.51	-1502.53	-1399.42	-1436.15		ppb
Terbium	159-1				106		%
Terbium	159-2				104		%
Thallium	203-1	0.07	0.07	0.06	0.07	9.15	ppb
Thallium	205-1	0.06	0.06	0.07	0.07	6.32	ppb
Tin	118-1	1151.01	1136.65	1155.96	1147.87	0.87	ppb
Titanium	47-1	313.91	314.18	321.98	316.69	1.45	ppb

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08DLX2	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:38:56	DataFile Name :	064SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.80	0.81	0.81	0.80	0.44	ppb
Vanadium	51-2	13.45	13.70	13.31	13.49	1.44	ppb
Yttrium	89-1				101		%
Yttrium	89-2				101		%
Zinc	66-2	26.65	27.86	26.86	27.12	2.38	ppb
Zirconium	90-1	0.17	0.20	0.19	0.19	7.09	ppb
Zirconium	91-1	0.18	0.20	0.18	0.19	5.78	ppb

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10DLX25	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	25
Date & Time Acquired :	2025-02-02 17:42:01	DataFile Name :	065SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	134.82	135.60	130.11	133.51	2.22	ppb
Antimony	121-1	0.07	0.07	0.06	0.07	3.59	ppb
Arsenic	75-2	2.63	2.67	2.91	2.74	5.61	ppb
Barium	135-1	1.47	1.46	1.55	1.50	3.47	ppb
Barium	137-1	1.43	1.47	1.51	1.47	2.63	ppb
Beryllium	9-1	0.00	-0.01	0.01	0.00	6642.16	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	47.46	48.51	49.67	48.55	2.28	ppb
Cadmium	106-1	32.94	34.99	33.71	33.88	3.07	ppb
Cadmium	111-1	-0.07	0.04	-0.12	-0.05		ppb
Calcium	43-1	90.96	95.52	88.23	91.57	4.02	ppb
Calcium	44-1	93.56	97.56	92.88	94.67	2.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	351.00	342.51	348.36	347.29	1.25	ppb
Cobalt	59-2	0.09	0.10	0.09	0.09	7.56	ppb
Copper	63-2	16.03	16.10	16.07	16.07	0.23	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				103		%
Indium	115-1				99		%
Indium	115-2				98		%
Iron	56-2	845.43	851.90	849.72	849.02	0.39	ppb
Iron	57-2	842.20	844.76	840.78	842.58	0.24	ppb
Iron	54-2	1078.17	1098.36	1095.59	1090.71	1.00	ppb
Krypton	83-1						cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10DLX25	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	25
Date & Time Acquired :	2025-02-02 17:42:01	DataFile Name :	065SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	22.62	22.57	22.85	22.68	0.66	ppb
Lead	207-1	20.16	20.16	20.68	20.33	1.46	ppb
Lead	208-1	21.00	20.97	21.41	21.13	1.18	ppb
Lithium	6-1				101		%
Magnesium	24-2	33.11	33.67	34.75	33.84	2.46	ppb
Manganese	55-2	3.65	3.52	3.54	3.57	1.94	ppb
Molybdenum	94-1	0.23	0.21	0.22	0.22	4.12	ppb
Molybdenum	95-1	0.19	0.21	0.22	0.21	6.30	ppb
Molybdenum	96-1	0.24	0.21	0.20	0.22	9.64	ppb
Molybdenum	97-1	0.20	0.26	0.20	0.22	13.64	ppb
Molybdenum	98-1	0.20	0.21	0.20	0.20	3.15	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	-0.02	0.19	0.08	143.39	ppb
Phosphorus	31-2	46.22	46.55	39.75	44.17	8.68	ppb
Potassium	39-2	23.45	24.56	25.92	24.64	5.02	ppb
Rhodium	103-1				99		%
Rhodium	103-2				102		%
Scandium	45-1				92		%
Scandium	45-2				95		%
Selenium	82-1	-0.05	-0.08	-0.03	-0.05		ppb
Selenium	77-2	0.26	-0.05	0.11	0.11	150.29	ppb
Selenium	78-2	-0.61	-0.45	-0.58	-0.55		ppb
Silicon	28-1	-0.58	-0.27	-0.71	-0.52		ppb
Silver	107-1	0.69	0.70	0.69	0.69	1.09	ppb
Silver	109-1	0.67	0.68	0.67	0.67	1.06	ppb
Sodium	23-2	14.34	14.93	13.22	14.16	6.14	ppb
Strontium	86-1	8.06	8.52	9.19	8.59	6.65	ppb
Strontium	88-1	8.73	8.76	8.69	8.73	0.44	ppb
Sulfur	34-1	-1499.09	-1545.63	-1570.68	-1538.47		ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.01	0.00	0.00	0.00	26.59	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	14.39	ppb
Tin	118-1	555.65	547.94	547.21	550.27	0.85	ppb
Titanium	47-1	18.03	17.67	17.61	17.77	1.29	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10DLX25	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	25
Date & Time Acquired :	2025-02-02 17:42:01	DataFile Name :	065SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.03	0.02	0.02	0.02	14.43	ppb
Vanadium	51-2	1.11	1.08	1.07	1.09	1.96	ppb
Yttrium	89-1				98		%
Yttrium	89-2				100		%
Zinc	66-2	1.34	1.36	1.47	1.39	4.94	ppb
Zirconium	90-1	0.02	0.02	0.02	0.02	6.25	ppb
Zirconium	91-1	0.02	0.03	0.03	0.03	12.46	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13DLX5	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:45:14	DataFile Name :	066SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2721.27	2717.03	2738.55	2725.62	0.42	ppb
Antimony	121-1	0.05	0.03	0.03	0.04	23.92	ppb
Arsenic	75-2	8.12	8.24	8.47	8.28	2.15	ppb
Barium	135-1	19.00	18.76	18.14	18.63	2.36	ppb
Barium	137-1	19.09	18.58	18.47	18.71	1.77	ppb
Beryllium	9-1	0.16	0.15	0.14	0.15	6.50	ppb
Bismuth	209-1				105		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	11.15	10.67	11.26	11.03	2.86	ppb
Cadmium	106-1	6.87	4.75	4.77	5.46	22.26	ppb
Cadmium	111-1	-0.01	-0.14	-0.17	-0.11		ppb
Calcium	43-1	512.85	495.36	497.06	501.76	1.92	ppb
Calcium	44-1	524.61	505.41	500.51	510.18	2.50	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	648.68	643.50	658.72	650.30	1.19	ppb
Cobalt	59-2	1.51	1.57	1.54	1.54	1.95	ppb
Copper	63-2	454.89	455.29	468.81	459.67	1.72	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	56-2	3443.08	3337.20	3456.37	3412.22	1.91	ppb
Iron	57-2	3429.28	3385.50	3466.36	3427.05	1.18	ppb
Iron	54-2	3913.88	3891.06	3961.27	3922.07	0.91	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13DLX5	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:45:14	DataFile Name :	066SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	29.69	28.77	28.81	29.09	1.78	ppb
Lead	207-1	26.65	25.91	25.73	26.10	1.87	ppb
Lead	208-1	27.70	26.98	26.97	27.22	1.55	ppb
Lithium	6-1				101		%
Magnesium	24-2	671.79	667.69	675.53	671.67	0.58	ppb
Manganese	55-2	52.48	51.93	52.79	52.40	0.83	ppb
Molybdenum	94-1	0.43	0.46	0.47	0.46	5.69	ppb
Molybdenum	95-1	0.30	0.26	0.32	0.29	9.69	ppb
Molybdenum	96-1	0.38	0.34	0.33	0.35	7.04	ppb
Molybdenum	97-1	0.32	0.30	0.28	0.30	6.36	ppb
Molybdenum	98-1	0.30	0.29	0.28	0.29	2.77	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	13.24	13.48	13.99	13.57	2.83	ppb
Phosphorus	31-2	140.76	138.99	142.82	140.86	1.36	ppb
Potassium	39-2	265.31	261.18	269.61	265.37	1.59	ppb
Rhodium	103-1				97		%
Rhodium	103-2				101		%
Scandium	45-1				91		%
Scandium	45-2				95		%
Selenium	82-1	0.12	0.41	0.47	0.33	55.73	ppb
Selenium	77-2	1.06	0.42	1.07	0.85	43.60	ppb
Selenium	78-2	-0.71	-0.01	-0.60	-0.44		ppb
Silicon	28-1	29.94	27.53	28.38	28.62	4.26	ppb
Silver	107-1	0.62	0.62	0.60	0.61	1.40	ppb
Silver	109-1	0.62	0.59	0.60	0.60	2.32	ppb
Sodium	23-2	79.13	77.66	79.58	78.79	1.27	ppb
Strontium	86-1	98.32	95.41	93.08	95.61	2.75	ppb
Strontium	88-1	99.13	96.85	96.71	97.56	1.39	ppb
Sulfur	34-1	-901.34	-1145.84	-1236.28	-1094.49		ppb
Terbium	159-1				101		%
Terbium	159-2				103		%
Thallium	203-1	0.04	0.03	0.03	0.04	6.65	ppb
Thallium	205-1	0.04	0.04	0.04	0.04	6.52	ppb
Tin	118-1	164.54	161.36	160.00	161.97	1.44	ppb
Titanium	47-1	83.72	80.26	80.57	81.52	2.35	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13DLX5	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:45:14	DataFile Name :	066SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.80	0.78	0.77	0.78	1.85	ppb
Vanadium	51-2	5.40	5.29	5.42	5.37	1.26	ppb
Yttrium	89-1				97		%
Yttrium	89-2				101		%
Zinc	66-2	28.88	29.58	29.41	29.29	1.25	ppb
Zirconium	90-1	0.10	0.10	0.10	0.10	2.67	ppb
Zirconium	91-1	0.10	0.09	0.09	0.10	8.30	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14DLX5	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:48:24	DataFile Name :	067SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3905.35	3885.08	3898.87	3896.44	0.27	ppb
Antimony	121-1	0.19	0.20	0.19	0.19	4.03	ppb
Arsenic	75-2	61.76	60.62	61.80	61.39	1.09	ppb
Barium	135-1	55.53	55.30	55.82	55.55	0.46	ppb
Barium	137-1	55.51	55.74	55.97	55.74	0.41	ppb
Beryllium	9-1	0.61	0.59	0.59	0.60	1.57	ppb
Bismuth	209-1				106		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	6.96	7.11	6.64	6.90	3.45	ppb
Cadmium	106-1	5.67	2.60	2.60	3.62	48.84	ppb
Cadmium	111-1	0.59	0.38	0.38	0.45	27.34	ppb
Calcium	43-1	2753.86	2776.34	2796.89	2775.70	0.78	ppb
Calcium	44-1	2763.35	2788.67	2801.91	2784.64	0.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	577.10	574.09	572.23	574.47	0.43	ppb
Cobalt	59-2	7.14	7.25	7.19	7.19	0.77	ppb
Copper	63-2	309.79	307.50	310.24	309.18	0.47	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				99		%
Iron	56-2	34568.14	34717.49	34634.61	34640.08	0.22	ppb
Iron	57-2	34179.70	33806.36	34025.36	34003.81	0.55	ppb
Iron	54-2	35197.86	35182.86	35082.07	35154.26	0.18	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14DLX5	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:48:24	DataFile Name :	067SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	44.11	45.14	44.93	44.73	1.22	ppb
Lead	207-1	39.62	40.61	40.92	40.38	1.68	ppb
Lead	208-1	41.42	42.42	42.32	42.05	1.30	ppb
Lithium	6-1				102		%
Magnesium	24-2	1012.05	1006.83	1016.01	1011.63	0.46	ppb
Manganese	55-2	442.00	429.65	426.17	432.61	1.92	ppb
Molybdenum	94-1	1.16	1.14	1.14	1.15	0.85	ppb
Molybdenum	95-1	0.92	0.89	0.83	0.88	5.22	ppb
Molybdenum	96-1	1.22	1.20	1.19	1.20	0.93	ppb
Molybdenum	97-1	0.92	0.88	0.86	0.89	3.38	ppb
Molybdenum	98-1	0.89	0.91	0.86	0.89	2.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	26.84	26.23	26.05	26.37	1.58	ppb
Phosphorus	31-2	601.99	594.03	591.95	595.99	0.89	ppb
Potassium	39-2	484.87	475.83	484.25	481.65	1.05	ppb
Rhodium	103-1				98		%
Rhodium	103-2				100		%
Scandium	45-1				93		%
Scandium	45-2				95		%
Selenium	82-1	0.34	0.70	-0.09	0.31	125.78	ppb
Selenium	77-2	2.63	2.17	1.06	1.95	41.25	ppb
Selenium	78-2	0.08	0.34	0.27	0.23	57.54	ppb
Silicon	28-1	91.73	92.21	92.92	92.29	0.65	ppb
Silver	107-1	0.66	0.66	0.69	0.67	3.00	ppb
Silver	109-1	0.69	0.64	0.70	0.67	4.52	ppb
Sodium	23-2	398.35	393.43	399.25	397.01	0.79	ppb
Strontium	86-1	446.73	441.28	441.60	443.20	0.69	ppb
Strontium	88-1	447.11	449.69	447.53	448.11	0.31	ppb
Sulfur	34-1	-72.26	-103.65	-187.89	-121.26		ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	0.08	0.09	0.08	0.09	5.23	ppb
Thallium	205-1	0.09	0.09	0.09	0.09	0.73	ppb
Tin	118-1	94.17	94.33	95.47	94.66	0.75	ppb
Titanium	47-1	142.68	143.39	143.66	143.24	0.35	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14DLX5	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:48:24	DataFile Name :	067SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.12	1.15	1.15	1.14	1.37	ppb
Vanadium	51-2	14.72	14.78	14.74	14.75	0.21	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	98.09	98.69	100.12	98.97	1.05	ppb
Zirconium	90-1	0.19	0.21	0.21	0.20	4.35	ppb
Zirconium	91-1	0.22	0.21	0.22	0.21	2.92	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15DLX5	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:51:35	DataFile Name :	068SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1638.39	1638.38	1631.55	1636.11	0.24	ppb
Antimony	121-1	0.04	0.04	0.04	0.04	6.45	ppb
Arsenic	75-2	2.29	2.36	2.41	2.36	2.59	ppb
Barium	135-1	10.45	11.14	11.09	10.89	3.54	ppb
Barium	137-1	10.55	11.04	11.21	10.93	3.12	ppb
Beryllium	9-1	0.13	0.13	0.11	0.12	7.83	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	8.17	7.85	7.39	7.80	5.01	ppb
Cadmium	106-1	4.33	4.34	4.25	4.31	1.09	ppb
Cadmium	111-1	-0.04	-0.04	-0.02	-0.04		ppb
Calcium	43-1	401.51	409.18	417.45	409.38	1.95	ppb
Calcium	44-1	403.59	421.42	424.58	416.53	2.72	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	309.74	312.40	309.97	310.70	0.47	ppb
Cobalt	59-2	1.02	1.04	1.02	1.03	1.20	ppb
Copper	63-2	525.47	537.62	533.98	532.36	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				105		%
Holmium	165-2				103		%
Indium	115-1				101		%
Indium	115-2				99		%
Iron	56-2	2068.76	2063.95	2068.42	2067.04	0.13	ppb
Iron	57-2	2066.21	2067.81	2085.32	2073.11	0.51	ppb
Iron	54-2	2311.92	2332.70	2324.17	2322.93	0.45	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15DLX5	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:51:35	DataFile Name :	068SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	36.48	37.40	37.36	37.08	1.40	ppb
Lead	207-1	32.06	32.76	32.90	32.57	1.38	ppb
Lead	208-1	33.57	34.42	34.75	34.25	1.78	ppb
Lithium	6-1				102		%
Magnesium	24-2	377.21	375.49	375.38	376.03	0.27	ppb
Manganese	55-2	23.78	23.83	24.06	23.89	0.64	ppb
Molybdenum	94-1	0.41	0.37	0.45	0.41	9.95	ppb
Molybdenum	95-1	0.32	0.35	0.32	0.33	5.53	ppb
Molybdenum	96-1	0.33	0.36	0.35	0.35	4.51	ppb
Molybdenum	97-1	0.26	0.34	0.29	0.30	13.99	ppb
Molybdenum	98-1	0.29	0.32	0.31	0.30	4.81	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	36.68	36.87	36.86	36.80	0.29	ppb
Phosphorus	31-2	94.58	80.16	102.64	92.46	12.32	ppb
Potassium	39-2	162.90	162.76	161.01	162.22	0.65	ppb
Rhodium	103-1				100		%
Rhodium	103-2				101		%
Scandium	45-1				94		%
Scandium	45-2				96		%
Selenium	82-1	0.21	0.30	0.22	0.24	21.08	ppb
Selenium	77-2	1.21	1.53	0.74	1.16	34.21	ppb
Selenium	78-2	0.12	-1.49	-0.45	-0.61		ppb
Silicon	28-1	21.32	22.96	23.19	22.49	4.54	ppb
Silver	107-1	0.64	0.66	0.65	0.65	1.70	ppb
Silver	109-1	0.61	0.64	0.64	0.63	2.39	ppb
Sodium	23-2	76.07	78.37	77.50	77.31	1.50	ppb
Strontium	86-1	71.60	72.52	75.17	73.10	2.54	ppb
Strontium	88-1	72.27	75.90	75.58	74.58	2.70	ppb
Sulfur	34-1	-867.00	-740.02	-788.12	-798.38		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	0.02	0.02	0.02	0.02	4.51	ppb
Thallium	205-1	0.03	0.03	0.02	0.03	6.14	ppb
Tin	118-1	87.55	91.50	92.35	90.46	2.83	ppb
Titanium	47-1	58.49	60.74	61.54	60.26	2.62	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15DLX5	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:51:35	DataFile Name :	068SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.92	0.95	0.96	0.94	2.29	ppb
Vanadium	51-2	3.00	3.03	2.91	2.98	2.07	ppb
Yttrium	89-1				100		%
Yttrium	89-2				101		%
Zinc	66-2	58.33	57.95	59.08	58.45	0.99	ppb
Zirconium	90-1	0.08	0.07	0.09	0.08	7.12	ppb
Zirconium	91-1	0.07	0.09	0.07	0.08	18.85	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV003	Instrumnet Name :	P7
Client Sample ID :	CCV003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:54:45	DataFile Name :	069CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48312.20	48161.06	49910.76	48794.67	1.99	ppb
Antimony	121-1	494.95	488.92	486.17	490.01	0.92	ppb
Arsenic	75-2	503.15	499.97	510.12	504.41	1.03	ppb
Barium	135-1	2498.98	2495.84	2464.52	2486.45	0.77	ppb
Barium	137-1	2502.00	2486.31	2451.41	2479.91	1.04	ppb
Beryllium	9-1	497.32	496.45	496.39	496.72	0.10	ppb
Bismuth	209-1				101		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	493.66	496.71	482.35	490.91	1.54	ppb
Cadmium	106-1	498.06	501.67	486.83	495.52	1.56	ppb
Cadmium	111-1	480.89	487.66	476.87	481.81	1.13	ppb
Calcium	43-1	248730.49	250448.30	254455.09	251211.29	1.17	ppb
Calcium	44-1	247690.14	249980.46	252882.44	250184.35	1.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	497.45	506.47	507.54	503.82	1.10	ppb
Cobalt	59-2	515.30	518.03	532.23	521.85	1.74	ppb
Copper	63-2	5085.92	5064.90	5194.80	5115.21	1.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				104		%
Indium	115-1				92		%
Indium	115-2				92		%
Iron	56-2	129840.03	129957.69	130911.70	130236.47	0.45	ppb
Iron	57-2	127201.10	128084.63	131223.25	128836.33	1.64	ppb
Iron	54-2	129769.04	129899.98	131797.23	130488.75	0.87	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV003	Instrumnet Name :	P7
Client Sample ID :	CCV003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:54:45	DataFile Name :	069CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2547.17	2510.68	2526.14	2527.99	0.72	ppb
Lead	207-1	2552.84	2522.31	2540.15	2538.43	0.60	ppb
Lead	208-1	2545.48	2519.11	2534.54	2533.04	0.52	ppb
Lithium	6-1				102		%
Magnesium	24-2	245979.38	245293.75	250023.18	247098.77	1.03	ppb
Manganese	55-2	4966.33	4977.90	5069.24	5004.49	1.13	ppb
Molybdenum	94-1	5000.31	5000.59	5014.18	5005.03	0.16	ppb
Molybdenum	95-1	4983.74	5049.94	5027.34	5020.34	0.67	ppb
Molybdenum	96-1	5028.31	5022.98	5030.63	5027.31	0.08	ppb
Molybdenum	97-1	4986.51	4989.86	5047.82	5008.06	0.69	ppb
Molybdenum	98-1	4999.07	5033.24	5045.41	5025.91	0.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	499.71	501.26	509.03	503.34	0.99	ppb
Phosphorus	31-2	9776.77	9769.60	9928.74	9825.04	0.91	ppb
Potassium	39-2	121708.32	122476.06	124038.45	122740.94	0.97	ppb
Rhodium	103-1				85		%
Rhodium	103-2				89		%
Scandium	45-1				86		%
Scandium	45-2				90		%
Selenium	82-1	485.38	491.46	496.03	490.96	1.09	ppb
Selenium	77-2	483.26	481.19	497.85	487.43	1.86	ppb
Selenium	78-2	494.86	484.81	483.63	487.77	1.26	ppb
Silicon	28-1	515.65	528.06	524.14	522.61	1.21	ppb
Silver	107-1	482.63	481.68	477.40	480.57	0.58	ppb
Silver	109-1	484.04	485.64	472.86	480.85	1.45	ppb
Sodium	23-2	247711.35	250772.15	257597.14	252026.88	2.01	ppb
Strontium	86-1	12503.10	12526.65	12659.37	12563.04	0.67	ppb
Strontium	88-1	12414.95	12429.19	12700.60	12514.91	1.29	ppb
Sulfur	34-1	9570.70	9754.43	9675.81	9666.98	0.95	ppb
Terbium	159-1				103		%
Terbium	159-2				103		%
Thallium	203-1	514.34	503.83	514.71	510.96	1.21	ppb
Thallium	205-1	513.91	505.18	513.00	510.70	0.94	ppb
Tin	118-1	492.69	495.28	493.84	493.94	0.26	ppb
Titanium	47-1	4935.21	4993.08	4982.83	4970.37	0.62	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV003	Instrumnet Name :	P7
Client Sample ID :	CCV003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:54:45	DataFile Name :	069CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	513.79	514.41	524.51	517.57	1.16	ppb
Vanadium	51-2	502.94	508.34	511.65	507.64	0.87	ppb
Yttrium	89-1				93		%
Yttrium	89-2				94		%
Zinc	66-2	5045.09	5053.34	5149.35	5082.59	1.14	ppb
Zirconium	90-1	508.84	507.90	504.15	506.97	0.49	ppb
Zirconium	91-1	495.84	509.00	507.41	504.09	1.42	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB003	Instrumnet Name :	P7
Client Sample ID :	CCB003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:57:40	DataFile Name :	070CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8.06	7.46	6.77	7.43	8.70	ppb
Antimony	121-1	0.33	0.26	0.21	0.26	22.99	ppb
Arsenic	75-2	0.11	0.06	0.08	0.08	33.26	ppb
Barium	135-1	1.14	0.82	0.68	0.88	27.06	ppb
Barium	137-1	1.11	0.78	0.62	0.84	29.65	ppb
Beryllium	9-1	0.29	0.23	0.18	0.23	24.60	ppb
Bismuth	209-1				109		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.16	0.01	-0.02	0.05	187.16	ppb
Cadmium	106-1	-2.05	-2.28	-2.65	-2.32		ppb
Cadmium	111-1	0.10	0.03	-0.05	0.03	308.83	ppb
Calcium	43-1	117.89	83.19	64.19	88.42	30.79	ppb
Calcium	44-1	116.97	82.35	61.19	86.84	32.43	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.17	0.14	0.13	0.15	16.25	ppb
Cobalt	59-2	0.10	0.08	0.06	0.08	25.69	ppb
Copper	63-2	0.95	0.85	0.70	0.83	15.01	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				103		%
Indium	115-1				97		%
Indium	115-2				97		%
Iron	56-2	24.02	21.70	19.26	21.66	10.99	ppb
Iron	57-2	21.38	17.51	15.41	18.10	16.73	ppb
Iron	54-2	25.51	21.16	20.21	22.29	12.67	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB003	Instrumnet Name :	P7
Client Sample ID :	CCB003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:57:40	DataFile Name :	070CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.10	0.83	0.62	0.85	28.32	ppb
Lead	207-1	1.12	0.77	0.63	0.84	29.79	ppb
Lead	208-1	1.09	0.81	0.62	0.84	28.21	ppb
Lithium	6-1				106		%
Magnesium	24-2	41.41	38.32	33.69	37.81	10.28	ppb
Manganese	55-2	0.89	0.81	0.75	0.82	9.08	ppb
Molybdenum	94-1	2.50	1.81	1.43	1.91	28.15	ppb
Molybdenum	95-1	2.35	1.72	1.34	1.80	28.44	ppb
Molybdenum	96-1	2.38	1.71	1.38	1.82	28.17	ppb
Molybdenum	97-1	2.41	1.76	1.30	1.83	30.53	ppb
Molybdenum	98-1	2.39	1.75	1.35	1.83	28.84	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.42	-0.47	-0.42	-0.44		ppb
Phosphorus	31-2	-20.00	-20.62	-22.95	-21.19		ppb
Potassium	39-2	21.39	17.36	14.25	17.67	20.26	ppb
Rhodium	103-1				94		%
Rhodium	103-2				99		%
Scandium	45-1				86		%
Scandium	45-2				91		%
Selenium	82-1	0.52	0.05	0.32	0.30	78.41	ppb
Selenium	77-2	0.28	0.11	0.11	0.17	57.25	ppb
Selenium	78-2	-2.43	-2.06	-1.11	-1.87		ppb
Silicon	28-1	-5.13	-5.20	-5.29	-5.21		ppb
Silver	107-1	0.31	0.23	0.17	0.24	31.03	ppb
Silver	109-1	0.29	0.21	0.19	0.23	24.01	ppb
Sodium	23-2	75.52	68.98	60.85	68.45	10.74	ppb
Strontium	86-1	5.79	3.89	3.17	4.28	31.57	ppb
Strontium	88-1	5.58	4.31	3.08	4.33	28.84	ppb
Sulfur	34-1	-798.45	-732.33	-627.37	-719.38		ppb
Terbium	159-1				104		%
Terbium	159-2				104		%
Thallium	203-1	0.29	0.21	0.18	0.23	23.98	ppb
Thallium	205-1	0.31	0.23	0.19	0.24	25.26	ppb
Tin	118-1	0.24	0.20	0.17	0.20	18.22	ppb
Titanium	47-1	2.28	1.63	1.25	1.72	30.22	ppb

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB003	Instrumnet Name :	P7
Client Sample ID :	CCB003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:57:40	DataFile Name :	070CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.20	0.14	0.10	0.15	34.75	ppb
Vanadium	51-2	0.09	0.10	0.07	0.09	14.66	ppb
Yttrium	89-1				93		%
Yttrium	89-2				96		%
Zinc	66-2	0.88	0.89	0.86	0.88	1.91	ppb
Zirconium	90-1	0.31	0.21	0.18	0.23	28.84	ppb
Zirconium	91-1	0.25	0.23	0.16	0.21	19.91	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DLX2	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 18:00:56	DataFile Name :	071SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9223.17	8616.60	8540.68	8793.48	4.25	ppb
Antimony	121-1	0.49	0.47	0.47	0.48	3.15	ppb
Arsenic	75-2	22.48	20.47	19.56	20.83	7.17	ppb
Barium	135-1	170.46	173.62	173.85	172.64	1.09	ppb
Barium	137-1	171.68	176.59	173.18	173.82	1.45	ppb
Beryllium	9-1	1.18	1.14	1.15	1.16	1.89	ppb
Bismuth	209-1				111		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	8.57	7.57	8.34	8.16	6.41	ppb
Cadmium	106-1	5.19	5.09	5.17	5.15	1.01	ppb
Cadmium	111-1	0.63	0.69	0.64	0.65	5.16	ppb
Calcium	43-1	18551.60	18748.98	18998.15	18766.24	1.19	ppb
Calcium	44-1	17945.94	18212.88	18429.61	18196.14	1.33	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	567.91	516.26	518.28	534.15	5.48	ppb
Cobalt	59-2	149.42	138.65	137.65	141.90	4.60	ppb
Copper	63-2	1247.20	1159.99	1160.71	1189.30	4.22	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				103		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	67258.77	62120.15	61248.68	63542.54	5.11	ppb
Iron	57-2	65167.10	61297.46	59819.78	62094.78	4.45	ppb
Iron	54-2	67319.16	62071.01	61641.12	63677.10	4.96	ppb
Krypton	83-1						cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DLX2	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 18:00:56	DataFile Name :	071SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	49.01	49.97	49.41	49.46	0.97	ppb
Lead	207-1	44.58	45.37	45.13	45.03	0.90	ppb
Lead	208-1	46.25	46.91	46.39	46.52	0.75	ppb
Lithium	6-1				110		%
Magnesium	24-2	1223.75	1125.04	1117.27	1155.35	5.14	ppb
Manganese	55-2	15548.28	14496.65	14497.84	14847.59	4.09	ppb
Molybdenum	94-1	2.33	2.30	2.34	2.32	0.75	ppb
Molybdenum	95-1	2.38	2.38	2.38	2.38	0.09	ppb
Molybdenum	96-1	2.60	2.57	2.67	2.61	1.89	ppb
Molybdenum	97-1	2.04	2.04	2.16	2.08	3.36	ppb
Molybdenum	98-1	2.04	2.05	2.07	2.05	0.87	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	384.46	355.82	353.55	364.61	4.72	ppb
Phosphorus	31-2	948.58	873.35	894.02	905.32	4.29	ppb
Potassium	39-2	1200.50	1096.59	1084.81	1127.30	5.65	ppb
Rhodium	103-1				97		%
Rhodium	103-2				99		%
Scandium	45-1				90		%
Scandium	45-2				93		%
Selenium	82-1	0.81	0.40	0.89	0.70	37.53	ppb
Selenium	77-2	3.68	2.61	3.21	3.17	17.04	ppb
Selenium	78-2	1.26	0.54	-0.15	0.55	127.97	ppb
Silicon	28-1	65.12	65.97	69.60	66.89	3.56	ppb
Silver	107-1	1.52	1.55	1.54	1.54	0.91	ppb
Silver	109-1	1.55	1.54	1.56	1.55	0.67	ppb
Sodium	23-2	461.71	424.67	417.47	434.62	5.46	ppb
Strontium	86-1	2251.40	2269.04	2276.97	2265.80	0.58	ppb
Strontium	88-1	2350.48	2361.66	2384.26	2365.47	0.73	ppb
Sulfur	34-1	1493.22	1473.65	1465.53	1477.47	0.96	ppb
Terbium	159-1				106		%
Terbium	159-2				103		%
Thallium	203-1	0.41	0.41	0.39	0.40	2.67	ppb
Thallium	205-1	0.41	0.40	0.39	0.40	3.39	ppb
Tin	118-1	33.63	34.76	34.33	34.24	1.67	ppb
Titanium	47-1	94.28	96.17	96.09	95.51	1.12	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DLX2	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 18:00:56	DataFile Name :	071SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.29	1.28	1.30	1.29	0.97	ppb
Vanadium	51-2	12.98	12.05	12.08	12.37	4.28	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	108.52	98.61	99.32	102.15	5.41	ppb
Zirconium	90-1	0.32	0.32	0.31	0.32	2.28	ppb
Zirconium	91-1	0.33	0.30	0.29	0.31	6.79	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DL2X5	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 18:04:04	DataFile Name :	072SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3436.30	3486.80	3422.27	3448.46	0.98	ppb
Antimony	121-1	0.17	0.19	0.20	0.19	8.00	ppb
Arsenic	75-2	8.44	8.44	8.19	8.36	1.76	ppb
Barium	135-1	69.59	72.32	72.34	71.42	2.22	ppb
Barium	137-1	70.65	73.03	72.79	72.16	1.81	ppb
Beryllium	9-1	0.49	0.48	0.49	0.49	0.86	ppb
Bismuth	209-1				110		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	3.71	3.66	3.75	3.71	1.25	ppb
Cadmium	106-1	-0.12	0.79	0.60	0.42	114.26	ppb
Cadmium	111-1	0.05	0.13	0.12	0.10	45.21	ppb
Calcium	43-1	7612.68	7756.50	7868.58	7745.92	1.66	ppb
Calcium	44-1	7341.61	7528.02	7581.98	7483.87	1.69	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	211.35	213.41	211.07	211.94	0.60	ppb
Cobalt	59-2	56.60	57.16	56.07	56.61	0.96	ppb
Copper	63-2	477.49	475.95	477.52	476.99	0.19	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				106		%
Holmium	165-2				102		%
Indium	115-1				100		%
Indium	115-2				98		%
Iron	56-2	25372.10	25467.31	25170.51	25336.64	0.60	ppb
Iron	57-2	24862.77	24775.15	24462.64	24700.19	0.85	ppb
Iron	54-2	25951.32	25811.84	25453.57	25738.91	1.00	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DL2X5	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 18:04:04	DataFile Name :	072SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	20.05	20.16	20.53	20.24	1.24	ppb
Lead	207-1	18.12	18.46	18.75	18.44	1.72	ppb
Lead	208-1	18.85	19.09	19.42	19.12	1.50	ppb
Lithium	6-1				108		%
Magnesium	24-2	465.83	466.07	458.50	463.47	0.93	ppb
Manganese	55-2	5949.92	5990.72	5885.30	5941.98	0.89	ppb
Molybdenum	94-1	0.87	0.91	0.89	0.89	2.26	ppb
Molybdenum	95-1	0.93	0.98	0.93	0.94	2.91	ppb
Molybdenum	96-1	0.98	1.03	1.04	1.02	2.86	ppb
Molybdenum	97-1	0.78	0.80	0.81	0.80	2.01	ppb
Molybdenum	98-1	0.77	0.83	0.80	0.80	3.51	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	145.62	147.38	145.35	146.12	0.76	ppb
Phosphorus	31-2	336.77	364.25	349.76	350.26	3.93	ppb
Potassium	39-2	445.96	452.53	447.80	448.76	0.76	ppb
Rhodium	103-1				97		%
Rhodium	103-2				100		%
Scandium	45-1				90		%
Scandium	45-2				94		%
Selenium	82-1	0.25	0.24	0.52	0.34	46.55	ppb
Selenium	77-2	1.08	1.39	1.39	1.29	13.66	ppb
Selenium	78-2	-1.02	-0.85	-0.93	-0.93		ppb
Silicon	28-1	24.94	26.18	28.49	26.54	6.78	ppb
Silver	107-1	0.60	0.62	0.63	0.62	2.83	ppb
Silver	109-1	0.59	0.60	0.62	0.61	2.11	ppb
Sodium	23-2	179.87	180.49	179.17	179.85	0.37	ppb
Strontium	86-1	917.52	952.51	972.29	947.44	2.93	ppb
Strontium	88-1	930.34	965.30	961.88	952.51	2.02	ppb
Sulfur	34-1	-146.72	-80.58	-17.92	-81.74		ppb
Terbium	159-1				104		%
Terbium	159-2				103		%
Thallium	203-1	0.14	0.14	0.14	0.14	1.70	ppb
Thallium	205-1	0.14	0.14	0.14	0.14	2.53	ppb
Tin	118-1	13.84	14.37	14.21	14.14	1.93	ppb
Titanium	47-1	38.55	39.55	39.90	39.33	1.79	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DL2X5	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 18:04:04	DataFile Name :	072SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.50	0.52	0.52	0.51	1.98	ppb
Vanadium	51-2	4.88	5.18	4.90	4.99	3.39	ppb
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	41.91	41.96	41.08	41.65	1.19	ppb
Zirconium	90-1	0.12	0.11	0.11	0.11	2.19	ppb
Zirconium	91-1	0.11	0.11	0.13	0.12	9.29	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05A	Instrumnet Name :	P7
Client Sample ID :	A6305A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:07:12	DataFile Name :	073SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	28552.03	29203.65	29171.19	28975.62	1.27	ppb
Antimony	121-1	4.40	4.39	4.46	4.42	0.85	ppb
Arsenic	75-2	150.07	149.48	152.75	150.77	1.16	ppb
Barium	135-1	204.01	205.11	207.16	205.43	0.78	ppb
Barium	137-1	205.72	204.66	208.62	206.33	0.99	ppb
Beryllium	9-1	4.00	4.28	3.78	4.02	6.23	ppb
Bismuth	209-1				111		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	73.32	77.40	75.22	75.31	2.71	ppb
Cadmium	106-1	51.38	51.70	52.84	51.97	1.47	ppb
Cadmium	111-1	1.70	1.49	1.85	1.68	10.67	ppb
Calcium	43-1	26654.90	27015.06	27139.71	26936.56	0.93	ppb
Calcium	44-1	25599.01	25882.18	26228.97	25903.39	1.22	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1060.69	1076.31	1076.98	1071.32	0.86	ppb
Cobalt	59-2	16.05	16.04	16.22	16.10	0.62	ppb
Copper	63-2	1805.27	1855.45	1847.64	1836.12	1.47	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				106		%
Indium	115-1				99		%
Indium	115-2				97		%
Iron	56-2	60665.19	60564.64	60877.61	60702.48	0.26	ppb
Iron	57-2	58687.95	59700.39	59365.11	59251.15	0.87	ppb
Iron	54-2	60766.57	60998.64	61910.38	61225.20	0.99	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05A	Instrumnet Name :	P7
Client Sample ID :	A6305A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:07:12	DataFile Name :	073SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	556.87	551.57	554.16	554.20	0.48	ppb
Lead	207-1	504.62	510.26	518.41	511.10	1.36	ppb
Lead	208-1	528.73	524.81	531.44	528.33	0.63	ppb
Lithium	6-1				113		%
Magnesium	24-2	4827.13	4815.90	4897.61	4846.88	0.91	ppb
Manganese	55-2	2540.60	2530.24	2549.44	2540.09	0.38	ppb
Molybdenum	94-1	3.90	4.05	4.08	4.01	2.38	ppb
Molybdenum	95-1	3.46	3.36	3.49	3.44	1.99	ppb
Molybdenum	96-1	4.02	4.00	3.93	3.98	1.07	ppb
Molybdenum	97-1	3.42	3.42	3.39	3.41	0.56	ppb
Molybdenum	98-1	3.38	3.47	3.39	3.41	1.45	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	175.94	179.51	180.05	178.50	1.25	ppb
Phosphorus	31-2	1949.11	1917.47	1945.02	1937.20	0.89	ppb
Potassium	39-2	1608.02	1619.46	1625.82	1617.76	0.56	ppb
Rhodium	103-1				98		%
Rhodium	103-2				101		%
Scandium	45-1				93		%
Scandium	45-2				97		%
Selenium	82-1	11.24	10.96	11.48	11.23	2.33	ppb
Selenium	77-2	15.67	15.50	17.11	16.09	5.51	ppb
Selenium	78-2	12.93	11.78	11.35	12.02	6.82	ppb
Silicon	28-1	244.87	250.75	251.48	249.03	1.46	ppb
Silver	107-1	2.53	2.53	2.50	2.52	0.70	ppb
Silver	109-1	2.53	2.50	2.54	2.52	0.82	ppb
Sodium	23-2	4091.77	4129.44	4136.01	4119.07	0.58	ppb
Strontium	86-1	4645.14	4730.04	4715.25	4696.81	0.97	ppb
Strontium	88-1	4757.18	4895.13	4866.96	4839.76	1.51	ppb
Sulfur	34-1	3620.94	3596.18	3748.94	3655.35	2.24	ppb
Terbium	159-1				106		%
Terbium	159-2				106		%
Thallium	203-1	0.27	0.25	0.27	0.26	4.00	ppb
Thallium	205-1	0.26	0.25	0.25	0.25	1.99	ppb
Tin	118-1	1057.23	1051.44	1067.06	1058.58	0.75	ppb
Titanium	47-1	468.67	474.41	478.58	473.89	1.05	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05A	Instrumnet Name :	P7
Client Sample ID :	A6305A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:07:12	DataFile Name :	073SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.05	2.07	2.09	2.07	1.02	ppb
Vanadium	51-2	32.28	32.77	32.69	32.58	0.81	ppb
Yttrium	89-1				101		%
Yttrium	89-2				104		%
Zinc	66-2	711.13	725.55	727.45	721.37	1.24	ppb
Zirconium	90-1	0.66	0.67	0.64	0.66	2.50	ppb
Zirconium	91-1	0.69	0.68	0.67	0.68	1.63	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09A	Instrumnet Name :	P7
Client Sample ID :	A6342A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:10:14	DataFile Name :	074SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11965.08	11901.55	11976.08	11947.57	0.34	ppb
Antimony	121-1	0.04	0.04	0.04	0.04	1.30	ppb
Arsenic	75-2	6.95	6.30	6.69	6.65	4.94	ppb
Barium	135-1	47.74	49.39	48.87	48.67	1.73	ppb
Barium	137-1	48.36	49.66	48.91	48.97	1.33	ppb
Beryllium	9-1	0.67	0.65	0.69	0.67	2.79	ppb
Bismuth	209-1				108		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.23	0.09	0.22	0.18	43.76	ppb
Cadmium	106-1	-1.64	-2.50	-1.75	-1.96		ppb
Cadmium	111-1	-0.03	-0.08	-0.02	-0.04		ppb
Calcium	43-1	1621.00	1587.57	1649.93	1619.50	1.93	ppb
Calcium	44-1	1615.48	1620.57	1631.61	1622.55	0.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	31.56	31.10	30.82	31.16	1.21	ppb
Cobalt	59-2	5.23	5.10	5.00	5.11	2.23	ppb
Copper	63-2	11.45	11.10	11.22	11.26	1.58	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				100		%
Indium	115-2				99		%
Iron	56-2	12526.91	12494.06	12371.00	12463.99	0.66	ppb
Iron	57-2	12612.26	12497.20	12526.68	12545.38	0.48	ppb
Iron	54-2	12741.41	12681.66	12677.84	12700.30	0.28	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09A	Instrumnet Name :	P7
Client Sample ID :	A6342A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:10:14	DataFile Name :	074SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	164.46	169.30	169.50	167.75	1.70	ppb
Lead	207-1	161.43	168.87	167.79	166.03	2.42	ppb
Lead	208-1	171.09	175.17	175.58	173.95	1.43	ppb
Lithium	6-1				105		%
Magnesium	24-2	3806.10	3818.71	3753.98	3792.93	0.90	ppb
Manganese	55-2	150.71	151.03	149.00	150.25	0.73	ppb
Molybdenum	94-1	2.35	2.40	2.40	2.38	1.20	ppb
Molybdenum	95-1	0.51	0.49	0.52	0.51	3.37	ppb
Molybdenum	96-1	0.83	0.82	0.84	0.83	1.18	ppb
Molybdenum	97-1	0.54	0.51	0.54	0.53	2.94	ppb
Molybdenum	98-1	0.49	0.51	0.52	0.50	3.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	17.72	17.22	17.20	17.38	1.70	ppb
Phosphorus	31-2	353.97	375.13	367.45	365.52	2.93	ppb
Potassium	39-2	1116.49	1117.95	1093.70	1109.38	1.23	ppb
Rhodium	103-1				97		%
Rhodium	103-2				102		%
Scandium	45-1				92		%
Scandium	45-2				98		%
Selenium	82-1	10.68	10.69	10.73	10.70	0.25	ppb
Selenium	77-2	13.82	12.92	12.42	13.05	5.44	ppb
Selenium	78-2	10.66	10.85	10.29	10.60	2.72	ppb
Silicon	28-1	38.58	39.69	40.83	39.70	2.84	ppb
Silver	107-1	0.06	0.06	0.05	0.06	12.56	ppb
Silver	109-1	0.06	0.05	0.05	0.05	9.44	ppb
Sodium	23-2	186.00	183.90	184.82	184.90	0.57	ppb
Strontium	86-1	197.67	203.50	206.09	202.42	2.13	ppb
Strontium	88-1	203.10	205.44	205.98	204.84	0.75	ppb
Sulfur	34-1	-825.44	-887.47	-922.37	-878.43		ppb
Terbium	159-1				104		%
Terbium	159-2				105		%
Thallium	203-1	0.18	0.18	0.19	0.19	3.37	ppb
Thallium	205-1	0.18	0.18	0.19	0.18	2.30	ppb
Tin	118-1	1.09	0.75	0.57	0.80	32.52	ppb
Titanium	47-1	460.32	467.51	471.53	466.45	1.22	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09A	Instrumnet Name :	P7
Client Sample ID :	A6342A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:10:14	DataFile Name :	074SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.92	2.00	1.99	1.97	2.29	ppb
Vanadium	51-2	27.22	27.26	26.77	27.08	1.02	ppb
Yttrium	89-1				99		%
Yttrium	89-2				102		%
Zinc	66-2	47.19	47.38	45.68	46.75	1.99	ppb
Zirconium	90-1	1.07	1.08	1.09	1.08	0.97	ppb
Zirconium	91-1	1.09	1.12	1.10	1.10	1.52	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV004	Instrumnet Name :	P7
Client Sample ID :	CCV004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:13:23	DataFile Name :	075CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48487.77	49407.52	49801.71	49232.33	1.37	ppb
Antimony	121-1	475.47	491.75	497.21	488.15	2.32	ppb
Arsenic	75-2	512.68	516.89	513.59	514.39	0.43	ppb
Barium	135-1	2463.61	2495.50	2487.27	2482.13	0.67	ppb
Barium	137-1	2412.97	2463.38	2439.23	2438.52	1.03	ppb
Beryllium	9-1	480.83	492.61	491.97	488.47	1.36	ppb
Bismuth	209-1				101		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	487.98	495.30	494.51	492.60	0.82	ppb
Cadmium	106-1	481.12	495.09	492.07	489.42	1.50	ppb
Cadmium	111-1	475.06	484.63	489.07	482.92	1.48	ppb
Calcium	43-1	244095.02	251500.58	245890.48	247162.03	1.56	ppb
Calcium	44-1	243748.39	251801.22	248339.43	247963.01	1.63	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	505.44	505.07	506.99	505.83	0.20	ppb
Cobalt	59-2	514.46	526.29	526.86	522.53	1.34	ppb
Copper	63-2	5081.93	5080.37	5072.91	5078.40	0.09	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				90		%
Indium	115-2				90		%
Iron	56-2	128000.86	130811.65	129529.21	129447.24	1.09	ppb
Iron	57-2	127893.33	129345.45	129371.96	128870.25	0.66	ppb
Iron	54-2	128142.02	130310.15	130242.12	129564.76	0.95	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV004	Instrumnet Name :	P7
Client Sample ID :	CCV004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:13:23	DataFile Name :	075CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2510.77	2521.20	2532.94	2521.64	0.44	ppb
Lead	207-1	2505.34	2511.85	2510.98	2509.39	0.14	ppb
Lead	208-1	2506.03	2511.40	2521.60	2513.01	0.31	ppb
Lithium	6-1				104		%
Magnesium	24-2	247387.49	251696.58	253009.31	250697.79	1.17	ppb
Manganese	55-2	4928.78	5041.83	5056.86	5009.16	1.40	ppb
Molybdenum	94-1	4933.14	4980.45	5088.77	5000.79	1.60	ppb
Molybdenum	95-1	4929.50	4980.27	5108.21	5005.99	1.84	ppb
Molybdenum	96-1	4945.23	5013.59	5075.30	5011.37	1.30	ppb
Molybdenum	97-1	4917.84	5018.37	5089.87	5008.70	1.73	ppb
Molybdenum	98-1	4959.40	5042.45	5066.95	5022.93	1.12	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	502.58	514.45	511.29	509.44	1.21	ppb
Phosphorus	31-2	9772.46	9821.93	9847.34	9813.91	0.39	ppb
Potassium	39-2	122325.69	122929.40	124543.59	123266.23	0.93	ppb
Rhodium	103-1				85		%
Rhodium	103-2				88		%
Scandium	45-1				84		%
Scandium	45-2				89		%
Selenium	82-1	490.49	495.57	500.56	495.54	1.02	ppb
Selenium	77-2	504.30	496.43	506.30	502.34	1.04	ppb
Selenium	78-2	488.54	493.92	504.81	495.76	1.67	ppb
Silicon	28-1	517.98	525.61	520.61	521.40	0.74	ppb
Silver	107-1	493.42	503.35	501.58	499.45	1.06	ppb
Silver	109-1	493.57	500.19	505.39	499.72	1.19	ppb
Sodium	23-2	250783.17	254764.20	255758.71	253768.69	1.04	ppb
Strontium	86-1	12273.79	12415.21	12517.98	12402.33	0.99	ppb
Strontium	88-1	12303.54	12452.62	12648.86	12468.34	1.39	ppb
Sulfur	34-1	9226.77	9451.00	9249.92	9309.23	1.32	ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	502.22	508.91	508.39	506.51	0.74	ppb
Thallium	205-1	500.67	510.83	509.71	507.07	1.10	ppb
Tin	118-1	479.86	491.17	492.77	487.93	1.44	ppb
Titanium	47-1	4906.44	4984.74	4912.74	4934.64	0.88	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV004	Instrumnet Name :	P7
Client Sample ID :	CCV004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:13:23	DataFile Name :	075CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	516.96	511.56	521.20	516.57	0.94	ppb
Vanadium	51-2	502.98	512.99	510.10	508.69	1.01	ppb
Yttrium	89-1				91		%
Yttrium	89-2				94		%
Zinc	66-2	4994.13	5096.79	5079.32	5056.75	1.09	ppb
Zirconium	90-1	498.32	504.62	513.54	505.49	1.51	ppb
Zirconium	91-1	496.93	500.94	504.17	500.68	0.72	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB004	Instrumnet Name :	P7
Client Sample ID :	CCB004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:16:50	DataFile Name :	076CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8.15	7.45	6.71	7.44	9.64	ppb
Antimony	121-1	0.29	0.24	0.19	0.24	20.40	ppb
Arsenic	75-2	0.06	0.07	0.06	0.06	8.95	ppb
Barium	135-1	0.84	0.68	0.54	0.69	21.48	ppb
Barium	137-1	0.92	0.69	0.54	0.72	27.35	ppb
Beryllium	9-1	0.22	0.15	0.15	0.18	23.07	ppb
Bismuth	209-1				109		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.17	0.11	0.11	0.13	25.93	ppb
Cadmium	106-1	-2.29	-2.52	-3.59	-2.80		ppb
Cadmium	111-1	0.02	-0.04	-0.11	-0.04		ppb
Calcium	43-1	94.12	69.42	53.24	72.26	28.49	ppb
Calcium	44-1	94.47	69.73	55.04	73.08	27.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.10	0.08	0.10	0.09	10.28	ppb
Cobalt	59-2	0.08	0.07	0.05	0.07	19.69	ppb
Copper	63-2	0.81	0.72	0.60	0.71	14.80	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				97		%
Indium	115-2				97		%
Iron	56-2	23.38	21.00	19.16	21.18	10.01	ppb
Iron	57-2	18.81	16.23	17.30	17.44	7.42	ppb
Iron	54-2	21.95	22.28	19.01	21.08	8.53	ppb
Krypton	83-1						cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB004	Instrumnet Name :	P7
Client Sample ID :	CCB004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:16:50	DataFile Name :	076CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.92	0.65	0.53	0.70	28.67	ppb
Lead	207-1	0.87	0.67	0.52	0.69	25.27	ppb
Lead	208-1	0.90	0.66	0.53	0.69	26.85	ppb
Lithium	6-1				107		%
Magnesium	24-2	39.26	33.65	33.51	35.47	9.25	ppb
Manganese	55-2	0.89	0.86	0.76	0.84	8.15	ppb
Molybdenum	94-1	2.00	1.63	1.30	1.64	21.37	ppb
Molybdenum	95-1	1.87	1.47	1.18	1.50	23.15	ppb
Molybdenum	96-1	1.93	1.52	1.14	1.53	26.04	ppb
Molybdenum	97-1	1.96	1.54	1.20	1.57	24.15	ppb
Molybdenum	98-1	1.87	1.50	1.18	1.52	22.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.60	-0.56	-0.59	-0.58		ppb
Phosphorus	31-2	-22.26	-15.64	-19.93	-19.28		ppb
Potassium	39-2	10.29	10.54	6.68	9.17	23.57	ppb
Rhodium	103-1				93		%
Rhodium	103-2				99		%
Scandium	45-1				86		%
Scandium	45-2				90		%
Selenium	82-1	0.25	0.08	-0.26	0.02	1254.29	ppb
Selenium	77-2	0.28	0.28	0.11	0.22	43.24	ppb
Selenium	78-2	-0.93	-1.49	-1.46	-1.29		ppb
Silicon	28-1	-5.09	-5.14	-5.26	-5.16		ppb
Silver	107-1	0.23	0.17	0.12	0.17	32.33	ppb
Silver	109-1	0.22	0.16	0.13	0.17	27.14	ppb
Sodium	23-2	64.68	60.35	55.01	60.01	8.07	ppb
Strontium	86-1	4.29	3.12	2.23	3.22	32.16	ppb
Strontium	88-1	4.63	3.73	2.76	3.70	25.26	ppb
Sulfur	34-1	-749.00	-778.39	-770.84	-766.08		ppb
Terbium	159-1				102		%
Terbium	159-2				103		%
Thallium	203-1	0.20	0.16	0.14	0.16	19.43	ppb
Thallium	205-1	0.22	0.16	0.14	0.17	24.51	ppb
Tin	118-1	0.19	0.12	0.12	0.14	26.36	ppb
Titanium	47-1	1.89	1.59	1.10	1.53	26.16	ppb

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB004	Instrumnet Name :	P7
Client Sample ID :	CCB004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:16:50	DataFile Name :	076CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.16	0.12	0.10	0.13	23.89	ppb
Vanadium	51-2	0.07	0.05	0.08	0.06	22.39	ppb
Yttrium	89-1				93		%
Yttrium	89-2				96		%
Zinc	66-2	0.80	0.77	0.85	0.81	4.72	ppb
Zirconium	90-1	0.23	0.20	0.18	0.20	12.38	ppb
Zirconium	91-1	0.23	0.17	0.15	0.18	19.94	ppb

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:25:31	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	310	333	363	336	7.97	cps
Antimony	121-1	43	30	43	39	19.79	cps
Arsenic	75-2	10	23	10	14	53.28	cps
Barium	135-1	67	60	60	62	6.19	cps
Barium	137-1	97	133	117	116	15.89	cps
Beryllium	9-1	47	80	67	64	26.03	cps
Bismuth	209-1	7099431	7049295	7127652	7092126	0.56	cps
Bismuth	209-2	5996187	5994855	5993773	5994938	0.02	cps
Bromine	81-1	15905	16282	16182	16123	1.21	cps
Bromine	81-2	180	133	137	150	17.35	cps
Cadmium	108-1	23	13	13	17	34.65	cps
Cadmium	106-1	5341	5304	5054	5233	2.98	cps
Cadmium	111-1	3732	3710	3532	3658	3.00	cps
Calcium	43-1	320	430	397	382	14.76	cps
Calcium	44-1	12229	11915	12042	12062	1.31	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1237	1263	1283	1261	1.86	cps
Cobalt	59-2	143	133	157	144	8.10	cps
Copper	63-2	2784	2600	2697	2694	3.41	cps
Dysprosium	156-1	3	17	10	10	66.70	cps
Dysprosium	156-2	3	0	7	3	100.05	cps
Erbium	164-1	70	47	63	60	20.03	cps
Erbium	164-2	33	57	27	39	40.51	cps
Gadolinium	160-1	33	43	47	41	16.89	cps
Gadolinium	160-2	497	463	453	471	4.82	cps
Holmium	165-1	11783660	11573261	11511478	11622800	1.23	cps
Holmium	165-2	8816046	8743722	8786175	8781981	0.41	cps
Indium	115-1	9159362	9116902	9097242	9124502	0.35	cps
Indium	115-2	4176053	4080566	4091473	4116031	1.27	cps
Iron	56-2	26500	26093	26750	26448	1.26	cps
Iron	57-2	1740	1733	1907	1793	5.48	cps
Iron	54-2	3300	3294	3290	3295	0.15	cps
Krypton	83-1	237	260	197	231	13.86	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:25:31	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	603	673	607	628	6.29	cps
Lead	207-1	523	547	553	541	2.91	cps
Lead	208-1	2370	2617	2403	2463	5.43	cps
Lithium	6-1	1100187	1088991	1093743	1094307	0.51	cps
Magnesium	24-2	1397	1270	1257	1308	5.91	cps
Manganese	55-2	420	383	483	429	11.80	cps
Molybdenum	94-1	253	237	207	232	10.18	cps
Molybdenum	95-1	130	127	150	136	9.31	cps
Molybdenum	96-1	213	210	157	193	16.45	cps
Molybdenum	97-1	113	63	123	100	32.15	cps
Molybdenum	98-1	233	190	233	219	11.43	cps
Neodymium	150-1	10	0	3	4	114.60	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	3407	3430	3711	3516	4.80	cps
Phosphorus	31-2	273	300	317	297	7.37	cps
Potassium	39-2	68791	66996	66953	67580	1.55	cps
Rhodium	103-1	8658528	8653124	8442531	8584728	1.43	cps
Rhodium	103-2	5563906	5480356	5493146	5512469	0.82	cps
Scandium	45-1	4770324	4791022	4697353	4752899	1.04	cps
Scandium	45-2	533919	538599	536159	536226	0.44	cps
Selenium	82-1	377	350	437	388	11.45	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	590	590	683	621	8.68	cps
Silicon	28-1	873527	1175926	876138	975197	17.83	cps
Silver	107-1	67	113	77	86	28.71	cps
Silver	109-1	33	30	23	29	17.63	cps
Sodium	23-2	22754	22296	21929	22326	1.85	cps
Strontium	86-1	340	433	383	386	12.11	cps
Strontium	88-1	203	220	210	211	3.97	cps
Sulfur	34-1	161911	161836	162632	162126	0.27	cps
Terbium	159-1	11939224	11851836	11734254	11841771	0.87	cps
Terbium	159-2	8584844	8671425	8622924	8626398	0.50	cps
Thallium	203-1	130	127	167	141	15.73	cps
Thallium	205-1	320	320	233	291	17.19	cps
Tin	118-1	1463	1387	1317	1389	5.28	cps
Titanium	47-1	80	103	97	93	12.88	cps

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Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S00	Instrumnet Name :	P7
Client Sample ID :	S0	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:25:31	DataFile Name :	004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	93	97	33	74	47.88	cps
Vanadium	51-2	13	7	10	10	33.30	cps
Yttrium	89-1	16216154	15793556	15621571	15877094	1.93	cps
Yttrium	89-2	5309137	5207234	5164865	5227079	1.42	cps
Zinc	66-2	560	650	590	600	7.64	cps
Zirconium	90-1	540	490	420	483	12.47	cps
Zirconium	91-1	80	100	130	103	24.35	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:28:50	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5508	5484	5394	5462	1.10	cps
Antimony	121-1	19840	19901	19814	19852	0.22	cps
Arsenic	75-2	683	697	730	703	3.42	cps
Barium	135-1	24848	25169	25496	25171	1.29	cps
Barium	137-1	43938	43894	43683	43838	0.31	cps
Beryllium	9-1	1100	1120	1120	1113	1.04	cps
Bismuth	209-1	7186176	7192523	7186238	7188312	0.05	cps
Bismuth	209-2	6039413	6048737	5974084	6020745	0.68	cps
Bromine	81-1	15935	15495	15862	15764	1.50	cps
Bromine	81-2	87	107	140	111	24.25	cps
Cadmium	108-1	177	217	227	207	12.80	cps
Cadmium	106-1	5738	5264	5518	5507	4.30	cps
Cadmium	111-1	6563	6110	6377	6350	3.58	cps
Calcium	43-1	13319	13369	13236	13308	0.51	cps
Calcium	44-1	222537	225454	225231	224407	0.72	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	10724	10437	10540	10567	1.37	cps
Cobalt	59-2	7585	7345	7352	7427	1.84	cps
Copper	63-2	13566	13126	13319	13337	1.66	cps
Dysprosium	156-1	20	7	3	10	88.20	cps
Dysprosium	156-2	17	7	17	13	43.29	cps
Erbium	164-1	60	50	47	52	13.28	cps
Erbium	164-2	67	60	30	52	37.40	cps
Gadolinium	160-1	50	37	47	44	15.61	cps
Gadolinium	160-2	413	413	570	466	19.43	cps
Holmium	165-1	11777255	11677879	11396376	11617170	1.70	cps
Holmium	165-2	8890812	8879088	8831487	8867129	0.35	cps
Indium	115-1	9318765	9166234	9004589	9163196	1.71	cps
Indium	115-2	4140261	4122993	4097318	4120191	0.52	cps
Iron	56-2	248508	248973	246919	248133	0.43	cps
Iron	57-2	7662	7389	7742	7598	2.44	cps
Iron	54-2	15939	15888	15435	15754	1.76	cps
Krypton	83-1	257	190	200	216	16.68	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:28:50	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	7809	8183	8286	8092	3.10	cps
Lead	207-1	6908	7259	7019	7062	2.54	cps
Lead	208-1	31631	32792	32722	32382	2.01	cps
Lithium	6-1	1070532	1093577	1079200	1081103	1.08	cps
Magnesium	24-2	210563	211669	209770	210667	0.45	cps
Manganese	55-2	4137	4251	4271	4220	1.70	cps
Molybdenum	94-1	20384	20518	20341	20414	0.45	cps
Molybdenum	95-1	24738	24724	25252	24905	1.21	cps
Molybdenum	96-1	27840	28318	27636	27931	1.25	cps
Molybdenum	97-1	15869	15805	15832	15835	0.20	cps
Molybdenum	98-1	40656	39864	40269	40263	0.98	cps
Neodymium	150-1	17	13	0	10	88.20	cps
Neodymium	150-2	3	7	0	3	100.05	cps
Nickel	60-2	5191	5001	5244	5145	2.49	cps
Phosphorus	31-2	790	737	743	757	3.84	cps
Potassium	39-2	375292	375565	374958	375272	0.08	cps
Rhodium	103-1	8717198	8641912	8468708	8609273	1.48	cps
Rhodium	103-2	5638682	5510744	5524552	5557993	1.26	cps
Scandium	45-1	4741385	4704514	4724876	4723591	0.39	cps
Scandium	45-2	537099	542420	541234	540251	0.52	cps
Selenium	82-1	1062	1187	1235	1161	7.68	cps
Selenium	77-2	70	130	103	101	29.73	cps
Selenium	78-2	957	1110	1093	1053	7.99	cps
Silicon	28-1	1200851	1187230	1184913	1190998	0.72	cps
Silver	107-1	12552	12419	12365	12445	0.77	cps
Silver	109-1	11708	11308	11635	11550	1.85	cps
Sodium	23-2	349564	347586	349927	349025	0.36	cps
Strontium	86-1	3557	3590	3587	3578	0.51	cps
Strontium	88-1	28074	28147	28170	28130	0.18	cps
Sulfur	34-1	160263	159917	160412	160197	0.16	cps
Terbium	159-1	11844081	11738460	11889427	11823989	0.66	cps
Terbium	159-2	8675143	8673659	8607245	8652016	0.45	cps
Thallium	203-1	9273	9360	9427	9353	0.82	cps
Thallium	205-1	21657	21954	22172	21928	1.18	cps
Tin	118-1	42620	42369	42442	42477	0.30	cps
Titanium	47-1	6248	6035	5875	6052	3.10	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S02	Instrumnet Name :	P7
Client Sample ID :	S02	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:28:50	DataFile Name :	005CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	28855	28911	28848	28871	0.12	cps
Vanadium	51-2	20377	20474	20234	20362	0.59	cps
Yttrium	89-1	15883315	15882419	15866329	15877354	0.06	cps
Yttrium	89-2	5267258	5343453	5200648	5270453	1.36	cps
Zinc	66-2	4831	5014	5008	4951	2.10	cps
Zirconium	90-1	16850	17257	16686	16931	1.74	cps
Zirconium	91-1	3894	3604	4014	3837	5.49	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:32:07	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	253837	248500	249117	250485	1.17	cps
Antimony	121-1	482265	488247	487489	486000	0.67	cps
Arsenic	75-2	30271	29392	29984	29882	1.50	cps
Barium	135-1	603473	612748	609590	608604	0.77	cps
Barium	137-1	1045043	1054318	1055896	1051752	0.56	cps
Beryllium	9-1	52572	53131	53916	53206	1.27	cps
Bismuth	209-1	7282743	7218538	7239517	7246933	0.45	cps
Bismuth	209-2	6057894	6075502	6066032	6066476	0.15	cps
Bromine	81-1	15301	15028	14414	14914	3.05	cps
Bromine	81-2	103	113	147	121	18.74	cps
Cadmium	108-1	9066	9380	9383	9276	1.96	cps
Cadmium	106-1	18802	19086	18989	18959	0.76	cps
Cadmium	111-1	130912	131509	130938	131119	0.26	cps
Calcium	43-1	125245	123061	121425	123243	1.56	cps
Calcium	44-1	1947610	1938276	1900292	1928726	1.30	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	220309	220792	217901	219668	0.70	cps
Cobalt	59-2	332082	331158	329290	330843	0.43	cps
Copper	63-2	2190232	2176623	2175737	2180864	0.37	cps
Dysprosium	156-1	37	27	17	27	37.50	cps
Dysprosium	156-2	53	80	57	63	22.94	cps
Erbium	164-1	70	70	67	69	2.79	cps
Erbium	164-2	67	67	43	59	22.88	cps
Gadolinium	160-1	60	50	70	60	16.67	cps
Gadolinium	160-2	447	483	453	461	4.24	cps
Holmium	165-1	11784651	11853011	11858044	11831902	0.35	cps
Holmium	165-2	8998708	8987347	8772297	8919451	1.43	cps
Indium	115-1	9226552	9219740	9074872	9173722	0.93	cps
Indium	115-2	4114231	4093868	4031337	4079812	1.06	cps
Iron	56-2	10010464	9949098	9936048	9965204	0.40	cps
Iron	57-2	261490	259913	258518	259974	0.57	cps
Iron	54-2	570149	568373	568603	569042	0.17	cps
Krypton	83-1	250	187	210	216	14.86	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:32:07	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1918905	1918450	1925383	1920913	0.20	cps
Lead	207-1	1580429	1589997	1604091	1591506	0.75	cps
Lead	208-1	7633686	7662246	7758347	7684760	0.85	cps
Lithium	6-1	1086477	1100474	1136479	1107810	2.33	cps
Magnesium	24-2	1953525	1970350	1993188	1972354	1.01	cps
Manganese	55-2	1800653	1746435	1774020	1773703	1.53	cps
Molybdenum	94-1	1683067	1694508	1697100	1691559	0.44	cps
Molybdenum	95-1	2414821	2469465	2420967	2435084	1.23	cps
Molybdenum	96-1	2672366	2650669	2674713	2665916	0.50	cps
Molybdenum	97-1	1504864	1513132	1502917	1506971	0.36	cps
Molybdenum	98-1	3889780	3952459	3903979	3915406	0.84	cps
Neodymium	150-1	60	67	50	59	14.25	cps
Neodymium	150-2	17	7	30	18	65.83	cps
Nickel	60-2	84684	85736	85814	85411	0.74	cps
Phosphorus	31-2	12712	12479	12989	12726	2.01	cps
Potassium	39-2	1467225	1450853	1415470	1444516	1.83	cps
Rhodium	103-1	8619122	8600506	8570732	8596787	0.28	cps
Rhodium	103-2	5517060	5370981	5488181	5458741	1.42	cps
Scandium	45-1	4783595	4761845	4662191	4735877	1.37	cps
Scandium	45-2	530413	532498	528147	530353	0.41	cps
Selenium	82-1	7846	7943	7858	7882	0.67	cps
Selenium	77-2	997	987	1057	1013	3.74	cps
Selenium	78-2	3987	4011	4161	4053	2.32	cps
Silicon	28-1	4266107	4203153	4228284	4232514	0.75	cps
Silver	107-1	628555	635727	633297	632526	0.58	cps
Silver	109-1	587228	590986	597272	591829	0.86	cps
Sodium	23-2	3133196	3169753	3147384	3150111	0.59	cps
Strontium	86-1	160042	159577	159992	159870	0.16	cps
Strontium	88-1	1392726	1409142	1394456	1398775	0.64	cps
Sulfur	34-1	187832	187555	185592	186993	0.65	cps
Terbium	159-1	11969399	11905894	11871007	11915433	0.42	cps
Terbium	159-2	8762099	8715457	8683348	8720302	0.45	cps
Thallium	203-1	456875	463404	466852	462377	1.10	cps
Thallium	205-1	1083049	1101049	1111056	1098385	1.29	cps
Tin	118-1	404498	410114	407122	407245	0.69	cps
Titanium	47-1	564570	561103	558773	561482	0.52	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S03	Instrumnet Name :	P7
Client Sample ID :	S03	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:32:07	DataFile Name :	006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1403109	1415213	1434845	1417722	1.13	cps
Vanadium	51-2	194584	192936	197275	194932	1.12	cps
Yttrium	89-1	16086944	15721061	15797241	15868415	1.22	cps
Yttrium	89-2	5278653	5171369	5165012	5205011	1.23	cps
Zinc	66-2	400590	398355	397368	398771	0.41	cps
Zirconium	90-1	810239	817342	822554	816712	0.76	cps
Zirconium	91-1	181741	182094	183302	182379	0.45	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:35:10	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	618223	627590	622837	622883	0.75	cps
Antimony	121-1	1244058	1263270	1250544	1252624	0.78	cps
Arsenic	75-2	74248	73615	73353	73738	0.62	cps
Barium	135-1	1624135	1570719	1646584	1613812	2.41	cps
Barium	137-1	2792419	2834133	2835644	2820732	0.87	cps
Beryllium	9-1	137956	140074	139166	139065	0.76	cps
Bismuth	209-1	7562103	7492299	7347926	7467443	1.46	cps
Bismuth	209-2	6122536	6104201	6112193	6112977	0.15	cps
Bromine	81-1	14654	14244	13800	14233	3.00	cps
Bromine	81-2	103	107	93	101	6.87	cps
Cadmium	108-1	23629	24387	23703	23906	1.75	cps
Cadmium	106-1	39082	39537	39119	39246	0.64	cps
Cadmium	111-1	328834	329047	326770	328217	0.38	cps
Calcium	43-1	303611	306403	305765	305260	0.48	cps
Calcium	44-1	4783777	4768027	4738215	4763339	0.49	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	544373	549159	548499	547344	0.47	cps
Cobalt	59-2	821143	822424	817559	820375	0.31	cps
Copper	63-2	5405221	5369258	5412156	5395545	0.43	cps
Dysprosium	156-1	57	53	23	44	41.31	cps
Dysprosium	156-2	107	87	127	107	18.75	cps
Erbium	164-1	83	83	97	88	8.77	cps
Erbium	164-2	50	47	37	44	15.61	cps
Gadolinium	160-1	83	57	53	64	25.51	cps
Gadolinium	160-2	437	483	490	470	6.18	cps
Holmium	165-1	12260502	11817115	11879699	11985772	2.00	cps
Holmium	165-2	9035042	8971619	8879107	8961923	0.88	cps
Indium	115-1	9288632	9033320	8896285	9072746	2.19	cps
Indium	115-2	4016908	3984442	3962680	3988010	0.68	cps
Iron	56-2	25006150	24775880	25115544	24965858	0.69	cps
Iron	57-2	641745	645436	644118	643766	0.29	cps
Iron	54-2	1346406	1355503	1403473	1368461	2.24	cps
Krypton	83-1	190	187	190	189	1.02	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:35:10	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5055556	5181182	5115215	5117318	1.23	cps
Lead	207-1	4492943	4589971	4533471	4538795	1.07	cps
Lead	208-1	20544322	20946643	20688605	20726523	0.98	cps
Lithium	6-1	1179097	1184655	1163882	1175878	0.91	cps
Magnesium	24-2	4890455	4938355	4940568	4923126	0.58	cps
Manganese	55-2	4412632	4457825	4451572	4440676	0.55	cps
Molybdenum	94-1	4230805	4269330	4256287	4252141	0.46	cps
Molybdenum	95-1	6146643	6160149	6100522	6135771	0.51	cps
Molybdenum	96-1	6745594	6766569	6648124	6720096	0.94	cps
Molybdenum	97-1	3845528	3862121	3835665	3847771	0.35	cps
Molybdenum	98-1	9855108	9956144	9946514	9919255	0.56	cps
Neodymium	150-1	147	110	127	128	14.37	cps
Neodymium	150-2	40	47	20	36	39.03	cps
Nickel	60-2	207025	206870	205870	206588	0.30	cps
Phosphorus	31-2	30711	30450	31362	30841	1.52	cps
Potassium	39-2	3516873	3487017	3526766	3510219	0.59	cps
Rhodium	103-1	8611156	8310084	8323523	8414921	2.02	cps
Rhodium	103-2	5294484	5362980	5296818	5318094	0.73	cps
Scandium	45-1	4736311	4551523	4473591	4587142	2.94	cps
Scandium	45-2	521941	518794	515215	518650	0.65	cps
Selenium	82-1	19302	19499	19439	19413	0.52	cps
Selenium	77-2	2600	2734	2677	2670	2.51	cps
Selenium	78-2	9320	9150	9093	9187	1.28	cps
Silicon	28-1	8741472	8828517	8626697	8732229	1.16	cps
Silver	107-1	1647523	1648887	1612382	1636264	1.26	cps
Silver	109-1	1505617	1514592	1513576	1511262	0.33	cps
Sodium	23-2	7842874	7917062	7896829	7885588	0.49	cps
Strontium	86-1	404295	403025	400697	402672	0.45	cps
Strontium	88-1	3587166	3588877	3588558	3588200	0.03	cps
Sulfur	34-1	226209	224965	222830	224668	0.76	cps
Terbium	159-1	12361988	11997339	11939656	12099661	1.89	cps
Terbium	159-2	8735717	8819519	8670693	8741976	0.85	cps
Thallium	203-1	1216763	1232265	1241937	1230322	1.03	cps
Thallium	205-1	3125543	3178308	3115778	3139876	1.07	cps
Tin	118-1	1041545	1045002	1047650	1044732	0.29	cps
Titanium	47-1	1398978	1384637	1378469	1387362	0.76	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:35:10	DataFile Name :	007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4089678	4180755	4181680	4150704	1.27	cps
Vanadium	51-2	480405	484164	483683	482751	0.42	cps
Yttrium	89-1	15933803	15491644	15453252	15626233	1.71	cps
Yttrium	89-2	5042877	5129506	5076280	5082887	0.86	cps
Zinc	66-2	995728	1000426	997348	997834	0.24	cps
Zirconium	90-1	2089680	2105606	2092300	2095862	0.41	cps
Zirconium	91-1	463860	465563	465168	464864	0.19	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:38:06	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1170996	1193764	1151831	1172197	1.79	cps
Antimony	121-1	2503698	2536851	2515885	2518811	0.67	cps
Arsenic	75-2	140202	139313	138674	139396	0.55	cps
Barium	135-1	3177060	3239981	3084677	3167239	2.47	cps
Barium	137-1	5478268	5489231	5406761	5458087	0.82	cps
Beryllium	9-1	273805	273172	272519	273166	0.24	cps
Bismuth	209-1	7392506	7471175	7322327	7395336	1.01	cps
Bismuth	209-2	6114586	6144285	6110133	6123001	0.30	cps
Bromine	81-1	13039	13042	12605	12896	1.95	cps
Bromine	81-2	107	87	93	96	10.66	cps
Cadmium	108-1	46043	46538	46260	46280	0.54	cps
Cadmium	106-1	70373	69873	68869	69705	1.10	cps
Cadmium	111-1	621565	631680	617277	623507	1.19	cps
Calcium	43-1	574706	573678	560196	569527	1.42	cps
Calcium	44-1	8962936	8957546	8819535	8913339	0.91	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1033843	1017346	1034008	1028399	0.93	cps
Cobalt	59-2	1557537	1543145	1535505	1545396	0.72	cps
Copper	63-2	10085586	10108777	9997159	10063841	0.59	cps
Dysprosium	156-1	90	60	97	82	23.76	cps
Dysprosium	156-2	233	180	197	203	13.42	cps
Erbium	164-1	130	83	87	100	26.03	cps
Erbium	164-2	87	80	67	78	13.09	cps
Gadolinium	160-1	113	103	60	92	30.74	cps
Gadolinium	160-2	460	543	477	493	8.94	cps
Holmium	165-1	11779751	11793725	11745286	11772921	0.21	cps
Holmium	165-2	8907473	8871291	8802664	8860476	0.60	cps
Indium	115-1	8730376	8664385	8695401	8696721	0.38	cps
Indium	115-2	3782873	3760485	3808861	3784073	0.64	cps
Iron	56-2	46954406	46857066	46714214	46841895	0.26	cps
Iron	57-2	1219332	1208816	1210828	1212992	0.46	cps
Iron	54-2	2595414	2570799	2632427	2599547	1.19	cps
Krypton	83-1	200	243	160	201	20.73	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:38:06	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10096510	10344212	10233750	10224824	1.21	cps
Lead	207-1	9059260	9164872	9079493	9101208	0.62	cps
Lead	208-1	41189132	41986984	41212330	41462816	1.10	cps
Lithium	6-1	1180801	1173481	1188803	1181028	0.65	cps
Magnesium	24-2	9415504	9349515	9317217	9360745	0.54	cps
Manganese	55-2	8475035	8453986	8407973	8445665	0.41	cps
Molybdenum	94-1	8167811	8236437	8021385	8141878	1.35	cps
Molybdenum	95-1	11711196	11731175	11526628	11656333	0.97	cps
Molybdenum	96-1	12891871	12917836	12760428	12856712	0.66	cps
Molybdenum	97-1	7375749	7454412	7264247	7364803	1.30	cps
Molybdenum	98-1	18953842	18989553	18529778	18824391	1.36	cps
Neodymium	150-1	180	233	240	218	15.10	cps
Neodymium	150-2	80	63	97	80	20.84	cps
Nickel	60-2	385360	383037	383476	383958	0.32	cps
Phosphorus	31-2	57855	56905	57022	57261	0.90	cps
Potassium	39-2	6539728	6401236	6378561	6439842	1.35	cps
Rhodium	103-1	8019398	7903075	7693640	7872038	2.10	cps
Rhodium	103-2	5133895	5023414	5032046	5063118	1.21	cps
Scandium	45-1	4304666	4290036	4140226	4244976	2.14	cps
Scandium	45-2	486991	477787	487925	484234	1.16	cps
Selenium	82-1	36185	36235	35447	35956	1.23	cps
Selenium	77-2	5144	4664	4884	4898	4.91	cps
Selenium	78-2	17090	16900	16873	16954	0.70	cps
Silicon	28-1	15223477	15238836	14842689	15101667	1.49	cps
Silver	107-1	3141407	3114599	3122853	3126286	0.44	cps
Silver	109-1	2989232	2944714	2908013	2947320	1.38	cps
Sodium	23-2	15170497	15038532	14905150	15038060	0.88	cps
Strontium	86-1	769738	769085	758972	765931	0.79	cps
Strontium	88-1	6857553	6932587	6695976	6828705	1.77	cps
Sulfur	34-1	284459	279721	273313	279164	2.00	cps
Terbium	159-1	12036582	11832401	11842128	11903704	0.97	cps
Terbium	159-2	8667970	8587961	8635843	8630591	0.47	cps
Thallium	203-1	2652100	2651247	2616597	2639982	0.77	cps
Thallium	205-1	6348024	6295091	6351167	6331427	0.50	cps
Tin	118-1	2084613	2081907	2073624	2080048	0.28	cps
Titanium	47-1	2605835	2602322	2534712	2580956	1.55	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:38:06	DataFile Name :	008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8311099	8523597	8438338	8424345	1.27	cps
Vanadium	51-2	908086	901462	914194	907914	0.70	cps
Yttrium	89-1	15095896	14950678	14463314	14836629	2.23	cps
Yttrium	89-2	4882742	4853024	4881177	4872315	0.34	cps
Zinc	66-2	1926717	1902061	1905636	1911471	0.70	cps
Zirconium	90-1	4014343	4010727	3941397	3988822	1.03	cps
Zirconium	91-1	882995	888232	870889	880705	1.01	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:40:52	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2327071	2299495	2322591	2316385	0.64	cps
Antimony	121-1	4892945	4966975	4957757	4939226	0.82	cps
Arsenic	75-2	275947	275522	274043	275171	0.36	cps
Barium	135-1	6131693	6273418	6292653	6232588	1.41	cps
Barium	137-1	10618843	10737850	10744539	10700411	0.66	cps
Beryllium	9-1	531601	537487	533978	534355	0.55	cps
Bismuth	209-1	7288883	7406200	7466367	7387150	1.22	cps
Bismuth	209-2	6116334	6061495	6070861	6082897	0.48	cps
Bromine	81-1	12402	12492	12612	12502	0.84	cps
Bromine	81-2	107	117	90	104	12.90	cps
Cadmium	108-1	89061	89068	89507	89212	0.29	cps
Cadmium	106-1	128795	131037	128721	129518	1.02	cps
Cadmium	111-1	1196974	1207305	1213380	1205887	0.69	cps
Calcium	43-1	1084548	1086602	1089443	1086865	0.23	cps
Calcium	44-1	17054471	17116959	17050175	17073868	0.22	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1989698	2027376	1989960	2002345	1.08	cps
Cobalt	59-2	3074705	3061063	3050893	3062220	0.39	cps
Copper	63-2	19764583	19506063	19573076	19614574	0.68	cps
Dysprosium	156-1	167	133	160	153	11.50	cps
Dysprosium	156-2	430	483	520	478	9.47	cps
Erbium	164-1	163	170	120	151	17.97	cps
Erbium	164-2	103	117	117	112	6.86	cps
Gadolinium	160-1	113	120	130	121	6.93	cps
Gadolinium	160-2	497	490	403	463	11.24	cps
Holmium	165-1	11720046	11764101	11915443	11799863	0.87	cps
Holmium	165-2	9081918	8869404	8944322	8965215	1.20	cps
Indium	115-1	8452089	8422505	8374573	8416389	0.46	cps
Indium	115-2	3754428	3734151	3742791	3743790	0.27	cps
Iron	56-2	93110425	93198395	93304292	93204371	0.10	cps
Iron	57-2	2307644	2353355	2280426	2313809	1.59	cps
Iron	54-2	5082131	5111933	5096340	5096801	0.29	cps
Krypton	83-1	153	203	190	182	14.21	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:40:52	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20102028	20900300	20792033	20598120	2.10	cps
Lead	207-1	18002394	18338412	18441316	18260707	1.26	cps
Lead	208-1	81758438	83332736	84189545	83093573	1.48	cps
Lithium	6-1	1189646	1187143	1216609	1197800	1.36	cps
Magnesium	24-2	18516601	18449258	18281898	18415919	0.66	cps
Manganese	55-2	16776418	16622050	16867283	16755250	0.74	cps
Molybdenum	94-1	15679904	15883937	15857248	15807029	0.70	cps
Molybdenum	95-1	22606481	22788721	22891650	22762284	0.63	cps
Molybdenum	96-1	24993620	25065506	25077125	25045417	0.18	cps
Molybdenum	97-1	14124200	14174470	14349274	14215981	0.83	cps
Molybdenum	98-1	36903780	36718520	37053820	36892040	0.46	cps
Neodymium	150-1	437	480	480	466	5.37	cps
Neodymium	150-2	127	173	170	157	16.62	cps
Nickel	60-2	741958	742028	737090	740359	0.38	cps
Phosphorus	31-2	110915	111714	110509	111046	0.55	cps
Potassium	39-2	12732233	12594334	12610382	12645650	0.60	cps
Rhodium	103-1	7670007	7419640	7564369	7551339	1.66	cps
Rhodium	103-2	5008694	5024607	4978394	5003898	0.47	cps
Scandium	45-1	4059716	4049794	4052218	4053909	0.13	cps
Scandium	45-2	479013	477125	476961	477700	0.24	cps
Selenium	82-1	68668	69422	69110	69067	0.55	cps
Selenium	77-2	9660	9500	9523	9561	0.90	cps
Selenium	78-2	33668	33097	32369	33045	1.97	cps
Silicon	28-1	27727330	27604971	27547005	27626436	0.33	cps
Silver	107-1	5930713	5956084	5936756	5941184	0.22	cps
Silver	109-1	5652219	5726582	5662623	5680475	0.71	cps
Sodium	23-2	29800715	29490936	29241546	29511066	0.95	cps
Strontium	86-1	1504022	1507886	1511068	1507658	0.23	cps
Strontium	88-1	13122914	13292929	13426727	13280857	1.15	cps
Sulfur	34-1	402972	403559	399996	402176	0.48	cps
Terbium	159-1	11903322	11947091	11805212	11885209	0.61	cps
Terbium	159-2	8738309	8752617	8659934	8716953	0.57	cps
Thallium	203-1	5170996	5245334	5343848	5253393	1.65	cps
Thallium	205-1	12380402	12691836	12689363	12587200	1.42	cps
Tin	118-1	4033634	4123217	4100046	4085632	1.14	cps
Titanium	47-1	4891559	4909481	4900456	4900499	0.18	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:40:52	DataFile Name :	009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16877027	17212673	17423320	17171007	1.60	cps
Vanadium	51-2	1774914	1825126	1782325	1794122	1.51	cps
Yttrium	89-1	14512741	14559935	14448022	14506900	0.39	cps
Yttrium	89-2	4797353	4833298	4780138	4803596	0.56	cps
Zinc	66-2	3743418	3747908	3729862	3740396	0.25	cps
Zirconium	90-1	7640217	7739167	7731613	7703666	0.71	cps
Zirconium	91-1	1711081	1727042	1748046	1728723	1.07	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:43:39	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4692518	4684565	4639475	4672186	0.61	cps
Antimony	121-1	9839063	9897882	9821903	9852949	0.40	cps
Arsenic	75-2	547202	549249	551246	549233	0.37	cps
Barium	135-1	12667040	12717875	12546025	12643646	0.70	cps
Barium	137-1	21774462	22020455	21769008	21854642	0.66	cps
Beryllium	9-1	1034010	1056991	1023829	1038276	1.64	cps
Bismuth	209-1	7287426	7357104	7270526	7305019	0.63	cps
Bismuth	209-2	5936893	5898662	5947383	5927646	0.43	cps
Bromine	81-1	12495	12676	13216	12796	2.93	cps
Bromine	81-2	70	130	103	101	29.73	cps
Cadmium	108-1	173014	177913	176117	175682	1.41	cps
Cadmium	106-1	253133	251511	251505	252050	0.37	cps
Cadmium	111-1	2443456	2430580	2443025	2439021	0.30	cps
Calcium	43-1	2088256	2099656	2070425	2086112	0.71	cps
Calcium	44-1	34073202	34304161	34111104	34162822	0.36	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4039465	3997720	3993270	4010152	0.64	cps
Cobalt	59-2	6046625	5989293	6066438	6034119	0.66	cps
Copper	63-2	38525021	38980954	38562309	38689428	0.65	cps
Dysprosium	156-1	307	293	290	297	2.97	cps
Dysprosium	156-2	800	870	850	840	4.29	cps
Erbium	164-1	230	307	300	279	15.23	cps
Erbium	164-2	177	183	180	180	1.85	cps
Gadolinium	160-1	170	187	213	190	11.51	cps
Gadolinium	160-2	543	600	513	552	7.97	cps
Holmium	165-1	11909190	11949813	11898286	11919096	0.23	cps
Holmium	165-2	8965214	8903050	8928690	8932318	0.35	cps
Indium	115-1	8325097	8309109	8295196	8309801	0.18	cps
Indium	115-2	3679072	3726700	3670591	3692121	0.82	cps
Iron	56-2	184950384	183710877	184365584	184342282	0.34	cps
Iron	57-2	4602837	4576570	4624903	4601437	0.53	cps
Iron	54-2	10164338	10075554	10052203	10097365	0.59	cps
Krypton	83-1	193	227	157	192	18.21	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:43:39	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	41475230	41836947	41628787	41646988	0.44	cps
Lead	207-1	36808983	36938984	36914614	36887527	0.19	cps
Lead	208-1	167445505	168899600	168045597	168130234	0.43	cps
Lithium	6-1	1193706	1191041	1164488	1183078	1.37	cps
Magnesium	24-2	36881351	36817680	36713629	36804220	0.23	cps
Manganese	55-2	33259915	32964753	33119183	33114617	0.45	cps
Molybdenum	94-1	32018594	32125288	32052177	32065353	0.17	cps
Molybdenum	95-1	45936629	46376324	46242009	46184988	0.49	cps
Molybdenum	96-1	50553534	50729311	50814918	50699254	0.26	cps
Molybdenum	97-1	28811495	28839295	28887646	28846145	0.13	cps
Molybdenum	98-1	74459462	74135979	74433902	74343114	0.24	cps
Neodymium	150-1	877	803	857	846	4.48	cps
Neodymium	150-2	293	300	317	303	3.96	cps
Nickel	60-2	1442716	1447364	1450256	1446779	0.26	cps
Phosphorus	31-2	223734	222443	224116	223431	0.39	cps
Potassium	39-2	25473009	25330615	25400302	25401309	0.28	cps
Rhodium	103-1	7370970	7426921	7447870	7415254	0.54	cps
Rhodium	103-2	4899160	4983710	4912811	4931894	0.92	cps
Scandium	45-1	4042801	4042030	4043950	4042927	0.02	cps
Scandium	45-2	479764	479309	482005	480359	0.30	cps
Selenium	82-1	137110	136990	136474	136858	0.25	cps
Selenium	77-2	19420	19079	19610	19369	1.39	cps
Selenium	78-2	64801	62943	64181	63975	1.48	cps
Silicon	28-1	53066719	52210349	52209351	52495473	0.94	cps
Silver	107-1	11783192	11858661	11740115	11793990	0.51	cps
Silver	109-1	11167169	11219134	11245930	11210744	0.36	cps
Sodium	23-2	59158684	59145989	58517059	58940577	0.62	cps
Strontium	86-1	3095390	3098896	3069808	3088031	0.51	cps
Strontium	88-1	26887440	27040980	26940682	26956367	0.29	cps
Sulfur	34-1	679190	677360	679228	678592	0.16	cps
Terbium	159-1	12083713	12050741	11958545	12031000	0.54	cps
Terbium	159-2	8851628	8715401	8780388	8782472	0.78	cps
Thallium	203-1	10665207	10725865	10555762	10648944	0.81	cps
Thallium	205-1	25394987	25896272	25380716	25557325	1.15	cps
Tin	118-1	8082533	8228741	8223263	8178179	1.01	cps
Titanium	47-1	9904905	9924117	9922417	9917147	0.11	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:43:39	DataFile Name :	010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	35168083	35518981	34858835	35181966	0.94	cps
Vanadium	51-2	3594136	3596568	3572275	3587659	0.37	cps
Yttrium	89-1	14392074	14576303	14550839	14506405	0.69	cps
Yttrium	89-2	4839754	4886965	4864810	4863843	0.49	cps
Zinc	66-2	7378486	7385574	7322074	7362045	0.47	cps
Zirconium	90-1	15643816	15747635	15610678	15667377	0.46	cps
Zirconium	91-1	3505101	3487037	3481541	3491226	0.35	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:46:23	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	24291121	24374081	24389551	24351585	0.22	cps
Antimony	121-1	8403	7112	6295	7270	14.62	cps
Arsenic	75-2	487	497	393	459	12.42	cps
Barium	135-1	9930	8816	8129	8958	10.15	cps
Barium	137-1	17835	15779	14100	15905	11.76	cps
Beryllium	9-1	857	633	603	698	19.84	cps
Bismuth	209-1	6362894	6346120	6336879	6348631	0.21	cps
Bismuth	209-2	5230784	5229910	5250451	5237048	0.22	cps
Bromine	81-1	13850	14257	14771	14293	3.23	cps
Bromine	81-2	133	120	127	127	5.27	cps
Cadmium	108-1	157	170	130	152	13.38	cps
Cadmium	106-1	5318	4811	4994	5041	5.09	cps
Cadmium	111-1	5146	4405	4312	4621	9.89	cps
Calcium	43-1	10361730	10649775	10685503	10565669	1.68	cps
Calcium	44-1	169865291	174934851	175536524	173445555	1.80	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	11884	10590	9880	10785	9.42	cps
Cobalt	59-2	18004	18388	18111	18168	1.09	cps
Copper	63-2	15538	15268	14587	15131	3.24	cps
Dysprosium	156-1	327	393	390	370	10.15	cps
Dysprosium	156-2	387	347	377	370	5.63	cps
Erbium	164-1	387	420	450	419	7.56	cps
Erbium	164-2	353	320	353	342	5.62	cps
Gadolinium	160-1	320	410	400	377	13.10	cps
Gadolinium	160-2	797	670	777	748	9.11	cps
Holmium	165-1	11383814	11368620	11150349	11300928	1.16	cps
Holmium	165-2	8600730	8582982	8573489	8585734	0.16	cps
Indium	115-1	7868487	7787652	7968841	7874993	1.15	cps
Indium	115-2	3617989	3615164	3600155	3611103	0.27	cps
Iron	56-2	925598866	924694333	934586199	928293133	0.59	cps
Iron	57-2	23221916	23458612	23317279	23332602	0.51	cps
Iron	54-2	50031996	50054693	50429073	50171920	0.44	cps
Krypton	83-1	220	280	267	256	12.33	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:46:23	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	22763	18256	16050	19023	17.99	cps
Lead	207-1	19658	15783	13520	16320	19.02	cps
Lead	208-1	90087	73195	62897	75393	18.21	cps
Lithium	6-1	1125725	1132733	1102359	1120272	1.42	cps
Magnesium	24-2	192747750	192973637	195378170	193699853	0.75	cps
Manganese	55-2	26136	25655	24817	25536	2.61	cps
Molybdenum	94-1	30091	26337	24424	26951	10.70	cps
Molybdenum	95-1	28458	23552	20705	24238	16.18	cps
Molybdenum	96-1	42462	36639	33432	37511	12.20	cps
Molybdenum	97-1	17975	14691	12535	15067	18.18	cps
Molybdenum	98-1	45501	37167	31962	38210	17.87	cps
Neodymium	150-1	187	197	160	181	10.47	cps
Neodymium	150-2	157	133	130	140	10.38	cps
Nickel	60-2	9240	8496	8849	8862	4.20	cps
Phosphorus	31-2	307	393	420	373	15.87	cps
Potassium	39-2	135293168	133699921	136000528	134997872	0.87	cps
Rhodium	103-1	6720647	6873131	6915607	6836462	1.50	cps
Rhodium	103-2	4559244	4633248	4631827	4608106	0.92	cps
Scandium	45-1	4007443	4095003	4117986	4073477	1.43	cps
Scandium	45-2	492636	491461	495816	493304	0.46	cps
Selenium	82-1	513	453	562	509	10.66	cps
Selenium	77-2	10	3	3	6	69.34	cps
Selenium	78-2	530	667	513	570	14.76	cps
Silicon	28-1	687211	685259	684034	685501	0.23	cps
Silver	107-1	6895	5705	4721	5773	18.86	cps
Silver	109-1	6548	5211	4487	5416	19.31	cps
Sodium	23-2	298992029	301596949	303019522	301202833	0.68	cps
Strontium	86-1	10801	10834	10944	10860	0.69	cps
Strontium	88-1	93303	92629	91428	92454	1.03	cps
Sulfur	34-1	119274	124777	130773	124941	4.60	cps
Terbium	159-1	11213793	11333778	11286611	11278061	0.54	cps
Terbium	159-2	8298739	8335073	8357812	8330541	0.36	cps
Thallium	203-1	6005	4474	3684	4721	24.99	cps
Thallium	205-1	13447	10648	8773	10956	21.47	cps
Tin	118-1	6358	5148	4818	5441	14.91	cps
Titanium	47-1	5935	4841	4361	5045	15.99	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	S08	Instrumnet Name :	P7
Client Sample ID :	S08	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:46:23	DataFile Name :	011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16701	13363	10891	13652	21.36	cps
Vanadium	51-2	1973	1820	1707	1833	7.30	cps
Yttrium	89-1	14106153	14117499	14264739	14162797	0.62	cps
Yttrium	89-2	4797646	4835401	4845639	4826229	0.52	cps
Zinc	66-2	5194	5104	5028	5109	1.63	cps
Zirconium	90-1	34885	33562	32312	33586	3.83	cps
Zirconium	91-1	7759	7349	7148	7419	4.19	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICV001	Instrumnet Name :	P7
Client Sample ID :	ICV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:51:36	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	130953	130667	130620	130746	0.14	cps
Antimony	121-1	2038058	2060778	2081586	2060141	1.06	cps
Arsenic	75-2	124197	124543	123747	124163	0.32	cps
Barium	135-1	257888	264224	260595	260902	1.22	cps
Barium	137-1	448456	453062	453260	451593	0.60	cps
Beryllium	9-1	115666	116233	115246	115715	0.43	cps
Bismuth	209-1	7415294	7506514	7499562	7473790	0.68	cps
Bismuth	209-2	6210301	6210550	6292092	6237648	0.76	cps
Bromine	81-1	15432	15378	15378	15396	0.20	cps
Bromine	81-2	90	87	100	92	7.52	cps
Cadmium	108-1	17537	17150	17327	17338	1.12	cps
Cadmium	106-1	28455	28992	28782	28743	0.94	cps
Cadmium	111-1	260791	265812	269208	265270	1.60	cps
Calcium	43-1	56856	54491	53096	54814	3.47	cps
Calcium	44-1	942721	902906	894324	913317	2.83	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	462992	458716	457345	459684	0.64	cps
Cobalt	59-2	689821	689218	691732	690257	0.19	cps
Copper	63-2	463689	467065	461151	463968	0.64	cps
Dysprosium	156-1	23	20	0	14	87.37	cps
Dysprosium	156-2	30	17	27	24	28.38	cps
Erbium	164-1	57	70	80	69	16.99	cps
Erbium	164-2	40	30	63	44	38.48	cps
Gadolinium	160-1	47	57	53	52	9.75	cps
Gadolinium	160-2	450	457	460	456	1.12	cps
Holmium	165-1	11921238	12010796	11878460	11936831	0.57	cps
Holmium	165-2	9019163	9040990	8994762	9018305	0.26	cps
Indium	115-1	9076154	9098461	9096823	9090480	0.14	cps
Indium	115-2	4089442	4052654	3997459	4046519	1.14	cps
Iron	56-2	8510631	8601852	8526716	8546400	0.57	cps
Iron	57-2	220325	221549	219351	220408	0.50	cps
Iron	54-2	498025	501267	495057	498116	0.62	cps
Krypton	83-1	200	160	167	176	12.21	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICV001	Instrumnet Name :	P7
Client Sample ID :	ICV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:51:36	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1617354	1635908	1651885	1635049	1.06	cps
Lead	207-1	1348653	1356039	1380899	1361864	1.24	cps
Lead	208-1	6611326	6651700	6719379	6660802	0.82	cps
Lithium	6-1	1241208	1220142	1232935	1231428	0.86	cps
Magnesium	24-2	494576	491588	484628	490264	1.04	cps
Manganese	55-2	376050	374594	378381	376342	0.51	cps
Molybdenum	94-1	4231	2640	1983	2951	39.15	cps
Molybdenum	95-1	5935	3444	2817	4065	40.57	cps
Molybdenum	96-1	6522	4124	3524	4723	33.58	cps
Molybdenum	97-1	3347	2157	1890	2465	31.47	cps
Molybdenum	98-1	9470	5678	4717	6622	37.95	cps
Neodymium	150-1	20	17	17	18	10.81	cps
Neodymium	150-2	10	17	10	12	31.50	cps
Nickel	60-2	178093	176353	175645	176697	0.71	cps
Phosphorus	31-2	370	363	337	357	4.95	cps
Potassium	39-2	1215234	1220702	1209403	1215113	0.47	cps
Rhodium	103-1	8469603	8327348	8400774	8399242	0.85	cps
Rhodium	103-2	5544185	5539202	5523271	5535553	0.20	cps
Scandium	45-1	4554508	4532954	4569923	4552462	0.41	cps
Scandium	45-2	530300	531790	533621	531904	0.31	cps
Selenium	82-1	31220	31808	31984	31670	1.26	cps
Selenium	77-2	4494	4657	4467	4540	2.27	cps
Selenium	78-2	15245	15538	15158	15314	1.30	cps
Silicon	28-1	696726	694427	693055	694736	0.27	cps
Silver	107-1	597026	610744	618367	608712	1.78	cps
Silver	109-1	566833	577358	577342	573844	1.06	cps
Sodium	23-2	1350537	1384428	1387388	1374118	1.49	cps
Strontium	86-1	1443	1383	1317	1381	4.59	cps
Strontium	88-1	10177	8679	8563	9140	9.85	cps
Sulfur	34-1	148900	149415	147938	148751	0.50	cps
Terbium	159-1	12139537	12066307	12014614	12073486	0.52	cps
Terbium	159-2	8863213	8912860	8856773	8877615	0.35	cps
Thallium	203-1	2124870	2148262	2141787	2138306	0.56	cps
Thallium	205-1	5075469	5144620	5130874	5116987	0.72	cps
Tin	118-1	2454	1927	1837	2072	16.08	cps
Titanium	47-1	1263	623	507	798	51.07	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICV001	Instrumnet Name :	P7
Client Sample ID :	ICV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:51:36	DataFile Name :	012ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2974	1480	1007	1820	56.40	cps
Vanadium	51-2	396866	395931	393003	395267	0.51	cps
Yttrium	89-1	15637041	15526074	15565149	15576088	0.36	cps
Yttrium	89-2	5203354	5157398	5207967	5189573	0.54	cps
Zinc	66-2	169341	167825	167153	168107	0.67	cps
Zirconium	90-1	2587	1643	1403	1878	33.32	cps
Zirconium	91-1	660	543	450	551	19.09	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICB001	Instrumnet Name :	P7
Client Sample ID :	ICB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:55:10	DataFile Name :	013CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	617	613	567	599	4.67	cps
Antimony	121-1	1620	1360	1193	1391	15.46	cps
Arsenic	75-2	33	37	43	38	13.48	cps
Barium	135-1	187	203	180	190	6.33	cps
Barium	137-1	333	347	257	312	15.56	cps
Beryllium	9-1	217	150	157	174	21.05	cps
Bismuth	209-1	7330652	7300745	7386449	7339282	0.59	cps
Bismuth	209-2	6306931	6208761	6148926	6221539	1.28	cps
Bromine	81-1	14928	14994	14944	14955	0.23	cps
Bromine	81-2	113	173	130	139	22.30	cps
Cadmium	108-1	20	20	10	17	34.64	cps
Cadmium	106-1	5188	5074	5328	5197	2.44	cps
Cadmium	111-1	3814	3665	3832	3770	2.44	cps
Calcium	43-1	527	447	477	483	8.36	cps
Calcium	44-1	14047	13577	12906	13510	4.24	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1340	1413	1303	1352	4.14	cps
Cobalt	59-2	347	237	247	277	21.99	cps
Copper	63-2	2664	2547	2764	2658	4.08	cps
Dysprosium	156-1	13	23	10	16	44.60	cps
Dysprosium	156-2	7	13	10	10	33.30	cps
Erbium	164-1	63	63	47	58	16.65	cps
Erbium	164-2	57	57	53	56	3.47	cps
Gadolinium	160-1	77	33	40	50	46.67	cps
Gadolinium	160-2	520	540	463	508	7.83	cps
Holmium	165-1	11901488	11833166	11885628	11873427	0.30	cps
Holmium	165-2	8977853	8857623	8820545	8885340	0.93	cps
Indium	115-1	9115874	9144113	9093810	9117932	0.28	cps
Indium	115-2	4096735	4093407	4056981	4082374	0.54	cps
Iron	56-2	41651	39729	38660	40013	3.79	cps
Iron	57-2	1800	1847	1870	1839	1.94	cps
Iron	54-2	4164	4027	4084	4092	1.68	cps
Krypton	83-1	257	233	180	223	17.60	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICB001	Instrumnet Name :	P7
Client Sample ID :	ICB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:55:10	DataFile Name :	013CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2070	1850	1630	1850	11.89	cps
Lead	207-1	1623	1573	1413	1537	7.14	cps
Lead	208-1	7858	7244	6617	7240	8.57	cps
Lithium	6-1	1246653	1204811	1230201	1227221	1.72	cps
Magnesium	24-2	3524	3110	3194	3276	6.67	cps
Manganese	55-2	597	493	513	534	10.25	cps
Molybdenum	94-1	473	487	453	471	3.56	cps
Molybdenum	95-1	530	443	410	461	13.43	cps
Molybdenum	96-1	610	520	527	552	9.08	cps
Molybdenum	97-1	303	267	270	280	7.24	cps
Molybdenum	98-1	807	677	667	717	10.90	cps
Neodymium	150-1	3	3	3	3	0.00	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	2867	3064	3187	3039	5.31	cps
Phosphorus	31-2	307	350	323	327	6.69	cps
Potassium	39-2	64901	65868	65614	65461	0.77	cps
Rhodium	103-1	8417354	8439233	8499465	8452017	0.50	cps
Rhodium	103-2	5599382	5455811	5487936	5514376	1.37	cps
Scandium	45-1	4532394	4553064	4579481	4554980	0.52	cps
Scandium	45-2	526782	531011	529583	529126	0.41	cps
Selenium	82-1	301	354	378	345	11.39	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	647	623	510	593	12.32	cps
Silicon	28-1	699053	697124	696905	697694	0.17	cps
Silver	107-1	620	540	450	537	15.85	cps
Silver	109-1	590	463	397	483	20.32	cps
Sodium	23-2	40483	40313	40373	40389	0.21	cps
Strontium	86-1	373	387	343	368	6.04	cps
Strontium	88-1	247	280	270	266	6.44	cps
Sulfur	34-1	147551	147521	147887	147653	0.14	cps
Terbium	159-1	11924897	11937046	11934285	11932076	0.05	cps
Terbium	159-2	8858538	8798395	8706031	8787655	0.87	cps
Thallium	203-1	1227	923	717	956	26.85	cps
Thallium	205-1	2684	1994	1737	2138	22.90	cps
Tin	118-1	1567	1453	1410	1477	5.48	cps
Titanium	47-1	120	137	123	127	6.96	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICB001	Instrumnet Name :	P7
Client Sample ID :	ICB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 14:55:10	DataFile Name :	013CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	243	173	127	181	32.42	cps
Vanadium	51-2	67	107	77	83	24.98	cps
Yttrium	89-1	15583619	15662701	15557276	15601199	0.35	cps
Yttrium	89-2	5277055	5071601	5190394	5179683	1.99	cps
Zinc	66-2	723	637	673	678	6.42	cps
Zirconium	90-1	570	657	567	598	8.54	cps
Zirconium	91-1	120	123	143	129	9.79	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSA001	Instrumnet Name :	P7
Client Sample ID :	ICSA001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:01:48	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	21670010	21706780	21651014	21675934	0.13	cps
Antimony	121-1	10224	10007	10457	10229	2.20	cps
Arsenic	75-2	207	200	200	202	1.90	cps
Barium	135-1	3344	3327	3410	3360	1.31	cps
Barium	137-1	5985	6018	5801	5935	1.97	cps
Beryllium	9-1	407	417	347	390	9.71	cps
Bismuth	209-1	6985943	7064196	7040346	7030162	0.57	cps
Bismuth	209-2	5901929	5871773	5868942	5880881	0.31	cps
Bromine	81-1	13937	14547	14577	14354	2.52	cps
Bromine	81-2	263	223	210	232	11.95	cps
Cadmium	108-1	1497	1367	1530	1465	5.89	cps
Cadmium	106-1	4844	4617	4637	4700	2.67	cps
Cadmium	111-1	4120	4292	4015	4143	3.38	cps
Calcium	43-1	2086013	2105451	2091646	2094370	0.48	cps
Calcium	44-1	33964284	34567664	34562023	34364657	1.01	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	81783	81602	81944	81777	0.21	cps
Cobalt	59-2	7956	7775	7792	7841	1.27	cps
Copper	63-2	31840	32438	32385	32221	1.03	cps
Dysprosium	156-1	43	40	57	47	18.90	cps
Dysprosium	156-2	73	43	40	52	35.15	cps
Erbium	164-1	113	100	73	96	21.32	cps
Erbium	164-2	70	50	53	58	18.55	cps
Gadolinium	160-1	93	77	67	79	17.07	cps
Gadolinium	160-2	557	480	510	516	7.49	cps
Holmium	165-1	11858272	11753445	11934581	11848766	0.77	cps
Holmium	165-2	8950307	8934237	8866830	8917125	0.50	cps
Indium	115-1	8568385	8550897	8495844	8538375	0.44	cps
Indium	115-2	3833320	3854318	3820428	3836022	0.45	cps
Iron	56-2	379614208	378553168	383223208	380463528	0.64	cps
Iron	57-2	9440515	9316969	9361545	9373010	0.67	cps
Iron	54-2	20635415	20585075	20432215	20550902	0.51	cps
Krypton	83-1	210	187	197	198	5.92	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSA001	Instrumnet Name :	P7
Client Sample ID :	ICSA001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:01:48	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	39230	38524	38187	38647	1.38	cps
Lead	207-1	30798	30193	29819	30270	1.63	cps
Lead	208-1	147960	144320	142522	144934	1.91	cps
Lithium	6-1	1238893	1203604	1182804	1208434	2.35	cps
Magnesium	24-2	34942404	35045065	34765664	34917711	0.40	cps
Manganese	55-2	27008	26837	26684	26843	0.60	cps
Molybdenum	94-1	5005510	5008644	5098263	5037472	1.05	cps
Molybdenum	95-1	8849108	8907932	8947350	8901464	0.56	cps
Molybdenum	96-1	9518615	9651733	9607421	9592590	0.71	cps
Molybdenum	97-1	5431223	5524230	5584248	5513234	1.40	cps
Molybdenum	98-1	14112073	14417482	14295230	14274928	1.08	cps
Neodymium	150-1	47	50	23	40	36.33	cps
Neodymium	150-2	30	30	53	38	35.66	cps
Nickel	60-2	10033	9950	10310	10098	1.87	cps
Phosphorus	31-2	1163297	1154754	1158879	1158977	0.37	cps
Potassium	39-2	51453979	51186539	51430604	51357041	0.29	cps
Rhodium	103-1	7600476	7524173	7502961	7542537	0.68	cps
Rhodium	103-2	4988921	5053749	5004132	5015601	0.68	cps
Scandium	45-1	4252296	4193185	4251763	4232415	0.80	cps
Scandium	45-2	495911	500407	500005	498775	0.50	cps
Selenium	82-1	353	421	391	388	8.75	cps
Selenium	77-2	3	7	0	3	100.05	cps
Selenium	78-2	503	530	553	529	4.73	cps
Silicon	28-1	654325	658077	668283	660228	1.09	cps
Silver	107-1	720	583	437	580	24.43	cps
Silver	109-1	637	473	503	538	16.17	cps
Sodium	23-2	59020832	58449792	59074172	58848266	0.59	cps
Strontium	86-1	95058	97147	96262	96156	1.09	cps
Strontium	88-1	834787	841851	855284	843974	1.23	cps
Sulfur	34-1	3035755	2999774	3027656	3021062	0.62	cps
Terbium	159-1	11824628	11889559	11856455	11856881	0.27	cps
Terbium	159-2	8800517	8771168	8683743	8751809	0.69	cps
Thallium	203-1	1860	1807	1730	1799	3.63	cps
Thallium	205-1	4274	4367	3994	4212	4.61	cps
Tin	118-1	4814	4711	4317	4614	5.68	cps
Titanium	47-1	1985716	2038421	2050705	2024947	1.71	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSA001	Instrumnet Name :	P7
Client Sample ID :	ICSA001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:01:48	DataFile Name :	015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	547	590	497	544	8.58	cps
Vanadium	51-2	743	787	803	778	3.98	cps
Yttrium	89-1	14891844	14664790	14917455	14824696	0.94	cps
Yttrium	89-2	4994590	5093739	4942082	5010137	1.54	cps
Zinc	66-2	8583	8629	8933	8715	2.18	cps
Zirconium	90-1	910	710	820	813	12.32	cps
Zirconium	91-1	173	113	183	157	24.17	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSAB001	Instrumnet Name :	P7
Client Sample ID :	ICSAB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:04:51	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	22382831	22110511	22125015	22206119	0.69	cps
Antimony	121-1	200075	200501	202069	200881	0.52	cps
Arsenic	75-2	11645	11398	11775	11606	1.65	cps
Barium	135-1	53105	53798	52771	53224	0.98	cps
Barium	137-1	91874	93779	92173	92609	1.11	cps
Beryllium	9-1	20560	20861	20787	20736	0.76	cps
Bismuth	209-1	7187028	7169796	7174271	7177032	0.12	cps
Bismuth	209-2	6032150	5985136	5903657	5973647	1.09	cps
Bromine	81-1	15598	15672	15792	15687	0.62	cps
Bromine	81-2	287	237	247	257	10.31	cps
Cadmium	108-1	4391	4607	4521	4506	2.42	cps
Cadmium	106-1	9000	8886	8879	8922	0.76	cps
Cadmium	111-1	51369	50299	50729	50799	1.06	cps
Calcium	43-1	2179340	2192321	2192389	2188017	0.34	cps
Calcium	44-1	35876923	35582233	35704128	35721094	0.41	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	166003	165476	166467	165982	0.30	cps
Cobalt	59-2	132434	132683	132092	132403	0.22	cps
Copper	63-2	112660	112687	113137	112828	0.24	cps
Dysprosium	156-1	47	33	33	38	20.39	cps
Dysprosium	156-2	90	50	50	63	36.46	cps
Erbium	164-1	93	73	80	82	12.39	cps
Erbium	164-2	80	100	57	79	27.49	cps
Gadolinium	160-1	83	67	97	82	18.28	cps
Gadolinium	160-2	453	473	487	471	3.56	cps
Holmium	165-1	12065449	12125231	12094291	12094990	0.25	cps
Holmium	165-2	9139431	9238788	9065600	9147940	0.95	cps
Indium	115-1	8747959	8703455	8698973	8716796	0.31	cps
Indium	115-2	3959025	3945947	3896171	3933714	0.84	cps
Iron	56-2	388981488	386178474	393303994	389487985	0.92	cps
Iron	57-2	9728764	9692468	9705747	9708993	0.19	cps
Iron	54-2	21125532	21246308	21066886	21146242	0.43	cps
Krypton	83-1	157	230	210	199	19.06	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSAB001	Instrumnet Name :	P7
Client Sample ID :	ICSAB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:04:51	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	193344	194843	194653	194280	0.42	cps
Lead	207-1	160583	161976	162526	161695	0.62	cps
Lead	208-1	743558	751512	755561	750210	0.81	cps
Lithium	6-1	1181358	1190281	1165453	1179030	1.07	cps
Magnesium	24-2	35998008	35498564	35279205	35591926	1.04	cps
Manganese	55-2	96856	95574	95963	96131	0.68	cps
Molybdenum	94-1	5296469	5276015	5273517	5282000	0.24	cps
Molybdenum	95-1	9285771	9279575	9268709	9278018	0.09	cps
Molybdenum	96-1	9890183	10021167	10029750	9980367	0.78	cps
Molybdenum	97-1	5794535	5858657	5788545	5813912	0.67	cps
Molybdenum	98-1	14895794	15033346	15136059	15021733	0.80	cps
Neodymium	150-1	53	67	47	56	18.33	cps
Neodymium	150-2	40	33	50	41	20.41	cps
Nickel	60-2	39806	40541	40324	40224	0.94	cps
Phosphorus	31-2	1191547	1162384	1179743	1177891	1.25	cps
Potassium	39-2	53649509	53140423	52441106	53077013	1.14	cps
Rhodium	103-1	7729029	7693728	7731309	7718022	0.27	cps
Rhodium	103-2	5156528	5116789	5125017	5132778	0.41	cps
Scandium	45-1	4302466	4249213	4245009	4265563	0.75	cps
Scandium	45-2	510238	499479	502834	504183	1.09	cps
Selenium	82-1	3239	3037	3209	3162	3.44	cps
Selenium	77-2	383	420	367	390	7.00	cps
Selenium	78-2	1840	1800	1893	1845	2.54	cps
Silicon	28-1	696773	699165	699314	698417	0.20	cps
Silver	107-1	219619	227064	225450	224044	1.75	cps
Silver	109-1	210221	212720	210394	211112	0.66	cps
Sodium	23-2	60931026	60263627	59914531	60369728	0.86	cps
Strontium	86-1	102007	101275	102278	101853	0.51	cps
Strontium	88-1	891739	891537	890315	891197	0.09	cps
Sulfur	34-1	3128013	3109384	3051416	3096271	1.29	cps
Terbium	159-1	11998465	12075451	12243392	12105769	1.03	cps
Terbium	159-2	9123331	8843929	8912146	8959802	1.63	cps
Thallium	203-1	190543	194823	194039	193135	1.18	cps
Thallium	205-1	455810	463111	465631	461517	1.11	cps
Tin	118-1	3140	3084	2960	3061	3.01	cps
Titanium	47-1	2069817	2141904	2089652	2100458	1.77	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	ICSAB001	Instrumnet Name :	P7
Client Sample ID :	ICSAB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:04:51	DataFile Name :	016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	587	553	563	568	3.01	cps
Vanadium	51-2	75109	72955	73223	73762	1.59	cps
Yttrium	89-1	15450057	15447694	14996307	15298019	1.71	cps
Yttrium	89-2	5110204	5044850	5068275	5074443	0.65	cps
Zinc	66-2	24610	23696	23959	24088	1.95	cps
Zirconium	90-1	1090	807	690	862	23.87	cps
Zirconium	91-1	207	183	147	179	16.91	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV001	Instrumnet Name :	P7
Client Sample ID :	CCV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:07:57	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	12248329	12192604	12143770	12194901	0.43	cps
Antimony	121-1	4884056	5020748	4971092	4958632	1.40	cps
Arsenic	75-2	289882	290221	287957	289353	0.42	cps
Barium	135-1	6472315	6516185	6448952	6479151	0.53	cps
Barium	137-1	11075046	11176697	11222483	11158075	0.68	cps
Beryllium	9-1	497453	506167	509663	504428	1.25	cps
Bismuth	209-1	7363556	7128401	6977972	7156643	2.72	cps
Bismuth	209-2	5745319	5677846	5623090	5682085	1.08	cps
Bromine	81-1	15248	15268	15478	15331	0.83	cps
Bromine	81-2	107	143	123	124	14.75	cps
Cadmium	108-1	88666	90476	91241	90127	1.47	cps
Cadmium	106-1	132548	131821	133341	132570	0.57	cps
Cadmium	111-1	1208908	1220121	1223328	1217452	0.62	cps
Calcium	43-1	5463229	5606630	5531053	5533638	1.30	cps
Calcium	44-1	90610872	92505552	91604015	91573480	1.03	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2132556	2118208	2115090	2121951	0.44	cps
Cobalt	59-2	3236155	3246456	3229161	3237257	0.27	cps
Copper	63-2	20402911	20391202	20146988	20313700	0.71	cps
Dysprosium	156-1	297	283	293	291	2.38	cps
Dysprosium	156-2	617	653	593	621	4.87	cps
Erbium	164-1	347	373	277	332	15.03	cps
Erbium	164-2	240	217	267	241	10.38	cps
Gadolinium	160-1	263	293	250	269	8.26	cps
Gadolinium	160-2	657	633	627	639	2.47	cps
Holmium	165-1	12508530	12033709	11933724	12158654	2.53	cps
Holmium	165-2	9001568	8903222	8874227	8926339	0.75	cps
Indium	115-1	8852822	8531134	8426061	8603339	2.58	cps
Indium	115-2	3793014	3714476	3794377	3767289	1.21	cps
Iron	56-2	485917713	486306473	479848073	484024086	0.75	cps
Iron	57-2	12093573	12169614	11925129	12062772	1.04	cps
Iron	54-2	26250474	26398570	25959324	26202789	0.85	cps
Krypton	83-1	280	167	220	222	25.52	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV001	Instrumnet Name :	P7
Client Sample ID :	CCV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:07:57	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20444294	20521521	20512518	20492777	0.21	cps
Lead	207-1	17988311	18168661	18146602	18101191	0.54	cps
Lead	208-1	82193595	83322120	82744308	82753341	0.68	cps
Lithium	6-1	1174953	1166875	1186567	1176132	0.84	cps
Magnesium	24-2	98901365	97783365	98440642	98375124	0.57	cps
Manganese	55-2	17347426	17316394	17053023	17238948	0.94	cps
Molybdenum	94-1	16528229	16766234	16587665	16627376	0.74	cps
Molybdenum	95-1	23782513	24252791	23846844	23960716	1.06	cps
Molybdenum	96-1	26280258	26445839	26367979	26364692	0.31	cps
Molybdenum	97-1	14990704	14955616	14943044	14963121	0.17	cps
Molybdenum	98-1	38675612	38551879	38718914	38648801	0.22	cps
Neodymium	150-1	510	533	590	544	7.56	cps
Neodymium	150-2	247	227	210	228	8.06	cps
Nickel	60-2	761477	764549	755304	760444	0.62	cps
Phosphorus	31-2	116136	116073	114624	115611	0.74	cps
Potassium	39-2	67650622	67640914	67460521	67584019	0.16	cps
Rhodium	103-1	7820017	7526085	7469345	7605149	2.48	cps
Rhodium	103-2	4927320	4777223	4881405	4861983	1.58	cps
Scandium	45-1	4459661	4313215	4311155	4361344	1.95	cps
Scandium	45-2	500348	498995	497950	499098	0.24	cps
Selenium	82-1	70049	71265	71306	70873	1.01	cps
Selenium	77-2	9850	9830	9827	9836	0.13	cps
Selenium	78-2	33428	33531	32636	33198	1.48	cps
Silicon	28-1	29477532	29535112	29376129	29462924	0.27	cps
Silver	107-1	5869376	5935558	5853143	5886026	0.74	cps
Silver	109-1	5526204	5655896	5636363	5606154	1.25	cps
Sodium	23-2	154674424	155022374	153786221	154494340	0.41	cps
Strontium	86-1	1602785	1617982	1602948	1607905	0.54	cps
Strontium	88-1	14011788	14131159	14030844	14057930	0.46	cps
Sulfur	34-1	412536	416774	415559	414956	0.53	cps
Terbium	159-1	12644507	12262301	12034686	12313831	2.50	cps
Terbium	159-2	8690503	8763395	8663482	8705793	0.59	cps
Thallium	203-1	5287480	5284315	5215183	5262326	0.78	cps
Thallium	205-1	12618556	12629851	12651770	12633392	0.13	cps
Tin	118-1	4126906	4190506	4140930	4152780	0.80	cps
Titanium	47-1	5181124	5202235	5190943	5191434	0.20	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV001	Instrumnet Name :	P7
Client Sample ID :	CCV001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:07:57	DataFile Name :	017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17451795	17796302	17405599	17551232	1.22	cps
Vanadium	51-2	1911697	1923544	1866812	1900684	1.57	cps
Yttrium	89-1	15587206	15080736	14901348	15189763	2.34	cps
Yttrium	89-2	5039062	4948570	4939653	4975762	1.11	cps
Zinc	66-2	3785121	3802617	3748029	3778589	0.74	cps
Zirconium	90-1	8149813	8319008	8210417	8226413	1.04	cps
Zirconium	91-1	1812686	1846166	1827274	1828709	0.92	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB001	Instrumnet Name :	P7
Client Sample ID :	CCB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:14:13	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2570	2327	2260	2386	6.84	cps
Antimony	121-1	787	610	597	664	15.96	cps
Arsenic	75-2	27	27	17	23	24.74	cps
Barium	135-1	510	433	393	446	13.31	cps
Barium	137-1	843	757	610	737	16.01	cps
Beryllium	9-1	200	153	163	172	14.27	cps
Bismuth	209-1	7757111	7661043	7612259	7676804	0.96	cps
Bismuth	209-2	6355901	6306764	6362520	6341728	0.48	cps
Bromine	81-1	14737	14744	15031	14838	1.13	cps
Bromine	81-2	143	187	237	189	24.73	cps
Cadmium	108-1	30	23	17	23	28.56	cps
Cadmium	106-1	5474	4544	4994	5004	9.30	cps
Cadmium	111-1	3901	3238	3568	3569	9.29	cps
Calcium	43-1	1334	890	847	1023	26.33	cps
Calcium	44-1	26550	19580	18398	21509	20.48	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1247	1243	1283	1258	1.76	cps
Cobalt	59-2	253	273	220	249	10.83	cps
Copper	63-2	3110	3164	3157	3144	0.92	cps
Dysprosium	156-1	10	0	17	9	94.38	cps
Dysprosium	156-2	7	7	10	8	24.71	cps
Erbium	164-1	63	60	27	50	40.55	cps
Erbium	164-2	63	33	23	40	52.05	cps
Gadolinium	160-1	43	47	37	42	12.06	cps
Gadolinium	160-2	500	547	513	520	4.62	cps
Holmium	165-1	12070101	12196164	12095988	12120751	0.55	cps
Holmium	165-2	9196658	9171038	9154548	9174081	0.23	cps
Indium	115-1	9255509	9212184	9149980	9205891	0.58	cps
Indium	115-2	4112027	4055794	4032924	4066915	1.00	cps
Iron	56-2	76426	74527	69928	73627	4.54	cps
Iron	57-2	2677	2777	2434	2629	6.72	cps
Iron	54-2	6071	6235	5791	6032	3.72	cps
Krypton	83-1	237	207	200	214	9.11	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB001	Instrumnet Name :	P7
Client Sample ID :	CCB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:14:13	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	6164	2660	2350	3725	56.86	cps
Lead	207-1	6395	2250	2350	3665	64.51	cps
Lead	208-1	29022	10632	9911	16522	65.56	cps
Lithium	6-1	1224617	1226964	1210028	1220536	0.75	cps
Magnesium	24-2	7949	7605	7002	7519	6.38	cps
Manganese	55-2	1087	1087	1047	1073	2.15	cps
Molybdenum	94-1	2277	2030	1647	1985	16.00	cps
Molybdenum	95-1	3067	2464	2330	2620	14.98	cps
Molybdenum	96-1	3407	2850	2407	2888	17.35	cps
Molybdenum	97-1	2060	1633	1393	1696	19.92	cps
Molybdenum	98-1	5028	3824	3764	4205	16.95	cps
Neodymium	150-1	3	3	7	4	43.40	cps
Neodymium	150-2	13	3	10	9	57.30	cps
Nickel	60-2	3014	2877	2724	2871	5.05	cps
Phosphorus	31-2	320	340	340	333	3.46	cps
Potassium	39-2	68825	67763	67257	67948	1.18	cps
Rhodium	103-1	8421232	8396037	8312558	8376609	0.68	cps
Rhodium	103-2	5566379	5527236	5478391	5524002	0.80	cps
Scandium	45-1	4449515	4413653	4442088	4435085	0.43	cps
Scandium	45-2	521434	515302	524506	520414	0.90	cps
Selenium	82-1	372	411	385	389	5.05	cps
Selenium	77-2	0	7	0	2	173.21	cps
Selenium	78-2	550	493	580	541	8.13	cps
Silicon	28-1	670819	668385	669246	669483	0.18	cps
Silver	107-1	780	793	653	742	10.41	cps
Silver	109-1	720	627	453	600	22.55	cps
Sodium	23-2	53165	51653	51840	52219	1.58	cps
Strontium	86-1	413	460	453	442	5.71	cps
Strontium	88-1	1363	1073	957	1131	18.51	cps
Sulfur	34-1	135985	135635	136009	135876	0.15	cps
Terbium	159-1	12395148	12178199	12315477	12296275	0.89	cps
Terbium	159-2	8918211	8899284	8846258	8887918	0.42	cps
Thallium	203-1	1057	1093	943	1031	7.58	cps
Thallium	205-1	3261	2290	2284	2612	21.54	cps
Tin	118-1	2403	1487	1657	1849	26.35	cps
Titanium	47-1	990	657	490	712	35.75	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB001	Instrumnet Name :	P7
Client Sample ID :	CCB001	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:14:13	DataFile Name :	019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3255	910	820	1662	83.08	cps
Vanadium	51-2	63	120	110	98	30.94	cps
Yttrium	89-1	15401543	15769560	15460230	15543778	1.27	cps
Yttrium	89-2	5206875	5159306	5136793	5167658	0.69	cps
Zinc	66-2	773	853	750	792	6.84	cps
Zirconium	90-1	1243	1180	947	1123	13.91	cps
Zirconium	91-1	273	217	170	220	23.52	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BL	Instrumnet Name :	P7
Client Sample ID :	PBS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:17:31	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1473	1340	1177	1330	11.17	cps
Antimony	121-1	357	317	293	322	9.94	cps
Arsenic	75-2	7	13	23	14	58.06	cps
Barium	135-1	203	233	163	200	17.56	cps
Barium	137-1	360	370	337	356	4.81	cps
Beryllium	9-1	113	100	120	111	9.16	cps
Bismuth	209-1	7705705	7675528	7663519	7681584	0.28	cps
Bismuth	209-2	6381729	6348659	6283163	6337850	0.79	cps
Bromine	81-1	15452	15532	15258	15414	0.91	cps
Bromine	81-2	140	133	130	134	3.79	cps
Cadmium	108-1	10	10	17	12	31.50	cps
Cadmium	106-1	5318	4921	5214	5151	4.00	cps
Cadmium	111-1	3749	3504	3698	3650	3.54	cps
Calcium	43-1	497	620	377	498	24.44	cps
Calcium	44-1	14915	14468	14288	14557	2.22	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1190	1207	1287	1228	4.21	cps
Cobalt	59-2	133	167	170	157	12.94	cps
Copper	63-2	2637	2707	2600	2648	2.05	cps
Dysprosium	156-1	7	7	17	10	57.72	cps
Dysprosium	156-2	13	7	3	8	65.47	cps
Erbium	164-1	40	67	57	54	24.75	cps
Erbium	164-2	63	47	53	54	15.40	cps
Gadolinium	160-1	57	53	43	51	13.58	cps
Gadolinium	160-2	477	480	520	492	4.90	cps
Holmium	165-1	12157333	12175366	12221632	12184777	0.27	cps
Holmium	165-2	9216103	9036396	8988071	9080190	1.32	cps
Indium	115-1	9203359	9334451	9283252	9273687	0.71	cps
Indium	115-2	4132531	4106467	4057273	4098757	0.93	cps
Iron	56-2	49126	47739	45465	47444	3.90	cps
Iron	57-2	1977	2037	2010	2008	1.50	cps
Iron	54-2	4451	4511	4361	4441	1.70	cps
Krypton	83-1	233	183	223	213	12.40	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BL	Instrumnet Name :	P7
Client Sample ID :	PBS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:17:31	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1783	1783	1880	1816	3.07	cps
Lead	207-1	1470	1550	1403	1475	4.98	cps
Lead	208-1	6891	6991	7014	6965	0.94	cps
Lithium	6-1	1214695	1228938	1203545	1215726	1.05	cps
Magnesium	24-2	4041	4147	3704	3964	5.84	cps
Manganese	55-2	653	573	560	596	8.48	cps
Molybdenum	94-1	983	927	873	928	5.93	cps
Molybdenum	95-1	1270	1200	1050	1173	9.58	cps
Molybdenum	96-1	1400	1470	1133	1335	13.31	cps
Molybdenum	97-1	833	760	657	750	11.83	cps
Molybdenum	98-1	1967	1940	1730	1879	6.90	cps
Neodymium	150-1	17	10	13	13	25.01	cps
Neodymium	150-2	3	7	3	4	43.40	cps
Nickel	60-2	2757	2844	2787	2796	1.57	cps
Phosphorus	31-2	350	323	363	346	5.89	cps
Potassium	39-2	65229	64235	64787	64750	0.77	cps
Rhodium	103-1	8540116	8481025	8471270	8497470	0.44	cps
Rhodium	103-2	5666333	5589503	5517358	5591065	1.33	cps
Scandium	45-1	4516236	4540564	4528498	4528432	0.27	cps
Scandium	45-2	523453	524593	522764	523603	0.18	cps
Selenium	82-1	338	431	389	386	12.08	cps
Selenium	77-2	7	0	0	2	173.21	cps
Selenium	78-2	603	623	710	646	8.78	cps
Silicon	28-1	682997	680582	682056	681879	0.18	cps
Silver	107-1	373	357	260	330	18.54	cps
Silver	109-1	257	277	257	263	4.38	cps
Sodium	23-2	41877	40891	40212	40993	2.04	cps
Strontium	86-1	423	407	347	392	10.28	cps
Strontium	88-1	590	483	510	528	10.52	cps
Sulfur	34-1	140260	141881	141239	141126	0.58	cps
Terbium	159-1	12489390	12454784	12364316	12436163	0.52	cps
Terbium	159-2	8938866	8878066	8862575	8893169	0.45	cps
Thallium	203-1	713	690	600	668	8.96	cps
Thallium	205-1	1733	1667	1557	1652	5.40	cps
Tin	118-1	1393	1333	1323	1350	2.80	cps
Titanium	47-1	340	350	280	323	11.71	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BL	Instrumnet Name :	P7
Client Sample ID :	PBS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:17:31	DataFile Name :	020CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	403	413	347	388	9.27	cps
Vanadium	51-2	67	30	50	49	37.55	cps
Yttrium	89-1	15834377	15700782	15688164	15741108	0.51	cps
Yttrium	89-2	5272328	5227138	5134608	5211358	1.35	cps
Zinc	66-2	713	620	693	676	7.27	cps
Zirconium	90-1	750	763	747	753	1.17	cps
Zirconium	91-1	150	140	113	134	14.10	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BS	Instrumnet Name :	P7
Client Sample ID :	LCS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:20:50	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10640	10630	10717	10663	0.45	cps
Antimony	121-1	38505	39551	39364	39140	1.43	cps
Arsenic	75-2	1213	1307	1213	1245	4.33	cps
Barium	135-1	50422	50753	49512	50229	1.28	cps
Barium	137-1	85407	85414	85944	85589	0.36	cps
Beryllium	9-1	2217	2247	2300	2255	1.87	cps
Bismuth	209-1	7839256	7785249	7665809	7763438	1.14	cps
Bismuth	209-2	6395569	6381042	6388535	6388382	0.11	cps
Bromine	81-1	15632	15939	15862	15811	1.01	cps
Bromine	81-2	120	103	167	130	25.26	cps
Cadmium	108-1	410	403	440	418	4.68	cps
Cadmium	106-1	5788	5694	5414	5632	3.45	cps
Cadmium	111-1	8839	8625	8573	8679	1.62	cps
Calcium	43-1	24016	24456	23705	24059	1.57	cps
Calcium	44-1	404510	405099	406411	405340	0.24	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	17891	18111	18475	18159	1.62	cps
Cobalt	59-2	13583	13343	13766	13564	1.57	cps
Copper	63-2	21272	21412	21319	21334	0.33	cps
Dysprosium	156-1	20	17	13	17	20.01	cps
Dysprosium	156-2	7	7	10	8	24.71	cps
Erbium	164-1	57	53	90	67	30.41	cps
Erbium	164-2	53	50	17	40	50.68	cps
Gadolinium	160-1	40	37	47	41	12.39	cps
Gadolinium	160-2	527	517	360	468	19.98	cps
Holmium	165-1	12254497	12141014	12167074	12187529	0.49	cps
Holmium	165-2	9070747	9184344	9123914	9126335	0.62	cps
Indium	115-1	9420089	9282533	9341927	9348183	0.74	cps
Indium	115-2	4133797	4143488	4114291	4130525	0.36	cps
Iron	56-2	1709720	1697169	1661731	1689540	1.47	cps
Iron	57-2	44298	44686	45144	44710	0.95	cps
Iron	54-2	97392	96808	96986	97062	0.31	cps
Krypton	83-1	197	223	233	218	8.70	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BS	Instrumnet Name :	P7
Client Sample ID :	LCS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:20:50	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	17298	17525	17785	17536	1.39	cps
Lead	207-1	15008	14878	14958	14948	0.44	cps
Lead	208-1	68555	69166	69112	68944	0.49	cps
Lithium	6-1	1247345	1232030	1245362	1241579	0.67	cps
Magnesium	24-2	383067	380983	382853	382301	0.30	cps
Manganese	55-2	8272	7569	7956	7932	4.44	cps
Molybdenum	94-1	38751	39827	39236	39271	1.37	cps
Molybdenum	95-1	47644	48152	48470	48089	0.87	cps
Molybdenum	96-1	53357	54267	52942	53522	1.27	cps
Molybdenum	97-1	30662	31471	30853	30995	1.36	cps
Molybdenum	98-1	76418	77833	78265	77505	1.25	cps
Neodymium	150-1	7	27	20	18	57.27	cps
Neodymium	150-2	3	7	0	3	100.05	cps
Nickel	60-2	6285	6225	6018	6176	2.27	cps
Phosphorus	31-2	913	920	907	913	0.73	cps
Potassium	39-2	652528	659428	653008	654988	0.59	cps
Rhodium	103-1	8633842	8459831	8581838	8558503	1.04	cps
Rhodium	103-2	5604153	5626331	5568397	5599627	0.52	cps
Scandium	45-1	4593607	4558670	4542218	4564832	0.57	cps
Scandium	45-2	529994	528819	531365	530059	0.24	cps
Selenium	82-1	1912	1892	1837	1880	2.06	cps
Selenium	77-2	180	190	223	198	11.47	cps
Selenium	78-2	1330	1350	1253	1311	3.89	cps
Silicon	28-1	773021	772903	773693	773205	0.06	cps
Silver	107-1	24133	24210	24684	24343	1.23	cps
Silver	109-1	22948	22851	23112	22970	0.57	cps
Sodium	23-2	663397	661919	660121	661812	0.25	cps
Strontium	86-1	6498	6535	6598	6544	0.77	cps
Strontium	88-1	52691	54450	53698	53613	1.65	cps
Sulfur	34-1	146393	146481	146138	146337	0.12	cps
Terbium	159-1	12373329	12389252	12383450	12382011	0.07	cps
Terbium	159-2	8954319	8885877	8878610	8906269	0.47	cps
Thallium	203-1	20098	20279	20072	20149	0.56	cps
Thallium	205-1	47031	47784	47466	47427	0.80	cps
Tin	118-1	81746	82022	82407	82058	0.40	cps
Titanium	47-1	2757	2677	2920	2785	4.45	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166384BS	Instrumnet Name :	P7
Client Sample ID :	LCS384	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:20:50	DataFile Name :	021LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	62780	61862	62486	62376	0.75	cps
Vanadium	51-2	39301	39455	39635	39464	0.42	cps
Yttrium	89-1	15876632	15747243	16021051	15881642	0.86	cps
Yttrium	89-2	5331536	5249472	5281228	5287412	0.78	cps
Zinc	66-2	8643	8993	8756	8797	2.03	cps
Zirconium	90-1	31911	32920	32616	32483	1.59	cps
Zirconium	91-1	7015	7439	7292	7249	2.97	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BL	Instrumnet Name :	P7
Client Sample ID :	PBS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:24:05	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	387	327	347	353	8.65	cps
Antimony	121-1	150	133	153	146	7.36	cps
Arsenic	75-2	17	20	3	13	66.16	cps
Barium	135-1	90	83	53	76	25.85	cps
Barium	137-1	117	150	160	142	15.95	cps
Beryllium	9-1	103	90	70	88	19.12	cps
Bismuth	209-1	7054706	7504828	7556296	7371943	3.74	cps
Bismuth	209-2	6410013	6287930	6324454	6340799	0.99	cps
Bromine	81-1	16032	16015	16259	16102	0.85	cps
Bromine	81-2	197	130	137	154	23.77	cps
Cadmium	108-1	20	13	7	13	49.99	cps
Cadmium	106-1	4831	5324	5238	5131	5.14	cps
Cadmium	111-1	3384	3741	3678	3601	5.29	cps
Calcium	43-1	290	283	307	293	4.10	cps
Calcium	44-1	10491	10374	10441	10435	0.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1227	1223	1110	1187	5.60	cps
Cobalt	59-2	137	140	87	121	24.67	cps
Copper	63-2	2210	2194	2384	2262	4.65	cps
Dysprosium	156-1	7	7	7	7	0.00	cps
Dysprosium	156-2	10	13	0	8	89.21	cps
Erbium	164-1	40	30	60	43	35.25	cps
Erbium	164-2	43	37	43	41	9.35	cps
Gadolinium	160-1	23	53	37	38	39.79	cps
Gadolinium	160-2	513	500	527	513	2.60	cps
Holmium	165-1	11069350	12017105	12101097	11729184	4.89	cps
Holmium	165-2	9173573	9158837	8985269	9105893	1.15	cps
Indium	115-1	8451841	9253429	9276015	8993762	5.22	cps
Indium	115-2	4150332	4221413	4077577	4149774	1.73	cps
Iron	56-2	27281	26657	27125	27021	1.20	cps
Iron	57-2	1693	1503	1577	1591	6.02	cps
Iron	54-2	3160	3240	3324	3241	2.52	cps
Krypton	83-1	230	217	217	221	3.48	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BL	Instrumnet Name :	P7
Client Sample ID :	PBS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:24:05	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1117	1043	1030	1063	4.39	cps
Lead	207-1	1053	1007	993	1018	3.10	cps
Lead	208-1	4587	4360	4257	4401	3.84	cps
Lithium	6-1	1135180	1228554	1166883	1176872	4.03	cps
Magnesium	24-2	1590	1467	1493	1517	4.28	cps
Manganese	55-2	360	330	337	342	4.60	cps
Molybdenum	94-1	367	397	347	370	6.80	cps
Molybdenum	95-1	217	277	257	250	12.22	cps
Molybdenum	96-1	283	270	363	306	16.52	cps
Molybdenum	97-1	137	103	140	127	16.01	cps
Molybdenum	98-1	350	370	317	346	7.80	cps
Neodymium	150-1	3	13	13	10	57.75	cps
Neodymium	150-2	0	3	0	1	173.21	cps
Nickel	60-2	3010	2767	2967	2915	4.45	cps
Phosphorus	31-2	337	273	290	300	10.94	cps
Potassium	39-2	64027	63512	63800	63780	0.40	cps
Rhodium	103-1	7789173	8547608	8583540	8306774	5.40	cps
Rhodium	103-2	5643612	5592627	5591135	5609125	0.53	cps
Scandium	45-1	4157673	4583615	4619855	4453715	5.77	cps
Scandium	45-2	531279	526267	525491	527679	0.60	cps
Selenium	82-1	321	385	438	381	15.38	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	533	550	663	582	12.15	cps
Silicon	28-1	692243	696779	688322	692448	0.61	cps
Silver	107-1	260	197	227	228	13.91	cps
Silver	109-1	210	167	247	208	19.27	cps
Sodium	23-2	32451	32324	32123	32299	0.51	cps
Strontium	86-1	357	377	440	391	11.12	cps
Strontium	88-1	230	210	223	221	4.61	cps
Sulfur	34-1	147686	147544	147369	147533	0.11	cps
Terbium	159-1	11350302	12269605	12053557	11891155	4.04	cps
Terbium	159-2	8973115	8927412	8938340	8946289	0.27	cps
Thallium	203-1	550	580	503	544	7.10	cps
Thallium	205-1	1150	1143	1277	1190	6.31	cps
Tin	118-1	1343	1340	1190	1291	6.78	cps
Titanium	47-1	90	73	103	89	16.91	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BL	Instrumnet Name :	P7
Client Sample ID :	PBS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:24:05	DataFile Name :	022CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	87	67	53	69	24.36	cps
Vanadium	51-2	23	40	17	27	45.07	cps
Yttrium	89-1	14564549	15735668	15795301	15365173	4.52	cps
Yttrium	89-2	5252244	5189285	5207478	5216336	0.62	cps
Zinc	66-2	620	577	570	589	4.61	cps
Zirconium	90-1	667	627	623	639	3.77	cps
Zirconium	91-1	147	150	143	147	2.27	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BS	Instrumnet Name :	P7
Client Sample ID :	LCS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:27:25	DataFile Name :	023LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10500	10414	10220	10378	1.38	cps
Antimony	121-1	37813	38588	39865	38755	2.67	cps
Arsenic	75-2	1307	1143	1277	1242	7.00	cps
Barium	135-1	49442	48984	49098	49174	0.49	cps
Barium	137-1	84864	87205	85914	85994	1.36	cps
Beryllium	9-1	2240	2207	2164	2204	1.75	cps
Bismuth	209-1	7687287	7612197	7537815	7612433	0.98	cps
Bismuth	209-2	6313508	6332551	6265015	6303691	0.55	cps
Bromine	81-1	15919	16536	16199	16218	1.91	cps
Bromine	81-2	137	137	127	133	4.33	cps
Cadmium	108-1	347	403	367	372	7.72	cps
Cadmium	106-1	5771	5765	5424	5653	3.51	cps
Cadmium	111-1	8681	8777	8471	8643	1.81	cps
Calcium	43-1	23645	24313	24119	24026	1.43	cps
Calcium	44-1	396050	402041	400781	399624	0.79	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	18305	17734	18094	18044	1.60	cps
Cobalt	59-2	13449	13219	13696	13455	1.77	cps
Copper	63-2	20981	20441	21482	20968	2.48	cps
Dysprosium	156-1	7	13	20	13	49.99	cps
Dysprosium	156-2	10	13	13	12	15.73	cps
Erbium	164-1	60	73	63	66	10.58	cps
Erbium	164-2	30	40	47	39	21.57	cps
Gadolinium	160-1	53	73	23	50	50.34	cps
Gadolinium	160-2	523	480	443	482	8.30	cps
Holmium	165-1	12025951	12107349	12070729	12068010	0.34	cps
Holmium	165-2	9109845	9088190	8972458	9056831	0.82	cps
Indium	115-1	9181711	9232753	9198974	9204480	0.28	cps
Indium	115-2	4089310	4112955	4189415	4130560	1.27	cps
Iron	56-2	1681503	1667215	1685130	1677949	0.56	cps
Iron	57-2	44596	43733	43272	43867	1.53	cps
Iron	54-2	95688	96611	95423	95907	0.65	cps
Krypton	83-1	257	193	230	227	14.03	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BS	Instrumnet Name :	P7
Client Sample ID :	LCS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:27:25	DataFile Name :	023LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	16520	16520	16814	16618	1.02	cps
Lead	207-1	14278	14478	14611	14456	1.16	cps
Lead	208-1	66294	66247	67797	66779	1.32	cps
Lithium	6-1	1217344	1199711	1206450	1207835	0.74	cps
Magnesium	24-2	382187	378462	379900	380183	0.49	cps
Manganese	55-2	7625	7809	7802	7745	1.34	cps
Molybdenum	94-1	38708	39209	39466	39128	0.99	cps
Molybdenum	95-1	47085	48222	47574	47627	1.20	cps
Molybdenum	96-1	52567	53106	53487	53053	0.87	cps
Molybdenum	97-1	29887	29740	29790	29806	0.25	cps
Molybdenum	98-1	77179	76887	77437	77168	0.36	cps
Neodymium	150-1	13	17	10	13	25.01	cps
Neodymium	150-2	3	0	17	7	132.33	cps
Nickel	60-2	6015	6201	6331	6182	2.58	cps
Phosphorus	31-2	923	890	883	899	2.38	cps
Potassium	39-2	655067	650042	654497	653202	0.42	cps
Rhodium	103-1	8636052	8512957	8521869	8556959	0.80	cps
Rhodium	103-2	5549045	5562379	5559203	5556876	0.13	cps
Scandium	45-1	4616170	4517931	4524013	4552705	1.21	cps
Scandium	45-2	529531	528507	532291	530109	0.37	cps
Selenium	82-1	1847	1829	1957	1878	3.68	cps
Selenium	77-2	207	260	187	218	17.41	cps
Selenium	78-2	1297	1237	1257	1263	2.42	cps
Silicon	28-1	780196	789643	782574	784138	0.63	cps
Silver	107-1	24017	25002	24851	24623	2.16	cps
Silver	109-1	22214	23152	23165	22844	2.39	cps
Sodium	23-2	652527	653050	652405	652661	0.05	cps
Strontium	86-1	6398	6425	6191	6338	2.02	cps
Strontium	88-1	52891	53330	53932	53384	0.98	cps
Sulfur	34-1	148799	149685	150513	149665	0.57	cps
Terbium	159-1	12305263	12246397	12235018	12262226	0.31	cps
Terbium	159-2	8875024	8877747	8943560	8898777	0.44	cps
Thallium	203-1	19351	19741	19387	19493	1.11	cps
Thallium	205-1	46345	46439	46325	46370	0.13	cps
Tin	118-1	80151	82099	81539	81263	1.23	cps
Titanium	47-1	2744	2694	2780	2739	1.59	cps

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	PB166471BS	Instrumnet Name :	P7
Client Sample ID :	LCS471	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:27:25	DataFile Name :	023LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	59616	61169	60898	60561	1.37	cps
Vanadium	51-2	38960	39070	38653	38894	0.56	cps
Yttrium	89-1	15933020	15677356	15866068	15825481	0.84	cps
Yttrium	89-2	5319196	5270257	5302470	5297308	0.47	cps
Zinc	66-2	8769	9106	8726	8867	2.35	cps
Zirconium	90-1	31888	32466	32873	32409	1.53	cps
Zirconium	91-1	7002	7058	6945	7002	0.81	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:30:42	DataFile Name :	024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8018510	8091802	7996912	8035741	0.62	cps
Antimony	121-1	6251	6135	6411	6266	2.22	cps
Arsenic	75-2	98115	99376	97306	98266	1.06	cps
Barium	135-1	557746	563922	568020	563229	0.92	cps
Barium	137-1	972028	979578	986242	979282	0.73	cps
Beryllium	9-1	4607	4804	4731	4714	2.11	cps
Bismuth	209-1	8121529	7918133	7936864	7992176	1.41	cps
Bismuth	209-2	6458733	6523833	6539006	6507191	0.66	cps
Bromine	81-1	51891	55126	55530	54182	3.68	cps
Bromine	81-2	10097	10094	10190	10127	0.54	cps
Cadmium	108-1	14331	14794	14341	14488	1.83	cps
Cadmium	106-1	20708	20147	19904	20253	2.04	cps
Cadmium	111-1	9242	8371	8392	8668	5.73	cps
Calcium	43-1	668309	672853	667175	669446	0.45	cps
Calcium	44-1	10562364	10609858	10537834	10570019	0.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4976944	4935668	4965577	4959396	0.43	cps
Cobalt	59-2	111423	111839	112860	112041	0.66	cps
Copper	63-2	8191719	8142775	8168807	8167767	0.30	cps
Dysprosium	156-1	29688	30269	29969	29975	0.97	cps
Dysprosium	156-2	29725	29735	30216	29892	0.94	cps
Erbium	164-1	25897	26886	26201	26328	1.92	cps
Erbium	164-2	19908	19944	20038	19963	0.34	cps
Gadolinium	160-1	27784	28382	28416	28194	1.26	cps
Gadolinium	160-2	22074	22829	22468	22457	1.68	cps
Holmium	165-1	13027311	12577576	12583048	12729312	2.03	cps
Holmium	165-2	9642752	9535942	9528659	9569117	0.67	cps
Indium	115-1	9537156	9349430	9278062	9388216	1.43	cps
Indium	115-2	4139722	4163357	4154507	4152528	0.29	cps
Iron	56-2	251896463	251965163	251360750	251740792	0.13	cps
Iron	57-2	6218581	6196132	6200809	6205174	0.19	cps
Iron	54-2	13738054	13777531	13826122	13780569	0.32	cps
Krypton	83-1	223	227	210	220	4.01	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:30:42	DataFile Name :	024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4986956	4989567	5008221	4994915	0.23	cps
Lead	207-1	4105211	4158310	4106512	4123344	0.73	cps
Lead	208-1	19248691	19351151	19302319	19300721	0.27	cps
Lithium	6-1	1357732	1344639	1320983	1341118	1.39	cps
Magnesium	24-2	2147861	2148420	2130410	2142230	0.48	cps
Manganese	55-2	9674378	9739629	9728641	9714216	0.36	cps
Molybdenum	94-1	15328	14964	15368	15220	1.46	cps
Molybdenum	95-1	18625	18485	18392	18501	0.64	cps
Molybdenum	96-1	23082	23980	24067	23709	2.30	cps
Molybdenum	97-1	11671	11555	11221	11482	2.04	cps
Molybdenum	98-1	29573	30091	29396	29687	1.22	cps
Neodymium	150-1	48710	48055	49302	48689	1.28	cps
Neodymium	150-2	33089	33540	33042	33224	0.83	cps
Nickel	60-2	303524	303799	302472	303265	0.23	cps
Phosphorus	31-2	26069	26223	26323	26205	0.49	cps
Potassium	39-2	1063513	1074371	1066203	1068029	0.53	cps
Rhodium	103-1	9016726	8723988	8655931	8798882	2.18	cps
Rhodium	103-2	5841362	5748830	5707073	5765755	1.19	cps
Scandium	45-1	4823184	4731799	4674538	4743174	1.58	cps
Scandium	45-2	555202	550209	552167	552526	0.46	cps
Selenium	82-1	656	666	643	655	1.75	cps
Selenium	77-2	117	117	133	122	7.87	cps
Selenium	78-2	767	737	837	780	6.58	cps
Silicon	28-1	15464346	15798220	15568496	15610354	1.09	cps
Silver	107-1	33372	32847	33492	33237	1.03	cps
Silver	109-1	31838	30823	31190	31284	1.64	cps
Sodium	23-2	2873428	2861010	2839191	2857877	0.61	cps
Strontium	86-1	670394	680235	679254	676628	0.80	cps
Strontium	88-1	6031703	6097209	6040644	6056519	0.59	cps
Sulfur	34-1	301988	301243	294815	299348	1.32	cps
Terbium	159-1	13075965	12817086	12784264	12892438	1.24	cps
Terbium	159-2	9399973	9296098	9293113	9329728	0.65	cps
Thallium	203-1	4301	4147	4154	4201	2.06	cps
Thallium	205-1	10237	9724	9947	9969	2.58	cps
Tin	118-1	9385603	9543352	9497081	9475345	0.86	cps
Titanium	47-1	556403	556285	559475	557388	0.32	cps

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:30:42	DataFile Name :	024SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	77664	79284	78935	78628	1.08	cps
Vanadium	51-2	136272	134406	136054	135577	0.75	cps
Yttrium	89-1	17171222	16784800	16477311	16811111	2.07	cps
Yttrium	89-2	5669917	5651528	5610512	5643986	0.54	cps
Zinc	66-2	190124	192837	191380	191447	0.71	cps
Zirconium	90-1	12575	12382	12555	12504	0.85	cps
Zirconium	91-1	2997	2960	2850	2936	2.60	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:33:46	DataFile Name :	025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8241423	8309989	8255640	8269017	0.44	cps
Antimony	121-1	6355	6625	6655	6545	2.53	cps
Arsenic	75-2	102470	102689	101849	102336	0.43	cps
Barium	135-1	575990	580930	586677	581199	0.92	cps
Barium	137-1	999853	1015733	1017189	1010925	0.95	cps
Beryllium	9-1	4807	4754	4864	4809	1.14	cps
Bismuth	209-1	7905272	7950579	7965377	7940409	0.39	cps
Bismuth	209-2	6482605	6372156	6394903	6416555	0.91	cps
Bromine	81-1	52590	55320	56715	54875	3.82	cps
Bromine	81-2	10494	10490	10440	10475	0.29	cps
Cadmium	108-1	15689	15151	15148	15329	2.03	cps
Cadmium	106-1	21269	20741	21019	21010	1.26	cps
Cadmium	111-1	9007	9021	9297	9108	1.80	cps
Calcium	43-1	676457	681664	683768	680630	0.55	cps
Calcium	44-1	10779951	10765025	10742710	10762562	0.17	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5225643	5209539	5187743	5207642	0.37	cps
Cobalt	59-2	116441	116269	115271	115994	0.54	cps
Copper	63-2	8535564	8538614	8521503	8531894	0.11	cps
Dysprosium	156-1	31071	32190	32614	31959	2.49	cps
Dysprosium	156-2	31328	31716	31502	31515	0.62	cps
Erbium	164-1	28355	27965	28172	28164	0.69	cps
Erbium	164-2	21003	20862	21079	20981	0.52	cps
Gadolinium	160-1	28703	29641	28873	29072	1.72	cps
Gadolinium	160-2	23443	23874	23997	23771	1.22	cps
Holmium	165-1	12887350	12800271	12756216	12814612	0.52	cps
Holmium	165-2	9423699	9341918	9325105	9363574	0.56	cps
Indium	115-1	9342564	9267465	9274777	9294935	0.45	cps
Indium	115-2	4164025	4095124	4114357	4124502	0.86	cps
Iron	56-2	264264329	262942643	261523096	262910023	0.52	cps
Iron	57-2	6499040	6416512	6440479	6452010	0.66	cps
Iron	54-2	14402116	14461310	14331254	14398227	0.45	cps
Krypton	83-1	350	247	263	287	19.35	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:33:46	DataFile Name :	025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5178341	5371439	5394062	5314614	2.23	cps
Lead	207-1	4286568	4450820	4424123	4387171	2.01	cps
Lead	208-1	20091373	20662919	20714180	20489491	1.69	cps
Lithium	6-1	1297187	1322375	1328965	1316176	1.27	cps
Magnesium	24-2	2248048	2274659	2228554	2250420	1.03	cps
Manganese	55-2	9942626	9891614	9830774	9888338	0.57	cps
Molybdenum	94-1	15525	15935	16276	15912	2.36	cps
Molybdenum	95-1	18432	19350	19493	19091	3.02	cps
Molybdenum	96-1	24390	25215	25108	24905	1.80	cps
Molybdenum	97-1	12002	11898	12028	11976	0.57	cps
Molybdenum	98-1	30852	31197	31307	31119	0.76	cps
Neodymium	150-1	51681	52440	51851	51991	0.77	cps
Neodymium	150-2	35057	34429	34790	34758	0.91	cps
Nickel	60-2	314813	313388	314401	314201	0.23	cps
Phosphorus	31-2	26860	27054	26737	26884	0.59	cps
Potassium	39-2	1109408	1121514	1115419	1115447	0.54	cps
Rhodium	103-1	8813783	8742042	8609331	8721719	1.19	cps
Rhodium	103-2	5754076	5672597	5717565	5714746	0.71	cps
Scandium	45-1	4782572	4728141	4675561	4728758	1.13	cps
Scandium	45-2	545940	543525	545519	544995	0.24	cps
Selenium	82-1	513	637	580	577	10.79	cps
Selenium	77-2	123	110	133	122	9.58	cps
Selenium	78-2	667	807	690	721	10.40	cps
Silicon	28-1	16170916	16207886	16344045	16240949	0.56	cps
Silver	107-1	34361	35163	35163	34895	1.33	cps
Silver	109-1	31781	32383	32623	32263	1.34	cps
Sodium	23-2	2909350	2886297	2897396	2897681	0.40	cps
Strontium	86-1	687512	702335	700127	696658	1.15	cps
Strontium	88-1	6187207	6239243	6174039	6200163	0.56	cps
Sulfur	34-1	293594	292001	289509	291701	0.71	cps
Terbium	159-1	12913863	12910784	12905375	12910007	0.03	cps
Terbium	159-2	9279894	9300361	9238697	9272984	0.34	cps
Thallium	203-1	3857	3847	3887	3864	0.54	cps
Thallium	205-1	8303	8840	8813	8652	3.50	cps
Tin	118-1	9980277	9838251	10025014	9947847	0.98	cps
Titanium	47-1	578291	586498	585015	583268	0.75	cps

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:33:46	DataFile Name :	025SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	81785	83556	84291	83211	1.55	cps
Vanadium	51-2	141616	142178	142707	142167	0.38	cps
Yttrium	89-1	16977620	16703860	16693085	16791522	0.96	cps
Yttrium	89-2	5559031	5556651	5608067	5574583	0.52	cps
Zinc	66-2	198501	199970	197086	198519	0.73	cps
Zirconium	90-1	12439	12956	13216	12870	3.07	cps
Zirconium	91-1	3067	2990	3160	3073	2.77	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LX5	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:36:46	DataFile Name :	026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1634016	1617427	1622312	1624585	0.52	cps
Antimony	121-1	1427	1503	1557	1496	4.37	cps
Arsenic	75-2	19439	19056	18976	19157	1.29	cps
Barium	135-1	110585	112701	111142	111476	0.98	cps
Barium	137-1	192916	196595	193504	194338	1.02	cps
Beryllium	9-1	1057	963	993	1004	4.74	cps
Bismuth	209-1	7447033	7709680	7700440	7619051	1.96	cps
Bismuth	209-2	6375589	6247221	6272549	6298453	1.08	cps
Bromine	81-1	24297	24137	24484	24306	0.71	cps
Bromine	81-2	2147	2107	2307	2187	4.84	cps
Cadmium	108-1	2884	2964	3080	2976	3.32	cps
Cadmium	106-1	8116	8016	7929	8020	1.17	cps
Cadmium	111-1	4676	4473	4394	4514	3.22	cps
Calcium	43-1	130999	134304	132940	132748	1.25	cps
Calcium	44-1	2108207	2087986	2091322	2095838	0.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	969260	967956	968381	968532	0.07	cps
Cobalt	59-2	22440	22487	22016	22314	1.16	cps
Copper	63-2	1643887	1653758	1655016	1650887	0.37	cps
Dysprosium	156-1	5845	6288	6068	6067	3.66	cps
Dysprosium	156-2	5731	5975	5858	5855	2.08	cps
Erbium	164-1	5158	5611	5451	5407	4.25	cps
Erbium	164-2	4251	3847	3921	4006	5.36	cps
Gadolinium	160-1	5648	5805	5394	5616	3.69	cps
Gadolinium	160-2	4644	4728	4754	4709	1.22	cps
Holmium	165-1	11913822	12299257	12508854	12240645	2.47	cps
Holmium	165-2	9140365	9061997	9144292	9115551	0.51	cps
Indium	115-1	9043817	9221302	9117590	9127570	0.98	cps
Indium	115-2	4096179	4084460	4055583	4078741	0.51	cps
Iron	56-2	49020971	49096991	49241231	49119731	0.23	cps
Iron	57-2	1252419	1241818	1247185	1247141	0.43	cps
Iron	54-2	2702985	2731814	2683284	2706028	0.90	cps
Krypton	83-1	247	247	200	231	11.66	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LX5	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:36:46	DataFile Name :	026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	926260	939928	935944	934044	0.75	cps
Lead	207-1	749817	757511	753019	753449	0.51	cps
Lead	208-1	3696281	3706144	3727824	3710083	0.43	cps
Lithium	6-1	1191507	1213398	1208028	1204311	0.95	cps
Magnesium	24-2	430323	430216	424702	428414	0.75	cps
Manganese	55-2	1907324	1907308	1900569	1905067	0.20	cps
Molybdenum	94-1	3227	3410	4499	3712	18.53	cps
Molybdenum	95-1	3904	3881	6398	4728	30.61	cps
Molybdenum	96-1	5074	4868	6892	5611	19.85	cps
Molybdenum	97-1	2314	2274	3174	2587	19.67	cps
Molybdenum	98-1	6098	5938	8180	6739	18.56	cps
Neodymium	150-1	9613	9380	9827	9607	2.33	cps
Neodymium	150-2	6458	6438	6612	6503	1.46	cps
Nickel	60-2	63135	63319	63912	63456	0.64	cps
Phosphorus	31-2	5328	5584	5154	5355	4.04	cps
Potassium	39-2	261221	263721	263439	262794	0.52	cps
Rhodium	103-1	8369211	8509834	8609349	8496131	1.42	cps
Rhodium	103-2	5684089	5526938	5580170	5597065	1.43	cps
Scandium	45-1	4512298	4595443	4467607	4525116	1.43	cps
Scandium	45-2	532517	534053	527801	531457	0.61	cps
Selenium	82-1	452	403	442	432	6.03	cps
Selenium	77-2	37	20	23	27	33.08	cps
Selenium	78-2	630	697	620	649	6.42	cps
Silicon	28-1	3787035	3853095	3813432	3817854	0.87	cps
Silver	107-1	6622	7015	6772	6803	2.92	cps
Silver	109-1	6038	6351	6461	6284	3.50	cps
Sodium	23-2	591956	590817	592230	591667	0.13	cps
Strontium	86-1	133872	135106	133778	134252	0.55	cps
Strontium	88-1	1166039	1183342	1186782	1178721	0.94	cps
Sulfur	34-1	151586	155020	152633	153080	1.15	cps
Terbium	159-1	12044544	12410358	12458051	12304318	1.84	cps
Terbium	159-2	8943785	8924013	9010632	8959477	0.51	cps
Thallium	203-1	983	1013	1000	999	1.50	cps
Thallium	205-1	2380	2027	2377	2261	8.98	cps
Tin	118-1	1865562	1871110	1881853	1872842	0.44	cps
Titanium	47-1	109344	111443	108529	109772	1.37	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LX5	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:36:46	DataFile Name :	026SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	15736	15833	15185	15585	2.24	cps
Vanadium	51-2	26260	26553	26139	26317	0.81	cps
Yttrium	89-1	15615539	16010292	15893244	15839691	1.28	cps
Yttrium	89-2	5341301	5307214	5289526	5312680	0.50	cps
Zinc	66-2	38904	39435	38777	39039	0.89	cps
Zirconium	90-1	3200	3317	3868	3462	10.30	cps
Zirconium	91-1	733	737	813	761	5.95	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:39:56	DataFile Name :	027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7988319	7970043	8044371	8000911	0.48	cps
Antimony	121-1	141949	142723	142979	142550	0.38	cps
Arsenic	75-2	111098	110229	111743	111023	0.68	cps
Barium	135-1	1660034	1661702	1642913	1654883	0.63	cps
Barium	137-1	2849445	2882094	2847731	2859757	0.68	cps
Beryllium	9-1	15074	15021	15054	15050	0.18	cps
Bismuth	209-1	7902337	7901296	7896447	7900027	0.04	cps
Bismuth	209-2	6361542	6318273	6371386	6350400	0.44	cps
Bromine	81-1	52085	53148	53527	52920	1.41	cps
Bromine	81-2	9960	9803	9456	9740	2.65	cps
Cadmium	108-1	17210	17874	17404	17496	1.95	cps
Cadmium	106-1	22918	23366	23172	23152	0.97	cps
Cadmium	111-1	32804	33347	33057	33069	0.82	cps
Calcium	43-1	644938	647068	645126	645711	0.18	cps
Calcium	44-1	10240239	10139361	10142549	10174050	0.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4752765	4735797	4638760	4709107	1.31	cps
Cobalt	59-2	764120	759024	762796	761980	0.35	cps
Copper	63-2	8768419	8785477	8745193	8766363	0.23	cps
Dysprosium	156-1	34091	34021	33146	33753	1.56	cps
Dysprosium	156-2	32835	32608	32888	32777	0.45	cps
Erbium	164-1	29972	29591	29444	29669	0.92	cps
Erbium	164-2	21997	22161	22255	22138	0.59	cps
Gadolinium	160-1	31479	31171	31048	31233	0.71	cps
Gadolinium	160-2	25039	24939	25236	25071	0.60	cps
Holmium	165-1	12644316	12541414	12330806	12505512	1.28	cps
Holmium	165-2	9309149	9238197	9348762	9298703	0.60	cps
Indium	115-1	9178252	9076316	9194632	9149733	0.70	cps
Indium	115-2	4044828	4063170	4015584	4041194	0.59	cps
Iron	56-2	262551536	261046043	259669509	261089029	0.55	cps
Iron	57-2	6481743	6459969	6379711	6440474	0.83	cps
Iron	54-2	14393947	14285250	14211087	14296761	0.64	cps
Krypton	83-1	227	263	280	257	10.63	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:39:56	DataFile Name :	027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5531115	5578637	5580831	5563527	0.50	cps
Lead	207-1	4585710	4579707	4547554	4570990	0.45	cps
Lead	208-1	21383014	21446342	21325431	21384929	0.28	cps
Lithium	6-1	1273080	1286601	1283012	1280898	0.55	cps
Magnesium	24-2	2263039	2247319	2243324	2251227	0.46	cps
Manganese	55-2	9278848	9169704	9167027	9205193	0.69	cps
Molybdenum	94-1	16272	16446	16296	16338	0.58	cps
Molybdenum	95-1	19780	19640	19436	19619	0.88	cps
Molybdenum	96-1	25439	24871	25048	25119	1.16	cps
Molybdenum	97-1	12359	12439	12622	12473	1.08	cps
Molybdenum	98-1	31447	30836	31537	31274	1.22	cps
Neodymium	150-1	54903	55090	54511	54835	0.54	cps
Neodymium	150-2	36684	36774	37022	36827	0.47	cps
Nickel	60-2	461361	457628	461118	460036	0.45	cps
Phosphorus	31-2	25421	25962	25982	25788	1.23	cps
Potassium	39-2	1096148	1103980	1096293	1098807	0.41	cps
Rhodium	103-1	8523957	8518887	8454883	8499242	0.45	cps
Rhodium	103-2	5634735	5581205	5590644	5602194	0.51	cps
Scandium	45-1	4622125	4643413	4651008	4638849	0.32	cps
Scandium	45-2	536814	537464	533032	535770	0.45	cps
Selenium	82-1	1161	1059	1131	1117	4.70	cps
Selenium	77-2	170	183	183	179	4.31	cps
Selenium	78-2	927	1043	900	957	7.97	cps
Silicon	28-1	14881858	14651228	14534253	14689113	1.20	cps
Silver	107-1	152191	153754	151562	152502	0.74	cps
Silver	109-1	144124	146245	146400	145590	0.87	cps
Sodium	23-2	2708349	2712598	2710608	2710518	0.08	cps
Strontium	86-1	660565	665105	665259	663643	0.40	cps
Strontium	88-1	5959419	5982720	5945949	5962696	0.31	cps
Sulfur	34-1	272384	270640	269921	270982	0.47	cps
Terbium	159-1	12710207	12677629	12509125	12632321	0.85	cps
Terbium	159-2	9138803	9116403	9135573	9130260	0.13	cps
Thallium	203-1	93948	93639	95002	94196	0.76	cps
Thallium	205-1	223120	226140	225831	225030	0.74	cps
Tin	118-1	9941858	10064510	10055563	10020644	0.68	cps
Titanium	47-1	627622	630338	624737	627566	0.45	cps

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:39:56	DataFile Name :	027SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	83486	85907	86189	85194	1.74	cps
Vanadium	51-2	528260	529800	522091	526717	0.77	cps
Yttrium	89-1	16509524	16634511	16578514	16574183	0.38	cps
Yttrium	89-2	5558297	5409330	5440401	5469343	1.44	cps
Zinc	66-2	266662	267041	269390	267698	0.55	cps
Zirconium	90-1	13493	12922	13486	13301	2.46	cps
Zirconium	91-1	3267	2994	3054	3105	4.63	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09	Instrumnet Name :	P7
Client Sample ID :	A6342	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:42:57	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3032266	3012873	3073814	3039651	1.02	cps
Antimony	121-1	703	570	547	607	13.93	cps
Arsenic	75-2	3861	3884	3861	3868	0.35	cps
Barium	135-1	120057	122370	124182	122203	1.69	cps
Barium	137-1	209547	213670	214398	212538	1.23	cps
Beryllium	9-1	733	740	663	712	5.96	cps
Bismuth	209-1	7543809	7520874	7423037	7495907	0.86	cps
Bismuth	209-2	6220270	6183495	6239979	6214581	0.46	cps
Bromine	81-1	17477	18118	17998	17864	1.91	cps
Bromine	81-2	680	827	757	754	9.72	cps
Cadmium	108-1	80	70	47	66	26.09	cps
Cadmium	106-1	5074	5168	4928	5056	2.39	cps
Cadmium	111-1	3793	3782	3660	3745	1.97	cps
Calcium	43-1	37229	38522	37817	37856	1.71	cps
Calcium	44-1	615969	626386	624249	622201	0.88	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	136498	136259	135656	136138	0.32	cps
Cobalt	59-2	32983	32622	33481	33029	1.31	cps
Copper	63-2	51920	51712	50833	51488	1.12	cps
Dysprosium	156-1	22785	23964	23513	23421	2.54	cps
Dysprosium	156-2	22698	22692	22127	22506	1.46	cps
Erbium	164-1	19026	19046	19247	19106	0.64	cps
Erbium	164-2	14554	14648	14458	14553	0.65	cps
Gadolinium	160-1	20922	21159	21370	21150	1.06	cps
Gadolinium	160-2	17044	16897	17137	17026	0.71	cps
Holmium	165-1	12098905	12016114	12008317	12041112	0.42	cps
Holmium	165-2	9077190	8901105	8995086	8991127	0.98	cps
Indium	115-1	9293221	9146950	9183192	9207788	0.83	cps
Indium	115-2	4083369	4080368	4056704	4073480	0.36	cps
Iron	56-2	48602291	48290001	47886336	48259543	0.74	cps
Iron	57-2	1231896	1213998	1213859	1219918	0.85	cps
Iron	54-2	2679009	2682280	2627194	2662828	1.16	cps
Krypton	83-1	220	243	247	237	6.14	cps

Reviewed By:Eman
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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09	Instrumnet Name :	P7
Client Sample ID :	A6342	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:42:57	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1368938	1397611	1394059	1386869	1.13	cps
Lead	207-1	1206355	1236374	1237257	1226662	1.43	cps
Lead	208-1	5727882	5909757	5848368	5828669	1.59	cps
Lithium	6-1	1143918	1159630	1173804	1159117	1.29	cps
Magnesium	24-2	1514697	1518197	1562257	1531717	1.73	cps
Manganese	55-2	534538	528732	530206	531158	0.57	cps
Molybdenum	94-1	8233	8046	8443	8240	2.41	cps
Molybdenum	95-1	2377	2524	2630	2510	5.07	cps
Molybdenum	96-1	4467	4511	4711	4563	2.85	cps
Molybdenum	97-1	1593	1607	1690	1630	3.21	cps
Molybdenum	98-1	4131	4141	4077	4116	0.83	cps
Neodymium	150-1	38573	39692	39485	39250	1.52	cps
Neodymium	150-2	25764	26091	25520	25791	1.11	cps
Nickel	60-2	30635	30635	31346	30872	1.33	cps
Phosphorus	31-2	5051	4787	4891	4910	2.70	cps
Potassium	39-2	694857	691257	690920	692345	0.32	cps
Rhodium	103-1	8458795	8328401	8425144	8404113	0.81	cps
Rhodium	103-2	5536360	5570485	5474584	5527143	0.88	cps
Scandium	45-1	4551369	4545217	4509621	4535402	0.50	cps
Scandium	45-2	534843	527086	530037	530655	0.74	cps
Selenium	82-1	475	454	425	451	5.58	cps
Selenium	77-2	63	70	77	70	9.53	cps
Selenium	78-2	683	657	627	656	4.32	cps
Silicon	28-1	3707656	3354718	3302136	3454837	6.38	cps
Silver	107-1	997	937	820	918	9.79	cps
Silver	109-1	897	773	893	854	8.22	cps
Sodium	23-2	148910	146839	145979	147242	1.02	cps
Strontium	86-1	26554	27499	27255	27103	1.81	cps
Strontium	88-1	232969	235005	235296	234423	0.54	cps
Sulfur	34-1	131688	129832	129164	130228	1.00	cps
Terbium	159-1	12199829	12155216	12174894	12176646	0.18	cps
Terbium	159-2	8832269	8774849	8734009	8780375	0.56	cps
Thallium	203-1	2257	2154	2267	2226	2.82	cps
Thallium	205-1	5314	5591	5244	5383	3.41	cps
Tin	118-1	11748	9230	8179	9719	18.87	cps
Titanium	47-1	495379	507316	505844	502846	1.29	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09	Instrumnet Name :	P7
Client Sample ID :	A6342	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:42:57	DataFile Name :	028SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	67714	68963	69058	68578	1.09	cps
Vanadium	51-2	106415	103945	105546	105302	1.19	cps
Yttrium	89-1	15939394	15917761	15871611	15909589	0.22	cps
Yttrium	89-2	5298378	5222900	5362689	5294656	1.32	cps
Zinc	66-2	36939	38022	37517	37493	1.44	cps
Zirconium	90-1	18348	18382	18241	18324	0.40	cps
Zirconium	91-1	3874	4021	3907	3934	1.96	cps

Reviewed By:Eman
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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-10	Instrumnet Name :	P7
Client Sample ID :	A6342D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:46:09	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3065003	3121259	3038012	3074758	1.38	cps
Antimony	121-1	450	507	513	490	7.10	cps
Arsenic	75-2	4191	4187	3984	4121	2.87	cps
Barium	135-1	125067	124196	125023	124762	0.39	cps
Barium	137-1	215233	214293	214601	214709	0.22	cps
Beryllium	9-1	643	727	730	700	7.01	cps
Bismuth	209-1	7491446	7463183	7511675	7488768	0.33	cps
Bismuth	209-2	6241373	6287263	6184369	6237669	0.83	cps
Bromine	81-1	16703	17180	17133	17005	1.55	cps
Bromine	81-2	630	733	683	682	7.57	cps
Cadmium	108-1	50	60	53	54	9.35	cps
Cadmium	106-1	5151	4758	5061	4990	4.13	cps
Cadmium	111-1	3877	3572	3795	3748	4.22	cps
Calcium	43-1	38753	38262	38094	38370	0.89	cps
Calcium	44-1	628333	632448	630393	630391	0.33	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	139925	136212	134227	136788	2.11	cps
Cobalt	59-2	33140	33243	32846	33076	0.62	cps
Copper	63-2	51135	49789	49147	50024	2.03	cps
Dysprosium	156-1	23046	23223	23026	23098	0.47	cps
Dysprosium	156-2	24238	23032	23309	23526	2.68	cps
Erbium	164-1	19734	19554	19410	19566	0.83	cps
Erbium	164-2	14634	14881	14885	14800	0.97	cps
Gadolinium	160-1	20949	21543	21573	21355	1.65	cps
Gadolinium	160-2	17184	17691	17264	17380	1.57	cps
Holmium	165-1	12021318	12124296	11935153	12026923	0.79	cps
Holmium	165-2	9100352	9095548	8979626	9058509	0.75	cps
Indium	115-1	9136912	9053401	9113448	9101254	0.47	cps
Indium	115-2	4112241	4039250	4041292	4064261	1.02	cps
Iron	56-2	48778524	48293331	47829138	48300331	0.98	cps
Iron	57-2	1227440	1229245	1223357	1226681	0.25	cps
Iron	54-2	2616286	2628730	2666991	2637336	1.00	cps
Krypton	83-1	260	213	237	237	9.86	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-10	Instrumnet Name :	P7
Client Sample ID :	A6342D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:46:09	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1452817	1469889	1465707	1462804	0.61	cps
Lead	207-1	1273054	1281409	1296077	1283513	0.91	cps
Lead	208-1	6075631	6076222	6189752	6113868	1.07	cps
Lithium	6-1	1162416	1136273	1167753	1155481	1.46	cps
Magnesium	24-2	1538813	1572022	1550847	1553894	1.08	cps
Manganese	55-2	542084	536020	536038	538048	0.65	cps
Molybdenum	94-1	8242	8556	8242	8347	2.17	cps
Molybdenum	95-1	2764	2757	2887	2803	2.61	cps
Molybdenum	96-1	4754	4664	4787	4735	1.35	cps
Molybdenum	97-1	1690	1733	1757	1727	1.96	cps
Molybdenum	98-1	4427	4581	4647	4552	2.48	cps
Neodymium	150-1	39933	40140	39091	39721	1.40	cps
Neodymium	150-2	27303	26889	26942	27045	0.83	cps
Nickel	60-2	31142	31069	30681	30964	0.80	cps
Phosphorus	31-2	5154	5061	5078	5098	0.98	cps
Potassium	39-2	704104	699852	690456	698137	1.00	cps
Rhodium	103-1	8448917	8468901	8313418	8410412	1.01	cps
Rhodium	103-2	5586275	5587311	5507095	5560227	0.83	cps
Scandium	45-1	4527853	4486624	4499881	4504786	0.47	cps
Scandium	45-2	530202	530966	521504	527557	1.00	cps
Selenium	82-1	433	513	439	461	9.66	cps
Selenium	77-2	47	60	80	62	26.96	cps
Selenium	78-2	720	700	607	676	8.95	cps
Silicon	28-1	3659914	3690658	3707256	3685942	0.65	cps
Silver	107-1	803	720	743	756	5.69	cps
Silver	109-1	640	717	637	664	6.81	cps
Sodium	23-2	148023	143081	143726	144943	1.85	cps
Strontium	86-1	27292	28073	27282	27549	1.65	cps
Strontium	88-1	239476	241800	239811	240362	0.52	cps
Sulfur	34-1	124616	124364	124929	124636	0.23	cps
Terbium	159-1	12038235	12273698	12174086	12162006	0.97	cps
Terbium	159-2	8901105	9046327	8790959	8912797	1.44	cps
Thallium	203-1	2214	2420	2327	2320	4.46	cps
Thallium	205-1	5178	5164	5314	5219	1.59	cps
Tin	118-1	4047	3754	3727	3843	4.62	cps
Titanium	47-1	514732	516035	516553	515773	0.18	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-10	Instrumnet Name :	P7
Client Sample ID :	A6342D	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:46:09	DataFile Name :	029SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	69215	69494	71142	69950	1.49	cps
Vanadium	51-2	106718	106811	106513	106680	0.14	cps
Yttrium	89-1	15846343	16108609	15762632	15905861	1.13	cps
Yttrium	89-2	5299014	5361125	5316913	5325684	0.60	cps
Zinc	66-2	37400	38098	38028	37842	1.02	cps
Zirconium	90-1	17791	18105	17918	17938	0.88	cps
Zirconium	91-1	3957	4134	4144	4078	2.58	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09LX5	Instrumnet Name :	P7
Client Sample ID :	A6342L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:49:20	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	626287	633186	622579	627351	0.86	cps
Antimony	121-1	200	137	197	178	20.05	cps
Arsenic	75-2	833	827	753	804	5.52	cps
Barium	135-1	25319	25957	26057	25778	1.55	cps
Barium	137-1	44061	45078	45198	44779	1.39	cps
Beryllium	9-1	187	203	237	209	12.19	cps
Bismuth	209-1	7781107	7571842	7604871	7652607	1.47	cps
Bismuth	209-2	6336005	6441210	6230884	6336033	1.66	cps
Bromine	81-1	15141	15388	15598	15376	1.49	cps
Bromine	81-2	237	333	227	266	22.18	cps
Cadmium	108-1	3	13	13	10	57.75	cps
Cadmium	106-1	5134	4908	4547	4863	6.09	cps
Cadmium	111-1	3665	3466	3221	3450	6.45	cps
Calcium	43-1	8116	8046	8216	8126	1.05	cps
Calcium	44-1	135583	138560	138886	137676	1.32	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	29599	29402	29055	29352	0.94	cps
Cobalt	59-2	7035	7158	7402	7198	2.59	cps
Copper	63-2	12205	12148	11735	12029	2.13	cps
Dysprosium	156-1	4778	5051	4918	4915	2.78	cps
Dysprosium	156-2	4701	4854	4828	4794	1.71	cps
Erbium	164-1	3867	4024	4214	4035	4.30	cps
Erbium	164-2	3147	3097	3014	3086	2.18	cps
Gadolinium	160-1	4507	4467	4624	4533	1.80	cps
Gadolinium	160-2	3971	3994	4047	4004	0.98	cps
Holmium	165-1	12380484	12029420	12139032	12182979	1.47	cps
Holmium	165-2	9099799	9227026	8980045	9102290	1.36	cps
Indium	115-1	9390883	9133462	9245140	9256495	1.39	cps
Indium	115-2	4109611	4171245	4088197	4123018	1.05	cps
Iron	56-2	10103940	10147627	10082703	10111424	0.33	cps
Iron	57-2	261203	257840	256555	258533	0.93	cps
Iron	54-2	565837	565766	568060	566554	0.23	cps
Krypton	83-1	243	230	227	233	3.78	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09LX5	Instrumnet Name :	P7
Client Sample ID :	A6342L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:49:20	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	294058	296185	291753	293999	0.75	cps
Lead	207-1	260513	261952	263223	261896	0.52	cps
Lead	208-1	1181781	1187259	1178733	1182591	0.37	cps
Lithium	6-1	1199516	1158152	1183168	1180279	1.77	cps
Magnesium	24-2	320353	318917	317768	319013	0.41	cps
Manganese	55-2	111845	112121	110892	111619	0.58	cps
Molybdenum	94-1	1897	1727	1910	1845	5.54	cps
Molybdenum	95-1	607	707	680	664	7.79	cps
Molybdenum	96-1	1117	980	1067	1054	6.56	cps
Molybdenum	97-1	437	450	450	446	1.73	cps
Molybdenum	98-1	1037	1083	1113	1078	3.59	cps
Neodymium	150-1	8102	8119	8319	8180	1.47	cps
Neodymium	150-2	5341	5628	5204	5391	4.01	cps
Nickel	60-2	8613	8853	8633	8699	1.53	cps
Phosphorus	31-2	1300	1390	1273	1321	4.63	cps
Potassium	39-2	196198	194593	191627	194140	1.19	cps
Rhodium	103-1	8713619	8463725	8545099	8574148	1.49	cps
Rhodium	103-2	5641349	5657736	5589662	5629582	0.63	cps
Scandium	45-1	4590117	4560940	4513979	4555012	0.84	cps
Scandium	45-2	523952	529937	528355	527415	0.59	cps
Selenium	82-1	341	410	435	395	12.37	cps
Selenium	77-2	10	10	17	12	31.50	cps
Selenium	78-2	663	540	600	601	10.26	cps
Silicon	28-1	1378722	1433483	1419853	1410686	2.02	cps
Silver	107-1	243	223	313	260	18.18	cps
Silver	109-1	267	247	280	264	6.35	cps
Sodium	23-2	52539	52553	52121	52404	0.47	cps
Strontium	86-1	5761	5951	6338	6017	4.89	cps
Strontium	88-1	49048	49329	49436	49271	0.41	cps
Sulfur	34-1	105370	104034	105192	104865	0.69	cps
Terbium	159-1	12538811	12354627	12449357	12447599	0.74	cps
Terbium	159-2	8940687	9007928	8948142	8965585	0.41	cps
Thallium	203-1	653	753	727	711	7.28	cps
Thallium	205-1	1677	1507	1657	1613	5.76	cps
Tin	118-1	1927	1980	2114	2007	4.79	cps
Titanium	47-1	103880	106283	106427	105530	1.36	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09LX5	Instrumnet Name :	P7
Client Sample ID :	A6342L	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 15:49:20	DataFile Name :	030SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	14341	14395	14822	14519	1.81	cps
Vanadium	51-2	22637	22120	22043	22267	1.45	cps
Yttrium	89-1	16230825	15692159	15762746	15895243	1.84	cps
Yttrium	89-2	5295069	5353463	5256906	5301812	0.92	cps
Zinc	66-2	8029	8396	8346	8257	2.41	cps
Zirconium	90-1	4007	4151	4027	4062	1.91	cps
Zirconium	91-1	813	900	883	866	5.31	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-11	Instrumnet Name :	P7
Client Sample ID :	A6342S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:52:37	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2838658	2819893	2785807	2814786	0.95	cps
Antimony	121-1	164043	165294	165358	164899	0.45	cps
Arsenic	75-2	9019	9557	9286	9287	2.89	cps
Barium	135-1	1109478	1120283	1117800	1115854	0.51	cps
Barium	137-1	2024129	2027022	2004968	2018707	0.59	cps
Beryllium	9-1	11107	10981	10470	10853	3.11	cps
Bismuth	209-1	7982359	7878258	7858673	7906430	0.84	cps
Bismuth	209-2	6638196	6368409	6372988	6459864	2.39	cps
Bromine	81-1	17681	17918	18188	17929	1.42	cps
Bromine	81-2	770	713	770	751	4.36	cps
Cadmium	108-1	1760	1643	1767	1723	4.02	cps
Cadmium	106-1	7612	7279	7429	7440	2.24	cps
Cadmium	111-1	29265	29123	28584	28991	1.24	cps
Calcium	43-1	34950	35218	35194	35121	0.42	cps
Calcium	44-1	578793	583344	582556	581564	0.42	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	300909	301408	299552	300623	0.32	cps
Cobalt	59-2	686664	687449	686020	686711	0.10	cps
Copper	63-2	271322	270942	265734	269333	1.16	cps
Dysprosium	156-1	22148	21854	22585	22195	1.66	cps
Dysprosium	156-2	21894	21186	21817	21632	1.80	cps
Erbium	164-1	18532	18779	18502	18605	0.82	cps
Erbium	164-2	13850	13737	13817	13801	0.42	cps
Gadolinium	160-1	20305	20382	20709	20465	1.05	cps
Gadolinium	160-2	16730	16210	16717	16552	1.79	cps
Holmium	165-1	12687684	12507520	12496387	12563864	0.85	cps
Holmium	165-2	9466095	9292945	9077667	9278902	2.10	cps
Indium	115-1	9677852	9416390	9395094	9496445	1.66	cps
Indium	115-2	4204320	4189293	4095530	4163047	1.42	cps
Iron	56-2	47172106	47220269	47121798	47171391	0.10	cps
Iron	57-2	1190285	1191084	1193951	1191773	0.16	cps
Iron	54-2	2568898	2598791	2553593	2573761	0.89	cps
Krypton	83-1	207	220	217	214	3.24	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-11	Instrumnet Name :	P7
Client Sample ID :	A6342S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:52:37	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	816503	829507	837758	827923	1.29	cps
Lead	207-1	719117	731679	728728	726508	0.90	cps
Lead	208-1	3440921	3467805	3453511	3454079	0.39	cps
Lithium	6-1	1245928	1226357	1234360	1235548	0.80	cps
Magnesium	24-2	1453092	1467142	1418794	1446342	1.72	cps
Manganese	55-2	853412	849818	841527	848253	0.72	cps
Molybdenum	94-1	3971	3831	3887	3896	1.81	cps
Molybdenum	95-1	2764	2534	2924	2740	7.16	cps
Molybdenum	96-1	4057	3947	3977	3994	1.42	cps
Molybdenum	97-1	1970	1613	1680	1755	10.81	cps
Molybdenum	98-1	4347	4507	4344	4400	2.12	cps
Neodymium	150-1	36878	37379	37724	37327	1.14	cps
Neodymium	150-2	25530	25343	24862	25245	1.36	cps
Nickel	60-2	193373	193664	192222	193086	0.39	cps
Phosphorus	31-2	4831	4721	4487	4680	3.75	cps
Potassium	39-2	674246	677456	677385	676362	0.27	cps
Rhodium	103-1	8810976	8675757	8669019	8718584	0.92	cps
Rhodium	103-2	5719916	5752532	5630015	5700821	1.11	cps
Scandium	45-1	4716482	4530474	4581835	4609597	2.08	cps
Scandium	45-2	539710	535426	528703	534613	1.04	cps
Selenium	82-1	980	912	934	942	3.67	cps
Selenium	77-2	153	157	163	158	3.23	cps
Selenium	78-2	863	897	897	886	2.17	cps
Silicon	28-1	7901090	7984521	8560877	8148829	4.41	cps
Silver	107-1	119315	121217	123291	121274	1.64	cps
Silver	109-1	112508	114884	115041	114144	1.24	cps
Sodium	23-2	151708	154308	154692	153569	1.06	cps
Strontium	86-1	25936	25469	25522	25642	1.00	cps
Strontium	88-1	219067	222086	219290	220148	0.76	cps
Sulfur	34-1	117091	115153	114955	115733	1.02	cps
Terbium	159-1	12887087	12663190	12528146	12692808	1.43	cps
Terbium	159-2	9262469	9181239	9078961	9174223	1.00	cps
Thallium	203-1	96485	98748	99708	98314	1.68	cps
Thallium	205-1	232026	237177	236472	235225	1.19	cps
Tin	118-1	10474	9767	10040	10094	3.53	cps
Titanium	47-1	595946	596203	597161	596437	0.11	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-11	Instrumnet Name :	P7
Client Sample ID :	A6342S	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:52:37	DataFile Name :	031SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	60902	61863	62683	61816	1.44	cps
Vanadium	51-2	487382	481840	478546	482589	0.93	cps
Yttrium	89-1	16694927	16516664	16324611	16512067	1.12	cps
Yttrium	89-2	5473853	5380948	5326760	5393854	1.38	cps
Zinc	66-2	117417	118173	117215	117602	0.43	cps
Zirconium	90-1	6618	6745	6455	6606	2.20	cps
Zirconium	91-1	1500	1620	1417	1512	6.76	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:55:49	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2830338	2809312	2801045	2813565	0.54	cps
Antimony	121-1	7155	7439	7475	7356	2.38	cps
Arsenic	75-2	21706	21552	21482	21580	0.53	cps
Barium	135-1	128880	129370	129774	129341	0.35	cps
Barium	137-1	222017	224114	225323	223818	0.75	cps
Beryllium	9-1	670	757	693	707	6.35	cps
Bismuth	209-1	8015554	7926417	7928789	7956920	0.64	cps
Bismuth	209-2	6495113	6448328	6538194	6493878	0.69	cps
Bromine	81-1	19960	20518	20881	20453	2.27	cps
Bromine	81-2	1437	1443	1433	1438	0.35	cps
Cadmium	108-1	38849	40132	40005	39662	1.78	cps
Cadmium	106-1	44963	45474	43836	44758	1.87	cps
Cadmium	111-1	4637	4013	2972	3874	21.72	cps
Calcium	43-1	29051	28660	29138	28950	0.88	cps
Calcium	44-1	474994	480051	480450	478498	0.64	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	7118325	7108819	7053558	7093567	0.49	cps
Cobalt	59-2	41564	42336	41621	41840	1.03	cps
Copper	63-2	5117115	5154786	5081187	5117696	0.72	cps
Dysprosium	156-1	23984	22959	23426	23456	2.19	cps
Dysprosium	156-2	22685	22902	22912	22833	0.56	cps
Erbium	164-1	20191	20872	20989	20684	2.08	cps
Erbium	164-2	15792	15686	14861	15446	3.30	cps
Gadolinium	160-1	22091	21630	21977	21899	1.10	cps
Gadolinium	160-2	17281	17788	17337	17469	1.59	cps
Holmium	165-1	12475170	12628761	12525764	12543231	0.62	cps
Holmium	165-2	9269059	9349410	9317022	9311831	0.43	cps
Indium	115-1	9015977	9019192	8947715	8994295	0.45	cps
Indium	115-2	3876516	3966944	3967116	3936859	1.33	cps
Iron	56-2	94007275	94497429	93670012	94058239	0.44	cps
Iron	57-2	2314023	2301649	2284582	2300085	0.64	cps
Iron	54-2	5327760	5308987	5294641	5310463	0.31	cps
Krypton	83-1	237	217	190	214	10.92	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:55:49	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3574839	3548038	3566107	3562995	0.38	cps
Lead	207-1	2869018	2912274	2936431	2905907	1.18	cps
Lead	208-1	13586704	13616487	13699112	13634101	0.43	cps
Lithium	6-1	1226426	1254663	1223929	1235006	1.38	cps
Magnesium	24-2	1298175	1275410	1275793	1283126	1.02	cps
Manganese	55-2	811999	803767	801207	805658	0.70	cps
Molybdenum	94-1	8189	8269	7992	8150	1.75	cps
Molybdenum	95-1	9436	9550	9230	9405	1.73	cps
Molybdenum	96-1	11568	11695	11731	11665	0.74	cps
Molybdenum	97-1	5861	5968	5775	5868	1.65	cps
Molybdenum	98-1	14901	15502	15055	15152	2.06	cps
Neodymium	150-1	40057	39933	40729	40239	1.06	cps
Neodymium	150-2	27296	26829	26665	26930	1.22	cps
Nickel	60-2	57178	55904	56667	56583	1.13	cps
Phosphorus	31-2	12765	12782	13263	12937	2.18	cps
Potassium	39-2	839164	836235	828508	834636	0.66	cps
Rhodium	103-1	8676985	8653018	8615858	8648620	0.36	cps
Rhodium	103-2	5706704	5730355	5744952	5727337	0.34	cps
Scandium	45-1	4538462	4623681	4496462	4552868	1.42	cps
Scandium	45-2	531456	530112	536414	532661	0.62	cps
Selenium	82-1	467	485	546	499	8.29	cps
Selenium	77-2	50	73	90	71	28.26	cps
Selenium	78-2	737	720	613	690	9.70	cps
Silicon	28-1	7503156	7648995	7523861	7558671	1.04	cps
Silver	107-1	59505	59833	59843	59727	0.32	cps
Silver	109-1	56202	56821	56068	56363	0.71	cps
Sodium	23-2	118760	120570	118583	119304	0.92	cps
Strontium	86-1	16953	17123	16813	16963	0.92	cps
Strontium	88-1	145067	146939	145211	145739	0.71	cps
Sulfur	34-1	112917	113840	112722	113159	0.53	cps
Terbium	159-1	12762708	12715108	12580026	12685947	0.75	cps
Terbium	159-2	9036882	9130260	9279086	9148743	1.34	cps
Thallium	203-1	1843	1797	1880	1840	2.27	cps
Thallium	205-1	4427	4491	4447	4455	0.73	cps
Tin	118-1	20502583	20446653	20278588	20409275	0.57	cps
Titanium	47-1	717861	722924	720463	720416	0.35	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:55:49	DataFile Name :	032SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	63209	64401	63152	63587	1.11	cps
Vanadium	51-2	106539	106932	106180	106551	0.35	cps
Yttrium	89-1	16257495	16382515	16354884	16331631	0.40	cps
Yttrium	89-2	5411726	5353006	5458040	5407591	0.97	cps
Zinc	66-2	45984	45900	45512	45799	0.55	cps
Zirconium	90-1	7649	7189	7332	7390	3.19	cps
Zirconium	91-1	1783	1577	1600	1653	6.85	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-09	Instrumnet Name :	P7
Client Sample ID :	A6307	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:58:55	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	8090222	7928222	7995196	8004547	1.02	cps
Antimony	121-1	11331	11802	11378	11504	2.25	cps
Arsenic	75-2	53222	52532	52609	52788	0.72	cps
Barium	135-1	141919	144251	142959	143043	0.82	cps
Barium	137-1	247253	250574	248664	248831	0.67	cps
Beryllium	9-1	2597	2564	2764	2641	4.06	cps
Bismuth	209-1	7991183	8116617	8326215	8144672	2.08	cps
Bismuth	209-2	6539713	6416693	6407203	6454537	1.15	cps
Bromine	81-1	94416	100502	103213	99377	4.53	cps
Bromine	81-2	21796	21843	21496	21712	0.87	cps
Cadmium	108-1	400	313	437	383	16.52	cps
Cadmium	106-1	6572	5995	6315	6294	4.59	cps
Cadmium	111-1	5660	5434	5551	5548	2.04	cps
Calcium	43-1	66943	67904	67298	67382	0.72	cps
Calcium	44-1	1104549	1106024	1101934	1104169	0.19	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	296894	291702	292984	293860	0.92	cps
Cobalt	59-2	260851	260470	261518	260946	0.20	cps
Copper	63-2	136327	136015	135598	135980	0.27	cps
Dysprosium	156-1	147815	148866	149708	148796	0.64	cps
Dysprosium	156-2	147484	149644	149027	148719	0.75	cps
Erbium	164-1	125104	125504	126049	125552	0.38	cps
Erbium	164-2	93759	92587	94748	93698	1.15	cps
Gadolinium	160-1	127070	129704	129969	128914	1.24	cps
Gadolinium	160-2	101621	101245	101366	101411	0.19	cps
Holmium	165-1	12827664	12851703	13200784	12960050	1.61	cps
Holmium	165-2	9433344	9373925	9416169	9407813	0.33	cps
Indium	115-1	9564148	9677337	9850177	9697221	1.49	cps
Indium	115-2	4196851	4135531	4145851	4159411	0.79	cps
Iron	56-2	134333568	131913811	131923328	132723569	1.05	cps
Iron	57-2	3283423	3297086	3285217	3288576	0.23	cps
Iron	54-2	7292732	7094780	7108457	7165323	1.54	cps
Krypton	83-1	297	313	360	323	10.15	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-09	Instrumnet Name :	P7
Client Sample ID :	A6307	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:58:55	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1123096	1135021	1141811	1133309	0.84	cps
Lead	207-1	936938	951590	947855	945461	0.81	cps
Lead	208-1	4560596	4604007	4619150	4594584	0.66	cps
Lithium	6-1	1236150	1277340	1252898	1255463	1.65	cps
Magnesium	24-2	1347531	1333228	1334118	1338292	0.60	cps
Manganese	55-2	1961369	1932528	1915759	1936552	1.19	cps
Molybdenum	94-1	11958	12115	12042	12038	0.65	cps
Molybdenum	95-1	14100	14954	14507	14521	2.94	cps
Molybdenum	96-1	17547	17961	17304	17604	1.89	cps
Molybdenum	97-1	9323	9356	9310	9330	0.26	cps
Molybdenum	98-1	23342	23172	23606	23373	0.94	cps
Neodymium	150-1	237010	238347	235840	237066	0.53	cps
Neodymium	150-2	157960	157970	157815	157915	0.05	cps
Nickel	60-2	48792	49227	49244	49088	0.52	cps
Phosphorus	31-2	22747	22977	22029	22585	2.19	cps
Potassium	39-2	718202	713245	711769	714405	0.47	cps
Rhodium	103-1	8762657	8784939	9021288	8856295	1.62	cps
Rhodium	103-2	5744356	5629103	5713617	5695692	1.05	cps
Scandium	45-1	4619911	4661154	4742141	4674402	1.33	cps
Scandium	45-2	540401	536250	540190	538947	0.43	cps
Selenium	82-1	1023	1060	1041	1041	1.75	cps
Selenium	77-2	477	400	453	443	8.86	cps
Selenium	78-2	1053	1067	1087	1069	1.57	cps
Silicon	28-1	8977889	8995007	8991967	8988288	0.10	cps
Silver	107-1	6498	6482	6348	6443	1.28	cps
Silver	109-1	6115	5971	6301	6129	2.70	cps
Sodium	23-2	451278	444440	446946	447555	0.77	cps
Strontium	86-1	69724	71851	71603	71059	1.64	cps
Strontium	88-1	622035	629855	622534	624808	0.70	cps
Sulfur	34-1	215451	214757	213602	214603	0.44	cps
Terbium	159-1	13062182	12963678	13374218	13133359	1.63	cps
Terbium	159-2	9361480	9310519	9265173	9312390	0.52	cps
Thallium	203-1	2324	2500	2524	2449	4.47	cps
Thallium	205-1	5431	5741	5825	5666	3.66	cps
Tin	118-1	122509	119507	129203	123740	4.01	cps
Titanium	47-1	468147	473374	467342	469621	0.70	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-09	Instrumnet Name :	P7
Client Sample ID :	A6307	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 15:58:55	DataFile Name :	033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	371898	373289	378031	374406	0.86	cps
Vanadium	51-2	194520	192545	192552	193206	0.59	cps
Yttrium	89-1	18099898	18020377	18574466	18231581	1.64	cps
Yttrium	89-2	5981986	5869437	5932526	5927983	0.95	cps
Zinc	66-2	45793	46402	46054	46083	0.66	cps
Zirconium	90-1	10230	10174	10030	10145	1.02	cps
Zirconium	91-1	2227	2294	2330	2284	2.29	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:02:05	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	767224	755368	754013	758868	0.96	cps
Antimony	121-1	17327	16773	17120	17074	1.64	cps
Arsenic	75-2	38697	37828	37434	37986	1.70	cps
Barium	135-1	95735	94178	93541	94485	1.19	cps
Barium	137-1	164984	164020	161670	163558	1.04	cps
Beryllium	9-1	250	233	163	216	21.33	cps
Bismuth	209-1	7703520	8265486	7968394	7979133	3.52	cps
Bismuth	209-2	6387411	6360210	6379336	6375652	0.22	cps
Bromine	81-1	23679	23556	23158	23464	1.16	cps
Bromine	81-2	2164	2013	2080	2086	3.60	cps
Cadmium	108-1	225417	220926	218376	221573	1.61	cps
Cadmium	106-1	232211	226978	222156	227115	2.21	cps
Cadmium	111-1	4966	4497	2889	4117	26.45	cps
Calcium	43-1	54009	53524	51202	52912	2.83	cps
Calcium	44-1	896445	871701	851194	873113	2.60	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	34394367	33875776	33536625	33935589	1.27	cps
Cobalt	59-2	13603	14367	13653	13874	3.08	cps
Copper	63-2	1587409	1546135	1503562	1545702	2.71	cps
Dysprosium	156-1	7462	7385	7309	7385	1.04	cps
Dysprosium	156-2	7419	7139	7625	7394	3.31	cps
Erbium	164-1	5318	5124	5101	5181	2.30	cps
Erbium	164-2	3701	3914	3647	3754	3.76	cps
Gadolinium	160-1	6728	6572	6588	6629	1.30	cps
Gadolinium	160-2	5504	5248	5234	5329	2.86	cps
Holmium	165-1	12012549	12547991	12234729	12265090	2.19	cps
Holmium	165-2	9098064	8912772	8854744	8955194	1.42	cps
Indium	115-1	6398131	6981041	6459677	6612950	4.84	cps
Indium	115-2	2661972	2638935	2668937	2656615	0.59	cps
Iron	56-2	75323101	75532547	73973959	74943202	1.13	cps
Iron	57-2	1860729	1879090	1850513	1863444	0.78	cps
Iron	54-2	5228145	5242430	5129261	5199945	1.19	cps
Krypton	83-1	250	243	197	230	12.63	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:02:05	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5549267	5521422	5507176	5525955	0.39	cps
Lead	207-1	4418562	4439487	4436003	4431350	0.25	cps
Lead	208-1	20983121	20922078	21037076	20980758	0.27	cps
Lithium	6-1	1203884	1231098	1190139	1208374	1.73	cps
Magnesium	24-2	316817	313708	314062	314862	0.54	cps
Manganese	55-2	289237	288491	289693	289140	0.21	cps
Molybdenum	94-1	18612	18295	17894	18267	1.97	cps
Molybdenum	95-1	26978	26564	25526	26356	2.84	cps
Molybdenum	96-1	30515	29633	29173	29774	2.29	cps
Molybdenum	97-1	16910	16056	15832	16266	3.50	cps
Molybdenum	98-1	43822	43130	41579	42844	2.68	cps
Neodymium	150-1	13957	14314	13079	13784	4.61	cps
Neodymium	150-2	8916	9193	8903	9004	1.82	cps
Nickel	60-2	28173	28704	28033	28303	1.25	cps
Phosphorus	31-2	19613	19456	19209	19426	1.05	cps
Potassium	39-2	464521	463042	457790	461784	0.77	cps
Rhodium	103-1	8092157	8402914	8113966	8203013	2.11	cps
Rhodium	103-2	5328855	5212496	5290080	5277144	1.12	cps
Scandium	45-1	4124404	4276834	4089565	4163601	2.39	cps
Scandium	45-2	468201	464680	459566	464149	0.94	cps
Selenium	82-1	514	402	480	465	12.31	cps
Selenium	77-2	30	40	20	30	33.33	cps
Selenium	78-2	517	573	547	546	5.20	cps
Silicon	28-1	5732400	5510582	5452415	5565132	2.65	cps
Silver	107-1	209482	206655	205378	207172	1.01	cps
Silver	109-1	196225	193658	192182	194022	1.05	cps
Sodium	23-2	151544	150374	151388	151102	0.42	cps
Strontium	86-1	29790	28855	28053	28899	3.01	cps
Strontium	88-1	258400	250748	245107	251418	2.65	cps
Sulfur	34-1	132562	130935	130313	131270	0.88	cps
Terbium	159-1	12143029	12777617	12317787	12412811	2.64	cps
Terbium	159-2	8790790	8664609	8699853	8718418	0.75	cps
Thallium	203-1	1140	1277	1167	1195	6.07	cps
Thallium	205-1	2874	2687	2694	2751	3.85	cps
Tin	118-1	117841945	116825898	114443298	116370380	1.50	cps
Titanium	47-1	469532	454793	439445	454590	3.31	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:02:05	DataFile Name :	034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	22977	22469	22436	22627	1.34	cps
Vanadium	51-2	96714	95936	95942	96197	0.47	cps
Yttrium	89-1	14828054	15617397	15047251	15164234	2.69	cps
Yttrium	89-2	4981239	4823191	4835483	4879971	1.80	cps
Zinc	66-2	24357	24437	24807	24534	0.98	cps
Zirconium	90-1	8593	8569	8400	8520	1.24	cps
Zirconium	91-1	1887	1850	1863	1867	0.99	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-11	Instrumnet Name :	P7
Client Sample ID :	A6309	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:05:13	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1158515	1156165	1185061	1166580	1.38	cps
Antimony	121-1	4397	3897	4151	4148	6.03	cps
Arsenic	75-2	11505	11988	12115	11869	2.71	cps
Barium	135-1	95863	94934	96065	95620	0.63	cps
Barium	137-1	164344	167005	167975	166441	1.13	cps
Beryllium	9-1	433	367	363	388	10.18	cps
Bismuth	209-1	7683020	7648847	7642083	7657983	0.29	cps
Bismuth	209-2	6209926	6241831	6267055	6239604	0.46	cps
Bromine	81-1	15208	15675	16099	15661	2.85	cps
Bromine	81-2	817	663	813	764	11.46	cps
Cadmium	108-1	287	167	193	216	29.23	cps
Cadmium	106-1	5204	5038	4884	5042	3.18	cps
Cadmium	111-1	4292	4210	4180	4227	1.37	cps
Calcium	43-1	43051	42315	42315	42561	1.00	cps
Calcium	44-1	699048	701756	708334	703046	0.68	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	122308	121753	120224	121428	0.89	cps
Cobalt	59-2	47776	48317	48769	48287	1.03	cps
Copper	63-2	158964	159785	161060	159936	0.66	cps
Dysprosium	156-1	15038	15632	15569	15413	2.12	cps
Dysprosium	156-2	14985	14925	14601	14837	1.39	cps
Erbium	164-1	13764	13470	13874	13702	1.52	cps
Erbium	164-2	10120	10304	10164	10196	0.94	cps
Gadolinium	160-1	14554	14421	14147	14374	1.44	cps
Gadolinium	160-2	11605	11785	11615	11668	0.87	cps
Holmium	165-1	12110323	11944304	11848474	11967700	1.11	cps
Holmium	165-2	8723896	8911533	8805238	8813556	1.07	cps
Indium	115-1	8695680	8685068	8713729	8698159	0.17	cps
Indium	115-2	3899672	3874753	3942046	3905491	0.87	cps
Iron	56-2	67019116	67239834	67199981	67152977	0.18	cps
Iron	57-2	1642429	1691462	1634326	1656073	1.87	cps
Iron	54-2	3620557	3640456	3643650	3634888	0.34	cps
Krypton	83-1	227	153	140	173	26.92	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-11	Instrumnet Name :	P7
Client Sample ID :	A6309	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:05:13	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	242428	242640	245140	243403	0.62	cps
Lead	207-1	199449	200611	198775	199612	0.47	cps
Lead	208-1	933550	940121	937440	937037	0.35	cps
Lithium	6-1	1202025	1206285	1201244	1203185	0.23	cps
Magnesium	24-2	757945	745239	754818	752667	0.88	cps
Manganese	55-2	617630	617039	619560	618076	0.21	cps
Molybdenum	94-1	5404	5648	5621	5558	2.40	cps
Molybdenum	95-1	5858	5811	5928	5866	1.00	cps
Molybdenum	96-1	7342	7325	7499	7389	1.29	cps
Molybdenum	97-1	3804	3641	3641	3695	2.55	cps
Molybdenum	98-1	9003	9163	9286	9151	1.55	cps
Neodymium	150-1	26194	26816	26662	26557	1.22	cps
Neodymium	150-2	17858	17935	17755	17849	0.51	cps
Nickel	60-2	34830	34222	34062	34372	1.18	cps
Phosphorus	31-2	7068	7202	7449	7240	2.66	cps
Potassium	39-2	407689	418482	418340	414837	1.49	cps
Rhodium	103-1	7931691	7934323	7873845	7913286	0.43	cps
Rhodium	103-2	5296063	5370630	5342558	5336417	0.71	cps
Scandium	45-1	3972647	3920739	3990893	3961426	0.92	cps
Scandium	45-2	479440	483127	490015	484194	1.11	cps
Selenium	82-1	357	442	509	436	17.47	cps
Selenium	77-2	73	63	47	61	22.04	cps
Selenium	78-2	560	623	467	550	14.33	cps
Silicon	28-1	5866280	6043835	6032570	5980895	1.66	cps
Silver	107-1	6031	5648	5808	5829	3.30	cps
Silver	109-1	5531	5254	5158	5314	3.65	cps
Sodium	23-2	273659	272281	274693	273544	0.44	cps
Strontium	86-1	30836	30792	31156	30928	0.64	cps
Strontium	88-1	269802	273629	276657	273363	1.26	cps
Sulfur	34-1	108220	109817	109002	109013	0.73	cps
Terbium	159-1	12040113	12056936	11903811	12000287	0.70	cps
Terbium	159-2	8701769	8658544	8634322	8664878	0.39	cps
Thallium	203-1	1303	1347	1390	1347	3.22	cps
Thallium	205-1	3304	3180	3214	3233	1.97	cps
Tin	118-1	88544	89509	95235	91096	3.97	cps
Titanium	47-1	246751	248655	252997	249468	1.28	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-11	Instrumnet Name :	P7
Client Sample ID :	A6309	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:05:13	DataFile Name :	035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	43818	42852	42471	43047	1.61	cps
Vanadium	51-2	51517	52384	51578	51826	0.93	cps
Yttrium	89-1	14718244	14618818	14814068	14717043	0.66	cps
Yttrium	89-2	4963714	5000394	4994395	4986168	0.39	cps
Zinc	66-2	86284	88738	87897	87639	1.42	cps
Zirconium	90-1	5961	5885	6075	5974	1.60	cps
Zirconium	91-1	1217	1363	1230	1270	6.39	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-12	Instrumnet Name :	P7
Client Sample ID :	A6320	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:08:26	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3023509	3064745	3071703	3053319	0.85	cps
Antimony	121-1	340	413	490	414	18.10	cps
Arsenic	75-2	2734	2650	2660	2681	1.70	cps
Barium	135-1	95027	96987	95991	96001	1.02	cps
Barium	137-1	165673	167119	166610	166467	0.44	cps
Beryllium	9-1	710	760	703	724	4.28	cps
Bismuth	209-1	7790743	7678213	7788204	7752387	0.83	cps
Bismuth	209-2	6244516	6264558	6306286	6271786	0.50	cps
Bromine	81-1	16646	16179	16583	16469	1.54	cps
Bromine	81-2	727	737	833	766	7.70	cps
Cadmium	108-1	40	47	60	49	20.83	cps
Cadmium	106-1	5081	5081	4754	4972	3.79	cps
Cadmium	111-1	3592	3634	3349	3525	4.36	cps
Calcium	43-1	32338	33370	32795	32834	1.58	cps
Calcium	44-1	549186	551633	550540	550453	0.22	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	115169	114933	114111	114737	0.48	cps
Cobalt	59-2	37263	37971	37373	37536	1.02	cps
Copper	63-2	44172	43988	44289	44149	0.34	cps
Dysprosium	156-1	14785	14641	15132	14852	1.70	cps
Dysprosium	156-2	14694	14231	14407	14444	1.62	cps
Erbium	164-1	12803	12896	12853	12850	0.36	cps
Erbium	164-2	9950	9380	9340	9557	3.57	cps
Gadolinium	160-1	14428	14077	13930	14145	1.81	cps
Gadolinium	160-2	11318	11642	10924	11295	3.18	cps
Holmium	165-1	11993791	12172584	11910658	12025678	1.11	cps
Holmium	165-2	8883091	9012014	8886560	8927222	0.82	cps
Indium	115-1	9012043	8885262	8987730	8961678	0.75	cps
Indium	115-2	3899409	3976576	3925249	3933745	1.00	cps
Iron	56-2	38898342	39569850	38934773	39134322	0.96	cps
Iron	57-2	980077	992274	978990	983780	0.75	cps
Iron	54-2	2142979	2152989	2094404	2130124	1.47	cps
Krypton	83-1	217	217	203	212	3.63	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-12	Instrumnet Name :	P7
Client Sample ID :	A6320	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:08:26	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	68541	69101	69992	69211	1.06	cps
Lead	207-1	55597	54894	56279	55590	1.25	cps
Lead	208-1	261326	263428	266014	263589	0.89	cps
Lithium	6-1	1212214	1212604	1220325	1215048	0.38	cps
Magnesium	24-2	1174904	1187561	1203962	1188809	1.23	cps
Manganese	55-2	285930	285916	283478	285108	0.50	cps
Molybdenum	94-1	2997	2944	2834	2925	2.85	cps
Molybdenum	95-1	1010	987	970	989	2.03	cps
Molybdenum	96-1	2070	1917	1810	1932	6.76	cps
Molybdenum	97-1	750	553	667	657	15.03	cps
Molybdenum	98-1	1493	1727	1560	1593	7.54	cps
Neodymium	150-1	24495	24164	24852	24504	1.40	cps
Neodymium	150-2	16169	15846	16697	16237	2.65	cps
Nickel	60-2	31263	30691	30675	30876	1.08	cps
Phosphorus	31-2	5018	5031	5011	5020	0.20	cps
Potassium	39-2	472272	477087	473705	474355	0.52	cps
Rhodium	103-1	8177795	8170408	8117633	8155279	0.40	cps
Rhodium	103-2	5401737	5481655	5418931	5434107	0.77	cps
Scandium	45-1	4189625	4177447	4165213	4177429	0.29	cps
Scandium	45-2	498851	503138	501155	501048	0.43	cps
Selenium	82-1	386	388	426	400	5.67	cps
Selenium	77-2	50	37	50	46	16.89	cps
Selenium	78-2	647	627	457	577	18.10	cps
Silicon	28-1	8698490	8809239	8973729	8827153	1.57	cps
Silver	107-1	993	873	927	931	6.46	cps
Silver	109-1	873	920	1013	936	7.62	cps
Sodium	23-2	183265	183182	183269	183239	0.03	cps
Strontium	86-1	23799	24113	23702	23872	0.90	cps
Strontium	88-1	212042	212093	211907	212014	0.05	cps
Sulfur	34-1	106961	105424	104840	105741	1.04	cps
Terbium	159-1	12273417	12098153	12078849	12150140	0.88	cps
Terbium	159-2	8751284	8759714	8797438	8769479	0.28	cps
Thallium	203-1	1307	1437	1443	1396	5.52	cps
Thallium	205-1	3340	3364	3424	3376	1.27	cps
Tin	118-1	12599	13543	14731	13624	7.84	cps
Titanium	47-1	503486	509333	508173	506997	0.61	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-12	Instrumnet Name :	P7
Client Sample ID :	A6320	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:08:26	DataFile Name :	036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	31634	31825	31594	31684	0.39	cps
Vanadium	51-2	64035	65133	64008	64392	1.00	cps
Yttrium	89-1	15469082	15160925	15436559	15355522	1.10	cps
Yttrium	89-2	5135537	5138293	5091897	5121909	0.51	cps
Zinc	66-2	26009	26560	26357	26309	1.06	cps
Zirconium	90-1	6181	6401	6495	6359	2.53	cps
Zirconium	91-1	1487	1473	1467	1476	0.69	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:11:41	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3313641	3341026	3325584	3326750	0.41	cps
Antimony	121-1	2207	2060	2007	2091	4.95	cps
Arsenic	75-2	24280	23719	24437	24145	1.56	cps
Barium	135-1	232386	231979	229613	231326	0.65	cps
Barium	137-1	404591	405750	401755	404032	0.51	cps
Beryllium	9-1	857	983	840	893	8.77	cps
Bismuth	209-1	7621271	7508407	7731054	7620244	1.46	cps
Bismuth	209-2	6259792	6242289	6323913	6275331	0.68	cps
Bromine	81-1	16890	16853	16526	16756	1.20	cps
Bromine	81-2	827	840	967	878	8.80	cps
Cadmium	108-1	9770	9910	9607	9762	1.56	cps
Cadmium	106-1	14821	14080	14160	14354	2.83	cps
Cadmium	111-1	4252	3619	3841	3904	8.23	cps
Calcium	43-1	53354	53554	53089	53332	0.44	cps
Calcium	44-1	888763	889434	878135	885444	0.72	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13106277	13185136	13042948	13111454	0.54	cps
Cobalt	59-2	46646	46422	46926	46664	0.54	cps
Copper	63-2	8907375	8927587	8973935	8936299	0.38	cps
Dysprosium	156-1	35064	33911	34258	34411	1.72	cps
Dysprosium	156-2	32210	32618	32330	32386	0.65	cps
Erbium	164-1	30002	29979	30173	30051	0.35	cps
Erbium	164-2	22221	22582	21830	22211	1.69	cps
Gadolinium	160-1	34051	34235	34734	34340	1.03	cps
Gadolinium	160-2	26896	27113	27066	27025	0.42	cps
Holmium	165-1	12013483	11569354	11988415	11857084	2.10	cps
Holmium	165-2	8772907	8895139	8948077	8872041	1.01	cps
Indium	115-1	8739631	8458827	8711107	8636522	1.79	cps
Indium	115-2	3800717	3831821	3787812	3806783	0.59	cps
Iron	56-2	62972517	62669844	62516639	62719667	0.37	cps
Iron	57-2	1578009	1549335	1559931	1562425	0.93	cps
Iron	54-2	3833493	3837844	3785892	3819077	0.75	cps
Krypton	83-1	257	170	207	211	20.61	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:11:41	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1245357	1254155	1265243	1254918	0.79	cps
Lead	207-1	1002114	1006173	1005462	1004583	0.22	cps
Lead	208-1	4934611	4957620	4968979	4953737	0.35	cps
Lithium	6-1	1209503	1204714	1228992	1214403	1.06	cps
Magnesium	24-2	1331038	1311381	1293331	1311917	1.44	cps
Manganese	55-2	875536	869318	865160	870004	0.60	cps
Molybdenum	94-1	7379	6918	7245	7181	3.30	cps
Molybdenum	95-1	7375	7145	7335	7285	1.69	cps
Molybdenum	96-1	9116	9133	9110	9120	0.13	cps
Molybdenum	97-1	4431	4501	4517	4483	1.03	cps
Molybdenum	98-1	11648	12095	11548	11764	2.48	cps
Neodymium	150-1	61537	62099	61021	61552	0.88	cps
Neodymium	150-2	40521	40699	41157	40792	0.80	cps
Nickel	60-2	101020	99708	100289	100339	0.66	cps
Phosphorus	31-2	9366	9370	9443	9393	0.46	cps
Potassium	39-2	777010	774876	772852	774913	0.27	cps
Rhodium	103-1	8010784	7687587	7961359	7886577	2.21	cps
Rhodium	103-2	5302643	5304608	5372525	5326592	0.75	cps
Scandium	45-1	4157393	3976150	4074795	4069446	2.23	cps
Scandium	45-2	488402	488522	490079	489001	0.19	cps
Selenium	82-1	443	505	551	500	10.84	cps
Selenium	77-2	113	100	87	100	13.33	cps
Selenium	78-2	690	623	570	628	9.58	cps
Silicon	28-1	8325541	8344792	8150905	8273746	1.29	cps
Silver	107-1	34461	34995	34651	34703	0.78	cps
Silver	109-1	32570	33168	32420	32719	1.21	cps
Sodium	23-2	262562	265396	264851	264270	0.57	cps
Strontium	86-1	62184	61842	61230	61752	0.78	cps
Strontium	88-1	546372	547042	540245	544553	0.69	cps
Sulfur	34-1	156337	153613	153795	154581	0.99	cps
Terbium	159-1	12101231	11714463	12077009	11964235	1.81	cps
Terbium	159-2	8705562	8854144	8736957	8765554	0.89	cps
Thallium	203-1	2170	2180	2267	2206	2.41	cps
Thallium	205-1	5571	5384	5578	5511	1.99	cps
Tin	118-1	6836964	6783901	6768215	6796360	0.53	cps
Titanium	47-1	405591	400474	396171	400745	1.18	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:11:41	DataFile Name :	037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	144278	144645	144773	144565	0.18	cps
Vanadium	51-2	96848	97603	97338	97263	0.39	cps
Yttrium	89-1	15335471	14767851	15221112	15108144	1.99	cps
Yttrium	89-2	5070916	5111460	5041328	5074568	0.69	cps
Zinc	66-2	56583	57336	56416	56779	0.86	cps
Zirconium	90-1	8282	8256	8052	8197	1.54	cps
Zirconium	91-1	1670	1697	1937	1768	8.31	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:14:47	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4675645	4744606	4688133	4702795	0.78	cps
Antimony	121-1	9903	10077	9954	9978	0.89	cps
Arsenic	75-2	177966	177193	177261	177474	0.24	cps
Barium	135-1	699773	708720	710186	706226	0.80	cps
Barium	137-1	1208784	1225906	1226430	1220373	0.82	cps
Beryllium	9-1	2934	2924	2924	2927	0.20	cps
Bismuth	209-1	7695071	7634716	7629929	7653238	0.47	cps
Bismuth	209-2	6449118	6051672	6301332	6267374	3.21	cps
Bromine	81-1	28952	29576	30815	29781	3.19	cps
Bromine	81-2	4151	3997	4371	4173	4.50	cps
Cadmium	108-1	6105	6168	5708	5994	4.16	cps
Cadmium	106-1	11855	11658	11625	11713	1.06	cps
Cadmium	111-1	10730	10471	10893	10698	1.99	cps
Calcium	43-1	301389	302927	302226	302181	0.25	cps
Calcium	44-1	4767284	4791828	4706282	4755131	0.93	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	11610432	11609115	11575195	11598247	0.17	cps
Cobalt	59-2	222382	222856	221453	222230	0.32	cps
Copper	63-2	6274382	6261436	6393458	6309759	1.15	cps
Dysprosium	156-1	58672	59164	59127	58988	0.46	cps
Dysprosium	156-2	56369	56781	57082	56744	0.63	cps
Erbium	164-1	52625	53391	53555	53191	0.93	cps
Erbium	164-2	38703	39686	39449	39280	1.31	cps
Gadolinium	160-1	58371	58716	57735	58274	0.85	cps
Gadolinium	160-2	45704	46102	45637	45815	0.55	cps
Holmium	165-1	12177616	12091318	12114918	12127951	0.37	cps
Holmium	165-2	9243649	8666802	9053877	8988109	3.27	cps
Indium	115-1	8878228	8719703	8746324	8781418	0.97	cps
Indium	115-2	3937534	3712484	3844884	3831634	2.95	cps
Iron	56-2	642733430	646164017	645033110	644643519	0.27	cps
Iron	57-2	15870536	15841448	15818324	15843436	0.17	cps
Iron	54-2	34762844	34857653	34814734	34811744	0.14	cps
Krypton	83-1	303	277	223	268	15.21	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:14:47	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2092521	2076496	2092611	2087209	0.44	cps
Lead	207-1	1560297	1571224	1578265	1569929	0.58	cps
Lead	208-1	7851297	7948827	7940232	7913452	0.68	cps
Lithium	6-1	1213078	1223025	1224333	1220145	0.50	cps
Magnesium	24-2	1972875	1976532	1974410	1974606	0.09	cps
Manganese	55-2	7185243	7327647	7337630	7283507	1.17	cps
Molybdenum	94-1	19440	19380	19063	19294	1.05	cps
Molybdenum	95-1	21803	22147	21673	21874	1.12	cps
Molybdenum	96-1	31858	31928	31634	31807	0.48	cps
Molybdenum	97-1	13653	13610	13940	13734	1.31	cps
Molybdenum	98-1	34811	34925	35373	35036	0.85	cps
Neodymium	150-1	101217	102895	103725	102612	1.25	cps
Neodymium	150-2	68100	68716	67752	68189	0.72	cps
Nickel	60-2	199822	198790	198576	199063	0.33	cps
Phosphorus	31-2	35468	35114	35207	35263	0.52	cps
Potassium	39-2	1294991	1320059	1278004	1297685	1.63	cps
Rhodium	103-1	8016170	7984589	7955429	7985396	0.38	cps
Rhodium	103-2	5432423	5110665	5306906	5283332	3.07	cps
Scandium	45-1	4198258	4126114	4067045	4130472	1.59	cps
Scandium	45-2	496290	469755	486533	484193	2.77	cps
Selenium	82-1	637	689	673	666	3.95	cps
Selenium	77-2	177	203	163	181	11.25	cps
Selenium	78-2	750	847	810	802	6.08	cps
Silicon	28-1	25533552	25610479	25407204	25517078	0.40	cps
Silver	107-1	38745	39343	39684	39257	1.21	cps
Silver	109-1	36813	37388	38103	37435	1.73	cps
Sodium	23-2	1232704	1252141	1258743	1247862	1.08	cps
Strontium	86-1	289427	292475	292251	291384	0.58	cps
Strontium	88-1	2615189	2649360	2613998	2626182	0.76	cps
Sulfur	34-1	295443	296059	293575	295025	0.44	cps
Terbium	159-1	12393158	12265361	12235224	12297915	0.68	cps
Terbium	159-2	8978072	8623469	8845450	8815664	2.03	cps
Thallium	203-1	4974	5064	5208	5082	2.32	cps
Thallium	205-1	12336	12546	12309	12397	1.05	cps
Tin	118-1	4058851	4066940	4035570	4053787	0.40	cps
Titanium	47-1	716081	724235	721549	720622	0.58	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:14:47	DataFile Name :	038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	212890	218709	218708	216769	1.55	cps
Vanadium	51-2	270050	271170	268866	270029	0.43	cps
Yttrium	89-1	15965853	15734152	15619500	15773168	1.12	cps
Yttrium	89-2	5321886	5039176	5284114	5215059	2.94	cps
Zinc	66-2	378702	381177	377922	379267	0.45	cps
Zirconium	90-1	17277	17934	17874	17695	2.05	cps
Zirconium	91-1	3941	4221	4184	4115	3.70	cps

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Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:17:51	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1951623	1988310	1964301	1968078	0.95	cps
Antimony	121-1	2337	2290	2344	2324	1.25	cps
Arsenic	75-2	6755	6788	6775	6773	0.25	cps
Barium	135-1	136358	139169	139233	138253	1.19	cps
Barium	137-1	238186	241727	242422	240778	0.94	cps
Beryllium	9-1	610	677	697	661	6.86	cps
Bismuth	209-1	7812783	7575838	7662125	7683582	1.56	cps
Bismuth	209-2	6137833	6251176	6221165	6203391	0.95	cps
Bromine	81-1	16946	17874	17274	17365	2.71	cps
Bromine	81-2	1130	1097	987	1071	7.00	cps
Cadmium	108-1	7048	7349	7192	7196	2.09	cps
Cadmium	106-1	12435	11985	12189	12203	1.85	cps
Cadmium	111-1	4491	3992	4194	4226	5.94	cps
Calcium	43-1	45351	45692	45922	45655	0.63	cps
Calcium	44-1	758844	761809	753692	758115	0.54	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	6354214	6380021	6335839	6356691	0.35	cps
Cobalt	59-2	31316	30959	31423	31233	0.78	cps
Copper	63-2	10363185	10370103	10407895	10380394	0.23	cps
Dysprosium	156-1	35181	35712	35775	35556	0.92	cps
Dysprosium	156-2	33821	33781	34285	33962	0.83	cps
Erbium	164-1	27577	28148	27784	27837	1.04	cps
Erbium	164-2	19874	19901	20562	20112	1.94	cps
Gadolinium	160-1	33564	35455	34419	34479	2.75	cps
Gadolinium	160-2	27123	27216	27180	27173	0.17	cps
Holmium	165-1	12228152	11968476	12081576	12092735	1.08	cps
Holmium	165-2	8860101	8854439	8689964	8801501	1.10	cps
Indium	115-1	9045185	8846208	8722429	8871274	1.84	cps
Indium	115-2	3866338	3843411	3847597	3852449	0.32	cps
Iron	56-2	37535963	37821098	37462661	37606574	0.50	cps
Iron	57-2	955486	949551	960204	955080	0.56	cps
Iron	54-2	2302898	2266250	2261397	2276849	1.00	cps
Krypton	83-1	243	183	193	207	15.55	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:17:51	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1609600	1631567	1624641	1621936	0.69	cps
Lead	207-1	1248382	1259011	1262587	1256660	0.59	cps
Lead	208-1	6267944	6325378	6340744	6311355	0.61	cps
Lithium	6-1	1195565	1217514	1199693	1204257	0.97	cps
Magnesium	24-2	717229	716292	717535	717019	0.09	cps
Manganese	55-2	396617	395643	398263	396841	0.33	cps
Molybdenum	94-1	7025	6862	6618	6835	3.00	cps
Molybdenum	95-1	7996	7432	7435	7621	4.26	cps
Molybdenum	96-1	9136	9443	9423	9334	1.84	cps
Molybdenum	97-1	4864	4881	4724	4823	1.78	cps
Molybdenum	98-1	12345	12369	12449	12388	0.44	cps
Neodymium	150-1	64748	65940	67256	65981	1.90	cps
Neodymium	150-2	43737	44166	44246	44050	0.62	cps
Nickel	60-2	280644	278131	278296	279024	0.50	cps
Phosphorus	31-2	6958	7038	6852	6949	1.35	cps
Potassium	39-2	507266	502857	511465	507196	0.85	cps
Rhodium	103-1	8297995	8069893	8111369	8159752	1.49	cps
Rhodium	103-2	5365051	5377823	5353032	5365302	0.23	cps
Scandium	45-1	4286911	4184664	4152054	4207876	1.67	cps
Scandium	45-2	486446	490366	487982	488265	0.40	cps
Selenium	82-1	463	549	576	529	11.15	cps
Selenium	77-2	153	120	100	124	21.65	cps
Selenium	78-2	760	660	670	697	7.91	cps
Silicon	28-1	7043256	7120821	7008552	7057543	0.81	cps
Silver	107-1	37562	37826	37893	37760	0.46	cps
Silver	109-1	36028	35206	35467	35567	1.18	cps
Sodium	23-2	257783	257234	257725	257581	0.12	cps
Strontium	86-1	48727	48797	48981	48835	0.27	cps
Strontium	88-1	424151	427319	425515	425662	0.37	cps
Sulfur	34-1	216768	215163	211134	214355	1.35	cps
Terbium	159-1	12435106	12226512	12102114	12254577	1.37	cps
Terbium	159-2	8879549	8611639	8567457	8686215	1.94	cps
Thallium	203-1	1597	1673	1897	1722	9.05	cps
Thallium	205-1	3784	3847	3984	3872	2.64	cps
Tin	118-1	3859598	3878844	3861771	3866738	0.27	cps
Titanium	47-1	309712	313392	310738	311281	0.61	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:17:51	DataFile Name :	039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	174737	175804	174156	174899	0.48	cps
Vanadium	51-2	55267	54936	54685	54963	0.53	cps
Yttrium	89-1	15698190	15430479	15322820	15483830	1.25	cps
Yttrium	89-2	5024765	5100684	5059668	5061706	0.75	cps
Zinc	66-2	227768	225541	225430	226246	0.58	cps
Zirconium	90-1	6735	7215	7309	7086	4.34	cps
Zirconium	91-1	1697	1673	1553	1641	4.69	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-16	Instrumnet Name :	P7
Client Sample ID :	A6324	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:20:57	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5444449	5443482	5389160	5425697	0.58	cps
Antimony	121-1	8429	8126	8763	8439	3.78	cps
Arsenic	75-2	50218	50462	49743	50141	0.73	cps
Barium	135-1	664911	671876	668471	668419	0.52	cps
Barium	137-1	1149827	1168048	1158128	1158668	0.79	cps
Beryllium	9-1	2130	2087	1800	2006	8.94	cps
Bismuth	209-1	7658129	7580875	7637047	7625350	0.52	cps
Bismuth	209-2	6150987	6182517	6192215	6175239	0.35	cps
Bromine	81-1	34647	35195	35780	35207	1.61	cps
Bromine	81-2	5791	5721	5631	5714	1.40	cps
Cadmium	108-1	287	293	347	309	10.65	cps
Cadmium	106-1	5434	5584	5511	5510	1.36	cps
Cadmium	111-1	6804	6871	6635	6770	1.79	cps
Calcium	43-1	779172	776313	770497	775328	0.57	cps
Calcium	44-1	12251269	12244975	12137735	12211326	0.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	215241	212482	212847	213523	0.70	cps
Cobalt	59-2	80263	79760	79847	79957	0.34	cps
Copper	63-2	146846	144695	144139	145227	0.98	cps
Dysprosium	156-1	88500	89509	89778	89262	0.76	cps
Dysprosium	156-2	85991	84529	84948	85156	0.88	cps
Erbium	164-1	79598	80855	80423	80292	0.80	cps
Erbium	164-2	59138	59583	59985	59568	0.71	cps
Gadolinium	160-1	86002	86525	88356	86961	1.42	cps
Gadolinium	160-2	68034	66681	66765	67160	1.13	cps
Holmium	165-1	12234938	12094043	12022309	12117097	0.89	cps
Holmium	165-2	9014244	8848415	8829410	8897357	1.14	cps
Indium	115-1	9066528	8965329	8942210	8991356	0.74	cps
Indium	115-2	3916468	3902136	3900050	3906218	0.23	cps
Iron	56-2	114872008	113849285	112603628	113774974	1.00	cps
Iron	57-2	2863057	2806735	2820628	2830140	1.04	cps
Iron	54-2	6225144	6196316	6083359	6168273	1.21	cps
Krypton	83-1	290	317	303	303	4.39	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-16	Instrumnet Name :	P7
Client Sample ID :	A6324	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:20:57	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	824995	835642	837838	832825	0.82	cps
Lead	207-1	681948	686301	694766	687672	0.95	cps
Lead	208-1	3309206	3226764	3379258	3305076	2.31	cps
Lithium	6-1	1208919	1221589	1226844	1219117	0.76	cps
Magnesium	24-2	2587882	2591461	2610056	2596467	0.46	cps
Manganese	55-2	873538	866194	865923	868552	0.50	cps
Molybdenum	94-1	25850	26160	26153	26054	0.68	cps
Molybdenum	95-1	20988	21005	21172	21055	0.48	cps
Molybdenum	96-1	26347	26594	26204	26382	0.75	cps
Molybdenum	97-1	13219	12862	13400	13160	2.08	cps
Molybdenum	98-1	34474	33411	33970	33952	1.57	cps
Neodymium	150-1	146263	147930	144687	146293	1.11	cps
Neodymium	150-2	98232	97907	96323	97487	1.05	cps
Nickel	60-2	106568	107055	105561	106395	0.72	cps
Phosphorus	31-2	17624	16803	17096	17174	2.42	cps
Potassium	39-2	995747	987481	988028	990419	0.47	cps
Rhodium	103-1	8180005	8196462	8020767	8132411	1.19	cps
Rhodium	103-2	5352330	5371261	5293642	5339078	0.76	cps
Scandium	45-1	4282917	4248484	4210170	4247190	0.86	cps
Scandium	45-2	497612	488990	493824	493475	0.88	cps
Selenium	82-1	1075	1033	1007	1038	3.35	cps
Selenium	77-2	290	313	333	312	6.95	cps
Selenium	78-2	937	1067	1003	1002	6.49	cps
Silicon	28-1	9685445	9677965	9621184	9661531	0.36	cps
Silver	107-1	6165	6278	6291	6245	1.12	cps
Silver	109-1	5928	5811	5761	5833	1.47	cps
Sodium	23-2	1395322	1401122	1401427	1399290	0.25	cps
Strontium	86-1	719921	729730	722206	723953	0.71	cps
Strontium	88-1	6445844	6481273	6431602	6452906	0.40	cps
Sulfur	34-1	353077	358953	359503	357178	1.00	cps
Terbium	159-1	12346948	12345933	12190422	12294434	0.73	cps
Terbium	159-2	8822430	8788011	8745256	8785232	0.44	cps
Thallium	203-1	7369	6992	7139	7166	2.65	cps
Thallium	205-1	17274	17238	17278	17263	0.13	cps
Tin	118-1	26464	26581	25252	26099	2.82	cps
Titanium	47-1	588481	587244	587967	587897	0.11	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-16	Instrumnet Name :	P7
Client Sample ID :	A6324	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:20:57	DataFile Name :	040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1876644	1929306	1925820	1910590	1.54	cps
Vanadium	51-2	256332	253498	252146	253992	0.84	cps
Yttrium	89-1	16300337	16186076	16290393	16258935	0.39	cps
Yttrium	89-2	5372406	5359022	5394022	5375150	0.33	cps
Zinc	66-2	89282	88711	90831	89608	1.22	cps
Zirconium	90-1	37682	38423	38196	38100	1.00	cps
Zirconium	91-1	8536	8809	8649	8665	1.59	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV002	Instrumnet Name :	P7
Client Sample ID :	CCV002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:24:07	DataFile Name :	041CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11579154	11490787	11473669	11514536	0.49	cps
Antimony	121-1	4898118	4923876	4926007	4916000	0.32	cps
Arsenic	75-2	281421	284401	279942	281922	0.81	cps
Barium	135-1	6323478	6360439	6290350	6324756	0.55	cps
Barium	137-1	10797418	10954399	10839335	10863718	0.75	cps
Beryllium	9-1	476059	486203	486509	482923	1.23	cps
Bismuth	209-1	7260807	7205177	7257956	7241313	0.43	cps
Bismuth	209-2	5787255	5472245	5571664	5610388	2.87	cps
Bromine	81-1	13149	13263	13276	13229	0.53	cps
Bromine	81-2	190	167	150	169	11.90	cps
Cadmium	108-1	87505	88588	87075	87723	0.89	cps
Cadmium	106-1	129961	128868	128004	128945	0.76	cps
Cadmium	111-1	1184712	1200781	1197545	1194346	0.71	cps
Calcium	43-1	5318208	5322003	5249560	5296590	0.77	cps
Calcium	44-1	87064065	86808772	86282935	86718591	0.46	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2016827	2024894	2028360	2023360	0.29	cps
Cobalt	59-2	3104754	3151192	3142273	3132740	0.79	cps
Copper	63-2	19634216	19769915	19817988	19740706	0.48	cps
Dysprosium	156-1	320	340	277	312	10.37	cps
Dysprosium	156-2	613	600	570	594	3.73	cps
Erbium	164-1	390	373	400	388	3.47	cps
Erbium	164-2	290	247	327	288	13.92	cps
Gadolinium	160-1	353	367	333	351	4.78	cps
Gadolinium	160-2	560	643	637	613	7.55	cps
Holmium	165-1	11969886	11973832	11990360	11978026	0.09	cps
Holmium	165-2	8895768	8443708	8534581	8624686	2.77	cps
Indium	115-1	8377555	8311413	8347848	8345605	0.40	cps
Indium	115-2	3675125	3517043	3442026	3544731	3.36	cps
Iron	56-2	465152380	466146966	470883553	467394300	0.66	cps
Iron	57-2	11656201	11662795	11628539	11649178	0.16	cps
Iron	54-2	25129394	25032578	25446252	25202741	0.86	cps
Krypton	83-1	190	220	240	217	11.62	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV002	Instrumnet Name :	P7
Client Sample ID :	CCV002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:24:07	DataFile Name :	041CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20540634	20743843	20704968	20663148	0.52	cps
Lead	207-1	17994775	18281912	18604141	18293609	1.67	cps
Lead	208-1	82974747	84030084	84094145	83699658	0.75	cps
Lithium	6-1	1123960	1113220	1120271	1119150	0.49	cps
Magnesium	24-2	93700785	93604975	93287002	93530921	0.23	cps
Manganese	55-2	16525953	16505137	16743174	16591421	0.79	cps
Molybdenum	94-1	16326774	16185344	16153071	16221730	0.57	cps
Molybdenum	95-1	23422703	23155087	23263850	23280547	0.58	cps
Molybdenum	96-1	25575722	25617161	25639777	25610887	0.13	cps
Molybdenum	97-1	14546021	14508979	14476713	14510571	0.24	cps
Molybdenum	98-1	37577784	37494070	37562324	37544726	0.12	cps
Neodymium	150-1	587	593	553	578	3.71	cps
Neodymium	150-2	263	273	210	249	13.68	cps
Nickel	60-2	735508	743115	736096	738240	0.57	cps
Phosphorus	31-2	108914	109317	109058	109096	0.19	cps
Potassium	39-2	63851537	64037392	64092191	63993707	0.20	cps
Rhodium	103-1	7381304	7310949	7231716	7307989	1.02	cps
Rhodium	103-2	4881054	4651215	4634424	4722231	2.92	cps
Scandium	45-1	4108358	4068516	4029347	4068741	0.97	cps
Scandium	45-2	477790	458802	456940	464511	2.48	cps
Selenium	82-1	68367	68435	68032	68278	0.32	cps
Selenium	77-2	9423	9553	9213	9396	1.83	cps
Selenium	78-2	31774	32155	31684	31871	0.78	cps
Silicon	28-1	27885452	28284680	28033365	28067832	0.72	cps
Silver	107-1	5727909	5757997	5649676	5711860	0.98	cps
Silver	109-1	5421662	5460452	5485696	5455937	0.59	cps
Sodium	23-2	147584511	147390691	147645844	147540349	0.09	cps
Strontium	86-1	1576336	1551058	1569279	1565558	0.83	cps
Strontium	88-1	13678586	13799081	13601439	13693035	0.73	cps
Sulfur	34-1	394154	390220	386881	390418	0.93	cps
Terbium	159-1	12142091	12091261	11970788	12068047	0.73	cps
Terbium	159-2	8681039	8253937	8342884	8425953	2.67	cps
Thallium	203-1	5300744	5349762	5322775	5324427	0.46	cps
Thallium	205-1	12629599	12754324	12890657	12758193	1.02	cps
Tin	118-1	4045612	4082206	4094805	4074208	0.63	cps
Titanium	47-1	4961591	4975221	4909609	4948807	0.70	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV002	Instrumnet Name :	P7
Client Sample ID :	CCV002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:24:07	DataFile Name :	041CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17529919	17717355	17956539	17734604	1.21	cps
Vanadium	51-2	1843617	1830995	1814460	1829691	0.80	cps
Yttrium	89-1	14665263	14740236	14525636	14643711	0.74	cps
Yttrium	89-2	4878879	4621682	4643299	4714620	3.03	cps
Zinc	66-2	3746429	3782902	3748115	3759149	0.55	cps
Zirconium	90-1	7938560	8062129	8040337	8013676	0.82	cps
Zirconium	91-1	1778577	1753817	1776790	1769728	0.78	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB002	Instrumnet Name :	P7
Client Sample ID :	CCB002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:29:40	DataFile Name :	042CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1203	1023	1080	1102	8.35	cps
Antimony	121-1	1197	1117	990	1101	9.46	cps
Arsenic	75-2	17	27	7	17	59.99	cps
Barium	135-1	780	633	570	661	16.29	cps
Barium	137-1	1320	1097	937	1118	17.23	cps
Beryllium	9-1	130	183	137	150	19.37	cps
Bismuth	209-1	7684893	7590823	7609346	7628354	0.65	cps
Bismuth	209-2	6350594	6472948	6280375	6367972	1.53	cps
Bromine	81-1	13203	13329	13116	13216	0.81	cps
Bromine	81-2	123	143	177	148	18.23	cps
Cadmium	108-1	13	20	17	17	20.01	cps
Cadmium	106-1	4311	4584	4427	4441	3.09	cps
Cadmium	111-1	3141	3358	3188	3229	3.54	cps
Calcium	43-1	893	893	750	846	9.79	cps
Calcium	44-1	20865	18889	17561	19105	8.70	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1463	1353	1453	1423	4.27	cps
Cobalt	59-2	367	283	267	306	17.54	cps
Copper	63-2	3567	3721	3484	3590	3.34	cps
Dysprosium	156-1	33	23	10	22	52.68	cps
Dysprosium	156-2	10	3	7	7	50.03	cps
Erbium	164-1	50	50	57	52	7.37	cps
Erbium	164-2	50	37	40	42	16.43	cps
Gadolinium	160-1	40	53	47	47	14.28	cps
Gadolinium	160-2	370	427	393	397	7.18	cps
Holmium	165-1	11889974	11941654	11973546	11935058	0.35	cps
Holmium	165-2	8940985	8949373	8941443	8943934	0.05	cps
Indium	115-1	8788696	8815198	8850655	8818183	0.35	cps
Indium	115-2	4023745	3917299	3968186	3969743	1.34	cps
Iron	56-2	61696	58731	54930	58452	5.80	cps
Iron	57-2	2287	2174	2157	2206	3.21	cps
Iron	54-2	4948	4964	4727	4880	2.71	cps
Krypton	83-1	163	173	167	168	3.03	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB002	Instrumnet Name :	P7
Client Sample ID :	CCB002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:29:40	DataFile Name :	042CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3754	3437	2974	3388	11.58	cps
Lead	207-1	3187	2944	2590	2907	10.32	cps
Lead	208-1	14560	13563	11972	13365	9.77	cps
Lithium	6-1	1186050	1159252	1149890	1165064	1.61	cps
Magnesium	24-2	7409	6698	5985	6697	10.63	cps
Manganese	55-2	1543	1517	1537	1532	0.91	cps
Molybdenum	94-1	2404	2104	1987	2165	9.93	cps
Molybdenum	95-1	2934	2697	2204	2611	14.27	cps
Molybdenum	96-1	3357	2864	2714	2978	11.30	cps
Molybdenum	97-1	1873	1750	1477	1700	11.94	cps
Molybdenum	98-1	4797	4381	3751	4310	12.23	cps
Neodymium	150-1	17	10	13	13	25.01	cps
Neodymium	150-2	3	7	7	6	34.70	cps
Nickel	60-2	3130	2914	2994	3013	3.64	cps
Phosphorus	31-2	273	263	277	271	2.56	cps
Potassium	39-2	62605	61912	61658	62058	0.79	cps
Rhodium	103-1	8069261	8101562	7995397	8055406	0.68	cps
Rhodium	103-2	5392438	5399526	5418071	5403345	0.24	cps
Scandium	45-1	4152264	4071922	4137717	4120634	1.04	cps
Scandium	45-2	488713	490951	483797	487820	0.75	cps
Selenium	82-1	384	321	367	357	9.15	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	520	570	543	544	4.60	cps
Silicon	28-1	610129	603868	609780	607925	0.58	cps
Silver	107-1	963	917	827	902	7.70	cps
Silver	109-1	893	817	670	793	14.30	cps
Sodium	23-2	49031	46690	45621	47114	3.70	cps
Strontium	86-1	527	537	480	514	5.88	cps
Strontium	88-1	1890	1763	1560	1738	9.58	cps
Sulfur	34-1	120883	120618	121670	121057	0.45	cps
Terbium	159-1	11934342	12161356	12070156	12055284	0.95	cps
Terbium	159-2	8924689	8817379	8789194	8843754	0.81	cps
Thallium	203-1	1173	1040	873	1029	14.61	cps
Thallium	205-1	2800	2460	2140	2467	13.38	cps
Tin	118-1	1840	1877	1900	1872	1.62	cps
Titanium	47-1	617	567	493	559	11.10	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB002	Instrumnet Name :	P7
Client Sample ID :	CCB002	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:29:40	DataFile Name :	042CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	2050	1567	1423	1680	19.55	cps
Vanadium	51-2	150	133	123	136	9.94	cps
Yttrium	89-1	14831739	14864229	14872347	14856105	0.14	cps
Yttrium	89-2	4997101	5016060	5015506	5009556	0.22	cps
Zinc	66-2	870	740	830	813	8.19	cps
Zirconium	90-1	1720	1807	1747	1758	2.53	cps
Zirconium	91-1	367	340	387	364	6.42	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-01	Instrumnet Name :	P7
Client Sample ID :	A6313	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:32:55	DataFile Name :	043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2346763	2315509	2314297	2325523	0.79	cps
Antimony	121-1	615570	632331	642645	630182	2.17	cps
Arsenic	75-2	254184	254977	254673	254612	0.16	cps
Barium	135-1	2204699	2204347	2235667	2214904	0.81	cps
Barium	137-1	3753265	3787812	3770418	3770498	0.46	cps
Beryllium	9-1	379871	386402	387249	384507	1.05	cps
Bismuth	209-1	7942296	7811618	7865749	7873221	0.83	cps
Bismuth	209-2	6369200	6299272	6286972	6318482	0.70	cps
Bromine	81-1	15458	16179	16886	16175	4.42	cps
Bromine	81-2	997	1043	1007	1016	2.42	cps
Cadmium	108-1	42288	42301	42836	42475	0.74	cps
Cadmium	106-1	62885	64322	64264	63824	1.27	cps
Cadmium	111-1	638926	651563	649662	646717	1.05	cps
Calcium	43-1	291804	292952	295700	293486	0.68	cps
Calcium	44-1	4534379	4613792	4617372	4588514	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2370479	2337407	2381831	2363239	0.98	cps
Cobalt	59-2	2644841	2674495	2638177	2652504	0.73	cps
Copper	63-2	1254236	1251991	1253873	1253366	0.10	cps
Dysprosium	156-1	47303	48436	49028	48256	1.82	cps
Dysprosium	156-2	46607	47895	47834	47445	1.53	cps
Erbium	164-1	37179	37731	37748	37553	0.86	cps
Erbium	164-2	28215	28399	28001	28205	0.71	cps
Gadolinium	160-1	43073	43544	44066	43561	1.14	cps
Gadolinium	160-2	34142	34279	35024	34481	1.38	cps
Holmium	165-1	12119607	12155084	11994172	12089621	0.70	cps
Holmium	165-2	9207963	8985040	9060815	9084606	1.25	cps
Indium	115-1	9023641	8914724	8918866	8952411	0.69	cps
Indium	115-2	3916657	3936313	3961201	3938057	0.57	cps
Iron	56-2	43682533	43292724	43310976	43428744	0.51	cps
Iron	57-2	1100752	1093503	1099063	1097773	0.35	cps
Iron	54-2	2410971	2424085	2425363	2420140	0.33	cps
Krypton	83-1	253	147	180	193	28.23	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-01	Instrumnet Name :	P7
Client Sample ID :	A6313	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:32:55	DataFile Name :	043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3192466	3227058	3221293	3213606	0.58	cps
Lead	207-1	2703358	2703221	2676222	2694267	0.58	cps
Lead	208-1	12453842	12598737	12589598	12547392	0.65	cps
Lithium	6-1	1250786	1257587	1231666	1246680	1.08	cps
Magnesium	24-2	1356809	1367517	1360527	1361618	0.40	cps
Manganese	55-2	3355011	3365272	3406859	3375714	0.81	cps
Molybdenum	94-1	364551	377187	376268	372669	1.89	cps
Molybdenum	95-1	494117	503541	505853	501170	1.24	cps
Molybdenum	96-1	545850	552573	553524	550649	0.76	cps
Molybdenum	97-1	310214	314167	315893	313425	0.93	cps
Molybdenum	98-1	793173	809786	815327	806095	1.43	cps
Neodymium	150-1	87821	89186	88898	88635	0.81	cps
Neodymium	150-2	60054	59977	59652	59894	0.36	cps
Nickel	60-2	422504	421154	421133	421597	0.19	cps
Phosphorus	31-2	6165	6235	6551	6317	3.26	cps
Potassium	39-2	1555609	1514632	1515506	1528582	1.53	cps
Rhodium	103-1	8210323	8053734	7994941	8086333	1.38	cps
Rhodium	103-2	5354208	5368261	5365875	5362781	0.14	cps
Scandium	45-1	4286840	4193647	4265974	4248820	1.15	cps
Scandium	45-2	495913	492482	495801	494732	0.39	cps
Selenium	82-1	32824	33521	33866	33404	1.59	cps
Selenium	77-2	4814	4631	4617	4687	2.35	cps
Selenium	78-2	15892	16406	16222	16173	1.61	cps
Silicon	28-1	7378862	7313029	7376969	7356286	0.51	cps
Silver	107-1	973711	992727	1002722	989720	1.49	cps
Silver	109-1	916481	929918	942712	929704	1.41	cps
Sodium	23-2	673109	671168	665598	669958	0.58	cps
Strontium	86-1	1609704	1619339	1625945	1618329	0.50	cps
Strontium	88-1	14018381	14229997	14189569	14145983	0.79	cps
Sulfur	34-1	121801	118646	117232	119226	1.96	cps
Terbium	159-1	12478499	12296175	12274919	12349864	0.91	cps
Terbium	159-2	8978973	8784857	8926604	8896812	1.13	cps
Thallium	203-1	4462369	4563964	4571939	4532758	1.35	cps
Thallium	205-1	10797441	10782123	10924512	10834692	0.72	cps
Tin	118-1	631750	645881	646388	641340	1.30	cps
Titanium	47-1	459956	467043	474449	467149	1.55	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-01	Instrumnet Name :	P7
Client Sample ID :	A6313	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:32:55	DataFile Name :	043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	14909612	14876595	15303770	15029992	1.58	cps
Vanadium	51-2	1000905	1000767	1004997	1002223	0.24	cps
Yttrium	89-1	15939231	15581028	15419573	15646610	1.70	cps
Yttrium	89-2	5197811	5115453	5221058	5178107	1.07	cps
Zinc	66-2	717651	713586	711351	714196	0.45	cps
Zirconium	90-1	230897	236849	238408	235385	1.68	cps
Zirconium	91-1	52109	53052	52062	52408	1.07	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-02	Instrumnet Name :	P7
Client Sample ID :	A6314	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:35:54	DataFile Name :	044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2501994	2496629	2510900	2503174	0.29	cps
Antimony	121-1	507203	520112	522437	516584	1.59	cps
Arsenic	75-2	212939	209483	210386	210936	0.85	cps
Barium	135-1	2029708	2070155	2068992	2056285	1.12	cps
Barium	137-1	3505172	3567504	3569991	3547556	1.04	cps
Beryllium	9-1	295471	303772	305989	301744	1.84	cps
Bismuth	209-1	8571672	7807976	7786269	8055305	5.55	cps
Bismuth	209-2	6305037	6375173	6327743	6335984	0.56	cps
Bromine	81-1	15411	15835	16513	15920	3.49	cps
Bromine	81-2	820	953	970	914	8.99	cps
Cadmium	108-1	50959	51213	51688	51287	0.72	cps
Cadmium	106-1	74747	76185	76158	75697	1.09	cps
Cadmium	111-1	765678	788338	784123	779380	1.55	cps
Calcium	43-1	278494	285294	283931	282573	1.27	cps
Calcium	44-1	4363192	4454493	4502784	4440156	1.60	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1570015	1532379	1555681	1552692	1.22	cps
Cobalt	59-2	2434320	2468038	2494466	2465608	1.22	cps
Copper	63-2	2671953	2650800	2618844	2647199	1.01	cps
Dysprosium	156-1	49664	51675	50731	50690	1.98	cps
Dysprosium	156-2	50798	50179	49768	50248	1.03	cps
Erbium	164-1	38232	38536	38964	38578	0.95	cps
Erbium	164-2	29354	29681	29114	29383	0.97	cps
Gadolinium	160-1	44126	45868	46089	45361	2.37	cps
Gadolinium	160-2	36628	37323	36454	36802	1.25	cps
Holmium	165-1	13313770	12188024	12055098	12518964	5.52	cps
Holmium	165-2	9059824	9102087	8969484	9043798	0.75	cps
Indium	115-1	9906952	8888360	8816409	9203907	6.63	cps
Indium	115-2	3951447	3945345	3931645	3942812	0.26	cps
Iron	56-2	46945363	47127761	46993648	47022257	0.20	cps
Iron	57-2	1195424	1196183	1197497	1196368	0.09	cps
Iron	54-2	2654851	2604024	2612118	2623664	1.04	cps
Krypton	83-1	213	233	313	253	20.89	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-02	Instrumnet Name :	P7
Client Sample ID :	A6314	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:35:54	DataFile Name :	044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5126181	5215962	5147070	5163071	0.91	cps
Lead	207-1	4208094	4332952	4352156	4297734	1.82	cps
Lead	208-1	19653880	20203933	20235274	20031029	1.63	cps
Lithium	6-1	1366710	1243092	1260356	1290053	5.19	cps
Magnesium	24-2	1490826	1485585	1471103	1482505	0.69	cps
Manganese	55-2	3697239	3663839	3663530	3674869	0.53	cps
Molybdenum	94-1	775228	799743	807155	794042	2.10	cps
Molybdenum	95-1	1199663	1233257	1243310	1225410	1.87	cps
Molybdenum	96-1	1314188	1345002	1354675	1337955	1.58	cps
Molybdenum	97-1	762646	782574	784266	776495	1.55	cps
Molybdenum	98-1	1994167	2047216	2040165	2027183	1.42	cps
Neodymium	150-1	91309	93564	94483	93119	1.75	cps
Neodymium	150-2	63151	62123	61958	62411	1.04	cps
Nickel	60-2	690427	686438	689114	688660	0.30	cps
Phosphorus	31-2	7115	7115	7012	7081	0.84	cps
Potassium	39-2	1560113	1549960	1573491	1561188	0.76	cps
Rhodium	103-1	8993286	8126949	8029188	8383141	6.33	cps
Rhodium	103-2	5318662	5318679	5377999	5338446	0.64	cps
Scandium	45-1	4703785	4275657	4235241	4404894	5.89	cps
Scandium	45-2	499643	497434	498432	498503	0.22	cps
Selenium	82-1	57317	59398	60010	58908	2.40	cps
Selenium	77-2	8516	8189	8459	8388	2.08	cps
Selenium	78-2	28327	28033	27903	28088	0.77	cps
Silicon	28-1	4498297	4676985	4594727	4590003	1.95	cps
Silver	107-1	963368	993460	987418	981416	1.62	cps
Silver	109-1	913761	941615	940017	931798	1.68	cps
Sodium	23-2	687125	682494	681396	683672	0.44	cps
Strontium	86-1	682765	706157	705675	698199	1.91	cps
Strontium	88-1	6180614	6320434	6298392	6266480	1.20	cps
Sulfur	34-1	115422	114129	114828	114793	0.56	cps
Terbium	159-1	13461025	12329861	12120966	12637284	5.71	cps
Terbium	159-2	8895791	8747547	8761367	8801568	0.93	cps
Thallium	203-1	2588615	2620762	2589549	2599642	0.70	cps
Thallium	205-1	6251484	6383752	6279354	6304864	1.11	cps
Tin	118-1	877766	896639	900220	891542	1.35	cps
Titanium	47-1	617040	639873	633680	630198	1.87	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-02	Instrumnet Name :	P7
Client Sample ID :	A6314	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:35:54	DataFile Name :	044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4985455	5042362	5022029	5016615	0.57	cps
Vanadium	51-2	1468466	1447566	1466777	1460936	0.79	cps
Yttrium	89-1	17142922	15709161	15500153	16117412	5.55	cps
Yttrium	89-2	5073883	5171679	5196165	5147242	1.26	cps
Zinc	66-2	398657	400916	394248	397941	0.85	cps
Zirconium	90-1	246076	255564	255888	252509	2.21	cps
Zirconium	91-1	55943	57703	57063	56903	1.57	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-03	Instrumnet Name :	P7
Client Sample ID :	A6325	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:38:50	DataFile Name :	045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5176297	5247560	5178217	5200691	0.78	cps
Antimony	121-1	7589	6888	7145	7207	4.92	cps
Arsenic	75-2	5164	4938	4974	5025	2.42	cps
Barium	135-1	353086	357226	357492	355935	0.69	cps
Barium	137-1	609211	621322	622438	617657	1.19	cps
Beryllium	9-1	3454	3447	3617	3506	2.75	cps
Bismuth	209-1	7660044	7748994	7809037	7739358	0.97	cps
Bismuth	209-2	6446621	6430138	6391490	6422750	0.44	cps
Bromine	81-1	31584	34407	34741	33577	5.17	cps
Bromine	81-2	5528	5785	6051	5788	4.52	cps
Cadmium	108-1	210	237	133	193	27.75	cps
Cadmium	106-1	5391	5568	5418	5459	1.75	cps
Cadmium	111-1	5890	5802	5803	5832	0.87	cps
Calcium	43-1	405479	411339	413823	410214	1.04	cps
Calcium	44-1	6412302	6507776	6540384	6486821	1.03	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	180891	180344	181397	180878	0.29	cps
Cobalt	59-2	26958	26099	26233	26430	1.75	cps
Copper	63-2	203808	201487	203545	202947	0.63	cps
Dysprosium	156-1	68680	69146	70553	69459	1.40	cps
Dysprosium	156-2	72063	73096	72352	72504	0.73	cps
Erbium	164-1	63832	65948	64933	64904	1.63	cps
Erbium	164-2	49491	49849	49624	49655	0.36	cps
Gadolinium	160-1	64953	66125	66590	65889	1.28	cps
Gadolinium	160-2	53455	52511	52140	52702	1.29	cps
Holmium	165-1	12163471	12184440	12186442	12178118	0.10	cps
Holmium	165-2	9358503	9235013	9226644	9273387	0.80	cps
Indium	115-1	8887832	8935887	9009934	8944551	0.69	cps
Indium	115-2	4062287	3976931	4047045	4028754	1.13	cps
Iron	56-2	49448088	48472884	47932501	48617824	1.58	cps
Iron	57-2	1249350	1236111	1241235	1242232	0.54	cps
Iron	54-2	2655673	2650104	2658882	2654886	0.17	cps
Krypton	83-1	280	250	330	287	14.10	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-03	Instrumnet Name :	P7
Client Sample ID :	A6325	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:38:50	DataFile Name :	045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1515819	1549352	1560203	1541791	1.50	cps
Lead	207-1	1262904	1295656	1306691	1288417	1.77	cps
Lead	208-1	6135251	6339403	6342969	6272541	1.90	cps
Lithium	6-1	1208970	1195103	1205079	1203051	0.59	cps
Magnesium	24-2	799535	799445	799165	799382	0.02	cps
Manganese	55-2	594643	590077	597219	593980	0.61	cps
Molybdenum	94-1	12335	12198	11735	12089	2.60	cps
Molybdenum	95-1	9510	9453	9053	9339	2.67	cps
Molybdenum	96-1	12229	11885	11802	11972	1.89	cps
Molybdenum	97-1	5745	6141	5795	5893	3.67	cps
Molybdenum	98-1	14778	15248	14931	14986	1.60	cps
Neodymium	150-1	122900	123882	124789	123857	0.76	cps
Neodymium	150-2	85239	85588	84192	85006	0.85	cps
Nickel	60-2	33274	32896	33030	33066	0.58	cps
Phosphorus	31-2	25915	25288	25081	25428	1.71	cps
Potassium	39-2	641910	630213	637953	636692	0.93	cps
Rhodium	103-1	8119878	8152758	8156899	8143178	0.25	cps
Rhodium	103-2	5488234	5449880	5528149	5488754	0.71	cps
Scandium	45-1	4267851	4300770	4259920	4276180	0.51	cps
Scandium	45-2	512375	511630	509132	511046	0.33	cps
Selenium	82-1	909	966	828	901	7.70	cps
Selenium	77-2	353	207	290	283	25.96	cps
Selenium	78-2	983	843	883	903	7.98	cps
Silicon	28-1	4026064	4114922	4843742	4328243	10.37	cps
Silver	107-1	4671	4651	4584	4635	0.98	cps
Silver	109-1	4564	4494	4117	4392	5.47	cps
Sodium	23-2	305949	304977	305018	305315	0.18	cps
Strontium	86-1	455411	462872	464124	460802	1.02	cps
Strontium	88-1	4073205	4171020	4208780	4151002	1.69	cps
Sulfur	34-1	246385	252195	251524	250034	1.27	cps
Terbium	159-1	12184189	12333841	12505876	12341302	1.30	cps
Terbium	159-2	9087580	9050627	8885858	9008022	1.19	cps
Thallium	203-1	5951	5728	5268	5649	6.17	cps
Thallium	205-1	14595	13143	12469	13402	8.10	cps
Tin	118-1	8756	8416	8643	8605	2.01	cps
Titanium	47-1	129848	132544	132557	131650	1.19	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-03	Instrumnet Name :	P7
Client Sample ID :	A6325	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:38:50	DataFile Name :	045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	334449	340992	341723	339054	1.18	cps
Vanadium	51-2	115135	115471	115373	115326	0.15	cps
Yttrium	89-1	15888483	15921968	15943389	15917946	0.17	cps
Yttrium	89-2	5437320	5391903	5413878	5414367	0.42	cps
Zinc	66-2	83639	83120	83341	83366	0.31	cps
Zirconium	90-1	17814	17938	17747	17833	0.54	cps
Zirconium	91-1	4181	3764	3981	3975	5.25	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-04	Instrumnet Name :	P7
Client Sample ID :	A6326	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:42:03	DataFile Name :	046SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1390477	1389215	1419354	1399682	1.22	cps
Antimony	121-1	747	730	793	757	4.34	cps
Arsenic	75-2	827	880	883	863	3.68	cps
Barium	135-1	100176	99679	99041	99632	0.57	cps
Barium	137-1	172887	174340	174323	173850	0.48	cps
Beryllium	9-1	983	913	983	960	4.21	cps
Bismuth	209-1	7397147	7473152	7584434	7484911	1.26	cps
Bismuth	209-2	6298856	6286077	6308096	6297676	0.18	cps
Bromine	81-1	16559	15672	16106	16112	2.75	cps
Bromine	81-2	647	710	640	666	5.80	cps
Cadmium	108-1	77	63	63	68	11.36	cps
Cadmium	106-1	5034	4767	4964	4922	2.81	cps
Cadmium	111-1	4087	3993	4197	4092	2.50	cps
Calcium	43-1	51390	52059	52159	51869	0.81	cps
Calcium	44-1	849823	860765	863718	858102	0.85	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	79421	78989	79414	79275	0.31	cps
Cobalt	59-2	12579	12779	12956	12771	1.48	cps
Copper	63-2	20227	20023	20387	20213	0.90	cps
Dysprosium	156-1	19781	20161	20395	20112	1.54	cps
Dysprosium	156-2	19257	19691	19450	19466	1.12	cps
Erbium	164-1	17247	17204	17101	17184	0.44	cps
Erbium	164-2	12926	13296	13166	13130	1.43	cps
Gadolinium	160-1	20261	20435	20352	20349	0.43	cps
Gadolinium	160-2	16023	15672	16857	16184	3.76	cps
Holmium	165-1	11626047	11850380	11801312	11759246	1.00	cps
Holmium	165-2	9056450	8936086	8948019	8980185	0.74	cps
Indium	115-1	8684066	8795968	8852554	8777529	0.98	cps
Indium	115-2	3997613	3973567	3979097	3983426	0.32	cps
Iron	56-2	10340958	10397954	10118830	10285914	1.43	cps
Iron	57-2	264455	264170	261790	263472	0.56	cps
Iron	54-2	579961	575676	577177	577605	0.38	cps
Krypton	83-1	213	193	220	209	6.64	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-04	Instrumnet Name :	P7
Client Sample ID :	A6326	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:42:03	DataFile Name :	046SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	106086	106244	107276	106535	0.61	cps
Lead	207-1	88519	87479	88629	88209	0.72	cps
Lead	208-1	410320	410736	414875	411977	0.61	cps
Lithium	6-1	1141510	1187186	1171733	1166810	1.99	cps
Magnesium	24-2	243876	247883	244157	245305	0.91	cps
Manganese	55-2	439720	439220	437466	438802	0.27	cps
Molybdenum	94-1	3044	3397	3354	3265	5.90	cps
Molybdenum	95-1	3280	3184	3117	3194	2.57	cps
Molybdenum	96-1	4007	3791	4021	3939	3.28	cps
Molybdenum	97-1	1903	2030	2020	1985	3.55	cps
Molybdenum	98-1	5134	5088	5221	5148	1.31	cps
Neodymium	150-1	35635	35678	37062	36125	2.25	cps
Neodymium	150-2	23964	24284	24207	24152	0.69	cps
Nickel	60-2	16656	16659	16903	16739	0.85	cps
Phosphorus	31-2	6115	6275	6085	6158	1.66	cps
Potassium	39-2	303632	304014	300183	302610	0.70	cps
Rhodium	103-1	7828281	8063384	8103246	7998303	1.86	cps
Rhodium	103-2	5426879	5416650	5398877	5414135	0.26	cps
Scandium	45-1	4095465	4173677	4240160	4169768	1.74	cps
Scandium	45-2	500212	498276	495830	498106	0.44	cps
Selenium	82-1	626	709	723	686	7.64	cps
Selenium	77-2	90	93	110	98	10.96	cps
Selenium	78-2	670	793	670	711	10.01	cps
Silicon	28-1	3457308	3523634	3530647	3503863	1.16	cps
Silver	107-1	1587	1700	1590	1626	3.97	cps
Silver	109-1	1503	1557	1473	1511	2.79	cps
Sodium	23-2	70792	71321	69761	70624	1.12	cps
Strontium	86-1	42949	43548	42722	43073	0.99	cps
Strontium	88-1	370875	374392	382262	375843	1.55	cps
Sulfur	34-1	130330	128182	127953	128822	1.02	cps
Terbium	159-1	11770437	11882724	11934868	11862676	0.71	cps
Terbium	159-2	8848229	8766193	8779412	8797945	0.50	cps
Thallium	203-1	1197	1360	1273	1277	6.40	cps
Thallium	205-1	3310	3197	3077	3195	3.65	cps
Tin	118-1	3627	3637	3470	3578	2.61	cps
Titanium	47-1	61451	61986	62769	62069	1.07	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-04	Instrumnet Name :	P7
Client Sample ID :	A6326	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:42:03	DataFile Name :	046SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	144860	146762	144685	145436	0.79	cps
Vanadium	51-2	19923	20400	20357	20227	1.30	cps
Yttrium	89-1	14664578	15095978	15381752	15047436	2.40	cps
Yttrium	89-2	5159730	5086420	5118698	5121616	0.72	cps
Zinc	66-2	18962	18368	18845	18725	1.68	cps
Zirconium	90-1	4181	8414	4197	5597	43.58	cps
Zirconium	91-1	900	993	917	937	5.31	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-05	Instrumnet Name :	P7
Client Sample ID :	A6331	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:45:17	DataFile Name :	047SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6135848	6217039	6269795	6207561	1.09	cps
Antimony	121-1	9503	9773	9690	9656	1.43	cps
Arsenic	75-2	32686	31213	31868	31922	2.31	cps
Barium	135-1	341747	348868	347085	345900	1.07	cps
Barium	137-1	588392	602970	601710	597691	1.35	cps
Beryllium	9-1	2064	2083	2063	2070	0.56	cps
Bismuth	209-1	7720586	7624601	7692115	7679101	0.64	cps
Bismuth	209-2	6432906	6393529	6272383	6366273	1.31	cps
Bromine	81-1	51520	58699	60426	56882	8.30	cps
Bromine	81-2	12305	12562	12389	12419	1.06	cps
Cadmium	108-1	400	473	427	433	8.57	cps
Cadmium	106-1	6228	5908	5881	6006	3.21	cps
Cadmium	111-1	8480	8215	8246	8314	1.75	cps
Calcium	43-1	935508	947889	952546	945315	0.93	cps
Calcium	44-1	14791544	15052680	15086679	14976968	1.08	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	232184	231856	231138	231726	0.23	cps
Cobalt	59-2	127603	127922	126625	127384	0.53	cps
Copper	63-2	155643	155306	152925	154625	0.96	cps
Dysprosium	156-1	73092	74234	74386	73904	0.96	cps
Dysprosium	156-2	73209	73196	73668	73358	0.37	cps
Erbium	164-1	68688	70808	69957	69818	1.53	cps
Erbium	164-2	53883	53987	52391	53421	1.67	cps
Gadolinium	160-1	72818	75033	75595	74482	1.97	cps
Gadolinium	160-2	60958	59583	60359	60300	1.14	cps
Holmium	165-1	12334676	12226913	12122714	12228101	0.87	cps
Holmium	165-2	9305680	9257527	9200471	9254559	0.57	cps
Indium	115-1	9170939	9037669	9007051	9071886	0.96	cps
Indium	115-2	4048119	4032259	4091045	4057141	0.75	cps
Iron	56-2	180228004	181335164	180005897	180523022	0.39	cps
Iron	57-2	4492755	4507153	4487388	4495765	0.23	cps
Iron	54-2	9758105	9831508	9897304	9828972	0.71	cps
Krypton	83-1	287	280	297	288	2.91	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-05	Instrumnet Name :	P7
Client Sample ID :	A6331	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:45:17	DataFile Name :	047SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	807648	825035	830299	820994	1.44	cps
Lead	207-1	674727	688754	686609	683363	1.11	cps
Lead	208-1	3136441	3197265	3219093	3184266	1.35	cps
Lithium	6-1	1251395	1228917	1238852	1239721	0.91	cps
Magnesium	24-2	3511220	3595908	3570038	3559055	1.22	cps
Manganese	55-2	2823221	2869049	2870473	2854248	0.94	cps
Molybdenum	94-1	45731	47069	46132	46311	1.48	cps
Molybdenum	95-1	6245	6368	6385	6333	1.21	cps
Molybdenum	96-1	16109	16029	15785	15974	1.06	cps
Molybdenum	97-1	3847	4044	3901	3931	2.59	cps
Molybdenum	98-1	9847	9890	10157	9965	1.69	cps
Neodymium	150-1	123209	126104	126807	125373	1.52	cps
Neodymium	150-2	83525	84628	84913	84356	0.87	cps
Nickel	60-2	96098	97638	96548	96762	0.82	cps
Phosphorus	31-2	23939	24246	23582	23922	1.39	cps
Potassium	39-2	1111485	1108938	1110789	1110404	0.12	cps
Rhodium	103-1	8480025	8238553	8193234	8303937	1.86	cps
Rhodium	103-2	5445073	5478479	5464583	5462712	0.31	cps
Scandium	45-1	4580546	4446880	4452514	4493313	1.68	cps
Scandium	45-2	522675	522885	523539	523033	0.09	cps
Selenium	82-1	1264	1309	1347	1307	3.17	cps
Selenium	77-2	293	330	323	316	6.19	cps
Selenium	78-2	1160	1113	1130	1135	2.08	cps
Silicon	28-1	4775042	4894124	4842342	4837169	1.23	cps
Silver	107-1	7259	7529	7352	7380	1.86	cps
Silver	109-1	7022	7242	7162	7142	1.56	cps
Sodium	23-2	182298	183169	183587	183018	0.36	cps
Strontium	86-1	499282	510200	510383	506622	1.25	cps
Strontium	88-1	4491255	4540590	4599168	4543671	1.19	cps
Sulfur	34-1	381015	388075	388565	385885	1.09	cps
Terbium	159-1	12658984	12417643	12456211	12510946	1.04	cps
Terbium	159-2	9168246	9052016	9048655	9089639	0.75	cps
Thallium	203-1	4064	4031	4234	4110	2.65	cps
Thallium	205-1	9717	9774	9774	9755	0.34	cps
Tin	118-1	6975	7272	7058	7102	2.16	cps
Titanium	47-1	748904	768319	770405	762543	1.55	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-05	Instrumnet Name :	P7
Client Sample ID :	A6331	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:45:17	DataFile Name :	047SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	306544	313155	314828	311509	1.41	cps
Vanadium	51-2	240504	240771	242749	241341	0.51	cps
Yttrium	89-1	16597441	16376777	16333772	16435997	0.86	cps
Yttrium	89-2	5530111	5480732	5521503	5510782	0.48	cps
Zinc	66-2	175636	177160	175707	176168	0.49	cps
Zirconium	90-1	113709	115960	116141	115270	1.18	cps
Zirconium	91-1	25272	26450	25920	25881	2.28	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-06	Instrumnet Name :	P7
Client Sample ID :	A6332	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:48:29	DataFile Name :	048SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3243876	3208251	3189839	3213989	0.85	cps
Antimony	121-1	1470	1377	1653	1500	9.38	cps
Arsenic	75-2	14030	13983	14023	14012	0.18	cps
Barium	135-1	108257	109510	110527	109432	1.04	cps
Barium	137-1	186988	190163	192008	189720	1.34	cps
Beryllium	9-1	763	697	767	742	5.32	cps
Bismuth	209-1	7524371	7457543	7522955	7501623	0.51	cps
Bismuth	209-2	6307847	6248886	6218043	6258259	0.73	cps
Bromine	81-1	20518	20297	20785	20533	1.19	cps
Bromine	81-2	1630	1623	1777	1677	5.17	cps
Cadmium	108-1	90	53	137	93	44.75	cps
Cadmium	106-1	5258	5084	4978	5107	2.77	cps
Cadmium	111-1	4227	4175	4029	4144	2.49	cps
Calcium	43-1	103278	105513	105020	104604	1.12	cps
Calcium	44-1	1633978	1673881	1665746	1657869	1.27	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	144151	142543	144386	143693	0.70	cps
Cobalt	59-2	58212	57841	56978	57677	1.10	cps
Copper	63-2	45017	44339	43827	44394	1.34	cps
Dysprosium	156-1	31950	32588	32651	32396	1.20	cps
Dysprosium	156-2	32173	31709	31619	31834	0.93	cps
Erbium	164-1	28008	28345	27253	27869	2.01	cps
Erbium	164-2	21149	20932	21587	21223	1.57	cps
Gadolinium	160-1	31091	30720	31165	30992	0.77	cps
Gadolinium	160-2	25527	24899	25607	25344	1.53	cps
Holmium	165-1	11978350	11775768	11908504	11887541	0.87	cps
Holmium	165-2	9102087	9019792	8996649	9039509	0.61	cps
Indium	115-1	9045287	8938237	8889454	8957659	0.89	cps
Indium	115-2	4030272	4006266	4030086	4022208	0.34	cps
Iron	56-2	63822497	63349246	63356826	63509523	0.43	cps
Iron	57-2	1586721	1572354	1550839	1569972	1.15	cps
Iron	54-2	3422088	3492524	3401155	3438589	1.39	cps
Krypton	83-1	210	230	210	217	5.33	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-06	Instrumnet Name :	P7
Client Sample ID :	A6332	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:48:29	DataFile Name :	048SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	232662	234689	234488	233946	0.48	cps
Lead	207-1	193443	195912	194678	194678	0.63	cps
Lead	208-1	901995	908724	913569	908096	0.64	cps
Lithium	6-1	1194886	1207715	1198789	1200463	0.55	cps
Magnesium	24-2	1604399	1604876	1572668	1593981	1.16	cps
Manganese	55-2	1018216	1021302	1017024	1018847	0.22	cps
Molybdenum	94-1	17554	17324	17027	17301	1.53	cps
Molybdenum	95-1	3574	3774	3594	3647	3.02	cps
Molybdenum	96-1	7032	7745	7115	7297	5.35	cps
Molybdenum	97-1	2274	2104	2190	2189	3.88	cps
Molybdenum	98-1	5931	5968	5975	5958	0.39	cps
Neodymium	150-1	54779	54883	55693	55118	0.91	cps
Neodymium	150-2	38579	38713	37911	38401	1.12	cps
Nickel	60-2	46241	46980	47227	46816	1.10	cps
Phosphorus	31-2	6658	6705	6785	6716	0.95	cps
Potassium	39-2	283981	283676	283123	283593	0.15	cps
Rhodium	103-1	8265256	8178988	8222815	8222353	0.52	cps
Rhodium	103-2	5425002	5444547	5444652	5438067	0.21	cps
Scandium	45-1	4438598	4339169	4361045	4379604	1.19	cps
Scandium	45-2	520312	515832	520393	518846	0.50	cps
Selenium	82-1	585	493	554	544	8.56	cps
Selenium	77-2	117	80	97	98	18.78	cps
Selenium	78-2	733	710	620	688	8.70	cps
Silicon	28-1	4179262	4201166	4261347	4213925	1.01	cps
Silver	107-1	2054	2237	2290	2194	5.66	cps
Silver	109-1	1917	2010	2184	2037	6.64	cps
Sodium	23-2	84959	85388	85190	85179	0.25	cps
Strontium	86-1	79211	80374	79329	79638	0.80	cps
Strontium	88-1	695087	706352	706785	702741	0.94	cps
Sulfur	34-1	151849	148368	145976	148731	1.99	cps
Terbium	159-1	12176846	12051830	12030442	12086373	0.65	cps
Terbium	159-2	8937307	8837207	8811745	8862087	0.75	cps
Thallium	203-1	1560	1580	1607	1582	1.48	cps
Thallium	205-1	3857	3814	3714	3795	1.94	cps
Tin	118-1	3144	3150	2900	3065	4.65	cps
Titanium	47-1	439275	447612	447887	444924	1.10	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-06	Instrumnet Name :	P7
Client Sample ID :	A6332	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:48:29	DataFile Name :	048SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	193862	196598	198057	196172	1.09	cps
Vanadium	51-2	103230	105032	104861	104374	0.95	cps
Yttrium	89-1	15770164	15538381	15574474	15627673	0.80	cps
Yttrium	89-2	5287538	5249896	5344611	5294015	0.90	cps
Zinc	66-2	42901	42948	43313	43054	0.52	cps
Zirconium	90-1	41676	40833	41926	41478	1.38	cps
Zirconium	91-1	8956	9300	9623	9293	3.59	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-07	Instrumnet Name :	P7
Client Sample ID :	A6333	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:51:39	DataFile Name :	049SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10864658	10932462	10748551	10848557	0.86	cps
Antimony	121-1	7695	7795	7909	7800	1.37	cps
Arsenic	75-2	52616	51532	51830	51993	1.08	cps
Barium	135-1	419453	432834	436604	429630	2.10	cps
Barium	137-1	728877	747244	755881	744001	1.85	cps
Beryllium	9-1	2627	2784	2647	2686	3.18	cps
Bismuth	209-1	7857737	7642957	7507846	7669513	2.30	cps
Bismuth	209-2	6341770	6295047	6326057	6320958	0.38	cps
Bromine	81-1	30799	34711	35693	33734	7.68	cps
Bromine	81-2	5484	5478	5584	5516	1.08	cps
Cadmium	108-1	433	430	507	457	9.49	cps
Cadmium	106-1	6215	6331	6278	6275	0.93	cps
Cadmium	111-1	8241	8542	8784	8522	3.19	cps
Calcium	43-1	503801	522854	523634	516763	2.17	cps
Calcium	44-1	7954848	8144000	8280796	8126548	2.01	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	436336	438178	441280	438598	0.57	cps
Cobalt	59-2	212834	211195	213476	212501	0.55	cps
Copper	63-2	175125	176042	175037	175401	0.32	cps
Dysprosium	156-1	136334	140562	143939	140278	2.72	cps
Dysprosium	156-2	141704	139818	140754	140759	0.67	cps
Erbium	164-1	118302	121139	122894	120778	1.92	cps
Erbium	164-2	92973	93332	91524	92610	1.03	cps
Gadolinium	160-1	136596	141688	141435	139906	2.05	cps
Gadolinium	160-2	111593	112131	114103	112609	1.17	cps
Holmium	165-1	12925896	12421546	12341500	12562981	2.52	cps
Holmium	165-2	9374135	9349296	9260214	9327882	0.64	cps
Indium	115-1	9576021	9293941	9106054	9325339	2.54	cps
Indium	115-2	4086291	4075331	4061996	4074539	0.30	cps
Iron	56-2	247887496	245949290	246441476	246759421	0.41	cps
Iron	57-2	6072786	6068415	6050275	6063825	0.20	cps
Iron	54-2	13406000	13407749	13374965	13396238	0.14	cps
Krypton	83-1	253	360	290	301	18.00	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-07	Instrumnet Name :	P7
Client Sample ID :	A6333	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:51:39	DataFile Name :	049SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1212635	1249506	1256679	1239607	1.91	cps
Lead	207-1	1006833	1032387	1046802	1028674	1.97	cps
Lead	208-1	4903860	5052944	5126212	5027672	2.25	cps
Lithium	6-1	1277291	1241506	1212482	1243760	2.61	cps
Magnesium	24-2	4520157	4506779	4515290	4514075	0.15	cps
Manganese	55-2	5524422	5484229	5437178	5481943	0.80	cps
Molybdenum	94-1	53688	57432	56689	55936	3.54	cps
Molybdenum	95-1	17314	17444	17621	17459	0.88	cps
Molybdenum	96-1	28504	29523	30529	29519	3.43	cps
Molybdenum	97-1	10107	10944	11415	10822	6.12	cps
Molybdenum	98-1	27265	28384	28157	27936	2.12	cps
Neodymium	150-1	250802	258324	260960	256695	2.05	cps
Neodymium	150-2	177448	174836	175616	175967	0.76	cps
Nickel	60-2	156672	156678	156116	156488	0.21	cps
Phosphorus	31-2	37209	37429	36717	37118	0.98	cps
Potassium	39-2	682849	688097	691227	687391	0.62	cps
Rhodium	103-1	8823117	8409564	8474287	8568990	2.60	cps
Rhodium	103-2	5538676	5522008	5553659	5538114	0.29	cps
Scandium	45-1	4890297	4648990	4689883	4743057	2.72	cps
Scandium	45-2	549877	551171	544661	548570	0.63	cps
Selenium	82-1	1139	1093	1208	1147	5.02	cps
Selenium	77-2	457	400	480	446	9.23	cps
Selenium	78-2	1240	1113	1213	1189	5.62	cps
Silicon	28-1	4811745	5060814	5037123	4969894	2.77	cps
Silver	107-1	8839	8599	8826	8755	1.54	cps
Silver	109-1	7902	8156	8633	8230	4.51	cps
Sodium	23-2	316313	319171	319049	318178	0.51	cps
Strontium	86-1	369763	383410	385109	379427	2.22	cps
Strontium	88-1	3317759	3489854	3436292	3414635	2.58	cps
Sulfur	34-1	360059	367454	370919	366144	1.52	cps
Terbium	159-1	13118476	12500055	12522419	12713650	2.76	cps
Terbium	159-2	9149882	9103427	9198082	9150464	0.52	cps
Thallium	203-1	4454	4641	4618	4571	2.23	cps
Thallium	205-1	10771	10951	10958	10893	0.97	cps
Tin	118-1	5601	5604	5534	5580	0.71	cps
Titanium	47-1	1208141	1271022	1249745	1242969	2.57	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-07	Instrumnet Name :	P7
Client Sample ID :	A6333	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:51:39	DataFile Name :	049SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1244780	1285118	1292347	1274082	2.01	cps
Vanadium	51-2	323530	321196	321792	322173	0.38	cps
Yttrium	89-1	17950409	17352175	17290896	17531160	2.08	cps
Yttrium	89-2	5788286	5794758	5869372	5817472	0.77	cps
Zinc	66-2	180082	180274	181455	180603	0.41	cps
Zirconium	90-1	119156	125753	125732	123547	3.08	cps
Zirconium	91-1	26484	28174	27783	27480	3.22	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-08	Instrumnet Name :	P7
Client Sample ID :	A6334	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:54:48	DataFile Name :	050SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11480492	11510002	11323013	11437835	0.88	cps
Antimony	121-1	6351	6368	6502	6407	1.28	cps
Arsenic	75-2	47512	48385	48720	48206	1.29	cps
Barium	135-1	443428	448348	444962	445579	0.57	cps
Barium	137-1	764880	780214	777995	774363	1.07	cps
Beryllium	9-1	2560	2740	2550	2617	4.09	cps
Bismuth	209-1	7567534	7554902	7525244	7549227	0.29	cps
Bismuth	209-2	6372510	6293049	6237585	6301048	1.08	cps
Bromine	81-1	34510	36859	37501	36290	4.34	cps
Bromine	81-2	6095	5831	6138	6021	2.76	cps
Cadmium	108-1	373	403	417	398	5.58	cps
Cadmium	106-1	6325	6131	6241	6233	1.56	cps
Cadmium	111-1	8037	8050	7968	8018	0.55	cps
Calcium	43-1	506662	509531	511325	509173	0.46	cps
Calcium	44-1	7956347	8188860	8054321	8066509	1.45	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	458290	463566	456052	459303	0.84	cps
Cobalt	59-2	217598	216221	216042	216620	0.39	cps
Copper	63-2	166795	165605	165136	165845	0.52	cps
Dysprosium	156-1	145965	147098	148101	147055	0.73	cps
Dysprosium	156-2	146465	147229	145390	146361	0.63	cps
Erbium	164-1	125040	128732	128043	127272	1.54	cps
Erbium	164-2	95879	96487	95298	95888	0.62	cps
Gadolinium	160-1	145502	145803	148423	146576	1.10	cps
Gadolinium	160-2	117057	116186	115579	116274	0.64	cps
Holmium	165-1	12139147	12265859	12283244	12229416	0.64	cps
Holmium	165-2	9362049	9204417	9093813	9220093	1.46	cps
Indium	115-1	9078575	9117879	9060094	9085516	0.32	cps
Indium	115-2	4173371	4140476	4110126	4141324	0.76	cps
Iron	56-2	254391850	255506250	254407056	254768385	0.25	cps
Iron	57-2	6371170	6337389	6267435	6325331	0.84	cps
Iron	54-2	13875199	13926239	13907679	13903039	0.19	cps
Krypton	83-1	303	313	360	326	9.29	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-08	Instrumnet Name :	P7
Client Sample ID :	A6334	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:54:48	DataFile Name :	050SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1162282	1195547	1189123	1182318	1.49	cps
Lead	207-1	977458	986564	995298	986440	0.90	cps
Lead	208-1	4782809	4828162	4858338	4823103	0.79	cps
Lithium	6-1	1198425	1223804	1210195	1210808	1.05	cps
Magnesium	24-2	4781015	4785114	4685266	4750465	1.19	cps
Manganese	55-2	5404955	5424456	5365582	5398331	0.56	cps
Molybdenum	94-1	53735	54782	54993	54503	1.24	cps
Molybdenum	95-1	14828	14621	14524	14657	1.06	cps
Molybdenum	96-1	26113	26454	26688	26418	1.09	cps
Molybdenum	97-1	9136	9223	9263	9207	0.70	cps
Molybdenum	98-1	23178	23796	23295	23423	1.40	cps
Neodymium	150-1	266978	270839	270658	269492	0.81	cps
Neodymium	150-2	184170	182159	183328	183219	0.55	cps
Nickel	60-2	160229	160313	158628	159723	0.59	cps
Phosphorus	31-2	39123	39344	39514	39327	0.50	cps
Potassium	39-2	734791	733837	732580	733736	0.15	cps
Rhodium	103-1	8301276	8277082	8324716	8301025	0.29	cps
Rhodium	103-2	5500673	5527464	5500252	5509463	0.28	cps
Scandium	45-1	4682049	4655170	4680606	4672609	0.32	cps
Scandium	45-2	546246	551297	544228	547257	0.67	cps
Selenium	82-1	1094	1153	1031	1093	5.58	cps
Selenium	77-2	493	437	543	491	10.87	cps
Selenium	78-2	1200	1277	1233	1237	3.11	cps
Silicon	28-1	5224971	5388821	5661407	5425066	4.06	cps
Silver	107-1	9306	8990	9440	9245	2.50	cps
Silver	109-1	8606	8846	8853	8768	1.60	cps
Sodium	23-2	318923	317130	315974	317343	0.47	cps
Strontium	86-1	365346	372804	374405	370852	1.30	cps
Strontium	88-1	3302310	3325946	3362415	3330223	0.91	cps
Sulfur	34-1	344928	345164	344407	344833	0.11	cps
Terbium	159-1	12435669	12496562	12563954	12498728	0.51	cps
Terbium	159-2	9229421	9045294	9125134	9133283	1.01	cps
Thallium	203-1	4261	4424	4171	4285	3.00	cps
Thallium	205-1	10374	10234	10254	10287	0.74	cps
Tin	118-1	5835	5918	5941	5898	0.95	cps
Titanium	47-1	1305333	1319972	1349986	1325097	1.72	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-08	Instrumnet Name :	P7
Client Sample ID :	A6334	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:54:48	DataFile Name :	050SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1197867	1209572	1218190	1208543	0.84	cps
Vanadium	51-2	330475	328067	327422	328655	0.49	cps
Yttrium	89-1	17328081	17251021	17366455	17315185	0.34	cps
Yttrium	89-2	5864612	5833165	5884468	5860748	0.44	cps
Zinc	66-2	174223	172483	173249	173318	0.50	cps
Zirconium	90-1	125128	125759	125222	125369	0.27	cps
Zirconium	91-1	27750	28725	28177	28217	1.73	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-01	Instrumnet Name :	P7
Client Sample ID :	A6301	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:57:57	DataFile Name :	051SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5674144	5463950	5615137	5584410	1.94	cps
Antimony	121-1	8589	8759	8509	8619	1.48	cps
Arsenic	75-2	277856	274885	275767	276170	0.55	cps
Barium	135-1	259395	262006	260372	260591	0.51	cps
Barium	137-1	449611	449657	449109	449459	0.07	cps
Beryllium	9-1	4457	4417	4447	4441	0.47	cps
Bismuth	209-1	7801087	7777840	7785311	7788079	0.15	cps
Bismuth	209-2	6431283	6533969	6405434	6456895	1.05	cps
Bromine	81-1	27102	26841	26804	26916	0.60	cps
Bromine	81-2	3007	3057	3020	3028	0.86	cps
Cadmium	108-1	10060	9520	9476	9686	3.36	cps
Cadmium	106-1	15235	14831	14708	14924	1.85	cps
Cadmium	111-1	8196	8325	8233	8251	0.81	cps
Calcium	43-1	460943	458797	455592	458444	0.59	cps
Calcium	44-1	7231386	7256538	7248231	7245385	0.18	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3893388	3870396	3917439	3893741	0.60	cps
Cobalt	59-2	43272	42664	42339	42758	1.11	cps
Copper	63-2	15215037	15092861	14800991	15036296	1.41	cps
Dysprosium	156-1	23223	23540	23553	23439	0.80	cps
Dysprosium	156-2	21817	22264	22074	22052	1.02	cps
Erbium	164-1	21704	22188	22071	21987	1.15	cps
Erbium	164-2	16700	16106	16470	16425	1.82	cps
Gadolinium	160-1	22064	22605	22461	22377	1.25	cps
Gadolinium	160-2	17728	18182	17962	17957	1.26	cps
Holmium	165-1	12562288	12594791	12571057	12576045	0.13	cps
Holmium	165-2	9321521	9400041	9283280	9334948	0.64	cps
Indium	115-1	9307192	9315648	9350430	9324423	0.25	cps
Indium	115-2	4097135	4085716	4032726	4071859	0.84	cps
Iron	56-2	347941688	341972822	340451068	343455193	1.15	cps
Iron	57-2	8518343	8469658	8391685	8459895	0.76	cps
Iron	54-2	18987163	18862811	18770286	18873420	0.58	cps
Krypton	83-1	177	257	220	218	18.39	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-01	Instrumnet Name :	P7
Client Sample ID :	A6301	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:57:57	DataFile Name :	051SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1241814	1245355	1241071	1242747	0.18	cps
Lead	207-1	973663	973172	981028	975954	0.45	cps
Lead	208-1	4865292	4846238	4861006	4857512	0.21	cps
Lithium	6-1	1223987	1212911	1194022	1210306	1.25	cps
Magnesium	24-2	1058716	1043334	1048596	1050215	0.74	cps
Manganese	55-2	1422194	1403977	1398700	1408290	0.88	cps
Molybdenum	94-1	18575	18625	18272	18491	1.04	cps
Molybdenum	95-1	24300	25188	25506	24998	2.50	cps
Molybdenum	96-1	31972	31718	31701	31797	0.48	cps
Molybdenum	97-1	15909	15842	16246	15999	1.35	cps
Molybdenum	98-1	40175	40412	40503	40363	0.42	cps
Neodymium	150-1	37530	36714	37339	37194	1.15	cps
Neodymium	150-2	24708	24575	24865	24716	0.59	cps
Nickel	60-2	416133	415111	412112	414452	0.50	cps
Phosphorus	31-2	34746	33754	34579	34360	1.55	cps
Potassium	39-2	652297	644299	650661	649086	0.65	cps
Rhodium	103-1	8662142	8594015	8513360	8589839	0.87	cps
Rhodium	103-2	5621927	5645051	5518517	5595165	1.20	cps
Scandium	45-1	4578892	4567639	4562005	4569512	0.19	cps
Scandium	45-2	526029	520856	525853	524246	0.56	cps
Selenium	82-1	633	636	644	638	0.90	cps
Selenium	77-2	83	93	80	86	8.11	cps
Selenium	78-2	773	680	723	726	6.44	cps
Silicon	28-1	8547025	8352458	8451115	8450199	1.15	cps
Silver	107-1	155849	156442	156830	156374	0.32	cps
Silver	109-1	147720	146868	147012	147200	0.31	cps
Sodium	23-2	344936	342845	343186	343656	0.33	cps
Strontium	86-1	356260	357168	351986	355138	0.78	cps
Strontium	88-1	3164235	3216539	3177688	3186154	0.85	cps
Sulfur	34-1	376795	371889	370199	372961	0.92	cps
Terbium	159-1	12768304	12659529	12738411	12722081	0.44	cps
Terbium	159-2	9065273	9181859	9272214	9173115	1.13	cps
Thallium	203-1	3347	3257	3390	3332	2.04	cps
Thallium	205-1	8569	7949	7862	8127	4.75	cps
Tin	118-1	2776214	2744222	2693295	2737910	1.53	cps
Titanium	47-1	359748	355368	353783	356300	0.87	cps

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LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-01	Instrumnet Name :	P7
Client Sample ID :	A6301	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 16:57:57	DataFile Name :	051SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	60506	60075	60835	60472	0.63	cps
Vanadium	51-2	136128	136171	135851	136050	0.13	cps
Yttrium	89-1	16524539	16374185	16420418	16439714	0.47	cps
Yttrium	89-2	5366504	5378812	5400168	5381828	0.32	cps
Zinc	66-2	964755	954618	960016	959796	0.53	cps
Zirconium	90-1	10804	10968	10794	10855	0.90	cps
Zirconium	91-1	2764	2724	2744	2744	0.73	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:01:04	DataFile Name :	052SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4392799	4307564	4287777	4329380	1.29	cps
Antimony	121-1	9487	9333	9373	9398	0.85	cps
Arsenic	75-2	25215	25452	24908	25191	1.08	cps
Barium	135-1	942972	954181	949976	949043	0.60	cps
Barium	137-1	1708334	1721062	1701152	1710183	0.59	cps
Beryllium	9-1	2437	2440	2487	2455	1.14	cps
Bismuth	209-1	7845583	7826977	7756154	7809571	0.60	cps
Bismuth	209-2	6380709	6388472	6260582	6343255	1.13	cps
Bromine	81-1	45176	48466	49011	47551	4.36	cps
Bromine	81-2	8556	8796	8633	8661	1.42	cps
Cadmium	108-1	2907	3140	3344	3130	6.98	cps
Cadmium	106-1	8769	8606	8306	8560	2.75	cps
Cadmium	111-1	7464	7410	7124	7333	2.49	cps
Calcium	43-1	890188	893512	878718	887472	0.87	cps
Calcium	44-1	14191316	14254033	13980037	14141795	1.02	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4482496	4456069	4503005	4480523	0.53	cps
Cobalt	59-2	1816282	1823653	1827404	1822447	0.31	cps
Copper	63-2	9742194	9623536	9452764	9606165	1.51	cps
Dysprosium	156-1	46477	47413	46834	46908	1.01	cps
Dysprosium	156-2	43313	42922	43340	43192	0.54	cps
Erbium	164-1	50227	50879	50494	50533	0.65	cps
Erbium	164-2	37932	37240	37002	37391	1.29	cps
Gadolinium	160-1	45671	46878	47116	46555	1.66	cps
Gadolinium	160-2	36624	36644	35949	36406	1.09	cps
Holmium	165-1	12697406	12350155	12208841	12418801	2.02	cps
Holmium	165-2	9265971	9211585	9218733	9232096	0.32	cps
Indium	115-1	9370068	9143537	9102697	9205434	1.56	cps
Indium	115-2	4062119	3923998	4004053	3996723	1.74	cps
Iron	56-2	478635340	473437846	476804353	476292513	0.55	cps
Iron	57-2	11944358	11655818	11640591	11746922	1.46	cps
Iron	54-2	26063610	25919894	26097398	26026967	0.36	cps
Krypton	83-1	317	303	340	320	5.80	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:01:04	DataFile Name :	052SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	890501	906061	903394	899985	0.92	cps
Lead	207-1	719457	728990	731056	726501	0.85	cps
Lead	208-1	3539095	3567804	3592326	3566408	0.75	cps
Lithium	6-1	1208111	1211758	1201393	1207087	0.44	cps
Magnesium	24-2	904662	896605	897255	899507	0.50	cps
Manganese	55-2	102477008	101321895	102217802	102005568	0.59	cps
Molybdenum	94-1	14604	14531	14294	14476	1.12	cps
Molybdenum	95-1	23469	23082	22547	23033	2.01	cps
Molybdenum	96-1	27947	28247	27566	27920	1.22	cps
Molybdenum	97-1	12455	12575	12209	12413	1.51	cps
Molybdenum	98-1	31948	32720	31487	32052	1.94	cps
Neodymium	150-1	69798	71560	70615	70658	1.25	cps
Neodymium	150-2	46774	47078	47025	46959	0.35	cps
Nickel	60-2	1106988	1099643	1096323	1100985	0.50	cps
Phosphorus	31-2	22603	22884	22931	22806	0.78	cps
Potassium	39-2	1259816	1242017	1274267	1258700	1.28	cps
Rhodium	103-1	8653387	8326488	8251185	8410353	2.54	cps
Rhodium	103-2	5481198	5439073	5450372	5456881	0.40	cps
Scandium	45-1	4589291	4367813	4352160	4436421	2.99	cps
Scandium	45-2	505493	500449	504275	503406	0.52	cps
Selenium	82-1	656	603	616	625	4.46	cps
Selenium	77-2	193	140	173	169	15.95	cps
Selenium	78-2	717	720	627	688	7.70	cps
Silicon	28-1	9177869	8953864	8748045	8959926	2.40	cps
Silver	107-1	38668	39380	39179	39076	0.94	cps
Silver	109-1	37131	37041	36670	36947	0.66	cps
Sodium	23-2	530609	526362	526852	527941	0.44	cps
Strontium	86-1	642586	641957	638777	641107	0.32	cps
Strontium	88-1	5817251	5741009	5757146	5771802	0.70	cps
Sulfur	34-1	257498	253503	250488	253829	1.39	cps
Terbium	159-1	12788564	12556349	12492995	12612636	1.23	cps
Terbium	159-2	8969566	8978129	9011345	8986347	0.25	cps
Thallium	203-1	8076	8369	8449	8298	2.37	cps
Thallium	205-1	19217	19618	19524	19453	1.08	cps
Tin	118-1	603947	610140	611225	608437	0.65	cps
Titanium	47-1	216479	217196	214080	215918	0.76	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:01:04	DataFile Name :	052SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	95687	96285	98242	96738	1.38	cps
Vanadium	51-2	94607	94457	94306	94456	0.16	cps
Yttrium	89-1	17033715	16610466	16360638	16668273	2.04	cps
Yttrium	89-2	5464414	5336264	5383377	5394685	1.20	cps
Zinc	66-2	161159	159687	158653	159833	0.79	cps
Zirconium	90-1	7785	7812	7896	7831	0.73	cps
Zirconium	91-1	1647	1763	1930	1780	8.00	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-03	Instrumnet Name :	P7
Client Sample ID :	A6303	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:04:07	DataFile Name :	053SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1757689	1801539	1794403	1784543	1.32	cps
Antimony	121-1	2240	2424	2284	2316	4.14	cps
Arsenic	75-2	24964	25495	25081	25180	1.11	cps
Barium	135-1	69140	75137	74815	73031	4.62	cps
Barium	137-1	122250	129009	131531	127597	3.76	cps
Beryllium	9-1	487	490	490	489	0.39	cps
Bismuth	209-1	9132097	7939070	7794468	8288545	8.86	cps
Bismuth	209-2	6392676	6312904	6444873	6383484	1.04	cps
Bromine	81-1	18425	19597	19994	19338	4.22	cps
Bromine	81-2	1523	1627	1683	1611	5.04	cps
Cadmium	108-1	220	310	247	259	17.86	cps
Cadmium	106-1	6058	5188	4834	5360	11.75	cps
Cadmium	111-1	4710	4111	3865	4229	10.28	cps
Calcium	43-1	44980	48049	48982	47337	4.42	cps
Calcium	44-1	740193	788228	803016	777146	4.23	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	754744	755094	758684	756174	0.29	cps
Cobalt	59-2	86179	85431	86286	85965	0.54	cps
Copper	63-2	386989	384861	387129	386326	0.33	cps
Dysprosium	156-1	15142	16293	16770	16068	5.21	cps
Dysprosium	156-2	16730	16450	17201	16793	2.26	cps
Erbium	164-1	13784	14558	15469	14603	5.78	cps
Erbium	164-2	11121	10948	11175	11081	1.07	cps
Gadolinium	160-1	14267	15318	15682	15089	4.87	cps
Gadolinium	160-2	12122	12749	12606	12492	2.63	cps
Holmium	165-1	14421159	12251771	12251924	12974951	9.65	cps
Holmium	165-2	9184801	9109655	9179730	9158062	0.46	cps
Indium	115-1	10795415	9189412	9231283	9738703	9.40	cps
Indium	115-2	4078591	4059480	4120524	4086199	0.76	cps
Iron	56-2	70244021	69918007	69788514	69983514	0.34	cps
Iron	57-2	1739015	1705601	1709429	1718015	1.06	cps
Iron	54-2	3819132	3794198	3807023	3806784	0.33	cps
Krypton	83-1	203	237	240	227	8.94	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-03	Instrumnet Name :	P7
Client Sample ID :	A6303	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:04:07	DataFile Name :	053SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	436636	470626	476358	461207	4.66	cps
Lead	207-1	358312	382549	385852	375571	4.00	cps
Lead	208-1	1674213	1798312	1819709	1764078	4.45	cps
Lithium	6-1	1357603	1216440	1178640	1250894	7.54	cps
Magnesium	24-2	829213	832186	827879	829759	0.27	cps
Manganese	55-2	1883090	1829936	1825051	1846026	1.74	cps
Molybdenum	94-1	7285	7782	7679	7582	3.46	cps
Molybdenum	95-1	9930	10430	10394	10251	2.72	cps
Molybdenum	96-1	11368	12602	12389	12120	5.44	cps
Molybdenum	97-1	6078	6525	6461	6355	3.80	cps
Molybdenum	98-1	15018	16513	16486	16006	5.34	cps
Neodymium	150-1	25269	27544	27921	26911	5.33	cps
Neodymium	150-2	18629	18996	18839	18822	0.98	cps
Nickel	60-2	46171	47602	47321	47031	1.61	cps
Phosphorus	31-2	5148	5454	5304	5302	2.89	cps
Potassium	39-2	377056	378518	377475	377683	0.20	cps
Rhodium	103-1	9877466	8540292	8467971	8961910	8.86	cps
Rhodium	103-2	5636208	5609786	5598697	5614897	0.34	cps
Scandium	45-1	5111214	4340402	4368808	4606808	9.49	cps
Scandium	45-2	521941	515261	518917	518706	0.64	cps
Selenium	82-1	491	400	483	458	10.94	cps
Selenium	77-2	50	67	43	53	22.54	cps
Selenium	78-2	610	713	650	658	7.92	cps
Silicon	28-1	6383028	6806279	6978049	6722452	4.56	cps
Silver	107-1	2130	1980	2057	2056	3.65	cps
Silver	109-1	1777	1703	1603	1695	5.14	cps
Sodium	23-2	130866	132185	131677	131576	0.51	cps
Strontium	86-1	37354	39974	40686	39338	4.46	cps
Strontium	88-1	326234	351725	355685	344548	4.64	cps
Sulfur	34-1	119459	119828	118700	119329	0.48	cps
Terbium	159-1	14581993	12533873	12589059	13234975	8.82	cps
Terbium	159-2	9056729	8924257	8906682	8962556	0.92	cps
Thallium	203-1	1550	1523	1463	1512	2.94	cps
Thallium	205-1	3811	3360	3334	3502	7.65	cps
Tin	118-1	95088	101524	102837	99817	4.15	cps
Titanium	47-1	355833	388304	393510	379215	5.38	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-03	Instrumnet Name :	P7
Client Sample ID :	A6303	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:04:07	DataFile Name :	053SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	40916	44474	43624	43005	4.32	cps
Vanadium	51-2	73896	74168	74141	74068	0.20	cps
Yttrium	89-1	18624252	15964695	15872165	16820371	9.29	cps
Yttrium	89-2	5292412	5347301	5298509	5312740	0.57	cps
Zinc	66-2	54847	54673	55703	55074	1.00	cps
Zirconium	90-1	4774	5181	5498	5151	7.04	cps
Zirconium	91-1	1140	1063	1133	1112	3.82	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-04	Instrumnet Name :	P7
Client Sample ID :	A6304	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:07:19	DataFile Name :	054SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1826691	1831172	1825520	1827794	0.16	cps
Antimony	121-1	2124	2504	2377	2335	8.29	cps
Arsenic	75-2	32402	32278	33097	32592	1.35	cps
Barium	135-1	70859	76427	76350	74545	4.28	cps
Barium	137-1	122165	132568	130835	128523	4.34	cps
Beryllium	9-1	440	430	543	471	13.32	cps
Bismuth	209-1	9413663	7974347	7845937	8411315	10.35	cps
Bismuth	209-2	6454738	6486164	6402499	6447800	0.66	cps
Bromine	81-1	19937	21042	20915	20631	2.93	cps
Bromine	81-2	1497	1373	1553	1475	6.24	cps
Cadmium	108-1	227	257	247	243	6.28	cps
Cadmium	106-1	6575	5218	5151	5648	14.23	cps
Cadmium	111-1	5064	4239	4086	4463	11.78	cps
Calcium	43-1	48769	54206	53116	52030	5.53	cps
Calcium	44-1	815025	880378	888865	861423	4.69	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	710484	711484	706580	709516	0.37	cps
Cobalt	59-2	77194	78283	77137	77538	0.83	cps
Copper	63-2	361229	366037	362274	363180	0.70	cps
Dysprosium	156-1	15132	16563	16393	16029	4.88	cps
Dysprosium	156-2	16283	16153	16270	16235	0.44	cps
Erbium	164-1	12612	14341	14017	13657	6.73	cps
Erbium	164-2	10434	10287	10357	10359	0.71	cps
Gadolinium	160-1	13670	14471	15399	14513	5.96	cps
Gadolinium	160-2	12155	12195	12169	12173	0.17	cps
Holmium	165-1	15076145	12701505	12488476	13422042	10.70	cps
Holmium	165-2	9331014	9206171	9261244	9266143	0.68	cps
Indium	115-1	11466606	9510603	9383844	10120351	11.54	cps
Indium	115-2	4173618	4214290	4142837	4176915	0.86	cps
Iron	56-2	83417817	82386397	82326972	82710395	0.74	cps
Iron	57-2	2046408	2033659	2010057	2030041	0.91	cps
Iron	54-2	4499077	4540624	4465594	4501765	0.83	cps
Krypton	83-1	223	217	223	221	1.74	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-04	Instrumnet Name :	P7
Client Sample ID :	A6304	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:07:19	DataFile Name :	054SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	396565	430842	431567	419658	4.77	cps
Lead	207-1	322696	351205	353672	342524	5.03	cps
Lead	208-1	1514764	1649005	1656213	1606661	4.96	cps
Lithium	6-1	1394534	1189850	1189361	1257915	9.41	cps
Magnesium	24-2	834913	836111	833042	834689	0.19	cps
Manganese	55-2	1704322	1665320	1682938	1684193	1.16	cps
Molybdenum	94-1	10207	10701	10851	10586	3.18	cps
Molybdenum	95-1	13960	15602	15361	14974	5.92	cps
Molybdenum	96-1	16543	17667	17834	17348	4.05	cps
Molybdenum	97-1	8823	9690	9480	9331	4.85	cps
Molybdenum	98-1	23469	25085	24968	24507	3.68	cps
Neodymium	150-1	24949	27253	27156	26453	4.93	cps
Neodymium	150-2	17968	18148	18008	18042	0.52	cps
Nickel	60-2	49030	48933	48859	48941	0.17	cps
Phosphorus	31-2	5618	5581	5561	5587	0.51	cps
Potassium	39-2	376443	381033	376109	377862	0.73	cps
Rhodium	103-1	10524386	8900508	8809081	9411325	10.25	cps
Rhodium	103-2	5753760	5760602	5753953	5756105	0.07	cps
Scandium	45-1	5538641	4684754	4612344	4945246	10.42	cps
Scandium	45-2	534896	537492	534110	535499	0.33	cps
Selenium	82-1	514	530	485	510	4.46	cps
Selenium	77-2	73	47	67	62	22.30	cps
Selenium	78-2	640	673	717	677	5.68	cps
Silicon	28-1	6412839	6807492	6824557	6681629	3.49	cps
Silver	107-1	1433	1673	1690	1599	8.98	cps
Silver	109-1	1410	1617	1553	1527	6.94	cps
Sodium	23-2	103005	104025	104595	103875	0.78	cps
Strontium	86-1	39784	43307	43370	42154	4.87	cps
Strontium	88-1	348406	378188	376665	367753	4.56	cps
Sulfur	34-1	119036	119952	120030	119673	0.46	cps
Terbium	159-1	15152024	12979414	12562001	13564480	10.25	cps
Terbium	159-2	9162199	9166199	8945513	9091304	1.39	cps
Thallium	203-1	1297	1273	1337	1302	2.46	cps
Thallium	205-1	3067	3010	3194	3090	3.04	cps
Tin	118-1	91318	99235	100051	96868	4.98	cps
Titanium	47-1	367589	396748	401743	388694	4.75	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-04	Instrumnet Name :	P7
Client Sample ID :	A6304	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:07:19	DataFile Name :	054SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	41244	44383	44303	43310	4.13	cps
Vanadium	51-2	75417	76141	75578	75712	0.50	cps
Yttrium	89-1	19901367	16899990	16621829	17807729	10.21	cps
Yttrium	89-2	5519026	5463143	5414220	5465463	0.96	cps
Zinc	66-2	54201	54542	54402	54382	0.32	cps
Zirconium	90-1	4717	5008	5038	4921	3.59	cps
Zirconium	91-1	1107	1050	1157	1104	4.83	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-12	Instrumnet Name :	P7
Client Sample ID :	A6343	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:10:30	DataFile Name :	055SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3504810	3494719	3508827	3502786	0.21	cps
Antimony	121-1	697	690	587	658	9.38	cps
Arsenic	75-2	5148	5151	5251	5183	1.13	cps
Barium	135-1	95260	99830	100759	98616	2.99	cps
Barium	137-1	167277	172361	171935	170524	1.65	cps
Beryllium	9-1	513	617	500	543	11.75	cps
Bismuth	209-1	8459391	7727537	7678317	7955082	5.50	cps
Bismuth	209-2	6401958	6316504	6328992	6349151	0.73	cps
Bromine	81-1	18024	18585	18528	18379	1.68	cps
Bromine	81-2	1000	913	947	953	4.59	cps
Cadmium	108-1	70	30	47	49	41.10	cps
Cadmium	106-1	5411	5104	4788	5101	6.11	cps
Cadmium	111-1	4162	3982	3745	3963	5.28	cps
Calcium	43-1	30497	30694	30501	30564	0.37	cps
Calcium	44-1	499830	514384	513562	509258	1.61	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	111596	112263	111407	111755	0.40	cps
Cobalt	59-2	20471	20484	20614	20523	0.39	cps
Copper	63-2	26771	28367	26724	27287	3.43	cps
Dysprosium	156-1	14554	15058	15091	14901	2.02	cps
Dysprosium	156-2	15262	15402	15318	15327	0.46	cps
Erbium	164-1	11351	11989	12079	11806	3.36	cps
Erbium	164-2	8950	9180	9006	9045	1.33	cps
Gadolinium	160-1	13303	13420	13497	13407	0.73	cps
Gadolinium	160-2	11428	11181	11178	11262	1.27	cps
Holmium	165-1	13713731	12302326	12216580	12744212	6.60	cps
Holmium	165-2	9221688	9201863	9074922	9166158	0.87	cps
Indium	115-1	10338932	9339689	9275964	9651528	6.18	cps
Indium	115-2	4106224	4101606	4081212	4096347	0.32	cps
Iron	56-2	41862294	41579921	41780699	41740971	0.35	cps
Iron	57-2	1056554	1063154	1058729	1059479	0.32	cps
Iron	54-2	2279227	2276017	2264272	2273172	0.35	cps
Krypton	83-1	193	220	207	207	6.45	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-12	Instrumnet Name :	P7
Client Sample ID :	A6343	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:10:30	DataFile Name :	055SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	367446	373538	382416	374467	2.01	cps
Lead	207-1	302241	313686	313184	309704	2.09	cps
Lead	208-1	1412704	1447566	1469722	1443331	1.99	cps
Lithium	6-1	1239738	1118659	1136703	1165034	5.61	cps
Magnesium	24-2	1036460	1043086	1038311	1039286	0.33	cps
Manganese	55-2	351126	349462	352426	351005	0.42	cps
Molybdenum	94-1	5301	5318	5298	5305	0.20	cps
Molybdenum	95-1	3267	3380	3070	3239	4.84	cps
Molybdenum	96-1	4444	4467	4447	4453	0.28	cps
Molybdenum	97-1	2000	2074	2074	2049	2.07	cps
Molybdenum	98-1	5124	5164	5201	5163	0.74	cps
Neodymium	150-1	24919	26585	26258	25921	3.41	cps
Neodymium	150-2	18038	17337	17518	17631	2.06	cps
Nickel	60-2	21526	21526	20905	21319	1.68	cps
Phosphorus	31-2	5428	5694	5821	5648	3.56	cps
Potassium	39-2	358445	354441	359032	357306	0.70	cps
Rhodium	103-1	9617292	8640754	8520256	8926100	6.74	cps
Rhodium	103-2	5682966	5567362	5591381	5613903	1.09	cps
Scandium	45-1	5108706	4501983	4494864	4701851	7.49	cps
Scandium	45-2	522311	518707	523980	521666	0.52	cps
Selenium	82-1	545	568	519	544	4.45	cps
Selenium	77-2	50	37	70	52	32.12	cps
Selenium	78-2	663	640	643	649	1.95	cps
Silicon	28-1	6140026	6214952	6172796	6175924	0.61	cps
Silver	107-1	950	967	973	963	1.25	cps
Silver	109-1	750	857	943	850	11.39	cps
Sodium	23-2	280299	281138	277306	279581	0.72	cps
Strontium	86-1	30762	31945	32325	31677	2.57	cps
Strontium	88-1	270449	283589	284875	279637	2.85	cps
Sulfur	34-1	130451	128215	127362	128676	1.24	cps
Terbium	159-1	13730550	12502553	12263841	12832314	6.13	cps
Terbium	159-2	8972233	8950620	8916840	8946564	0.31	cps
Thallium	203-1	1917	2120	2177	2071	6.60	cps
Thallium	205-1	4904	4771	4674	4783	2.42	cps
Tin	118-1	3694	3931	3771	3798	3.18	cps
Titanium	47-1	340990	351915	349859	347588	1.67	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-12	Instrumnet Name :	P7
Client Sample ID :	A6343	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:10:30	DataFile Name :	055SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	46377	47665	47852	47298	1.70	cps
Vanadium	51-2	88243	87867	88467	88192	0.34	cps
Yttrium	89-1	18090378	16181202	15962869	16744816	6.99	cps
Yttrium	89-2	5259481	5302975	5310181	5290879	0.52	cps
Zinc	66-2	32783	32445	32906	32711	0.73	cps
Zirconium	90-1	9643	9527	9840	9670	1.64	cps
Zirconium	91-1	2030	2260	2070	2120	5.80	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-13	Instrumnet Name :	P7
Client Sample ID :	A6344	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:13:45	DataFile Name :	056SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1532984	1481079	1484655	1499573	1.93	cps
Antimony	121-1	380	343	393	372	6.96	cps
Arsenic	75-2	4597	4511	4584	4564	1.02	cps
Barium	135-1	93712	94071	94702	94162	0.53	cps
Barium	137-1	160841	162577	163417	162278	0.81	cps
Beryllium	9-1	380	410	450	413	8.50	cps
Bismuth	209-1	7780067	7684477	7684893	7716479	0.71	cps
Bismuth	209-2	6306265	6283934	6411553	6333917	1.08	cps
Bromine	81-1	16803	16966	16743	16837	0.69	cps
Bromine	81-2	593	730	613	646	11.43	cps
Cadmium	108-1	60	53	90	68	28.82	cps
Cadmium	106-1	4951	4687	4851	4830	2.75	cps
Cadmium	111-1	3990	3791	3943	3908	2.67	cps
Calcium	43-1	59105	59124	59918	59382	0.78	cps
Calcium	44-1	983420	989170	984223	985604	0.32	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	59186	58841	59035	59020	0.29	cps
Cobalt	59-2	34246	34466	35081	34598	1.25	cps
Copper	63-2	24854	24497	24580	24644	0.76	cps
Dysprosium	156-1	14518	14411	14431	14453	0.39	cps
Dysprosium	156-2	14397	14114	14584	14365	1.65	cps
Erbium	164-1	12616	12793	13376	12928	3.08	cps
Erbium	164-2	9523	9513	9430	9489	0.54	cps
Gadolinium	160-1	13690	13874	13894	13819	0.81	cps
Gadolinium	160-2	11265	11251	11265	11260	0.07	cps
Holmium	165-1	12443907	12189397	12120751	12251352	1.39	cps
Holmium	165-2	9066878	9102678	9181255	9116937	0.64	cps
Indium	115-1	9265635	9200906	9201027	9222523	0.40	cps
Indium	115-2	4064708	4078338	4106333	4083126	0.52	cps
Iron	56-2	26499315	26476895	26582578	26519596	0.21	cps
Iron	57-2	668629	671098	672449	670725	0.29	cps
Iron	54-2	1434228	1484334	1449887	1456150	1.76	cps
Krypton	83-1	247	190	217	218	13.02	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-13	Instrumnet Name :	P7
Client Sample ID :	A6344	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:13:45	DataFile Name :	056SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	122976	124221	123672	123623	0.50	cps
Lead	207-1	100740	101240	103436	101805	1.41	cps
Lead	208-1	473494	478491	479272	477086	0.66	cps
Lithium	6-1	1163809	1108618	1116731	1129719	2.64	cps
Magnesium	24-2	665891	670450	669897	668746	0.37	cps
Manganese	55-2	414860	416746	415406	415671	0.23	cps
Molybdenum	94-1	5351	5631	5451	5478	2.59	cps
Molybdenum	95-1	1887	1753	1880	1840	4.08	cps
Molybdenum	96-1	3137	3020	3047	3068	1.99	cps
Molybdenum	97-1	1163	1140	1120	1141	1.90	cps
Molybdenum	98-1	3054	2957	2914	2975	2.41	cps
Neodymium	150-1	24822	24715	24478	24672	0.71	cps
Neodymium	150-2	16433	16443	16873	16583	1.52	cps
Nickel	60-2	20861	20467	20641	20657	0.96	cps
Phosphorus	31-2	4487	4361	4264	4371	2.56	cps
Potassium	39-2	362524	361223	363976	362574	0.38	cps
Rhodium	103-1	8667897	8555433	8361508	8528279	1.82	cps
Rhodium	103-2	5595925	5581380	5609926	5595744	0.26	cps
Scandium	45-1	4482350	4452262	4424794	4453135	0.65	cps
Scandium	45-2	514985	515887	521248	517373	0.65	cps
Selenium	82-1	467	542	472	494	8.50	cps
Selenium	77-2	37	47	47	43	13.32	cps
Selenium	78-2	657	617	727	667	8.35	cps
Silicon	28-1	4001453	3903023	4011439	3971972	1.51	cps
Silver	107-1	757	643	773	724	9.76	cps
Silver	109-1	690	643	660	664	3.56	cps
Sodium	23-2	95396	95933	95879	95736	0.31	cps
Strontium	86-1	30141	30348	30462	30317	0.54	cps
Strontium	88-1	262996	262713	265757	263822	0.64	cps
Sulfur	34-1	132670	133920	132962	133184	0.49	cps
Terbium	159-1	12508392	12486799	12447836	12481009	0.25	cps
Terbium	159-2	8973547	8989620	8840869	8934679	0.91	cps
Thallium	203-1	1387	1410	1473	1423	3.15	cps
Thallium	205-1	3174	3270	3514	3319	5.28	cps
Tin	118-1	2847	2707	2927	2827	3.94	cps
Titanium	47-1	211713	213017	212108	212279	0.31	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-13	Instrumnet Name :	P7
Client Sample ID :	A6344	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:13:45	DataFile Name :	056SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	77547	78620	78563	78243	0.77	cps
Vanadium	51-2	45686	45421	45997	45701	0.63	cps
Yttrium	89-1	16243476	15851380	15885223	15993359	1.36	cps
Yttrium	89-2	5240718	5220292	5307051	5256020	0.86	cps
Zinc	66-2	44459	43934	44459	44284	0.68	cps
Zirconium	90-1	12035	12122	12142	12100	0.47	cps
Zirconium	91-1	2437	2854	2570	2620	8.12	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-14	Instrumnet Name :	P7
Client Sample ID :	A6345	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:16:57	DataFile Name :	057SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2248141	2274015	2257115	2259757	0.58	cps
Antimony	121-1	290	330	367	329	11.66	cps
Arsenic	75-2	3847	4051	3987	3962	2.63	cps
Barium	135-1	140128	142608	143117	141951	1.13	cps
Barium	137-1	246184	248613	247975	247591	0.51	cps
Beryllium	9-1	500	553	500	518	5.95	cps
Bismuth	209-1	7878403	7540271	7571468	7663381	2.44	cps
Bismuth	209-2	6394716	6328908	6248678	6324101	1.16	cps
Bromine	81-1	16382	16426	16603	16470	0.71	cps
Bromine	81-2	623	603	683	637	6.54	cps
Cadmium	108-1	60	80	63	68	15.81	cps
Cadmium	106-1	5131	4711	4871	4904	4.32	cps
Cadmium	111-1	4103	3792	3879	3924	4.09	cps
Calcium	43-1	46885	47715	47685	47428	0.99	cps
Calcium	44-1	767020	787649	780340	778336	1.34	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	90137	89832	90614	90194	0.44	cps
Cobalt	59-2	34637	34480	34035	34384	0.91	cps
Copper	63-2	26657	26143	26764	26521	1.25	cps
Dysprosium	156-1	17468	17731	18035	17745	1.60	cps
Dysprosium	156-2	17988	17945	18082	18005	0.39	cps
Erbium	164-1	13540	13964	14378	13960	3.00	cps
Erbium	164-2	10120	10467	10607	10398	2.41	cps
Gadolinium	160-1	16420	16400	16670	16496	0.91	cps
Gadolinium	160-2	13697	13683	13263	13548	1.82	cps
Holmium	165-1	12567988	11853774	12045261	12155675	3.04	cps
Holmium	165-2	9020993	9024901	8992532	9012808	0.20	cps
Indium	115-1	9512705	9131594	9095101	9246467	2.50	cps
Indium	115-2	4073568	4067041	4108151	4082920	0.54	cps
Iron	56-2	36294459	36735167	36502308	36510644	0.60	cps
Iron	57-2	918401	924974	919785	921053	0.38	cps
Iron	54-2	1986164	1997573	1967634	1983790	0.76	cps
Krypton	83-1	190	157	200	182	12.45	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-14	Instrumnet Name :	P7
Client Sample ID :	A6345	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:16:57	DataFile Name :	057SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	143403	145798	146792	145331	1.20	cps
Lead	207-1	117946	120515	121547	120003	1.55	cps
Lead	208-1	551749	563915	568457	561374	1.54	cps
Lithium	6-1	1197257	1123067	1143409	1154578	3.32	cps
Magnesium	24-2	1009161	1016937	1013597	1013232	0.38	cps
Manganese	55-2	583297	583540	581900	582913	0.15	cps
Molybdenum	94-1	6548	6938	6788	6758	2.91	cps
Molybdenum	95-1	2304	2214	2197	2238	2.56	cps
Molybdenum	96-1	3851	3951	3731	3844	2.87	cps
Molybdenum	97-1	1497	1373	1480	1450	4.62	cps
Molybdenum	98-1	3630	3527	3751	3636	3.07	cps
Neodymium	150-1	30546	31068	31041	30885	0.95	cps
Neodymium	150-2	21082	20869	20682	20878	0.96	cps
Nickel	60-2	23585	23332	23225	23380	0.79	cps
Phosphorus	31-2	3500	3670	3470	3547	3.04	cps
Potassium	39-2	435770	437749	439163	437561	0.39	cps
Rhodium	103-1	8817678	8314242	8327804	8486575	3.38	cps
Rhodium	103-2	5573082	5545115	5552519	5556905	0.26	cps
Scandium	45-1	4671805	4391343	4390460	4484536	3.62	cps
Scandium	45-2	513663	515685	511225	513524	0.43	cps
Selenium	82-1	527	512	458	499	7.30	cps
Selenium	77-2	87	47	47	60	38.49	cps
Selenium	78-2	630	713	617	653	8.02	cps
Silicon	28-1	4654508	4669053	5012525	4778695	4.24	cps
Silver	107-1	617	683	587	629	7.87	cps
Silver	109-1	650	600	640	630	4.20	cps
Sodium	23-2	126672	126141	125314	126042	0.54	cps
Strontium	86-1	41147	42070	41779	41665	1.13	cps
Strontium	88-1	356947	368849	366071	363956	1.71	cps
Sulfur	34-1	124122	123383	123446	123650	0.33	cps
Terbium	159-1	12913131	12272666	12193671	12459822	3.17	cps
Terbium	159-2	8841488	8880450	8916915	8879618	0.42	cps
Thallium	203-1	1700	1860	1773	1778	4.51	cps
Thallium	205-1	4201	4057	4364	4207	3.65	cps
Tin	118-1	3057	3267	3127	3150	3.40	cps
Titanium	47-1	301973	308716	305910	305533	1.11	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-14	Instrumnet Name :	P7
Client Sample ID :	A6345	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:16:57	DataFile Name :	057SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	84080	86240	84848	85056	1.29	cps
Vanadium	51-2	61595	63061	61896	62184	1.24	cps
Yttrium	89-1	16525679	15829144	15559444	15971422	3.12	cps
Yttrium	89-2	5263068	5212679	5192708	5222818	0.69	cps
Zinc	66-2	33207	33858	33728	33598	1.03	cps
Zirconium	90-1	14264	14521	15028	14604	2.66	cps
Zirconium	91-1	3507	3280	3180	3323	5.04	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-15	Instrumnet Name :	P7
Client Sample ID :	A6346	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:20:11	DataFile Name :	058SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1915467	1934273	1933089	1927610	0.55	cps
Antimony	121-1	463	510	533	502	7.10	cps
Arsenic	75-2	4934	4824	5031	4930	2.10	cps
Barium	135-1	120333	121429	122730	121497	0.99	cps
Barium	137-1	206225	214699	213319	211415	2.15	cps
Beryllium	9-1	503	477	487	489	2.76	cps
Bismuth	209-1	8151727	7513839	7581166	7748911	4.52	cps
Bismuth	209-2	6404726	6386016	6237939	6342894	1.44	cps
Bromine	81-1	16229	15905	15615	15916	1.93	cps
Bromine	81-2	577	590	600	589	1.99	cps
Cadmium	108-1	107	73	37	72	48.48	cps
Cadmium	106-1	5161	4864	4991	5005	2.98	cps
Cadmium	111-1	4151	3994	3995	4047	2.24	cps
Calcium	43-1	46264	47240	47457	46987	1.35	cps
Calcium	44-1	762654	786622	777490	775589	1.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	85065	84351	84378	84598	0.48	cps
Cobalt	59-2	38349	39034	38706	38696	0.89	cps
Copper	63-2	43560	43931	42915	43469	1.18	cps
Dysprosium	156-1	19477	19904	20348	19910	2.19	cps
Dysprosium	156-2	19751	20155	20094	20000	1.09	cps
Erbium	164-1	17007	17201	17317	17175	0.91	cps
Erbium	164-2	12989	12582	12973	12848	1.79	cps
Gadolinium	160-1	18322	19243	19050	18872	2.57	cps
Gadolinium	160-2	15899	15459	15479	15612	1.59	cps
Holmium	165-1	12700704	11952138	12253086	12301976	3.06	cps
Holmium	165-2	9148086	9096025	9057651	9100587	0.50	cps
Indium	115-1	9618006	9037403	9065986	9240465	3.54	cps
Indium	115-2	4047557	4069976	3999276	4038937	0.89	cps
Iron	56-2	40898046	41128055	40930524	40985542	0.30	cps
Iron	57-2	1041174	1037316	1030327	1036273	0.53	cps
Iron	54-2	2254673	2225920	2255190	2245261	0.75	cps
Krypton	83-1	217	270	177	221	21.18	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-15	Instrumnet Name :	P7
Client Sample ID :	A6346	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:20:11	DataFile Name :	058SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	126539	131289	131687	129839	2.21	cps
Lead	207-1	105411	109154	108199	107588	1.81	cps
Lead	208-1	492170	506621	504881	501224	1.57	cps
Lithium	6-1	1221525	1152601	1145931	1173352	3.57	cps
Magnesium	24-2	1050009	1049249	1044622	1047960	0.28	cps
Manganese	55-2	829844	824073	821391	825103	0.52	cps
Molybdenum	94-1	9920	10541	9917	10126	3.55	cps
Molybdenum	95-1	2490	2607	2827	2641	6.47	cps
Molybdenum	96-1	4647	4844	4918	4803	2.91	cps
Molybdenum	97-1	1627	1660	1713	1667	2.62	cps
Molybdenum	98-1	4424	4431	4207	4354	2.92	cps
Neodymium	150-1	32868	33714	33025	33202	1.35	cps
Neodymium	150-2	23413	22568	23299	23093	1.99	cps
Nickel	60-2	26313	25922	26564	26266	1.23	cps
Phosphorus	31-2	5248	5151	5118	5172	1.31	cps
Potassium	39-2	748062	742639	742253	744318	0.44	cps
Rhodium	103-1	8865330	8525765	8257905	8549667	3.56	cps
Rhodium	103-2	5544272	5477022	5535763	5519019	0.66	cps
Scandium	45-1	4690444	4390390	4365655	4482163	4.03	cps
Scandium	45-2	514426	512724	516541	514564	0.37	cps
Selenium	82-1	490	413	500	467	10.19	cps
Selenium	77-2	87	67	100	84	19.87	cps
Selenium	78-2	663	647	650	653	1.35	cps
Silicon	28-1	4892831	5043336	5954898	5297021	10.85	cps
Silver	107-1	683	773	620	692	11.13	cps
Silver	109-1	553	590	637	593	7.04	cps
Sodium	23-2	134143	131765	130551	132153	1.38	cps
Strontium	86-1	32312	32853	33161	32775	1.31	cps
Strontium	88-1	282465	287922	291196	287194	1.54	cps
Sulfur	34-1	121905	121397	122956	122086	0.65	cps
Terbium	159-1	13116636	12354627	12082605	12517956	4.28	cps
Terbium	159-2	9033389	8888074	8896242	8939235	0.91	cps
Thallium	203-1	1867	1880	2054	1933	5.39	cps
Thallium	205-1	4474	4557	4557	4530	1.06	cps
Tin	118-1	3020	3267	3260	3183	4.42	cps
Titanium	47-1	368334	382342	380748	377141	2.03	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-15	Instrumnet Name :	P7
Client Sample ID :	A6346	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:20:11	DataFile Name :	058SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	82218	85713	84388	84107	2.10	cps
Vanadium	51-2	72051	70909	70330	71096	1.23	cps
Yttrium	89-1	16871755	15564530	15645616	16027300	4.57	cps
Yttrium	89-2	5322032	5258650	5198887	5259856	1.17	cps
Zinc	66-2	37888	37303	37026	37406	1.18	cps
Zirconium	90-1	23068	23602	23933	23534	1.85	cps
Zirconium	91-1	5318	5088	5288	5231	2.39	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-16	Instrumnet Name :	P7
Client Sample ID :	A6347	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:23:23	DataFile Name :	059SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3904294	3952052	3893795	3916714	0.79	cps
Antimony	121-1	280	233	290	268	11.30	cps
Arsenic	75-2	2090	2254	2074	2139	4.65	cps
Barium	135-1	139279	144033	144756	142690	2.09	cps
Barium	137-1	245163	250724	246613	247500	1.17	cps
Beryllium	9-1	643	600	703	649	8.00	cps
Bismuth	209-1	7817632	7640522	7468157	7642104	2.29	cps
Bismuth	209-2	6403582	6359211	6224224	6329005	1.48	cps
Bromine	81-1	15975	16796	17160	16644	3.65	cps
Bromine	81-2	513	573	600	562	7.90	cps
Cadmium	108-1	43	30	53	42	27.72	cps
Cadmium	106-1	4988	4841	4781	4870	2.18	cps
Cadmium	111-1	3774	3651	3583	3669	2.65	cps
Calcium	43-1	30624	31546	31028	31066	1.49	cps
Calcium	44-1	504443	514500	513322	510755	1.08	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	177417	175545	175582	176181	0.61	cps
Cobalt	59-2	37684	36655	36965	37101	1.42	cps
Copper	63-2	16172	15241	15395	15603	3.20	cps
Dysprosium	156-1	17725	17478	17992	17731	1.45	cps
Dysprosium	156-2	18245	17681	18616	18181	2.59	cps
Erbium	164-1	13023	13240	13306	13190	1.12	cps
Erbium	164-2	9950	10347	9874	10057	2.53	cps
Gadolinium	160-1	15452	15439	16043	15644	2.20	cps
Gadolinium	160-2	13183	12976	13200	13120	0.95	cps
Holmium	165-1	12698722	11961956	12089716	12250131	3.21	cps
Holmium	165-2	9108397	9189128	9042229	9113251	0.81	cps
Indium	115-1	9619176	9136491	9188993	9314887	2.84	cps
Indium	115-2	4094337	4078703	4036352	4069798	0.74	cps
Iron	56-2	66263597	66599846	65614627	66159357	0.76	cps
Iron	57-2	1630234	1629585	1626145	1628655	0.13	cps
Iron	54-2	3598650	3609117	3563006	3590258	0.67	cps
Krypton	83-1	230	207	203	213	6.81	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-16	Instrumnet Name :	P7
Client Sample ID :	A6347	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:23:23	DataFile Name :	059SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	220106	225929	226194	224076	1.54	cps
Lead	207-1	178729	183045	186031	182602	2.01	cps
Lead	208-1	842539	862470	871708	858905	1.74	cps
Lithium	6-1	1192412	1149825	1155331	1165856	1.99	cps
Magnesium	24-2	1822736	1855237	1831736	1836570	0.91	cps
Manganese	55-2	575519	576393	571780	574564	0.43	cps
Molybdenum	94-1	6335	6421	6238	6331	1.45	cps
Molybdenum	95-1	1793	1890	2064	1916	7.14	cps
Molybdenum	96-1	3427	3751	3587	3588	4.51	cps
Molybdenum	97-1	1210	1237	1263	1237	2.16	cps
Molybdenum	98-1	2894	2997	3227	3039	5.62	cps
Neodymium	150-1	31846	32310	31936	32031	0.77	cps
Neodymium	150-2	21643	22318	21306	21756	2.37	cps
Nickel	60-2	29356	29686	29576	29539	0.57	cps
Phosphorus	31-2	2324	2520	2414	2419	4.07	cps
Potassium	39-2	374007	372091	371441	372513	0.36	cps
Rhodium	103-1	8699302	8399283	8311329	8469971	2.40	cps
Rhodium	103-2	5540483	5532816	5468145	5513814	0.72	cps
Scandium	45-1	4593901	4406268	4358858	4453009	2.79	cps
Scandium	45-2	514152	519738	514665	516185	0.60	cps
Selenium	82-1	445	476	516	479	7.44	cps
Selenium	77-2	57	53	47	52	9.75	cps
Selenium	78-2	617	610	593	607	1.98	cps
Silicon	28-1	4393227	4368843	4359231	4373767	0.40	cps
Silver	107-1	670	700	633	668	5.00	cps
Silver	109-1	580	643	647	623	6.03	cps
Sodium	23-2	129234	129139	128531	128968	0.30	cps
Strontium	86-1	26253	26891	27008	26718	1.52	cps
Strontium	88-1	231945	238049	238814	236270	1.59	cps
Sulfur	34-1	106323	106686	106008	106339	0.32	cps
Terbium	159-1	12759554	12263916	12092969	12372146	2.80	cps
Terbium	159-2	9041088	8971763	8849469	8954107	1.08	cps
Thallium	203-1	2514	2640	2490	2548	3.17	cps
Thallium	205-1	6395	6498	6305	6399	1.51	cps
Tin	118-1	3444	3554	3327	3442	3.29	cps
Titanium	47-1	588946	598218	598673	595279	0.92	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-16	Instrumnet Name :	P7
Client Sample ID :	A6347	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:23:23	DataFile Name :	059SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	61317	64056	62814	62729	2.19	cps
Vanadium	51-2	110833	110705	111545	111028	0.41	cps
Yttrium	89-1	16395411	15514385	15583326	15831041	3.10	cps
Yttrium	89-2	5310996	5203729	5212304	5242343	1.14	cps
Zinc	66-2	34714	34804	34931	34816	0.31	cps
Zirconium	90-1	14120	14260	14404	14262	0.99	cps
Zirconium	91-1	3027	3257	3144	3143	3.66	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:26:37	DataFile Name :	060SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3681449	3669819	3633201	3661490	0.69	cps
Antimony	121-1	2734	2694	2854	2760	3.02	cps
Arsenic	75-2	44771	44316	44376	44488	0.56	cps
Barium	135-1	260955	261728	260421	261034	0.25	cps
Barium	137-1	452896	449777	451694	451456	0.35	cps
Beryllium	9-1	2130	2134	2150	2138	0.50	cps
Bismuth	209-1	7666183	7760212	7785103	7737166	0.81	cps
Bismuth	209-2	6436985	6448036	6300458	6395160	1.29	cps
Bromine	81-1	31898	32185	32690	32257	1.24	cps
Bromine	81-2	4591	4387	4714	4564	3.62	cps
Cadmium	108-1	6515	6692	6822	6676	2.31	cps
Cadmium	106-1	11695	11925	11648	11756	1.26	cps
Cadmium	111-1	5719	5994	5442	5718	4.82	cps
Calcium	43-1	298593	300715	300785	300031	0.42	cps
Calcium	44-1	4741092	4771417	4720222	4744244	0.54	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2256717	2239008	2278831	2258185	0.88	cps
Cobalt	59-2	51127	52036	51130	51431	1.02	cps
Copper	63-2	3812110	3862587	3713298	3795998	2.00	cps
Dysprosium	156-1	13593	14097	14004	13898	1.93	cps
Dysprosium	156-2	13790	13663	13677	13710	0.51	cps
Erbium	164-1	12669	12352	12452	12491	1.30	cps
Erbium	164-2	9503	9440	9233	9392	1.50	cps
Gadolinium	160-1	12682	13183	12929	12932	1.94	cps
Gadolinium	160-2	10734	10804	10707	10749	0.46	cps
Holmium	165-1	12151194	12404408	12402368	12319324	1.18	cps
Holmium	165-2	9195476	9257927	9072196	9175200	1.03	cps
Indium	115-1	8985642	9125139	9166466	9092416	1.04	cps
Indium	115-2	4081256	4075356	4044748	4067120	0.48	cps
Iron	56-2	114790378	113741535	114671958	114401291	0.50	cps
Iron	57-2	2849333	2812516	2811719	2824523	0.76	cps
Iron	54-2	6286985	6206965	6272122	6255357	0.68	cps
Krypton	83-1	180	190	153	174	10.86	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:26:37	DataFile Name :	060SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2375129	2381534	2416442	2391035	0.93	cps
Lead	207-1	1933567	1917558	1970962	1940696	1.41	cps
Lead	208-1	9115275	9093870	9243908	9151018	0.89	cps
Lithium	6-1	1197005	1188745	1174212	1186654	0.97	cps
Magnesium	24-2	952693	956307	938042	949014	1.02	cps
Manganese	55-2	4440382	4435197	4448631	4441404	0.15	cps
Molybdenum	94-1	7262	7302	7148	7237	1.10	cps
Molybdenum	95-1	8639	8593	8409	8547	1.42	cps
Molybdenum	96-1	10657	10707	10817	10727	0.76	cps
Molybdenum	97-1	5144	5488	5338	5323	3.23	cps
Molybdenum	98-1	13496	13676	13236	13470	1.64	cps
Neodymium	150-1	22478	22648	22738	22622	0.58	cps
Neodymium	150-2	15282	15045	15295	15207	0.93	cps
Nickel	60-2	141079	141392	140669	141047	0.26	cps
Phosphorus	31-2	11835	11181	11785	11600	3.14	cps
Potassium	39-2	505959	505812	512601	508124	0.76	cps
Rhodium	103-1	8383913	8495184	8469480	8449526	0.69	cps
Rhodium	103-2	5604680	5601417	5537272	5581123	0.68	cps
Scandium	45-1	4429881	4425607	4416512	4424000	0.15	cps
Scandium	45-2	513843	513594	518875	515437	0.58	cps
Selenium	82-1	521	531	552	535	2.90	cps
Selenium	77-2	47	73	53	58	24.02	cps
Selenium	78-2	637	617	567	607	5.94	cps
Silicon	28-1	7746172	7662553	7638582	7682436	0.74	cps
Silver	107-1	15151	14958	15131	15080	0.71	cps
Silver	109-1	14120	14444	14257	14274	1.14	cps
Sodium	23-2	1300150	1288666	1247386	1278734	2.17	cps
Strontium	86-1	309012	309745	309109	309289	0.13	cps
Strontium	88-1	2786965	2786462	2796426	2789951	0.20	cps
Sulfur	34-1	170233	171949	172121	171434	0.61	cps
Terbium	159-1	12309093	12387769	12522925	12406596	0.87	cps
Terbium	159-2	9089382	9155121	8999572	9081358	0.86	cps
Thallium	203-1	1493	1577	1497	1522	3.10	cps
Thallium	205-1	3784	3564	3734	3694	3.12	cps
Tin	118-1	4376429	4370074	4446383	4397629	0.96	cps
Titanium	47-1	249403	251489	250165	250352	0.42	cps

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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:26:37	DataFile Name :	060SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	36390	37566	37242	37066	1.64	cps
Vanadium	51-2	61059	60835	60598	60831	0.38	cps
Yttrium	89-1	15850972	15909594	15842609	15867725	0.23	cps
Yttrium	89-2	5312186	5275653	5281359	5289733	0.37	cps
Zinc	66-2	87786	89935	89311	89011	1.24	cps
Zirconium	90-1	5748	5955	5998	5900	2.27	cps
Zirconium	91-1	1323	1380	1297	1333	3.19	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:29:38	DataFile Name :	061SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3920295	3913650	3891616	3908520	0.38	cps
Antimony	121-1	3014	3044	3164	3074	2.58	cps
Arsenic	75-2	48850	48850	48937	48879	0.10	cps
Barium	135-1	280554	282725	283058	282112	0.48	cps
Barium	137-1	485903	495717	491313	490978	1.00	cps
Beryllium	9-1	2287	2230	2230	2249	1.45	cps
Bismuth	209-1	7694758	7829058	7611552	7711789	1.42	cps
Bismuth	209-2	6390366	6324829	6386786	6367327	0.58	cps
Bromine	81-1	33364	34203	34036	33868	1.31	cps
Bromine	81-2	4787	4941	5124	4951	3.41	cps
Cadmium	108-1	7359	7529	7539	7475	1.35	cps
Cadmium	106-1	12339	12869	12796	12668	2.27	cps
Cadmium	111-1	6096	6332	6364	6264	2.33	cps
Calcium	43-1	317580	318627	320005	318738	0.38	cps
Calcium	44-1	5061569	5073105	5049412	5061362	0.23	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2537460	2519493	2551521	2536158	0.63	cps
Cobalt	59-2	56071	55408	55646	55708	0.60	cps
Copper	63-2	4134088	4160119	4132711	4142306	0.37	cps
Dysprosium	156-1	15619	15832	15906	15786	0.94	cps
Dysprosium	156-2	15589	15205	15539	15444	1.35	cps
Erbium	164-1	13560	13530	13980	13690	1.84	cps
Erbium	164-2	10441	10291	10507	10413	1.07	cps
Gadolinium	160-1	14191	14668	14468	14442	1.66	cps
Gadolinium	160-2	11745	12272	11888	11969	2.28	cps
Holmium	165-1	12537868	12437769	12241534	12405724	1.22	cps
Holmium	165-2	9143187	9163012	9110684	9138961	0.29	cps
Indium	115-1	9210740	9121369	9095772	9142627	0.66	cps
Indium	115-2	4091850	4009708	4048986	4050181	1.01	cps
Iron	56-2	126110815	125820425	125283341	125738194	0.33	cps
Iron	57-2	3165781	3119196	3120898	3135292	0.84	cps
Iron	54-2	6859298	6880186	6776753	6838745	0.80	cps
Krypton	83-1	230	227	203	220	6.60	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:29:38	DataFile Name :	061SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2610039	2700196	2663494	2657909	1.71	cps
Lead	207-1	2131414	2215512	2165510	2170812	1.95	cps
Lead	208-1	10015152	10268974	10238753	10174293	1.36	cps
Lithium	6-1	1186787	1161065	1160425	1169426	1.29	cps
Magnesium	24-2	1037460	1030146	1034418	1034008	0.36	cps
Manganese	55-2	4758512	4664272	4704621	4709135	1.00	cps
Molybdenum	94-1	7502	7829	7802	7711	2.35	cps
Molybdenum	95-1	9086	9250	9236	9191	0.99	cps
Molybdenum	96-1	11728	12002	11718	11816	1.36	cps
Molybdenum	97-1	5671	5985	5948	5868	2.92	cps
Molybdenum	98-1	14758	15111	15148	15006	1.44	cps
Neodymium	150-1	24692	25734	25894	25440	2.57	cps
Neodymium	150-2	16927	17554	16900	17127	2.16	cps
Nickel	60-2	153422	153806	152593	153274	0.40	cps
Phosphorus	31-2	12295	12418	12075	12263	1.42	cps
Potassium	39-2	566666	555324	561161	561051	1.01	cps
Rhodium	103-1	8559784	8493868	8382457	8478703	1.06	cps
Rhodium	103-2	5623015	5539185	5594697	5585632	0.76	cps
Scandium	45-1	4520916	4401237	4386452	4436202	1.66	cps
Scandium	45-2	517164	507975	515361	513500	0.95	cps
Selenium	82-1	460	510	532	501	7.40	cps
Selenium	77-2	40	63	43	49	25.81	cps
Selenium	78-2	603	553	597	584	4.64	cps
Silicon	28-1	8080938	8179835	8191701	8150825	0.75	cps
Silver	107-1	16843	16813	16666	16774	0.56	cps
Silver	109-1	15705	16049	15849	15868	1.09	cps
Sodium	23-2	1361793	1327593	1349254	1346214	1.29	cps
Strontium	86-1	329021	332264	331217	330834	0.50	cps
Strontium	88-1	3010005	3061437	2991821	3021088	1.20	cps
Sulfur	34-1	183217	182910	180815	182314	0.72	cps
Terbium	159-1	12608342	12455836	12274694	12446290	1.34	cps
Terbium	159-2	9153187	8883962	8961380	8999509	1.54	cps
Thallium	203-1	1660	1617	1623	1633	1.43	cps
Thallium	205-1	3707	3761	3550	3673	2.97	cps
Tin	118-1	4871074	4987920	4969313	4942769	1.27	cps
Titanium	47-1	280587	281853	279833	280758	0.36	cps

Reviewed By:Eman
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Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-06DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305D	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:29:38	DataFile Name :	061SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	40675	41859	40829	41121	1.57	cps
Vanadium	51-2	67510	68330	67413	67751	0.74	cps
Yttrium	89-1	16325409	15931928	15770864	16009401	1.78	cps
Yttrium	89-2	5367988	5263443	5388479	5339970	1.26	cps
Zinc	66-2	95808	95909	94772	95496	0.66	cps
Zirconium	90-1	6685	6602	6502	6596	1.39	cps
Zirconium	91-1	1483	1507	1453	1481	1.81	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LDLX10	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	10
Date & Time Acquired :	2025-02-02 17:32:39	DataFile Name :	062SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	806527	798306	800778	801870	0.53	cps
Antimony	121-1	673	683	663	673	1.49	cps
Arsenic	75-2	10050	9720	10007	9926	1.81	cps
Barium	135-1	55320	57271	57914	56835	2.38	cps
Barium	137-1	97009	99649	99989	98882	1.65	cps
Beryllium	9-1	507	503	513	508	1.00	cps
Bismuth	209-1	8197514	7644289	7604996	7815600	4.24	cps
Bismuth	209-2	6241706	6311010	6263122	6271946	0.57	cps
Bromine	81-1	18879	19820	19803	19501	2.76	cps
Bromine	81-2	1217	1133	1143	1165	3.91	cps
Cadmium	108-1	1493	1473	1653	1540	6.41	cps
Cadmium	106-1	6718	6518	6131	6456	4.62	cps
Cadmium	111-1	4164	4001	3628	3931	6.99	cps
Calcium	43-1	63542	66950	66230	65574	2.74	cps
Calcium	44-1	1053141	1079152	1085384	1072559	1.59	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	497479	495595	493926	495667	0.36	cps
Cobalt	59-2	11321	11678	11428	11476	1.60	cps
Copper	63-2	818572	815350	812806	815576	0.35	cps
Dysprosium	156-1	2990	3090	3017	3033	1.71	cps
Dysprosium	156-2	2810	3090	3050	2984	5.08	cps
Erbium	164-1	2547	2740	2784	2690	4.68	cps
Erbium	164-2	2014	2060	1973	2016	2.15	cps
Gadolinium	160-1	2910	2904	2984	2933	1.51	cps
Gadolinium	160-2	2477	2530	2637	2548	3.20	cps
Holmium	165-1	12867525	12046710	11972231	12295489	4.04	cps
Holmium	165-2	8906691	9040952	9073854	9007166	0.98	cps
Indium	115-1	9818352	9135686	9069631	9341223	4.44	cps
Indium	115-2	4038151	4042701	4057007	4045953	0.24	cps
Iron	56-2	25217037	24972999	24953754	25047930	0.59	cps
Iron	57-2	637880	636030	636150	636687	0.16	cps
Iron	54-2	1373575	1378668	1396093	1382779	0.85	cps
Krypton	83-1	197	157	213	189	15.42	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LDLX10	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	10
Date & Time Acquired :	2025-02-02 17:32:39	DataFile Name :	062SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	477000	482774	487689	482487	1.11	cps
Lead	207-1	378074	390503	387764	385447	1.69	cps
Lead	208-1	1793294	1836228	1837321	1822281	1.38	cps
Lithium	6-1	1221857	1124677	1118816	1155117	5.01	cps
Magnesium	24-2	213694	212810	215255	213920	0.58	cps
Manganese	55-2	950138	953809	955323	953090	0.28	cps
Molybdenum	94-1	1757	1777	1920	1818	4.90	cps
Molybdenum	95-1	1817	1940	2134	1963	8.13	cps
Molybdenum	96-1	2457	2650	2460	2522	4.39	cps
Molybdenum	97-1	1173	1197	1257	1209	3.56	cps
Molybdenum	98-1	3024	3227	3144	3131	3.27	cps
Neodymium	150-1	5024	4934	5128	5029	1.92	cps
Neodymium	150-2	3544	3564	3617	3575	1.06	cps
Nickel	60-2	32509	32692	33213	32805	1.11	cps
Phosphorus	31-2	2784	2804	2790	2793	0.36	cps
Potassium	39-2	160674	160361	160816	160617	0.14	cps
Rhodium	103-1	9039570	8389756	8449391	8626239	4.16	cps
Rhodium	103-2	5575520	5570765	5522517	5556267	0.53	cps
Scandium	45-1	4720055	4389493	4352118	4487222	4.51	cps
Scandium	45-2	508519	512892	514409	511940	0.60	cps
Selenium	82-1	403	445	406	418	5.49	cps
Selenium	77-2	20	17	17	18	10.81	cps
Selenium	78-2	587	513	543	548	6.73	cps
Silicon	28-1	2277999	2379335	2329554	2328963	2.18	cps
Silver	107-1	3347	3464	3290	3367	2.63	cps
Silver	109-1	2914	3007	3230	3050	5.34	cps
Sodium	23-2	300215	298620	297749	298861	0.42	cps
Strontium	86-1	66027	67818	67909	67251	1.58	cps
Strontium	88-1	579704	602861	602229	594932	2.22	cps
Sulfur	34-1	117557	120386	121189	119711	1.59	cps
Terbium	159-1	13123639	12133396	12134993	12464010	4.58	cps
Terbium	159-2	8848718	8966205	8945231	8920051	0.70	cps
Thallium	203-1	440	477	393	437	9.57	cps
Thallium	205-1	1010	1107	1023	1047	5.01	cps
Tin	118-1	899469	930085	928746	919433	1.88	cps
Titanium	47-1	53267	54126	54585	53993	1.24	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05LDLX10	Instrumnet Name :	P7
Client Sample ID :	A6305L	Dilution Factor :	10
Date & Time Acquired :	2025-02-02 17:32:39	DataFile Name :	062SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7639	8033	8109	7927	3.18	cps
Vanadium	51-2	13856	13626	13806	13763	0.88	cps
Yttrium	89-1	16815855	15527769	15629004	15990876	4.48	cps
Yttrium	89-2	5266442	5233969	5198365	5232926	0.65	cps
Zinc	66-2	20805	20561	20581	20649	0.66	cps
Zirconium	90-1	1843	1633	1757	1745	6.05	cps
Zirconium	91-1	400	333	357	363	9.31	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:35:53	DataFile Name :	063SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3957146	3875764	3871611	3901507	1.24	cps
Antimony	121-1	67454	68977	68676	68369	1.18	cps
Arsenic	75-2	54011	53680	54232	53974	0.51	cps
Barium	135-1	755010	757920	753310	755414	0.31	cps
Barium	137-1	1316375	1306779	1305617	1309590	0.45	cps
Beryllium	9-1	6888	6958	7005	6950	0.85	cps
Bismuth	209-1	7729036	7793844	7557066	7693315	1.59	cps
Bismuth	209-2	6428514	6292675	6391261	6370817	1.10	cps
Bromine	81-1	32312	33304	34547	33388	3.35	cps
Bromine	81-2	4888	4731	4747	4789	1.80	cps
Cadmium	108-1	8392	8609	8613	8538	1.48	cps
Cadmium	106-1	14164	13827	13817	13936	1.42	cps
Cadmium	111-1	18307	17369	17673	17783	2.69	cps
Calcium	43-1	306708	309904	307671	308094	0.53	cps
Calcium	44-1	4855045	4843172	4871174	4856464	0.29	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2306847	2271732	2331746	2303442	1.31	cps
Cobalt	59-2	367177	365709	366758	366548	0.21	cps
Copper	63-2	4389402	4401686	4297037	4362708	1.31	cps
Dysprosium	156-1	16536	16613	16446	16532	0.51	cps
Dysprosium	156-2	15822	16259	15866	15982	1.51	cps
Erbium	164-1	14521	14154	14945	14540	2.72	cps
Erbium	164-2	10904	10861	11125	10963	1.29	cps
Gadolinium	160-1	15355	15208	15479	15347	0.88	cps
Gadolinium	160-2	12379	12426	12639	12481	1.11	cps
Holmium	165-1	12449568	12170982	12246910	12289153	1.17	cps
Holmium	165-2	9290238	9136114	9127479	9184610	1.00	cps
Indium	115-1	9127464	9124396	9072782	9108214	0.34	cps
Indium	115-2	4105884	4047193	4028553	4060544	0.99	cps
Iron	56-2	126075958	126710835	127505381	126764058	0.56	cps
Iron	57-2	3132153	3142734	3141630	3138839	0.19	cps
Iron	54-2	6859466	6928761	7023933	6937387	1.19	cps
Krypton	83-1	197	230	167	198	16.02	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:35:53	DataFile Name :	063SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2648809	2706692	2688874	2681458	1.11	cps
Lead	207-1	2181544	2194011	2166879	2180812	0.62	cps
Lead	208-1	10277348	10411764	10270975	10320029	0.77	cps
Lithium	6-1	1157712	1148520	1190219	1165484	1.88	cps
Magnesium	24-2	1073912	1058398	1044362	1058891	1.40	cps
Manganese	55-2	4436699	4485668	4515678	4479348	0.89	cps
Molybdenum	94-1	7862	7699	7899	7820	1.36	cps
Molybdenum	95-1	9517	9650	9510	9559	0.83	cps
Molybdenum	96-1	11938	12285	12375	12200	1.89	cps
Molybdenum	97-1	5811	5961	5981	5918	1.57	cps
Molybdenum	98-1	15111	15081	15228	15140	0.51	cps
Neodymium	150-1	26956	26632	27423	27004	1.47	cps
Neodymium	150-2	17705	18062	17755	17840	1.08	cps
Nickel	60-2	227927	227280	226157	227121	0.39	cps
Phosphorus	31-2	13082	11955	12458	12499	4.52	cps
Potassium	39-2	560856	549399	562174	557476	1.26	cps
Rhodium	103-1	8580382	8516799	8471551	8522911	0.64	cps
Rhodium	103-2	5618944	5589363	5589574	5599294	0.30	cps
Scandium	45-1	4473717	4396752	4379823	4416764	1.13	cps
Scandium	45-2	518620	512464	525484	518856	1.26	cps
Selenium	82-1	723	670	825	739	10.63	cps
Selenium	77-2	73	63	100	79	24.03	cps
Selenium	78-2	740	657	793	730	9.44	cps
Silicon	28-1	7463947	7486051	7513275	7487758	0.33	cps
Silver	107-1	74299	73387	74111	73932	0.65	cps
Silver	109-1	67894	69415	70557	69289	1.93	cps
Sodium	23-2	1319867	1316167	1286463	1307499	1.40	cps
Strontium	86-1	318629	321708	321152	320496	0.51	cps
Strontium	88-1	2876292	2893889	2912861	2894347	0.63	cps
Sulfur	34-1	180795	181206	180094	180699	0.31	cps
Terbium	159-1	12347924	12329091	12235919	12304311	0.49	cps
Terbium	159-2	9107295	9023700	9057687	9062894	0.46	cps
Thallium	203-1	44914	45375	45824	45371	1.00	cps
Thallium	205-1	106953	107655	107390	107332	0.33	cps
Tin	118-1	4914861	4857032	4860629	4877508	0.66	cps
Titanium	47-1	297835	300327	298829	298997	0.42	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-07DLX2	Instrumnet Name :	P7
Client Sample ID :	A6305S	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:35:53	DataFile Name :	063SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	41127	40628	40726	40827	0.65	cps
Vanadium	51-2	250638	250080	254241	251653	0.90	cps
Yttrium	89-1	16005581	15837817	16151256	15998218	0.98	cps
Yttrium	89-2	5375633	5334732	5372634	5361000	0.43	cps
Zinc	66-2	131990	130679	130426	131032	0.64	cps
Zirconium	90-1	6718	6618	6805	6714	1.39	cps
Zirconium	91-1	1580	1650	1500	1577	4.76	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08DLX2	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:38:56	DataFile Name :	064SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1387316	1381375	1387614	1385435	0.25	cps
Antimony	121-1	3540	3540	3781	3620	3.83	cps
Arsenic	75-2	10497	10611	10904	10671	1.97	cps
Barium	135-1	62590	62131	62811	62511	0.55	cps
Barium	137-1	108275	107815	108275	108121	0.25	cps
Beryllium	9-1	410	317	330	352	14.33	cps
Bismuth	209-1	7827997	7846353	7745498	7806616	0.69	cps
Bismuth	209-2	6385954	6315110	6299792	6333619	0.73	cps
Bromine	81-1	18482	18382	18348	18404	0.38	cps
Bromine	81-2	730	877	870	826	10.03	cps
Cadmium	108-1	19106	18679	19263	19016	1.59	cps
Cadmium	106-1	23800	23613	23836	23749	0.51	cps
Cadmium	111-1	3419	3567	3345	3444	3.28	cps
Calcium	43-1	13676	14567	14120	14121	3.15	cps
Calcium	44-1	239617	239526	235846	238330	0.90	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3453142	3467521	3491678	3470781	0.56	cps
Cobalt	59-2	20083	20124	20337	20181	0.68	cps
Copper	63-2	2503794	2505467	2568019	2525760	1.45	cps
Dysprosium	156-1	11501	11918	11321	11580	2.65	cps
Dysprosium	156-2	11118	10931	11365	11138	1.95	cps
Erbium	164-1	10184	9777	10194	10051	2.37	cps
Erbium	164-2	7219	7465	7539	7408	2.26	cps
Gadolinium	160-1	10621	10774	10671	10689	0.73	cps
Gadolinium	160-2	8599	8930	8846	8792	1.95	cps
Holmium	165-1	12371334	12450408	12262770	12361504	0.76	cps
Holmium	165-2	9121321	9098407	9148982	9122903	0.28	cps
Indium	115-1	9238967	9312238	9033066	9194757	1.57	cps
Indium	115-2	4007806	4045074	3963973	4005618	1.01	cps
Iron	56-2	46136491	46048144	46626059	46270232	0.67	cps
Iron	57-2	1150121	1147316	1158332	1151923	0.50	cps
Iron	54-2	2610383	2651428	2645997	2635936	0.85	cps
Krypton	83-1	237	187	260	228	16.45	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08DLX2	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:38:56	DataFile Name :	064SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1583732	1597939	1605330	1595667	0.69	cps
Lead	207-1	1259095	1272332	1278108	1269845	0.77	cps
Lead	208-1	6256925	6315745	6369540	6314070	0.89	cps
Lithium	6-1	1140334	1139584	1120720	1133546	0.98	cps
Magnesium	24-2	604850	609188	611146	608394	0.53	cps
Manganese	55-2	395665	394532	397892	396030	0.43	cps
Molybdenum	94-1	4274	4001	3884	4053	4.94	cps
Molybdenum	95-1	4461	4584	4487	4511	1.44	cps
Molybdenum	96-1	5611	5881	5928	5807	2.95	cps
Molybdenum	97-1	3004	2904	2744	2884	4.55	cps
Molybdenum	98-1	7632	7459	7562	7551	1.16	cps
Neodymium	150-1	19280	19650	19644	19525	1.09	cps
Neodymium	150-2	12699	13396	13079	13058	2.67	cps
Nickel	60-2	28681	28758	29325	28921	1.22	cps
Phosphorus	31-2	6261	6395	6231	6296	1.38	cps
Potassium	39-2	433741	439867	438578	437395	0.74	cps
Rhodium	103-1	8660984	8654703	8518887	8611524	0.93	cps
Rhodium	103-2	5688265	5681931	5557116	5642437	1.31	cps
Scandium	45-1	4500120	4502992	4385527	4462880	1.50	cps
Scandium	45-2	515342	515790	519048	516727	0.39	cps
Selenium	82-1	386	482	389	419	13.09	cps
Selenium	77-2	27	33	20	27	24.99	cps
Selenium	78-2	540	623	623	596	8.08	cps
Silicon	28-1	4031823	4068700	4044542	4048355	0.46	cps
Silver	107-1	28832	29386	29403	29207	1.11	cps
Silver	109-1	27593	27379	28040	27671	1.22	cps
Sodium	23-2	62663	62470	62322	62485	0.27	cps
Strontium	86-1	8456	8629	8406	8497	1.38	cps
Strontium	88-1	73077	73301	71807	72729	1.11	cps
Sulfur	34-1	111087	108290	108465	109280	1.43	cps
Terbium	159-1	12590748	12738730	12349445	12559641	1.56	cps
Terbium	159-2	9077665	9044805	8895698	9006056	1.08	cps
Thallium	203-1	990	907	843	913	8.05	cps
Thallium	205-1	2070	2014	2204	2096	4.66	cps
Tin	118-1	9886767	9878112	9738953	9834611	0.84	cps
Titanium	47-1	345451	345964	345303	345573	0.10	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-08DLX2	Instrumnet Name :	P7
Client Sample ID :	A6306	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 17:38:56	DataFile Name :	064SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	29914	30224	29817	29985	0.71	cps
Vanadium	51-2	51839	52839	51688	52122	1.20	cps
Yttrium	89-1	16371169	16065523	15706602	16047765	2.07	cps
Yttrium	89-2	5299943	5328618	5256661	5295074	0.68	cps
Zinc	66-2	21736	22717	22066	22173	2.25	cps
Zirconium	90-1	3577	3964	3741	3761	5.16	cps
Zirconium	91-1	813	873	787	824	5.38	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10DLX25	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	25
Date & Time Acquired :	2025-02-02 17:42:01	DataFile Name :	065SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	34606	34455	32979	34013	2.64	cps
Antimony	121-1	737	720	687	714	3.56	cps
Arsenic	75-2	1593	1583	1727	1635	4.90	cps
Barium	135-1	3827	3814	4021	3887	2.98	cps
Barium	137-1	6421	6662	6745	6609	2.54	cps
Beryllium	9-1	67	53	77	66	17.86	cps
Bismuth	209-1	7627931	7773615	7525661	7642402	1.63	cps
Bismuth	209-2	6358253	6382249	6318253	6352918	0.51	cps
Bromine	81-1	17290	16513	16553	16785	2.61	cps
Bromine	81-2	260	273	263	266	2.61	cps
Cadmium	108-1	8506	8769	8879	8718	2.20	cps
Cadmium	106-1	13623	14260	13783	13889	2.39	cps
Cadmium	111-1	3585	3874	3453	3637	5.92	cps
Calcium	43-1	2420	2500	2367	2429	2.76	cps
Calcium	44-1	46013	47060	45930	46334	1.36	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1513824	1462535	1483208	1486522	1.74	cps
Cobalt	59-2	717	783	700	733	6.01	cps
Copper	63-2	69500	69102	68810	69138	0.50	cps
Dysprosium	156-1	330	320	320	323	1.79	cps
Dysprosium	156-2	307	340	307	318	6.06	cps
Erbium	164-1	303	257	257	272	9.90	cps
Erbium	164-2	210	163	200	191	12.85	cps
Gadolinium	160-1	287	317	333	312	7.57	cps
Gadolinium	160-2	607	683	653	648	5.96	cps
Holmium	165-1	11986891	12107769	12026389	12040350	0.51	cps
Holmium	165-2	9198831	9073359	8936582	9069591	1.45	cps
Indium	115-1	9103010	9043048	9070356	9072138	0.33	cps
Indium	115-2	4035657	4073350	3998748	4035918	0.92	cps
Iron	56-2	3309783	3301732	3283868	3298461	0.40	cps
Iron	57-2	83933	83346	82722	83334	0.73	cps
Iron	54-2	229699	231613	230372	230561	0.42	cps
Krypton	83-1	213	203	193	203	4.92	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10DLX25	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	25
Date & Time Acquired :	2025-02-02 17:42:01	DataFile Name :	065SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	196252	199511	195555	197106	1.07	cps
Lead	207-1	154999	157937	156803	156580	0.95	cps
Lead	208-1	735449	748507	739975	741310	0.89	cps
Lithium	6-1	1126174	1109603	1094148	1109975	1.44	cps
Magnesium	24-2	14647	14724	15114	14828	1.69	cps
Manganese	55-2	13429	12842	12876	13049	2.53	cps
Molybdenum	94-1	1023	973	970	989	3.02	cps
Molybdenum	95-1	1083	1197	1193	1158	5.57	cps
Molybdenum	96-1	1510	1343	1287	1380	8.41	cps
Molybdenum	97-1	730	897	717	781	12.84	cps
Molybdenum	98-1	1833	1910	1773	1839	3.73	cps
Neodymium	150-1	557	577	530	554	4.22	cps
Neodymium	150-2	397	307	377	360	13.13	cps
Nickel	60-2	3467	3314	3637	3473	4.66	cps
Phosphorus	31-2	1057	1050	967	1024	4.90	cps
Potassium	39-2	78176	78015	78548	78246	0.35	cps
Rhodium	103-1	8516904	8475165	8474112	8488727	0.29	cps
Rhodium	103-2	5617470	5645718	5550606	5604598	0.87	cps
Scandium	45-1	4381729	4340640	4397943	4373438	0.68	cps
Scandium	45-2	515519	510390	508921	511610	0.68	cps
Selenium	82-1	374	373	375	374	0.19	cps
Selenium	77-2	7	0	3	3	100.05	cps
Selenium	78-2	587	587	577	583	0.99	cps
Silicon	28-1	865688	874622	861501	867271	0.77	cps
Silver	107-1	8346	8579	8332	8419	1.65	cps
Silver	109-1	7729	7842	7599	7723	1.58	cps
Sodium	23-2	30494	30560	29408	30154	2.15	cps
Strontium	86-1	1443	1520	1580	1515	4.52	cps
Strontium	88-1	10304	10447	10164	10305	1.38	cps
Sulfur	34-1	105474	103145	103776	104131	1.16	cps
Terbium	159-1	12136608	12240407	12107071	12161362	0.58	cps
Terbium	159-2	8844436	8858669	8919394	8874167	0.45	cps
Thallium	203-1	210	193	187	197	6.11	cps
Thallium	205-1	497	473	447	472	5.30	cps
Tin	118-1	4601392	4576394	4520519	4566102	0.91	cps
Titanium	47-1	19403	18842	19015	19087	1.50	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-10DLX25	Instrumnet Name :	P7
Client Sample ID :	A6308	Dilution Factor :	25
Date & Time Acquired :	2025-02-02 17:42:01	DataFile Name :	065SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1040	813	943	932	12.20	cps
Vanadium	51-2	4297	4144	4084	4175	2.64	cps
Yttrium	89-1	15606638	15770652	15475945	15617745	0.95	cps
Yttrium	89-2	5290211	5191095	5184036	5221780	1.14	cps
Zinc	66-2	1643	1637	1720	1667	2.78	cps
Zirconium	90-1	747	740	760	749	1.36	cps
Zirconium	91-1	190	207	213	203	5.91	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13DLX5	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:45:14	DataFile Name :	066SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	687724	687004	682272	685667	0.43	cps
Antimony	121-1	503	343	383	410	20.31	cps
Arsenic	75-2	4861	4944	5031	4945	1.72	cps
Barium	135-1	47305	47629	46332	47088	1.43	cps
Barium	137-1	82075	81458	81445	81659	0.44	cps
Beryllium	9-1	217	210	203	210	3.17	cps
Bismuth	209-1	7285927	7525390	7539522	7450280	1.91	cps
Bismuth	209-2	6361604	6356463	6272716	6330261	0.79	cps
Bromine	81-1	17183	16362	16606	16717	2.52	cps
Bromine	81-2	337	247	280	288	15.81	cps
Cadmium	108-1	1960	1913	2030	1968	2.98	cps
Cadmium	106-1	6905	6515	6555	6658	3.22	cps
Cadmium	111-1	3641	3381	3317	3447	4.98	cps
Calcium	43-1	11571	11571	11578	11573	0.03	cps
Calcium	44-1	199186	198870	196509	198188	0.74	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2778228	2757492	2781210	2772310	0.47	cps
Cobalt	59-2	9870	10260	9957	10029	2.04	cps
Copper	63-2	1889329	1891955	1919440	1900242	0.88	cps
Dysprosium	156-1	6845	7029	7225	7033	2.70	cps
Dysprosium	156-2	6818	6392	6475	6562	3.45	cps
Erbium	164-1	5985	6078	5801	5955	2.36	cps
Erbium	164-2	4644	4467	4377	4496	3.02	cps
Gadolinium	160-1	6792	6698	6762	6751	0.71	cps
Gadolinium	160-2	5578	5645	5618	5613	0.60	cps
Holmium	165-1	11619146	11989254	12019050	11875817	1.88	cps
Holmium	165-2	9128394	9079097	9035805	9081098	0.51	cps
Indium	115-1	8811484	9013303	9072733	8965840	1.53	cps
Indium	115-2	4097057	4066897	4081447	4081800	0.37	cps
Iron	56-2	13312948	12910890	13174620	13132820	1.56	cps
Iron	57-2	334249	330173	333051	332491	0.63	cps
Iron	54-2	820064	815718	818179	817987	0.27	cps
Krypton	83-1	217	187	167	190	13.25	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13DLX5	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:45:14	DataFile Name :	066SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	245787	246048	246826	246220	0.22	cps
Lead	207-1	195519	196382	195348	195749	0.28	cps
Lead	208-1	926096	931698	932944	930246	0.39	cps
Lithium	6-1	1082253	1113373	1108331	1101319	1.52	cps
Magnesium	24-2	271113	269602	268747	269821	0.44	cps
Manganese	55-2	186379	184540	184817	185245	0.54	cps
Molybdenum	94-1	1650	1810	1860	1773	6.19	cps
Molybdenum	95-1	1570	1430	1723	1575	9.32	cps
Molybdenum	96-1	2190	2003	2007	2067	5.17	cps
Molybdenum	97-1	1067	1010	977	1018	4.47	cps
Molybdenum	98-1	2514	2544	2460	2506	1.68	cps
Neodymium	150-1	12262	12122	12195	12193	0.57	cps
Neodymium	150-2	8433	7922	8112	8156	3.16	cps
Nickel	60-2	23896	24276	24704	24292	1.66	cps
Phosphorus	31-2	2174	2154	2167	2165	0.47	cps
Potassium	39-2	212939	210735	212286	211987	0.53	cps
Rhodium	103-1	8201340	8439987	8444338	8361888	1.66	cps
Rhodium	103-2	5623804	5519253	5519131	5554063	1.09	cps
Scandium	45-1	4221129	4365599	4353603	4313444	1.86	cps
Scandium	45-2	512126	512388	504860	509791	0.84	cps
Selenium	82-1	390	438	451	426	7.57	cps
Selenium	77-2	23	10	23	19	40.75	cps
Selenium	78-2	577	627	580	594	4.70	cps
Silicon	28-1	2495950	2445969	2486898	2476272	1.08	cps
Silver	107-1	7309	7429	7305	7347	0.96	cps
Silver	109-1	6882	6702	6882	6822	1.52	cps
Sodium	23-2	70822	69941	70095	70286	0.67	cps
Strontium	86-1	13026	12859	12662	12849	1.42	cps
Strontium	88-1	111925	111152	111952	111676	0.41	cps
Sulfur	34-1	118344	115314	112386	115348	2.58	cps
Terbium	159-1	11827914	12061988	12129021	12006308	1.32	cps
Terbium	159-2	8855815	8938415	8838653	8877628	0.60	cps
Thallium	203-1	557	530	530	539	2.86	cps
Thallium	205-1	1320	1297	1237	1285	3.35	cps
Tin	118-1	1328900	1329031	1325155	1327695	0.17	cps
Titanium	47-1	86482	85744	85838	86021	0.47	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-13DLX5	Instrumnet Name :	P7
Client Sample ID :	A6321	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:45:14	DataFile Name :	066SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	27829	27946	27822	27866	0.25	cps
Vanadium	51-2	20671	20287	20471	20476	0.94	cps
Yttrium	89-1	15214494	15464273	15598046	15425604	1.26	cps
Yttrium	89-2	5264079	5278522	5223780	5255460	0.54	cps
Zinc	66-2	23365	23929	23445	23580	1.29	cps
Zirconium	90-1	2094	2140	2077	2104	1.56	cps
Zirconium	91-1	480	430	453	454	5.51	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14DLX5	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:48:24	DataFile Name :	067SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	985898	987413	979352	984221	0.44	cps
Antimony	121-1	1907	2060	1913	1960	4.42	cps
Arsenic	75-2	37146	36191	36799	36712	1.32	cps
Barium	135-1	141864	142131	141911	141969	0.10	cps
Barium	137-1	244816	247311	245660	245929	0.52	cps
Beryllium	9-1	663	657	643	654	1.56	cps
Bismuth	209-1	7526431	7463891	7479978	7490100	0.43	cps
Bismuth	209-2	6252341	6366911	6235233	6284829	1.14	cps
Bromine	81-1	18572	19106	19126	18934	1.66	cps
Bromine	81-2	1033	873	1023	977	9.18	cps
Cadmium	108-1	1263	1297	1200	1253	3.92	cps
Cadmium	106-1	6788	6055	5991	6278	7.06	cps
Cadmium	111-1	5214	4717	4664	4865	6.24	cps
Calcium	43-1	63552	64205	64101	63953	0.55	cps
Calcium	44-1	1051496	1063293	1058762	1057850	0.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2469469	2473207	2436427	2459701	0.82	cps
Cobalt	59-2	46221	47254	46318	46598	1.22	cps
Copper	63-2	1286262	1285423	1281692	1284459	0.19	cps
Dysprosium	156-1	11645	12045	11205	11632	3.62	cps
Dysprosium	156-2	11198	11555	11058	11270	2.27	cps
Erbium	164-1	10177	9997	10361	10178	1.79	cps
Erbium	164-2	7896	7702	7686	7761	1.50	cps
Gadolinium	160-1	11515	11265	11158	11312	1.62	cps
Gadolinium	160-2	9337	9086	8923	9115	2.29	cps
Holmium	165-1	12034129	11971679	12016152	12007320	0.27	cps
Holmium	165-2	9080279	9096005	8945484	9040590	0.92	cps
Indium	115-1	9108526	9114302	8995839	9072889	0.74	cps
Indium	115-2	4044340	4056779	4062896	4054672	0.23	cps
Iron	56-2	133305935	134786901	132895938	133662925	0.74	cps
Iron	57-2	3312972	3298957	3281568	3297832	0.48	cps
Iron	54-2	7342813	7389304	7282159	7338092	0.73	cps
Krypton	83-1	193	210	237	213	10.25	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14DLX5	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:48:24	DataFile Name :	067SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	376878	382451	381554	380294	0.79	cps
Lead	207-1	299968	304925	307877	304257	1.31	cps
Lead	208-1	1429127	1451111	1450824	1443687	0.87	cps
Lithium	6-1	1112180	1125402	1107229	1114937	0.84	cps
Magnesium	24-2	407414	408057	406960	407477	0.14	cps
Manganese	55-2	1565220	1531789	1501651	1532887	2.07	cps
Molybdenum	94-1	4251	4197	4231	4226	0.64	cps
Molybdenum	95-1	4727	4577	4324	4543	4.49	cps
Molybdenum	96-1	6872	6795	6822	6829	0.57	cps
Molybdenum	97-1	2980	2850	2827	2886	2.86	cps
Molybdenum	98-1	7409	7559	7255	7407	2.05	cps
Neodymium	150-1	19877	20472	20074	20141	1.50	cps
Neodymium	150-2	13270	13707	13420	13465	1.65	cps
Nickel	60-2	44954	44299	43506	44253	1.64	cps
Phosphorus	31-2	7649	7605	7492	7582	1.07	cps
Potassium	39-2	335426	332606	333408	333813	0.44	cps
Rhodium	103-1	8431302	8367000	8445865	8414722	0.50	cps
Rhodium	103-2	5538834	5608926	5464197	5537319	1.31	cps
Scandium	45-1	4423071	4432530	4392997	4416199	0.47	cps
Scandium	45-2	511642	515101	509090	511944	0.59	cps
Selenium	82-1	436	489	376	434	13.05	cps
Selenium	77-2	57	47	23	42	40.52	cps
Selenium	78-2	637	650	643	643	1.04	cps
Silicon	28-1	6141639	6182248	6167676	6163855	0.33	cps
Silver	107-1	7952	8096	8369	8139	2.60	cps
Silver	109-1	7859	7382	7959	7733	3.99	cps
Sodium	23-2	270253	268985	269466	269568	0.24	cps
Strontium	86-1	59988	59198	59941	59709	0.74	cps
Strontium	88-1	522549	525002	528662	525404	0.59	cps
Sulfur	34-1	148328	147722	143950	146667	1.62	cps
Terbium	159-1	12144869	12217912	12086529	12149770	0.54	cps
Terbium	159-2	8896862	8948724	8818111	8887899	0.74	cps
Thallium	203-1	1047	1130	1060	1079	4.15	cps
Thallium	205-1	2594	2584	2610	2596	0.52	cps
Tin	118-1	781530	787618	788519	785889	0.48	cps
Titanium	47-1	154377	155479	154372	154743	0.41	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-14DLX5	Instrumnet Name :	P7
Client Sample ID :	A6322	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:48:24	DataFile Name :	067SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	40301	40883	41050	40744	0.97	cps
Vanadium	51-2	56328	56947	56137	56471	0.75	cps
Yttrium	89-1	15770865	15754122	15940421	15821803	0.65	cps
Yttrium	89-2	5304655	5265285	5251836	5273925	0.52	cps
Zinc	66-2	77912	78910	79112	78645	0.82	cps
Zirconium	90-1	3787	4011	4117	3972	4.24	cps
Zirconium	91-1	923	883	937	914	3.03	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15DLX5	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:51:35	DataFile Name :	068SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	417304	415215	413985	415501	0.40	cps
Antimony	121-1	447	440	480	456	4.70	cps
Arsenic	75-2	1387	1427	1450	1421	2.25	cps
Barium	135-1	27781	28689	28448	28306	1.66	cps
Barium	137-1	48442	49088	49643	49058	1.22	cps
Beryllium	9-1	190	197	177	188	5.42	cps
Bismuth	209-1	7696652	7636693	7580896	7638080	0.76	cps
Bismuth	209-2	6385600	6369741	6327264	6360869	0.47	cps
Bromine	81-1	16332	16586	16633	16517	0.98	cps
Bromine	81-2	323	307	337	322	4.67	cps
Cadmium	108-1	1537	1430	1343	1437	6.74	cps
Cadmium	106-1	6702	6495	6448	6548	2.06	cps
Cadmium	111-1	3785	3669	3710	3721	1.59	cps
Calcium	43-1	9940	9770	9910	9873	0.92	cps
Calcium	44-1	169468	170291	170617	170126	0.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1337231	1341949	1333106	1337429	0.33	cps
Cobalt	59-2	6755	6872	6758	6795	0.98	cps
Copper	63-2	2198491	2238003	2225550	2220681	0.91	cps
Dysprosium	156-1	7062	7422	7109	7197	2.72	cps
Dysprosium	156-2	7079	7132	6952	7054	1.31	cps
Erbium	164-1	5501	5621	5705	5609	1.82	cps
Erbium	164-2	4051	4337	4114	4167	3.61	cps
Gadolinium	160-1	7052	7135	7325	7171	1.95	cps
Gadolinium	160-2	6178	6025	6121	6108	1.27	cps
Holmium	165-1	12387652	12205086	12080756	12224498	1.26	cps
Holmium	165-2	9102659	9131329	8992799	9075596	0.81	cps
Indium	115-1	9397353	9241688	9131105	9256715	1.44	cps
Indium	115-2	4055545	4153269	4017126	4075313	1.72	cps
Iron	56-2	8069379	8010466	8037454	8039100	0.37	cps
Iron	57-2	203594	202732	204681	203669	0.48	cps
Iron	54-2	489354	491257	490064	490225	0.20	cps
Krypton	83-1	187	200	200	196	3.94	cps

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On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15DLX5	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:51:35	DataFile Name :	068SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	318882	324352	321627	321620	0.85	cps
Lead	207-1	248351	251761	251016	250376	0.72	cps
Lead	208-1	1184878	1205388	1207940	1199402	1.05	cps
Lithium	6-1	1120583	1115743	1109324	1115216	0.51	cps
Magnesium	24-2	153928	152467	152605	153000	0.53	cps
Manganese	55-2	85316	85058	86000	85458	0.57	cps
Molybdenum	94-1	1717	1513	1800	1677	8.80	cps
Molybdenum	95-1	1777	1873	1723	1791	4.25	cps
Molybdenum	96-1	2074	2164	2130	2122	2.14	cps
Molybdenum	97-1	943	1167	1007	1039	11.08	cps
Molybdenum	98-1	2630	2764	2710	2701	2.48	cps
Neodymium	150-1	13560	13186	13530	13425	1.55	cps
Neodymium	150-2	8983	9010	8816	8936	1.17	cps
Nickel	60-2	60705	60695	60753	60718	0.05	cps
Phosphorus	31-2	1637	1457	1727	1607	8.56	cps
Potassium	39-2	156828	155970	155175	155991	0.53	cps
Rhodium	103-1	8713215	8425390	8550854	8563153	1.69	cps
Rhodium	103-2	5580398	5599223	5576889	5585503	0.22	cps
Scandium	45-1	4594182	4433987	4411663	4479944	2.22	cps
Scandium	45-2	515981	513404	514022	514469	0.26	cps
Selenium	82-1	431	430	419	426	1.58	cps
Selenium	77-2	27	33	17	26	32.81	cps
Selenium	78-2	637	523	593	584	9.79	cps
Silicon	28-1	2205779	2222591	2224804	2217725	0.47	cps
Silver	107-1	8019	8032	7859	7970	1.21	cps
Silver	109-1	7289	7342	7345	7325	0.43	cps
Sodium	23-2	69426	70524	70062	70004	0.79	cps
Strontium	86-1	10277	10033	10404	10238	1.84	cps
Strontium	88-1	87538	88655	88423	88206	0.67	cps
Sulfur	34-1	129849	129056	126998	128634	1.14	cps
Terbium	159-1	12613994	12218682	12171964	12334880	1.97	cps
Terbium	159-2	8898758	8935505	8804404	8879556	0.76	cps
Thallium	203-1	423	403	423	417	2.77	cps
Thallium	205-1	1043	1013	947	1001	4.94	cps
Tin	118-1	754745	764051	768158	762318	0.90	cps
Titanium	47-1	65785	65929	66462	66059	0.54	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-15DLX5	Instrumnet Name :	P7
Client Sample ID :	A6323	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 17:51:35	DataFile Name :	068SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	33723	34581	34712	34339	1.57	cps
Vanadium	51-2	11588	11641	11201	11477	2.09	cps
Yttrium	89-1	16311374	15730859	15756160	15932798	2.06	cps
Yttrium	89-2	5285402	5268823	5252423	5268882	0.31	cps
Zinc	66-2	46957	46419	47372	46916	1.02	cps
Zirconium	90-1	1960	1740	1927	1876	6.32	cps
Zirconium	91-1	383	460	360	401	13.04	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV003	Instrumnet Name :	P7
Client Sample ID :	CCV003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:54:45	DataFile Name :	069CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11536502	11461957	11732669	11577043	1.21	cps
Antimony	121-1	4957830	4833616	4892563	4894670	1.27	cps
Arsenic	75-2	279044	280444	283752	281080	0.86	cps
Barium	135-1	6397786	6306453	6338845	6347695	0.73	cps
Barium	137-1	11058003	10845434	10884698	10929378	1.03	cps
Beryllium	9-1	487939	486196	491009	488381	0.50	cps
Bismuth	209-1	7102345	7228361	7127340	7152682	0.93	cps
Bismuth	209-2	5878245	5888068	5853812	5873375	0.30	cps
Bromine	81-1	13990	13827	13623	13813	1.33	cps
Bromine	81-2	140	93	110	114	20.67	cps
Cadmium	108-1	88608	87995	86982	87861	0.93	cps
Cadmium	106-1	130701	129894	128472	129689	0.87	cps
Cadmium	111-1	1191474	1192456	1187052	1190327	0.24	cps
Calcium	43-1	5404524	5223314	5314182	5314007	1.71	cps
Calcium	44-1	88291665	85529595	86641529	86820930	1.60	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2014237	2043890	2023063	2027063	0.75	cps
Cobalt	59-2	3148444	3154533	3201268	3168082	0.91	cps
Copper	63-2	19943109	19794256	20052881	19930082	0.65	cps
Dysprosium	156-1	357	283	307	316	11.87	cps
Dysprosium	156-2	620	577	500	566	10.74	cps
Erbium	164-1	283	333	350	322	10.77	cps
Erbium	164-2	257	240	237	244	4.38	cps
Gadolinium	160-1	253	267	260	260	2.56	cps
Gadolinium	160-2	643	613	667	641	4.17	cps
Holmium	165-1	12118215	12104852	12053229	12092099	0.28	cps
Holmium	165-2	9109235	9091488	9087427	9096050	0.13	cps
Indium	115-1	8494397	8361133	8333586	8396372	1.02	cps
Indium	115-2	3748792	3830561	3731154	3770169	1.41	cps
Iron	56-2	473693380	472537206	470167513	472132700	0.38	cps
Iron	57-2	11661430	11703154	11842831	11735805	0.81	cps
Iron	54-2	25606916	25547038	25602201	25585385	0.13	cps
Krypton	83-1	193	247	223	221	12.09	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV003	Instrumnet Name :	P7
Client Sample ID :	CCV003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:54:45	DataFile Name :	069CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20502323	20567205	20404626	20491385	0.40	cps
Lead	207-1	18205453	18306930	18178714	18230365	0.37	cps
Lead	208-1	82721565	83316967	82655812	82898115	0.44	cps
Lithium	6-1	1110354	1108333	1119435	1112708	0.53	cps
Magnesium	24-2	93407192	92835369	93464662	93235741	0.37	cps
Manganese	55-2	16636351	16619326	16716707	16657461	0.31	cps
Molybdenum	94-1	16462933	16155781	16094239	16237651	1.22	cps
Molybdenum	95-1	23626185	23492032	23234627	23450948	0.85	cps
Molybdenum	96-1	26183966	25666810	25538532	25796436	1.32	cps
Molybdenum	97-1	14773081	14506386	14579354	14619607	0.94	cps
Molybdenum	98-1	38204823	37746201	37591114	37847379	0.84	cps
Neodymium	150-1	503	493	570	522	7.98	cps
Neodymium	150-2	240	213	183	212	13.36	cps
Nickel	60-2	735897	735700	737894	736497	0.16	cps
Phosphorus	31-2	110327	109878	110290	110165	0.23	cps
Potassium	39-2	64409969	64599151	64620014	64543045	0.18	cps
Rhodium	103-1	7403148	7324897	7274596	7334214	0.88	cps
Rhodium	103-2	4914179	4944532	4895739	4918150	0.50	cps
Scandium	45-1	4187677	4019509	4025045	4077411	2.34	cps
Scandium	45-2	484107	482489	476571	481056	0.82	cps
Selenium	82-1	68794	68348	68531	68558	0.33	cps
Selenium	77-2	9426	9493	9740	9553	1.73	cps
Selenium	78-2	32425	32142	31797	32122	0.98	cps
Silicon	28-1	28720288	28210378	28045664	28325443	1.24	cps
Silver	107-1	5809660	5722731	5773363	5768585	0.76	cps
Silver	109-1	5540230	5486194	5437481	5487969	0.94	cps
Sodium	23-2	146496481	147810471	149970438	148092463	1.18	cps
Strontium	86-1	1580949	1554288	1560526	1565254	0.89	cps
Strontium	88-1	13742063	13500386	13705376	13649275	0.95	cps
Sulfur	34-1	408274	396777	395224	400092	1.78	cps
Terbium	159-1	12176152	12017449	12232689	12142097	0.92	cps
Terbium	159-2	8844699	8894777	8881352	8873610	0.29	cps
Thallium	203-1	5288501	5272425	5310948	5290624	0.37	cps
Thallium	205-1	12685801	12691626	12707887	12695105	0.09	cps
Tin	118-1	4093454	4061353	4122122	4092309	0.74	cps
Titanium	47-1	5052762	4906718	4903389	4954290	1.72	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV003	Instrumnet Name :	P7
Client Sample ID :	CCV003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:54:45	DataFile Name :	069CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17393345	17723318	17818732	17645132	1.27	cps
Vanadium	51-2	1820687	1834077	1823377	1826047	0.39	cps
Yttrium	89-1	14942397	14662801	14567337	14724178	1.32	cps
Yttrium	89-2	4892980	4948749	4907570	4916433	0.59	cps
Zinc	66-2	3764097	3757646	3782058	3767934	0.34	cps
Zirconium	90-1	8183546	8015540	7904634	8034573	1.75	cps
Zirconium	91-1	1778496	1791515	1774305	1781439	0.50	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB003	Instrumnet Name :	P7
Client Sample ID :	CCB003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:57:40	DataFile Name :	070CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2244	2073	1933	2083	7.45	cps
Antimony	121-1	3354	2650	2114	2706	22.99	cps
Arsenic	75-2	77	47	57	60	25.46	cps
Barium	135-1	3007	2207	1787	2334	26.56	cps
Barium	137-1	5061	3637	2860	3853	28.97	cps
Beryllium	9-1	373	303	247	308	20.62	cps
Bismuth	209-1	7799422	7774114	7706142	7759893	0.62	cps
Bismuth	209-2	6460773	6354361	6449472	6421536	0.91	cps
Bromine	81-1	13540	14210	13883	13878	2.42	cps
Bromine	81-2	83	153	97	111	33.45	cps
Cadmium	108-1	47	20	13	27	66.16	cps
Cadmium	106-1	4901	4891	4697	4830	2.37	cps
Cadmium	111-1	4038	3903	3612	3851	5.65	cps
Calcium	43-1	2807	2094	1673	2191	26.15	cps
Calcium	44-1	50672	39034	31349	40352	24.11	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1850	1680	1670	1733	5.84	cps
Cobalt	59-2	723	643	480	616	20.15	cps
Copper	63-2	6198	5725	5218	5713	8.58	cps
Dysprosium	156-1	3	27	3	11	121.29	cps
Dysprosium	156-2	7	3	7	6	34.70	cps
Erbium	164-1	63	80	70	71	11.80	cps
Erbium	164-2	27	43	57	42	35.60	cps
Gadolinium	160-1	30	20	50	33	45.83	cps
Gadolinium	160-2	417	467	430	438	5.91	cps
Holmium	165-1	12034891	12048483	11986281	12023218	0.27	cps
Holmium	165-2	9122350	9081747	9018362	9074153	0.58	cps
Indium	115-1	8928577	8838522	8910870	8892656	0.54	cps
Indium	115-2	4004307	4014723	3939468	3986166	1.02	cps
Iron	56-2	112282	102506	94823	103204	8.48	cps
Iron	57-2	3604	3207	3054	3288	8.63	cps
Iron	54-2	8062	7112	7012	7395	7.84	cps
Krypton	83-1	150	170	167	162	6.61	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB003	Instrumnet Name :	P7
Client Sample ID :	CCB003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:57:40	DataFile Name :	070CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10397	7996	6085	8159	26.48	cps
Lead	207-1	9380	6632	5495	7169	27.87	cps
Lead	208-1	41722	31375	24632	32576	26.42	cps
Lithium	6-1	1183190	1163371	1147712	1164757	1.53	cps
Magnesium	24-2	17023	15648	14073	15581	9.47	cps
Manganese	55-2	3404	3077	2907	3129	8.07	cps
Molybdenum	94-1	8352	6178	4848	6459	27.39	cps
Molybdenum	95-1	11168	8259	6355	8594	28.20	cps
Molybdenum	96-1	12462	9043	7219	9574	27.80	cps
Molybdenum	97-1	7172	5304	3887	5454	30.20	cps
Molybdenum	98-1	18308	13550	10314	14057	28.61	cps
Neodymium	150-1	3	17	10	10	66.70	cps
Neodymium	150-2	3	0	10	4	114.60	cps
Nickel	60-2	2574	2474	2580	2542	2.35	cps
Phosphorus	31-2	250	240	217	236	7.26	cps
Potassium	39-2	72820	69819	69039	70559	2.83	cps
Rhodium	103-1	8108720	8015240	7961131	8028364	0.93	cps
Rhodium	103-2	5461706	5450670	5410948	5441108	0.49	cps
Scandium	45-1	4055918	4088570	4047229	4063906	0.54	cps
Scandium	45-2	487434	481526	487574	485511	0.71	cps
Selenium	82-1	434	372	404	403	7.69	cps
Selenium	77-2	7	3	3	4	43.40	cps
Selenium	78-2	437	463	520	473	8.99	cps
Silicon	28-1	562968	563998	553499	560155	1.03	cps
Silver	107-1	3881	2937	2077	2965	30.43	cps
Silver	109-1	3380	2484	2144	2669	23.94	cps
Sodium	23-2	65258	60619	56540	60805	7.17	cps
Strontium	86-1	1083	853	750	896	19.05	cps
Strontium	88-1	6308	4964	3547	4940	27.95	cps
Sulfur	34-1	116480	119210	120823	118838	1.85	cps
Terbium	159-1	12264648	12389252	12132289	12262063	1.05	cps
Terbium	159-2	8933101	8943598	8917666	8931455	0.15	cps
Thallium	203-1	3384	2544	2164	2697	23.15	cps
Thallium	205-1	8596	6545	5274	6805	24.63	cps
Tin	118-1	3484	3104	2844	3144	10.24	cps
Titanium	47-1	2340	1713	1317	1790	28.83	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB003	Instrumnet Name :	P7
Client Sample ID :	CCB003	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 17:57:40	DataFile Name :	070CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7622	5304	3777	5568	34.77	cps
Vanadium	51-2	327	360	273	320	13.66	cps
Yttrium	89-1	14788587	14911618	14673283	14791163	0.81	cps
Yttrium	89-2	5018538	5047621	4983391	5016517	0.64	cps
Zinc	66-2	1203	1200	1190	1198	0.58	cps
Zirconium	90-1	5331	3844	3254	4143	25.84	cps
Zirconium	91-1	970	907	677	851	18.14	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DLX2	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 18:00:56	DataFile Name :	071SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2154340	2158725	2157786	2156950	0.11	cps
Antimony	121-1	5094	4798	4884	4925	3.10	cps
Arsenic	75-2	12552	12409	11955	12305	2.53	cps
Barium	135-1	447271	453472	460510	453751	1.46	cps
Barium	137-1	777655	796214	791961	788610	1.23	cps
Beryllium	9-1	1340	1277	1280	1299	2.74	cps
Bismuth	209-1	7842898	7850411	7939299	7877536	0.68	cps
Bismuth	209-2	5991712	6432614	6459608	6294645	4.17	cps
Bromine	81-1	29523	30298	30919	30247	2.31	cps
Bromine	81-2	4427	4251	4267	4315	2.26	cps
Cadmium	108-1	1593	1403	1567	1521	6.76	cps
Cadmium	106-1	6852	6795	6912	6853	0.85	cps
Cadmium	111-1	5448	5581	5525	5518	1.21	cps
Calcium	43-1	411510	417297	422309	417039	1.30	cps
Calcium	44-1	6535535	6655108	6725741	6638795	1.45	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2248967	2192889	2220058	2220638	1.26	cps
Cobalt	59-2	893001	888752	889817	890523	0.25	cps
Copper	63-2	4785101	4773618	4816934	4791885	0.47	cps
Dysprosium	156-1	22625	23039	23259	22974	1.40	cps
Dysprosium	156-2	21530	21854	21543	21642	0.85	cps
Erbium	164-1	24522	24702	24979	24734	0.93	cps
Erbium	164-2	18769	18285	18289	18448	1.51	cps
Gadolinium	160-1	22191	22592	22211	22331	1.01	cps
Gadolinium	160-2	18442	18108	18616	18389	1.40	cps
Holmium	165-1	12312696	12515812	12471453	12433321	0.86	cps
Holmium	165-2	8768503	9217551	9269879	9085311	3.03	cps
Indium	115-1	9079280	9209905	9121042	9136742	0.73	cps
Indium	115-2	3822440	4113927	4114349	4016905	4.19	cps
Iron	56-2	240008270	237758770	236404370	238057136	0.76	cps
Iron	57-2	5844063	5896030	5802554	5847549	0.80	cps
Iron	54-2	12993910	12850543	12869391	12904615	0.60	cps
Krypton	83-1	240	230	247	239	3.51	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DLX2	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 18:00:56	DataFile Name :	071SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	436292	445231	445242	442255	1.17	cps
Lead	207-1	351646	358226	360367	356746	1.27	cps
Lead	208-1	1662316	1687733	1688085	1679378	0.88	cps
Lithium	6-1	1213482	1195185	1191448	1200039	0.98	cps
Magnesium	24-2	455659	449402	450075	451712	0.76	cps
Manganese	55-2	50940808	50941834	51376469	51086370	0.49	cps
Molybdenum	94-1	8292	8289	8412	8331	0.84	cps
Molybdenum	95-1	11998	12118	12145	12087	0.65	cps
Molybdenum	96-1	14397	14424	14954	14592	2.15	cps
Molybdenum	97-1	6451	6515	6902	6623	3.68	cps
Molybdenum	98-1	16573	16833	17037	16814	1.38	cps
Neodymium	150-1	33603	33821	34780	34068	1.84	cps
Neodymium	150-2	23356	23356	22969	23227	0.96	cps
Nickel	60-2	554465	550651	551779	552298	0.35	cps
Phosphorus	31-2	10887	10791	11127	10935	1.59	cps
Potassium	39-2	680477	672220	671312	674670	0.75	cps
Rhodium	103-1	8303838	8205411	8385053	8298101	1.08	cps
Rhodium	103-2	5204373	5616821	5547834	5456343	4.05	cps
Scandium	45-1	4271775	4286280	4280913	4279656	0.17	cps
Scandium	45-2	473489	507847	512138	497825	4.26	cps
Selenium	82-1	504	448	521	491	7.84	cps
Selenium	77-2	73	57	70	67	13.22	cps
Selenium	78-2	667	673	630	657	3.55	cps
Silicon	28-1	4464860	4527107	4722021	4571329	2.93	cps
Silver	107-1	18856	19083	19323	19087	1.22	cps
Silver	109-1	18222	18005	18505	18244	1.38	cps
Sodium	23-2	286745	284575	282475	284598	0.75	cps
Strontium	86-1	299526	304938	306201	303555	1.17	cps
Strontium	88-1	2734761	2775692	2804059	2771504	1.26	cps
Sulfur	34-1	187610	187690	187225	187508	0.13	cps
Terbium	159-1	12477316	12420384	12596832	12498178	0.72	cps
Terbium	159-2	8556153	9064822	9121566	8914180	3.49	cps
Thallium	203-1	4778	4778	4621	4725	1.91	cps
Thallium	205-1	11628	11288	11021	11313	2.69	cps
Tin	118-1	287670	295973	296454	293366	1.68	cps
Titanium	47-1	98544	100866	100652	100021	1.28	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DLX2	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	2
Date & Time Acquired :	2025-02-02 18:00:56	DataFile Name :	071SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	48133	47879	49351	48454	1.62	cps
Vanadium	51-2	45977	45769	46281	46009	0.56	cps
Yttrium	89-1	15705396	15865009	15875246	15815217	0.60	cps
Yttrium	89-2	4921818	5342932	5386898	5217216	4.92	cps
Zinc	66-2	79708	77741	78957	78802	1.26	cps
Zirconium	90-1	5965	5955	5788	5902	1.68	cps
Zirconium	91-1	1347	1263	1203	1271	5.66	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DL2X5	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 18:04:04	DataFile Name :	072SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	858193	863605	854817	858872	0.52	cps
Antimony	121-1	1783	1953	2057	1931	7.15	cps
Arsenic	75-2	4941	5014	4858	4938	1.59	cps
Barium	135-1	182848	186089	187905	185614	1.38	cps
Barium	137-1	320474	324394	326413	323760	0.93	cps
Beryllium	9-1	583	563	590	579	2.40	cps
Bismuth	209-1	7790951	7809328	7699046	7766442	0.76	cps
Bismuth	209-2	6379939	6436943	6210987	6342623	1.85	cps
Bromine	81-1	21265	21295	22043	21535	2.05	cps
Bromine	81-2	1853	1980	1813	1882	4.62	cps
Cadmium	108-1	700	677	700	692	1.95	cps
Cadmium	106-1	5488	5604	5611	5568	1.25	cps
Cadmium	111-1	3981	4109	4108	4066	1.81	cps
Calcium	43-1	171810	173428	173119	172786	0.50	cps
Calcium	44-1	2723564	2766574	2741813	2743984	0.79	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	895409	896647	894370	895475	0.13	cps
Cobalt	59-2	361685	362245	358341	360757	0.59	cps
Copper	63-2	1959870	1937421	1960281	1952524	0.67	cps
Dysprosium	156-1	9220	9236	9367	9274	0.87	cps
Dysprosium	156-2	8593	8503	8539	8545	0.53	cps
Erbium	164-1	9690	9900	10137	9909	2.26	cps
Erbium	164-2	7322	7315	7209	7282	0.87	cps
Gadolinium	160-1	9036	8913	8930	8960	0.75	cps
Gadolinium	160-2	7776	7389	7349	7504	3.14	cps
Holmium	165-1	12521017	12209298	12182382	12304232	1.53	cps
Holmium	165-2	9084339	9075723	8810042	8990035	1.73	cps
Indium	115-1	9226196	9014783	9081841	9107607	1.19	cps
Indium	115-2	4093478	4017010	4017727	4042738	1.09	cps
Iron	56-2	96797129	96357449	96042512	96399030	0.39	cps
Iron	57-2	2384437	2356406	2346439	2362428	0.83	cps
Iron	54-2	5356421	5283627	5254525	5298191	0.99	cps
Krypton	83-1	200	203	203	202	0.95	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DL2X5	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 18:04:04	DataFile Name :	072SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	177681	179110	179775	178855	0.60	cps
Lead	207-1	142309	145358	145540	144403	1.26	cps
Lead	208-1	674786	684699	686892	682126	0.95	cps
Lithium	6-1	1196004	1162433	1199209	1185882	1.72	cps
Magnesium	24-2	186175	184731	183291	184732	0.78	cps
Manganese	55-2	20838124	20807666	20614884	20753558	0.58	cps
Molybdenum	94-1	3247	3310	3254	3270	1.06	cps
Molybdenum	95-1	4778	4914	4684	4792	2.41	cps
Molybdenum	96-1	5611	5748	5758	5706	1.44	cps
Molybdenum	97-1	2537	2540	2574	2550	0.80	cps
Molybdenum	98-1	6451	6752	6542	6582	2.34	cps
Neodymium	150-1	13830	14294	13877	14000	1.82	cps
Neodymium	150-2	9203	9223	9397	9274	1.15	cps
Nickel	60-2	226556	227361	226169	226695	0.27	cps
Phosphorus	31-2	4451	4734	4604	4596	3.09	cps
Potassium	39-2	310308	311344	311370	311007	0.19	cps
Rhodium	103-1	8459988	8252554	8251571	8321371	1.44	cps
Rhodium	103-2	5480602	5511762	5488655	5493673	0.29	cps
Scandium	45-1	4341103	4300897	4232186	4291395	1.28	cps
Scandium	45-2	506138	501956	506213	504769	0.48	cps
Selenium	82-1	423	413	452	429	4.76	cps
Selenium	77-2	23	30	30	28	13.86	cps
Selenium	78-2	543	563	557	554	1.84	cps
Silicon	28-1	2287238	2334860	2423478	2348525	2.94	cps
Silver	107-1	7472	7605	7802	7627	2.18	cps
Silver	109-1	6992	6978	7209	7060	1.83	cps
Sodium	23-2	132275	131562	131865	131901	0.27	cps
Strontium	86-1	122955	124793	127173	124974	1.69	cps
Strontium	88-1	1088419	1104211	1098551	1097060	0.73	cps
Sulfur	34-1	143435	143993	143452	143627	0.22	cps
Terbium	159-1	12491981	12233422	12349633	12358345	1.05	cps
Terbium	159-2	8946902	8895097	8917704	8919901	0.29	cps
Thallium	203-1	1753	1707	1693	1718	1.83	cps
Thallium	205-1	4124	4034	4167	4108	1.66	cps
Tin	118-1	119389	121369	121133	120631	0.90	cps
Titanium	47-1	40995	41667	41370	41344	0.81	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-02DL2X5	Instrumnet Name :	P7
Client Sample ID :	A6302	Dilution Factor :	5
Date & Time Acquired :	2025-02-02 18:04:04	DataFile Name :	072SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	18737	19398	19197	19111	1.77	cps
Vanadium	51-2	18495	19463	18545	18834	2.89	cps
Yttrium	89-1	15790345	15439379	15414796	15548174	1.35	cps
Yttrium	89-2	5147601	5225736	5218351	5197230	0.83	cps
Zinc	66-2	33250	33016	32609	32959	0.98	cps
Zirconium	90-1	2440	2344	2300	2361	3.04	cps
Zirconium	91-1	523	523	587	544	6.72	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05A	Instrumnet Name :	P7
Client Sample ID :	A6305A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:07:12	DataFile Name :	073SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	7419209	7456196	7446731	7440712	0.26	cps
Antimony	121-1	45315	45940	46324	45860	1.11	cps
Arsenic	75-2	93213	92010	92784	92669	0.66	cps
Barium	135-1	536982	547838	549549	544790	1.25	cps
Barium	137-1	934791	943683	955404	944626	1.09	cps
Beryllium	9-1	4504	4601	4237	4447	4.23	cps
Bismuth	209-1	7742626	7899153	7880422	7840734	1.09	cps
Bismuth	209-2	6430325	6442979	6487766	6453690	0.47	cps
Bromine	81-1	47319	49569	50285	49058	3.15	cps
Bromine	81-2	9526	9256	9480	9421	1.53	cps
Cadmium	108-1	13543	14507	14004	14018	3.44	cps
Cadmium	106-1	18822	19183	19350	19118	1.41	cps
Cadmium	111-1	8193	7767	8626	8195	5.24	cps
Calcium	43-1	614610	625722	616791	619041	0.95	cps
Calcium	44-1	9688492	9839767	9784006	9770755	0.78	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4672120	4658255	4660405	4663593	0.16	cps
Cobalt	59-2	106847	104903	106061	105937	0.92	cps
Copper	63-2	7704736	7780739	7746763	7744079	0.49	cps
Dysprosium	156-1	28773	29187	28643	28867	0.98	cps
Dysprosium	156-2	28359	28920	28923	28734	1.13	cps
Erbium	164-1	25547	25330	25774	25550	0.87	cps
Erbium	164-2	19297	19420	19420	19379	0.37	cps
Gadolinium	160-1	26619	27293	26879	26930	1.26	cps
Gadolinium	160-2	21901	21974	22178	22017	0.65	cps
Holmium	165-1	12479116	12603712	12645994	12576274	0.69	cps
Holmium	165-2	9293041	9201214	9345369	9279875	0.79	cps
Indium	115-1	9083317	9002535	8981684	9022512	0.59	cps
Indium	115-2	4014542	4030461	3989293	4011432	0.52	cps
Iron	56-2	240851030	236258950	237442116	238184032	1.00	cps
Iron	57-2	5855656	5852773	5818992	5842474	0.35	cps
Iron	54-2	13049787	12871186	13061455	12994143	0.82	cps
Krypton	83-1	190	263	213	222	16.86	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05A	Instrumnet Name :	P7
Client Sample ID :	A6305A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:07:12	DataFile Name :	073SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	4886898	4938285	4949648	4924944	0.68	cps
Lead	207-1	3923602	4047620	4102503	4024575	2.28	cps
Lead	208-1	18733568	18970533	19164454	18956185	1.14	cps
Lithium	6-1	1254095	1199004	1247691	1233597	2.44	cps
Magnesium	24-2	1995908	1956544	1989401	1980618	1.07	cps
Manganese	55-2	9261112	9062526	9129851	9151163	1.10	cps
Molybdenum	94-1	14094	14631	14704	14476	2.30	cps
Molybdenum	95-1	17828	17317	17981	17709	1.96	cps
Molybdenum	96-1	22751	22641	22274	22555	1.11	cps
Molybdenum	97-1	11028	11038	10921	10995	0.59	cps
Molybdenum	98-1	28087	28825	28164	28359	1.43	cps
Neodymium	150-1	46416	47536	48095	47349	1.81	cps
Neodymium	150-2	32424	32317	32187	32309	0.37	cps
Nickel	60-2	284180	284811	285623	284872	0.25	cps
Phosphorus	31-2	24346	23542	23869	23919	1.69	cps
Potassium	39-2	991533	980710	984149	985464	0.56	cps
Rhodium	103-1	8512325	8415687	8433706	8453906	0.61	cps
Rhodium	103-2	5633156	5608943	5478865	5573655	1.49	cps
Scandium	45-1	4441625	4461679	4377805	4427037	0.99	cps
Scandium	45-2	526789	517603	517521	520638	1.02	cps
Selenium	82-1	2104	2060	2139	2101	1.87	cps
Selenium	77-2	343	337	367	349	4.52	cps
Selenium	78-2	1583	1487	1437	1502	4.96	cps
Silicon	28-1	14943679	15349891	15102290	15131953	1.35	cps
Silver	107-1	31344	31862	31240	31482	1.06	cps
Silver	109-1	29784	29857	30121	29921	0.59	cps
Sodium	23-2	2654796	2632317	2636053	2641056	0.46	cps
Strontium	86-1	633859	645166	642845	640623	0.93	cps
Strontium	88-1	5680569	5842833	5806448	5776617	1.47	cps
Sulfur	34-1	257752	258183	257765	257900	0.10	cps
Terbium	159-1	12517049	12701739	12615421	12611403	0.73	cps
Terbium	159-2	9160960	9165091	9187642	9171231	0.16	cps
Thallium	203-1	3144	2994	3184	3107	3.22	cps
Thallium	205-1	7262	7159	7165	7195	0.80	cps
Tin	118-1	9028164	9111210	9183739	9107704	0.85	cps
Titanium	47-1	509008	517572	512307	512962	0.84	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1223-05A	Instrumnet Name :	P7
Client Sample ID :	A6305A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:07:12	DataFile Name :	073SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	75667	78204	78577	77482	2.04	cps
Vanadium	51-2	127154	126844	126511	126836	0.25	cps
Yttrium	89-1	16119271	16112489	16104844	16112201	0.04	cps
Yttrium	89-2	5479314	5429968	5358532	5422605	1.12	cps
Zinc	66-2	577849	579274	580700	579274	0.25	cps
Zirconium	90-1	11982	12095	11548	11875	2.43	cps
Zirconium	91-1	2777	2720	2690	2729	1.61	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09A	Instrumnet Name :	P7
Client Sample ID :	A6342A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:10:14	DataFile Name :	074SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3086697	3076334	3103964	3088998	0.45	cps
Antimony	121-1	487	473	477	479	1.45	cps
Arsenic	75-2	4241	3834	4034	4036	5.04	cps
Barium	135-1	123775	126876	126889	125847	1.43	cps
Barium	137-1	216432	220213	219216	218621	0.90	cps
Beryllium	9-1	760	737	757	751	1.68	cps
Bismuth	209-1	7736070	7577524	7643748	7652448	1.04	cps
Bismuth	209-2	6409597	6337504	6357691	6368264	0.58	cps
Bromine	81-1	16463	17097	17330	16963	2.65	cps
Bromine	81-2	687	660	747	698	6.36	cps
Cadmium	108-1	60	33	57	50	29.06	cps
Cadmium	106-1	5028	4764	5008	4933	2.97	cps
Cadmium	111-1	3734	3582	3759	3692	2.60	cps
Calcium	43-1	37075	36648	38031	37251	1.90	cps
Calcium	44-1	611465	618922	622371	617586	0.90	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	139213	137476	136588	137759	0.97	cps
Cobalt	59-2	34657	33845	33314	33938	1.99	cps
Copper	63-2	51127	49746	50375	50416	1.37	cps
Dysprosium	156-1	23216	23877	23840	23644	1.57	cps
Dysprosium	156-2	23309	23817	23663	23597	1.10	cps
Erbium	164-1	20008	19964	20245	20072	0.75	cps
Erbium	164-2	15148	14891	14751	14930	1.35	cps
Gadolinium	160-1	21881	22058	22552	22163	1.57	cps
Gadolinium	160-2	18142	17811	17494	17816	1.82	cps
Holmium	165-1	12249731	12071740	12197613	12173028	0.75	cps
Holmium	165-2	9233069	9167320	9161297	9187228	0.43	cps
Indium	115-1	9161660	9080118	9195331	9145703	0.65	cps
Indium	115-2	4091041	4059408	4101243	4083897	0.53	cps
Iron	56-2	49392808	49360056	49006233	49253032	0.44	cps
Iron	57-2	1250626	1241665	1247954	1246749	0.37	cps
Iron	54-2	2718898	2711474	2717985	2716119	0.15	cps
Krypton	83-1	210	170	203	194	11.02	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09A	Instrumnet Name :	P7
Client Sample ID :	A6342A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:10:14	DataFile Name :	074SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1442480	1454513	1468949	1455314	0.91	cps
Lead	207-1	1254472	1285427	1288346	1276082	1.47	cps
Lead	208-1	6058723	6075976	6143402	6092700	0.73	cps
Lithium	6-1	1172676	1158162	1131420	1154086	1.81	cps
Magnesium	24-2	1562562	1570811	1548378	1560584	0.73	cps
Manganese	55-2	545767	548021	542114	545301	0.55	cps
Molybdenum	94-1	8349	8516	8536	8467	1.21	cps
Molybdenum	95-1	2687	2554	2707	2649	3.15	cps
Molybdenum	96-1	4707	4684	4784	4725	1.11	cps
Molybdenum	97-1	1777	1690	1767	1745	2.72	cps
Molybdenum	98-1	4121	4274	4407	4267	3.36	cps
Neodymium	150-1	40053	41464	41030	40849	1.77	cps
Neodymium	150-2	27230	27544	27560	27445	0.68	cps
Nickel	60-2	31496	30765	30812	31024	1.32	cps
Phosphorus	31-2	4807	5074	4994	4959	2.76	cps
Potassium	39-2	703590	705805	693803	701066	0.91	cps
Rhodium	103-1	8351490	8329418	8414178	8365029	0.53	cps
Rhodium	103-2	5652578	5590469	5611996	5618348	0.56	cps
Scandium	45-1	4366566	4406198	4401321	4391362	0.49	cps
Scandium	45-2	522959	523986	525402	524116	0.23	cps
Selenium	82-1	1964	1967	1972	1968	0.20	cps
Selenium	77-2	297	277	263	279	6.02	cps
Selenium	78-2	1390	1400	1347	1379	2.06	cps
Silicon	28-1	3068600	3159711	3221038	3149783	2.44	cps
Silver	107-1	857	790	687	778	11.01	cps
Silver	109-1	683	660	577	640	8.76	cps
Sodium	23-2	140585	139518	140484	140196	0.42	cps
Strontium	86-1	26611	27416	27740	27255	2.13	cps
Strontium	88-1	236179	239174	239624	238326	0.79	cps
Sulfur	34-1	124619	123937	122782	123779	0.75	cps
Terbium	159-1	12324190	12211228	12341352	12292257	0.58	cps
Terbium	159-2	9110225	9005787	8983724	9033245	0.75	cps
Thallium	203-1	2220	2160	2307	2229	3.31	cps
Thallium	205-1	5284	5004	5258	5182	2.98	cps
Tin	118-1	10581	7659	6275	8171	26.90	cps
Titanium	47-1	491493	503697	507465	500885	1.67	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	Q1246-09A	Instrumnet Name :	P7
Client Sample ID :	A6342A	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:10:14	DataFile Name :	074SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	70810	72244	72747	71934	1.40	cps
Vanadium	51-2	106462	106838	105167	106156	0.83	cps
Yttrium	89-1	15684382	15702559	15690871	15692604	0.06	cps
Yttrium	89-2	5365412	5351066	5298052	5338177	0.66	cps
Zinc	66-2	38613	38844	37571	38343	1.77	cps
Zirconium	90-1	18508	18732	18869	18703	0.97	cps
Zirconium	91-1	4214	4334	4227	4258	1.54	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV004	Instrumnet Name :	P7
Client Sample ID :	CCV004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:13:23	DataFile Name :	075CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	11636785	11582204	11736578	11651856	0.67	cps
Antimony	121-1	4715084	4870430	4915077	4833530	2.17	cps
Arsenic	75-2	287315	283503	285246	285355	0.67	cps
Barium	135-1	6244067	6316993	6284159	6281739	0.58	cps
Barium	137-1	10557709	10764788	10638964	10653820	0.98	cps
Beryllium	9-1	481240	490742	496219	489400	1.55	cps
Bismuth	209-1	7122574	7175062	7177039	7158225	0.43	cps
Bismuth	209-2	5837246	5841866	5780179	5819763	0.59	cps
Bromine	81-1	12949	12739	13363	13017	2.44	cps
Bromine	81-2	173	147	157	159	8.48	cps
Cadmium	108-1	86713	87904	87595	87404	0.71	cps
Cadmium	106-1	125174	128492	127497	127054	1.34	cps
Cadmium	111-1	1165305	1187202	1195778	1182762	1.33	cps
Calcium	43-1	5073443	5178710	5151006	5134386	1.06	cps
Calcium	44-1	83112915	85059439	85345009	84505788	1.44	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2056907	2007654	2025984	2030182	1.23	cps
Cobalt	59-2	3159124	3156738	3176930	3164264	0.35	cps
Copper	63-2	20027894	19556871	19631812	19738859	1.28	cps
Dysprosium	156-1	300	347	357	334	9.04	cps
Dysprosium	156-2	657	577	537	590	10.36	cps
Erbium	164-1	320	383	357	353	9.00	cps
Erbium	164-2	270	237	200	236	14.87	cps
Gadolinium	160-1	317	257	270	281	11.21	cps
Gadolinium	160-2	673	600	533	602	11.63	cps
Holmium	165-1	11958544	11948383	11989292	11965406	0.18	cps
Holmium	165-2	8953529	8921693	8886980	8920734	0.37	cps
Indium	115-1	8209892	8239003	8311996	8253630	0.64	cps
Indium	115-2	3763232	3676696	3705329	3715085	1.19	cps
Iron	56-2	469337620	468506966	466376540	468073709	0.33	cps
Iron	57-2	11783980	11641051	11705239	11710090	0.61	cps
Iron	54-2	25413345	25243250	25363995	25340197	0.35	cps
Krypton	83-1	207	163	160	177	14.74	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV004	Instrumnet Name :	P7
Client Sample ID :	CCV004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:13:23	DataFile Name :	075CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20266904	20501133	20602215	20456751	0.84	cps
Lead	207-1	17917623	18096567	18095266	18036485	0.57	cps
Lead	208-1	81671580	82449804	82807342	82309575	0.71	cps
Lithium	6-1	1132662	1127423	1141479	1133855	0.63	cps
Magnesium	24-2	94415385	93829602	94819612	94354866	0.53	cps
Manganese	55-2	16593789	16580246	16717946	16630660	0.46	cps
Molybdenum	94-1	15759679	15868658	16105258	15911198	1.11	cps
Molybdenum	95-1	22675368	22848200	23278274	22933947	1.35	cps
Molybdenum	96-1	24986990	25265240	25405020	25219084	0.84	cps
Molybdenum	97-1	14137165	14387924	14495242	14340111	1.28	cps
Molybdenum	98-1	36776582	37293329	37223680	37097864	0.76	cps
Neodymium	150-1	513	523	493	510	3.00	cps
Neodymium	150-2	293	240	267	267	10.00	cps
Nickel	60-2	743827	743650	743019	743499	0.06	cps
Phosphorus	31-2	110834	108807	109666	109769	0.93	cps
Potassium	39-2	65062669	63865389	65046666	64658241	1.06	cps
Rhodium	103-1	7258524	7314475	7248278	7273759	0.49	cps
Rhodium	103-2	4881089	4810383	4844648	4845373	0.73	cps
Scandium	45-1	4005790	3968513	4037335	4003879	0.86	cps
Scandium	45-2	486547	475251	477773	479857	1.24	cps
Selenium	82-1	67450	67965	68187	67867	0.56	cps
Selenium	77-2	9940	9577	9890	9802	2.01	cps
Selenium	78-2	32355	32008	33114	32492	1.74	cps
Silicon	28-1	27593413	27727255	27947715	27756127	0.64	cps
Silver	107-1	5880081	5990926	5958553	5943186	0.96	cps
Silver	109-1	5592787	5660738	5708657	5654061	1.03	cps
Sodium	23-2	149060438	147910531	149276021	148748997	0.49	cps
Strontium	86-1	1505894	1519203	1521523	1515540	0.56	cps
Strontium	88-1	13214506	13339161	13458683	13337450	0.92	cps
Sulfur	34-1	381403	383756	385027	383395	0.48	cps
Terbium	159-1	12054233	12039155	12016228	12036539	0.16	cps
Terbium	159-2	8919018	8769741	8861655	8850138	0.85	cps
Thallium	203-1	5178597	5286293	5282337	5249076	1.16	cps
Thallium	205-1	12394212	12738921	12714467	12615867	1.52	cps
Tin	118-1	3946972	4034949	4040390	4007437	1.31	cps
Titanium	47-1	4805120	4836374	4849182	4830225	0.47	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCV004	Instrumnet Name :	P7
Client Sample ID :	CCV004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:13:23	DataFile Name :	075CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17550458	17495113	17829772	17625114	1.02	cps
Vanadium	51-2	1830005	1823080	1822445	1825177	0.23	cps
Yttrium	89-1	14498868	14460428	14363643	14440980	0.48	cps
Yttrium	89-2	4944331	4838988	4900039	4894453	1.08	cps
Zinc	66-2	3744863	3733096	3740046	3739335	0.16	cps
Zirconium	90-1	7776371	7853849	7939251	7856490	1.04	cps
Zirconium	91-1	1729479	1738828	1738303	1735536	0.30	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB004	Instrumnet Name :	P7
Client Sample ID :	CCB004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:16:50	DataFile Name :	076CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2254	2077	1913	2081	8.17	cps
Antimony	121-1	2890	2410	1943	2415	19.61	cps
Arsenic	75-2	50	53	47	50	6.66	cps
Barium	135-1	2187	1793	1453	1811	20.26	cps
Barium	137-1	4154	3150	2477	3260	25.88	cps
Beryllium	9-1	300	227	227	251	16.86	cps
Bismuth	209-1	7700336	7787705	7669388	7719143	0.79	cps
Bismuth	209-2	6388597	6349720	6395153	6377823	0.39	cps
Bromine	81-1	13239	13476	13396	13371	0.90	cps
Bromine	81-2	203	163	143	170	17.97	cps
Cadmium	108-1	47	37	37	40	14.43	cps
Cadmium	106-1	4744	4721	4461	4642	3.39	cps
Cadmium	111-1	3768	3632	3474	3625	4.07	cps
Calcium	43-1	2307	1800	1453	1853	23.16	cps
Calcium	44-1	42908	34617	29432	35652	19.07	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1527	1467	1550	1515	2.84	cps
Cobalt	59-2	630	580	467	559	14.97	cps
Copper	63-2	5624	5234	4807	5222	7.82	cps
Dysprosium	156-1	17	7	13	12	41.65	cps
Dysprosium	156-2	0	3	7	3	100.05	cps
Erbium	164-1	80	67	70	72	9.61	cps
Erbium	164-2	60	33	40	44	31.23	cps
Gadolinium	160-1	53	43	43	47	12.37	cps
Gadolinium	160-2	480	473	523	492	5.52	cps
Holmium	165-1	11888354	11867689	11972516	11909520	0.47	cps
Holmium	165-2	9058375	9055077	9002883	9038778	0.34	cps
Indium	115-1	8882850	8793072	8794825	8823582	0.58	cps
Indium	115-2	3996153	4009327	3974251	3993244	0.44	cps
Iron	56-2	109428	100271	94115	101272	7.61	cps
Iron	57-2	3350	3100	3217	3223	3.88	cps
Iron	54-2	7322	7355	6752	7143	4.75	cps
Krypton	83-1	160	137	173	157	11.85	cps

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB004	Instrumnet Name :	P7
Client Sample ID :	CCB004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:16:50	DataFile Name :	076CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	8720	6395	5291	6802	25.73	cps
Lead	207-1	7309	5845	4611	5921	22.81	cps
Lead	208-1	34247	26193	21200	27214	24.19	cps
Lithium	6-1	1168015	1167751	1164012	1166593	0.19	cps
Magnesium	24-2	16125	13930	13956	14670	8.59	cps
Manganese	55-2	3380	3250	2944	3191	7.03	cps
Molybdenum	94-1	6712	5554	4457	5574	20.22	cps
Molybdenum	95-1	8866	7045	5654	7189	22.41	cps
Molybdenum	96-1	10100	8052	6045	8066	25.14	cps
Molybdenum	97-1	5808	4624	3624	4685	23.34	cps
Molybdenum	98-1	14290	11621	9136	11683	22.06	cps
Neodymium	150-1	10	20	10	13	43.30	cps
Neodymium	150-2	0	0	13	4	173.21	cps
Nickel	60-2	2297	2347	2317	2320	1.08	cps
Phosphorus	31-2	223	297	250	257	14.46	cps
Potassium	39-2	66605	66454	64790	65950	1.53	cps
Rhodium	103-1	7963500	7970922	7981712	7972044	0.11	cps
Rhodium	103-2	5484163	5428809	5402965	5438646	0.76	cps
Scandium	45-1	4056030	4085642	4075299	4072324	0.37	cps
Scandium	45-2	485189	483128	485937	484751	0.30	cps
Selenium	82-1	394	374	325	365	9.72	cps
Selenium	77-2	7	7	3	6	34.70	cps
Selenium	78-2	533	503	503	513	3.37	cps
Silicon	28-1	565276	566753	558898	563642	0.74	cps
Silver	107-1	2827	2130	1510	2156	30.56	cps
Silver	109-1	2567	1903	1530	2000	26.25	cps
Sodium	23-2	58534	55730	52887	55717	5.07	cps
Strontium	86-1	893	753	640	762	16.65	cps
Strontium	88-1	5248	4297	3224	4256	23.79	cps
Sulfur	34-1	117813	117877	117783	117824	0.04	cps
Terbium	159-1	12024659	12109006	12132927	12088864	0.47	cps
Terbium	159-2	8958262	8985658	8813924	8919281	1.03	cps
Thallium	203-1	2377	1913	1677	1989	17.90	cps
Thallium	205-1	6158	4731	3924	4938	22.91	cps
Tin	118-1	2937	2450	2397	2595	11.47	cps
Titanium	47-1	1957	1670	1177	1601	24.64	cps

Reviewed By:Eman
On:2/5/2025 9:21:10 AM
Inst Id :P7

LB Number :	LB134522	Operator :	Jaswal
Lab Sample ID :	CCB004	Instrumnet Name :	P7
Client Sample ID :	CCB004	Dilution Factor :	1
Date & Time Acquired :	2025-02-02 18:16:50	DataFile Name :	076CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	5871	4658	3651	4726	23.53	cps
Vanadium	51-2	247	183	287	239	21.81	cps
Yttrium	89-1	14732737	14856224	14815143	14801368	0.42	cps
Yttrium	89-2	4998128	5067998	5045909	5037345	0.71	cps
Zinc	66-2	1143	1113	1177	1145	2.77	cps
Zirconium	90-1	4041	3677	3267	3662	10.57	cps
Zirconium	91-1	893	713	647	751	16.99	cps

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

Prep Standard - Chemical Standard Summary

Order ID : Q1246

Test : Metals CLP MS FULL

Prepbatch ID : PB166471,

Sequence ID/Qc Batch ID: LB134522,

Standard ID :
MP82128,MP84041,MP84042,MP84043,MP84044,MP84045,MP84046,MP84047,MP84048,MP84049,MP84050,MP84051,MP84052,MP84053,MP84054,MP84055,MP84056,MP84057,MP84073,MP84074,MP84092,MP84317,

Chemical ID :
M5288,M5289,M5295,M5298,M5304,M5472,M5476,M5496,M5497,M5498,M5513,M5519,M5658,M5697,M5739,M5751,M5768,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5819,M5820,M5873,M5874,M5942,M5960,M5961,M5962,M5976,M5977,M5978,M5981,M5983,M5993,M5999,M6021,M6023,M6025,M6028,M6030,M6032,M6040,M6055,M6121,M6126,M6127,M6128,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
641	1:4 HCL	MP82128	09/03/2024	02/08/2025	Janvi Patel	None	None	Sarabjit Jaswal 09/03/2024

FROM 1500.00000ml of W3112 + 500.00000ml of M6040 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP84041	01/14/2025	07/14/2025	Eman Mughal	None	None	Sarabjit Jaswal 01/16/2025

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

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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)	MP84042	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 25.00000ml of M6121 + 4925.00000ml of W3112 + 50.00000ml of M6126 = Final Quantity: 5000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3947	S7(SFAM,6020,200.8)	MP84043	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 1.00000ml of M5476 + 1.00000ml of M5799 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M5496 + 10.00000ml of M5976 + 10.00000ml of M5978 + 10.00000ml of M6126 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M6025 + 4.00000ml of M6032 + 4.90000ml of M5298 + 4.90000ml of M5519 + 5.00000ml of M6121 + 50.00000ml of M5304 + 830.60000ml of W3112 + 9.00000ml of M5751 + 9.00000ml of M5819 + 9.00000ml of M6128 + 9.90000ml of M5497 + 9.90000ml of M5806 + 9.90000ml of M6127 = Final Quantity: 1000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3948	S6(SFAM,6020,200.8)	MP84044	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 48.50000ml of W3112 + 50.00000ml of MP84043 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3949	S5(SFAM,6020,200.8)	MP84045	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 73.50000ml of W3112 + 25.00000ml of MP84043 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3954	S4(SFAM,6020,200.8)	MP84046	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 86.00000ml of W3112 + 12.50000ml of MP84043 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3951	S3(SFAM, 6020,200.8)	MP84047	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84044 = Final Quantity: 100.000 ml

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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
3955	S2CONC(SFAM,6020,200.8)	MP84048	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.05000ml of M5476 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5961 + 0.05000ml of M5981 + 0.05000ml of M5983 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.05000ml of M6128 + 0.10000ml of M5496 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.25000ml of M5298 + 0.25000ml of M5799 + 0.25000ml of M5819 + 0.25000ml of M5962 + 0.25000ml of M5976 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.50000ml of M6032 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5806 + 2.50000ml of M6121 + 2.50000ml of M6127 + 225.25000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3956	S2(SFAM,6020,200.8)	MP84049	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP84048 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3957	S1(SFAM,6020,200.8)	MP84050	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP84049 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3958	ICV(SFAM)	MP84051	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 2.00000ml of M5295 + 98.00000ml of MP84042 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3961	CCV	MP84052	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.20000ml of M5513 + 0.50000ml of M5476 + 0.50000ml of M5799 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6126 + 12.45000ml of M5298 + 12.45000ml of M5519 + 2.00000ml of M6032 + 24.95000ml of M5498 + 24.95000ml of M5806 + 24.95000ml of M6127 + 25.00000ml of M5304 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.50000ml of M6128 + 4.95000ml of M5496 + 5.00000ml of M5976 + 5.00000ml of M6121 + 830.60000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1142	ICSA ICPMS	MP84053	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 10.00000ml of M5873 + 90.00000ml of MP84042 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1143	ICSAB ICPMS	MP84054	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP84042 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3962	MG 10PPM FOR TUNE	MP84055	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 0.01000ml of M6127 + 9.99000ml of MP84042 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3894	TUNE 200PPB	MP84056	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 2.00000ml of M6055 + 2.00000ml of MP84055 + 96.00000ml of MP84042 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3903	ISS 3PPM	MP84057	01/14/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 01/16/2025

FROM 5.00000ml of M6126 + 75.00000ml of M5739 + 170.00000ml of MP84042 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2902	S8 ICPMS	MP84073	01/14/2025	02/07/2025	Janvi Patel	None	None	Mohan Bera 01/16/2025

FROM 1.00000ml of M5496 + 2.50000ml of M5288 + 2.50000ml of M5298 + 5.00000ml of M5497 + 5.00000ml of M5806 + 5.00000ml of M6127 + 79.00000ml of MP84042 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
870	ICPMS SPIKE SOL.B	MP84074	01/16/2025	02/07/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/17/2025

FROM 0.45000ml of M5962 + 5.00000ml of M5993 + 5.00000ml of M5999 + 39.55000ml of MP84042 = 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
3964	CONC.LCSS SPIKE	MP84092	01/16/2025	02/07/2025	Janvi Patel	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/17/2025

FROM 0.25000ml of M5472 + 0.25000ml of M5798 + 0.25000ml of M5800 + 0.25000ml of M5801 + 0.25000ml of M5960 + 0.25000ml of M5981 + 0.25000ml of M5983 + 0.25000ml of M6023 + 0.25000ml of M6025 + 0.25000ml of M6028 + 0.25000ml of M6030 + 0.25000ml of M6128 + 0.50000ml of M5289 + 0.50000ml of M5658 + 0.50000ml of M5697 + 0.50000ml of M5802 + 1.25000ml of M5799 + 1.25000ml of M5819 + 1.25000ml of M5942 + 1.25000ml of M5962 + 1.25000ml of M5977 + 1.25000ml of M6021 + 10.00000ml of M6126 + 12.50000ml of M5497 + 12.50000ml of M5519 + 12.50000ml of M5768 + 12.50000ml of M5806 + 152.50000ml of W3112 + 2.50000ml of M6032 + 5.00000ml of M5298 + 5.00000ml of M6121 + 6.25000ml of M5816 + 6.25000ml of M5820 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1883	SE 10PPM	MP84317	02/02/2025	02/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Eman Mughal 02/05/2025

FROM 0.10000ml of M5962 + 9.90000ml of MP84042 = Final Quantity: 10.000 ml

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	04/20/2021 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	020422	02/04/2025	05/02/2023 / jaswal	06/15/2022 / jaswal	M5298

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	S2-MEB711244	10/20/2026	08/07/2024 / jaswal	04/01/2022 / jaswal	M5304

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	01/14/2025 / Jaswal	03/16/2023 / jaswal	M5472

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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	03/18/2023 / bin	03/17/2023 / bin	M5497

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	01/08/2024 / bin	01/03/2024 / bin	M5768

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.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	01/16/2025 / JANVI	02/22/2024 / Jaswal	M5977

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CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57092 / U, 1000 PPM, 125 ml	060724	06/07/2027	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5981

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5983

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-4 / SOIL/WATER SPIKE SOLN 4, 125mL	V2-MEB742036	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/08/2025	08/09/2024 / jaswal	08/01/2024 / Janvi	M6040

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	U2-MEB734294	06/21/2028	08/21/2024 / Jaswal	08/19/2024 / Jaswal	M6055

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

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:

836

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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M6032

R 8/5/24

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840

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		

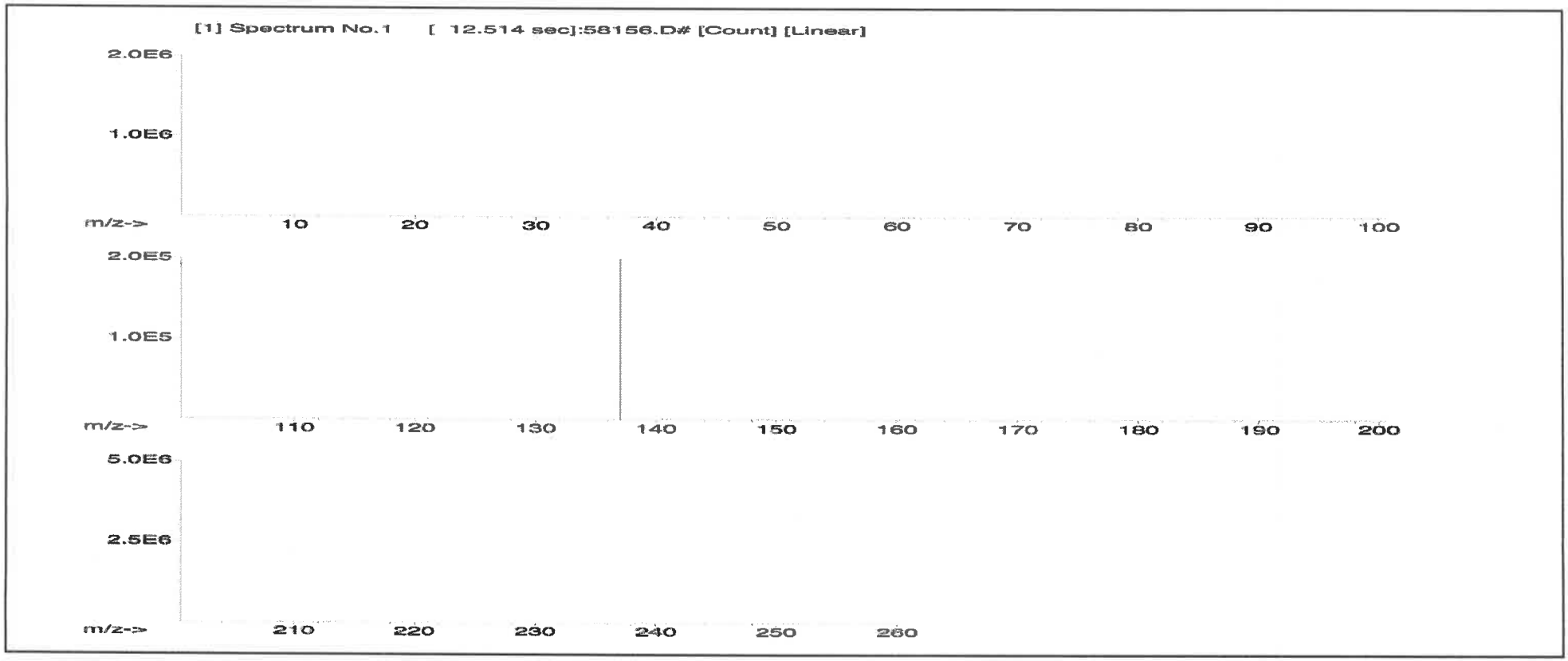
Giovanni Esposito

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



841

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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R 8/5/24

M6028

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842

CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

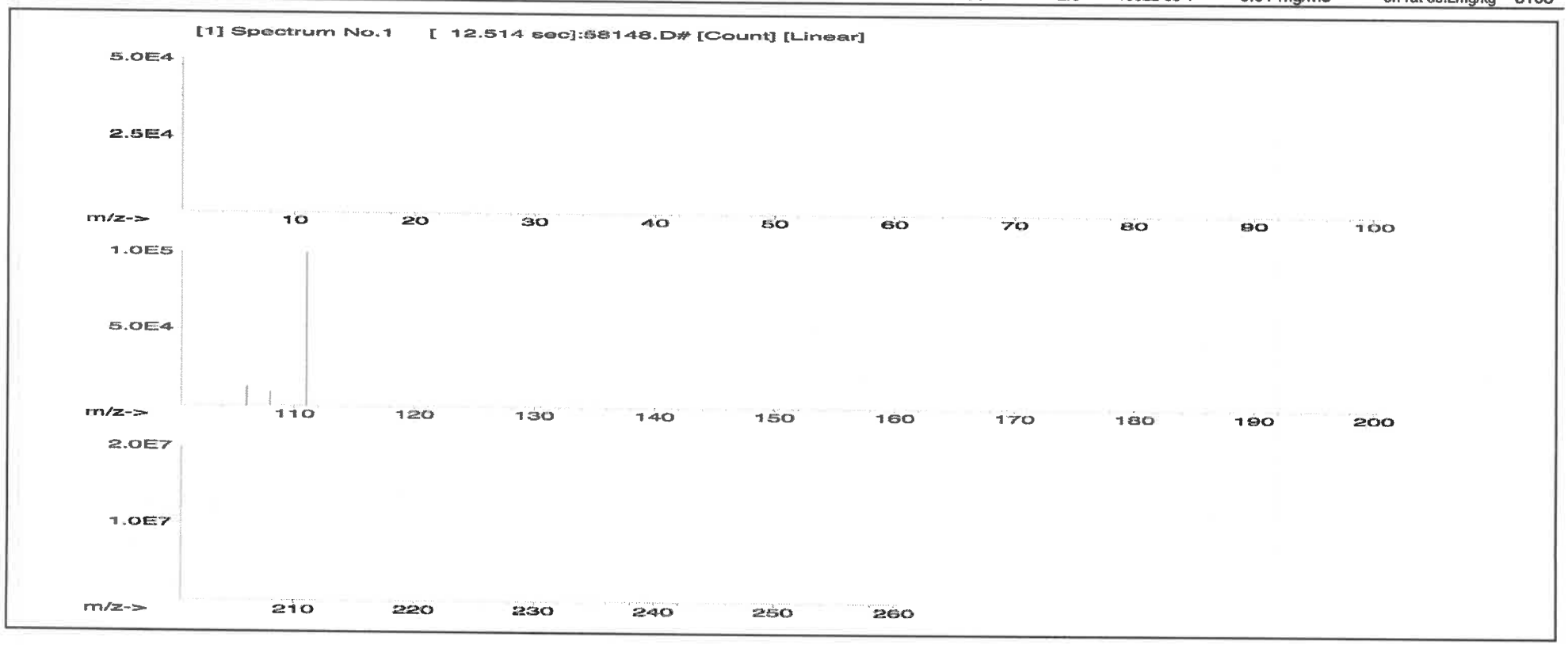
Aleah O'Brady

Formulated By:	Aleah O'Brady	070124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



843

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 8/5/24 M6025

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844

CERTIFIED WEIGHT REPORT:

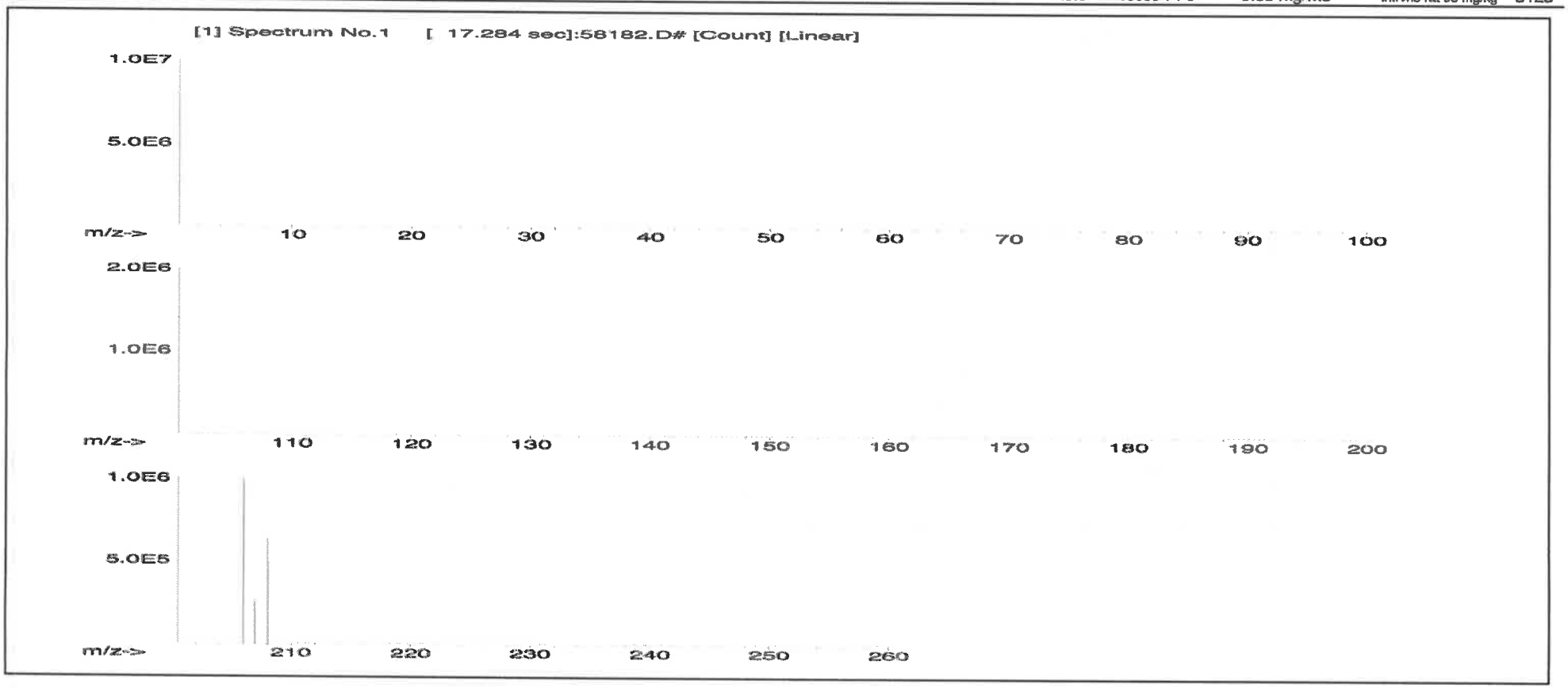
Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



845

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).

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Certified Reference Material CRM

M5288 R: 07/21/2022

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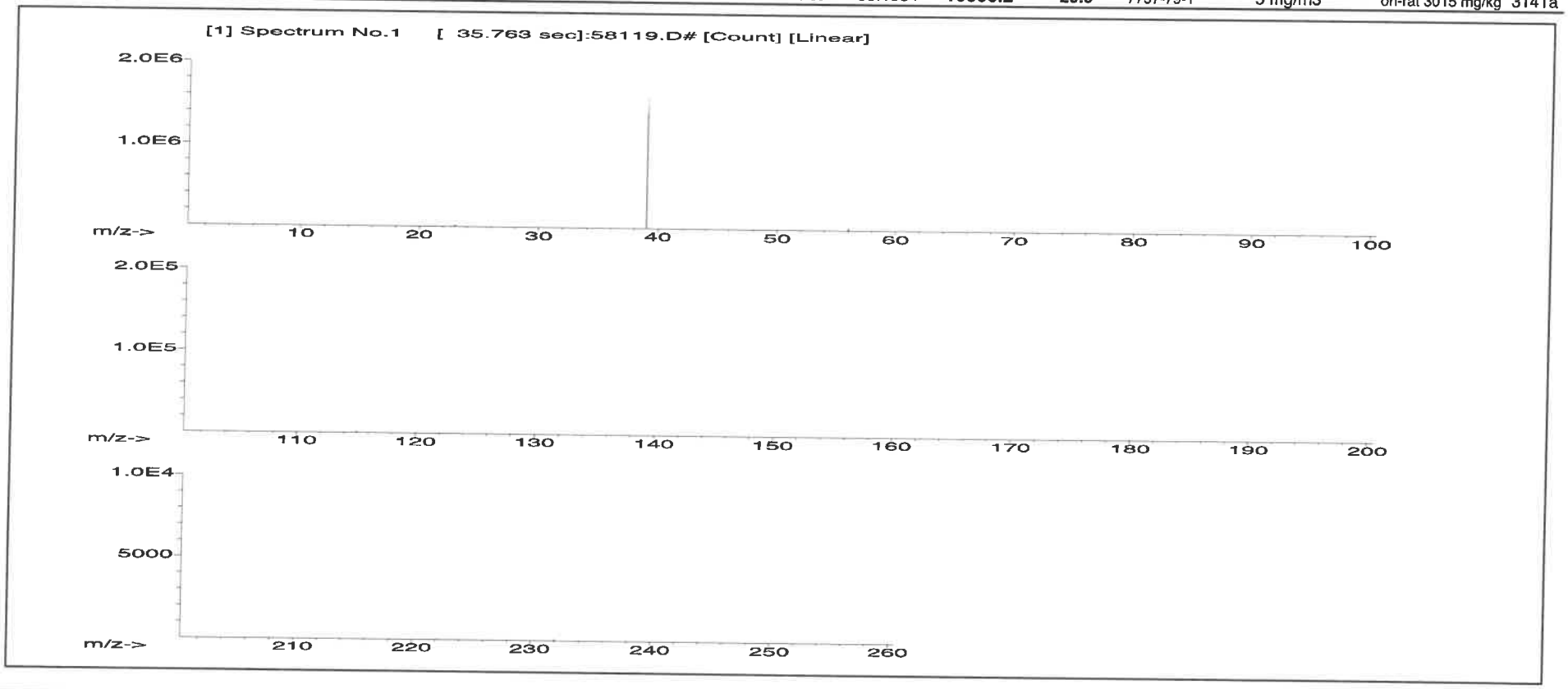
8469

CERTIFIED WEIGHT REPORT:

Part Number:	**58119**		**Lot #**		
Lot Number:	**071122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Potassium (K)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	071125				
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	071122
Reviewed By:	Pedro L. Rentas	071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5289 R: 07/12/22 BH

Certified Reference Material CRM

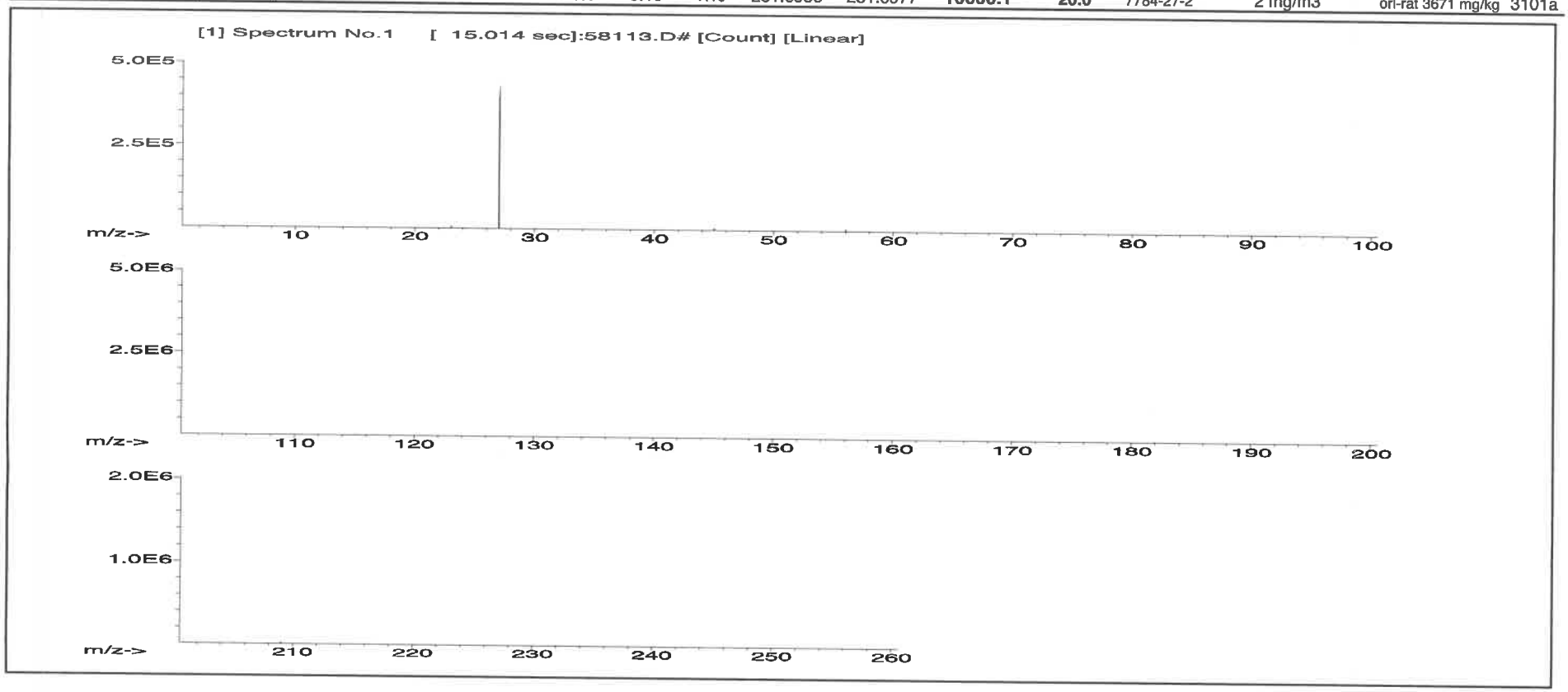
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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).

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

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

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

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

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

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

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

SJ 6/15/22

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www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

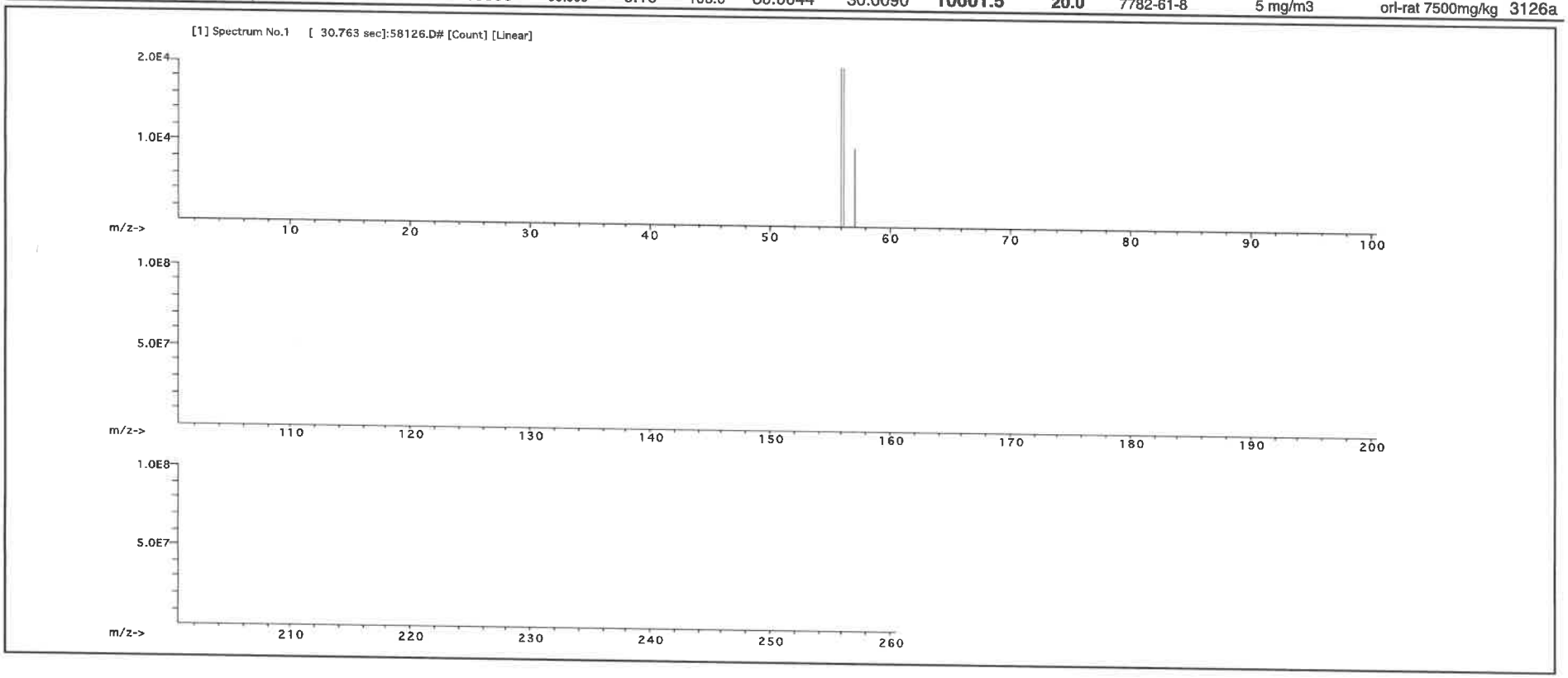
Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20370011	Nitric Acid	
5.0%	150.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	020422
Reviewed By:	Pedro L. Rentas	020422

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN346	221035107	10000	99.999	0.10	100.0	30.0044	30.0090	**10001.5**	**20.0**	7782-61-8	5 mg/m3	orl-rat 7500mg/kg	3126a



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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	<0.5	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020CAL-1
Lot Number:	S2-MEB711244
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	20 µg/mL ea:

Silver,	Aluminum,
Arsenic,	Barium,
Beryllium,	Calcium,
Cadmium,	Cobalt,
Chromium,	Copper,
Iron,	Potassium,
Magnesium,	Manganese,
Sodium,	Nickel,
Lead,	Antimony,
Selenium,	Thallium,
Vanadium,	Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**20.01 ± 0.08 µg/mL**	**Antimony, Sb**	**20.01 ± 0.12 µg/mL**
Arsenic, As	**20.01 ± 0.18 µg/mL**	**Barium, Ba**	**20.01 ± 0.11 µg/mL**
Beryllium, Be	**20.01 ± 0.14 µg/mL**	**Cadmium, Cd**	**20.01 ± 0.11 µg/mL**
Calcium, Ca	**20.01 ± 0.10 µg/mL**	**Chromium, Cr**	**20.01 ± 0.16 µg/mL**
Cobalt, Co	**20.01 ± 0.11 µg/mL**	**Copper, Cu**	**20.01 ± 0.10 µg/mL**
Iron, Fe	**20.01 ± 0.09 µg/mL**	**Lead, Pb**	**20.01 ± 0.11 µg/mL**
Magnesium, Mg	**19.99 ± 0.10 µg/mL**	**Manganese, Mn**	**20.01 ± 0.10 µg/mL**
Nickel, Ni	**20.01 ± 0.11 µg/mL**	**Potassium, K**	**20.01 ± 0.10 µg/mL**
Selenium, Se	**20.02 ± 0.14 µg/mL**	**Silver, Ag**	**20.02 ± 0.09 µg/mL**
Sodium, Na	**20.01 ± 0.10 µg/mL**	**Thallium, Tl**	**20.01 ± 0.13 µg/mL**
Vanadium, V	**20.01 ± 0.11 µg/mL**	**Zinc, Zn**	**20.01 ± 0.11 µg/mL**

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 20, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 20, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5496 R 7/20/23

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

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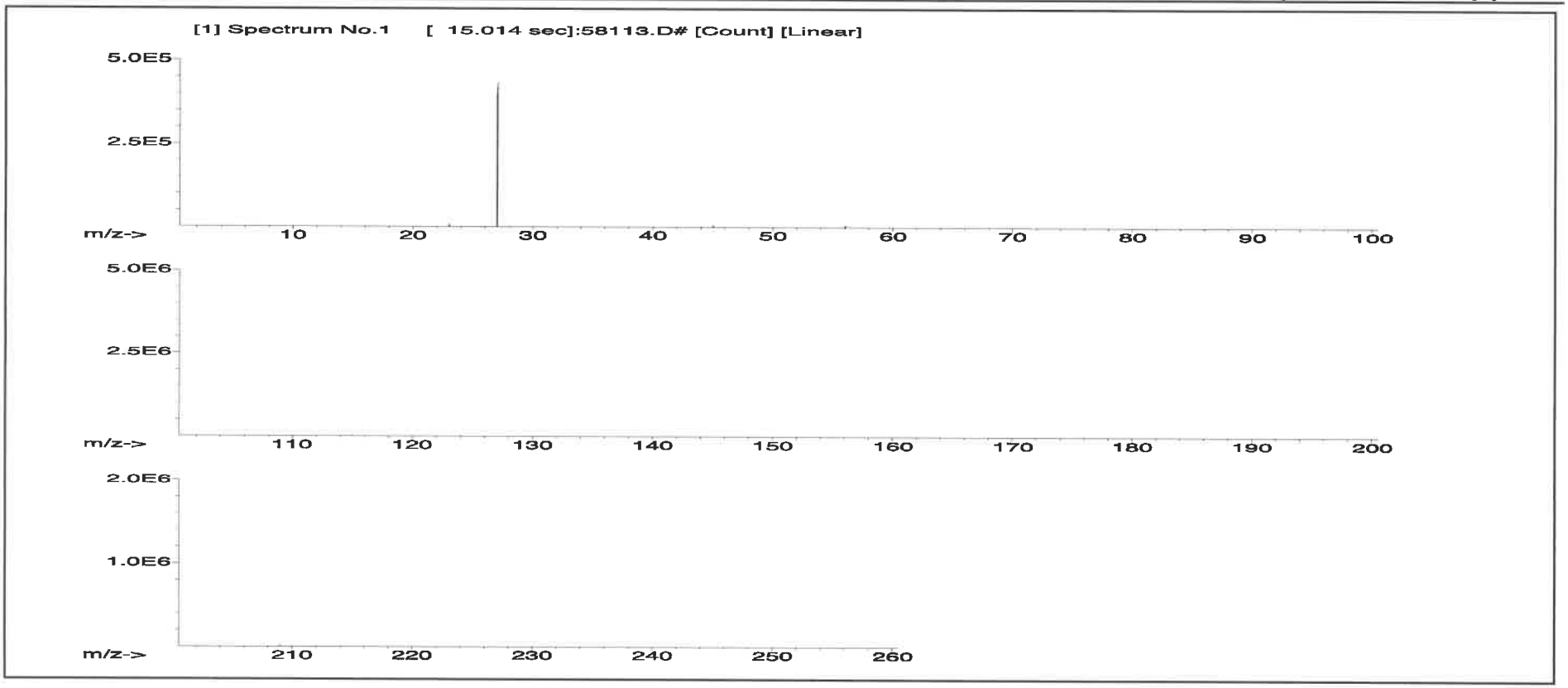
CERTIFIED WEIGHT REPORT:

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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M5497 - M5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

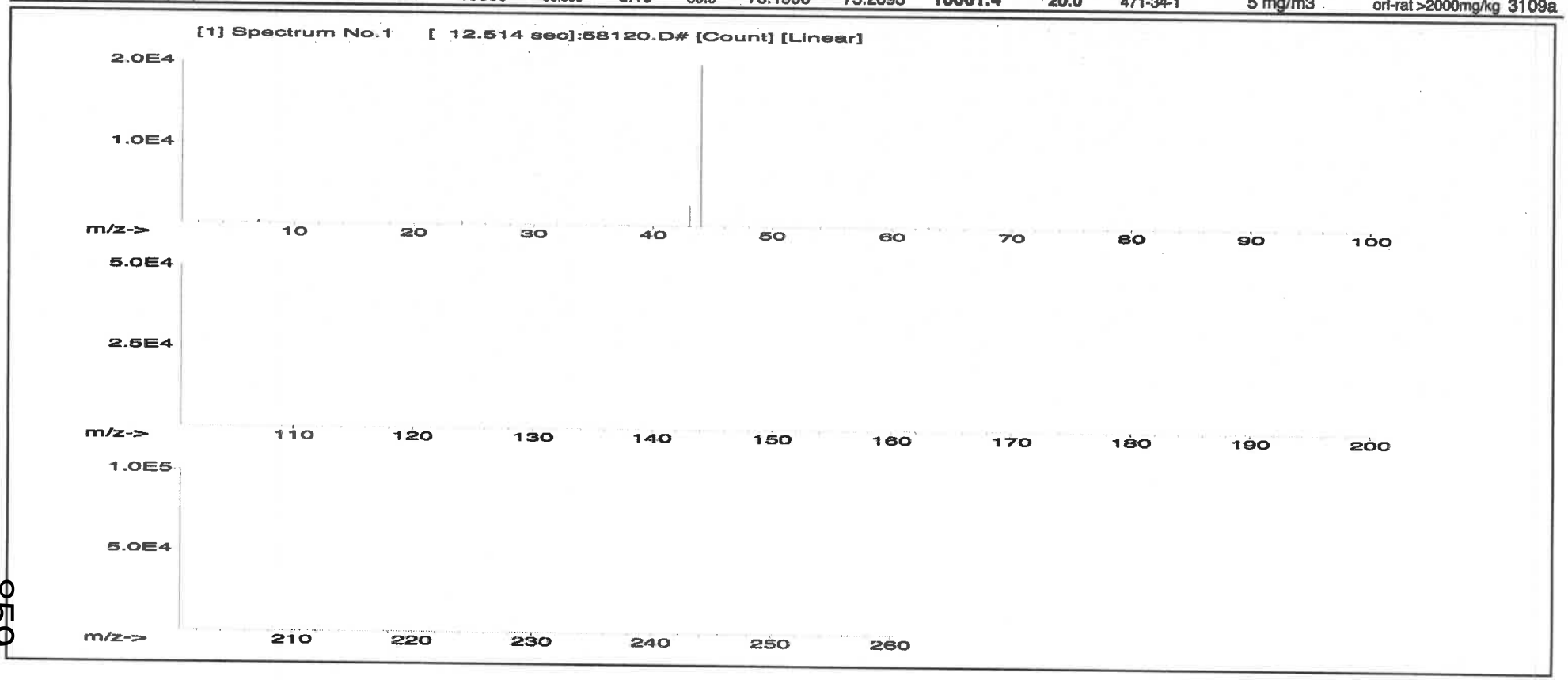
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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
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



859

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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M5497 - M5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

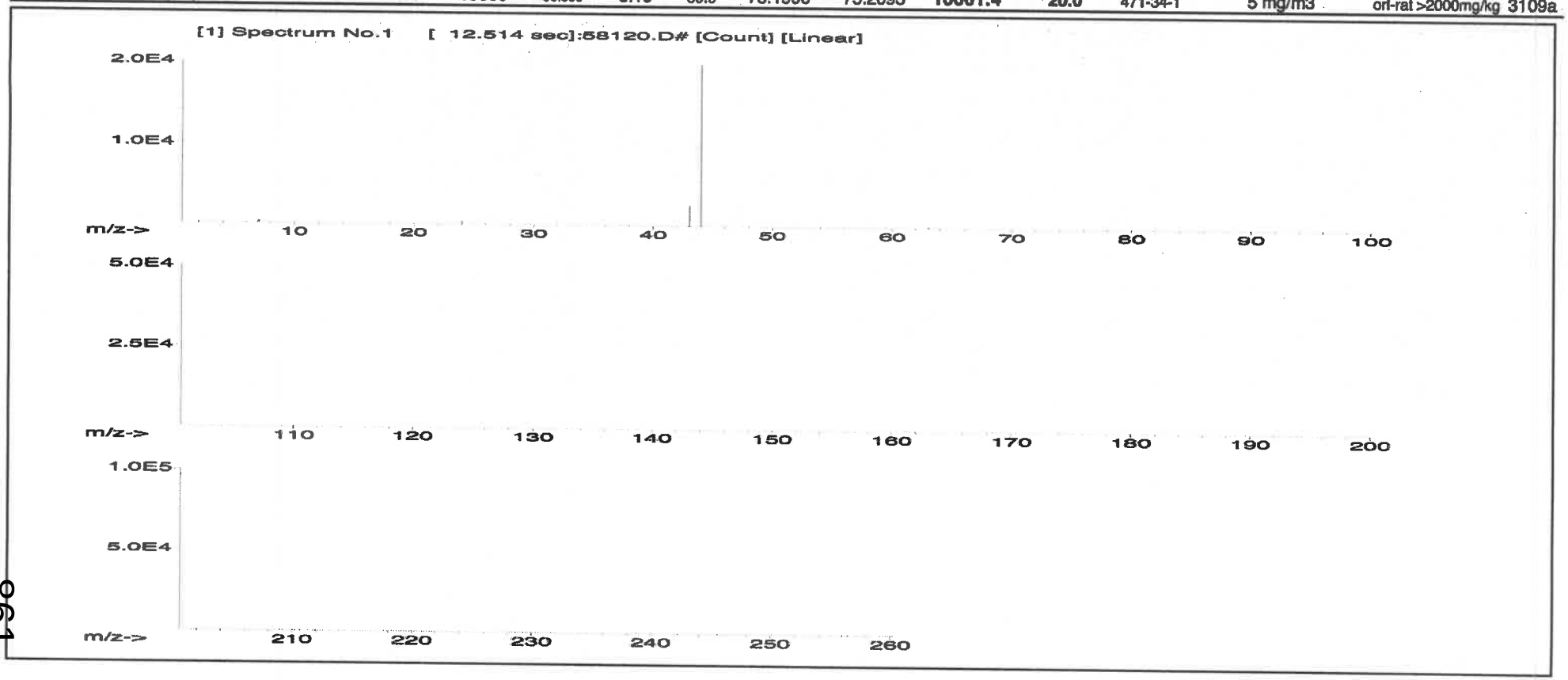
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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



861

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.
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* 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).

8092

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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

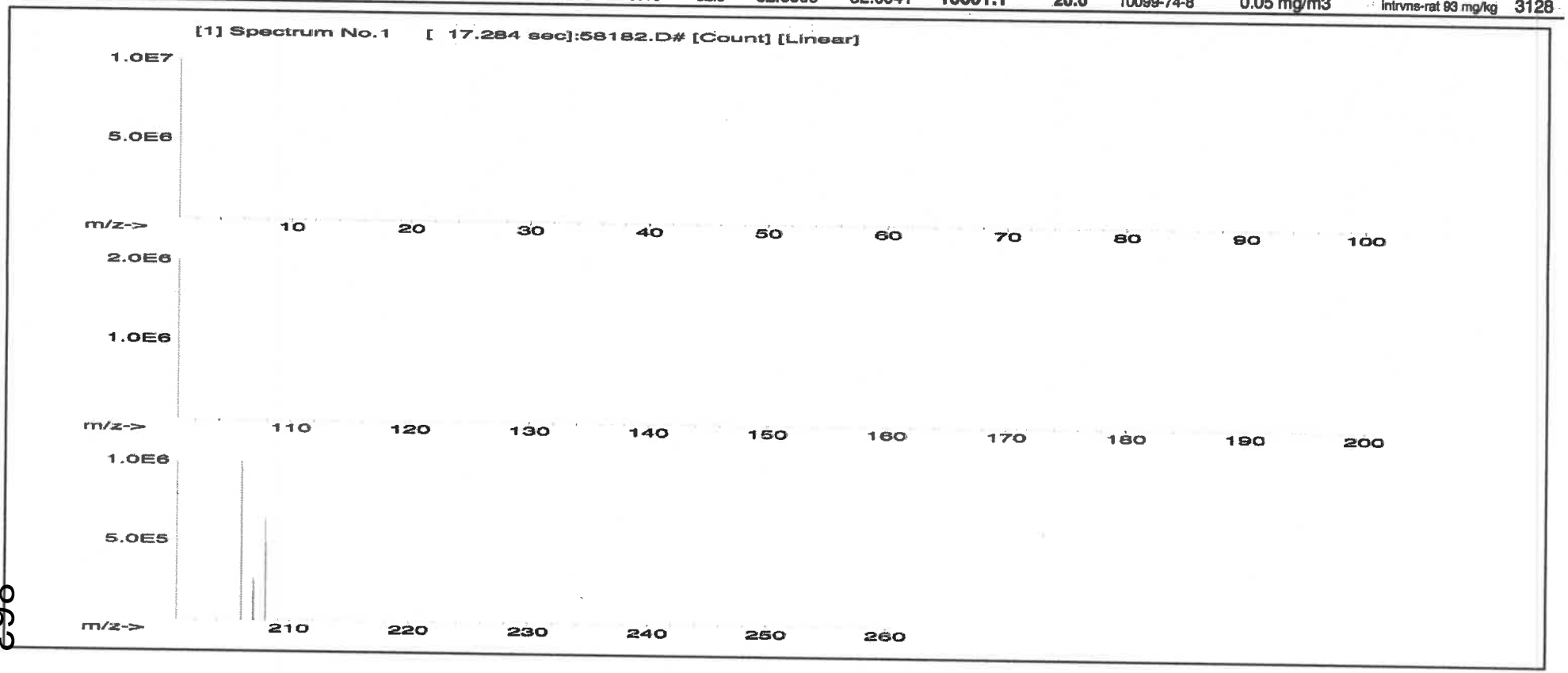
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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



863

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.

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M5519. M5520 (BH) R:03/17/23

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865

CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

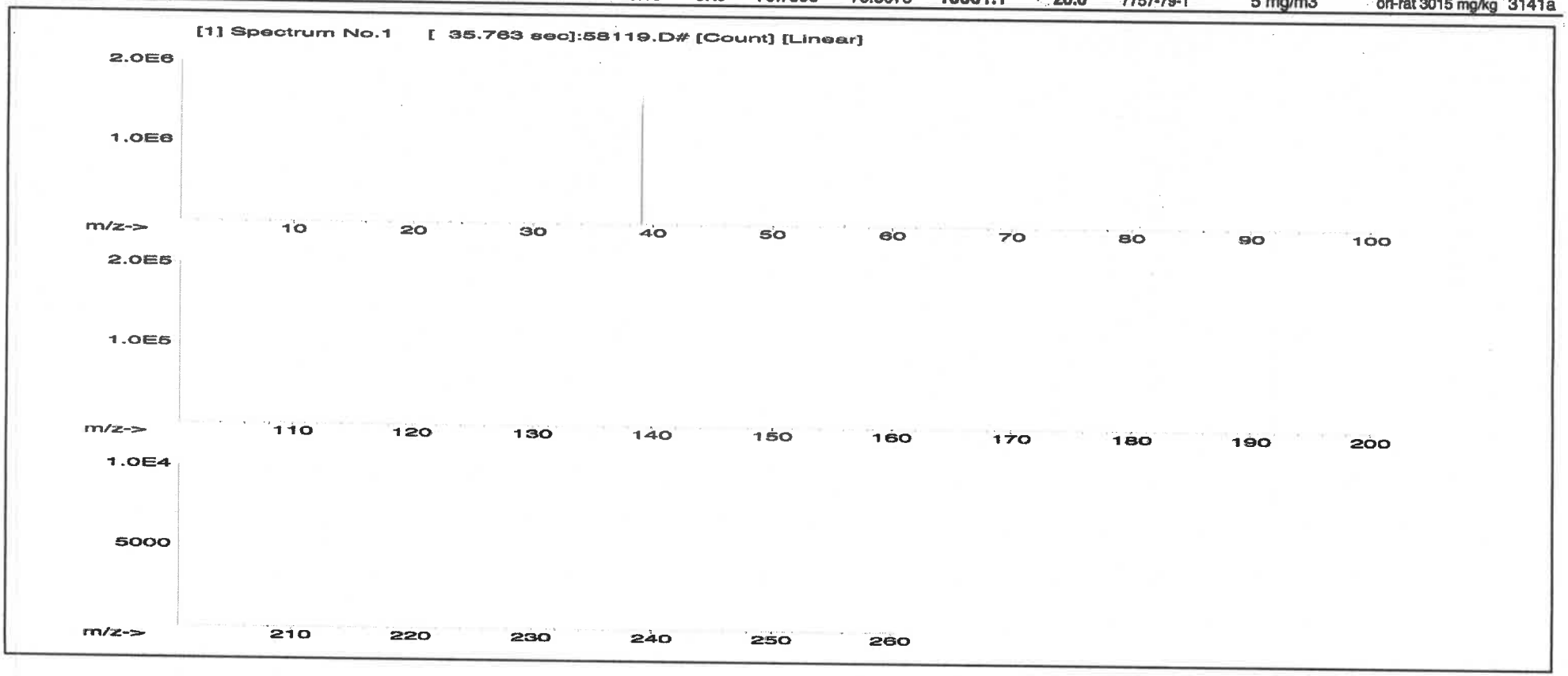
Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

	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



998

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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5658 R! 8/25/23

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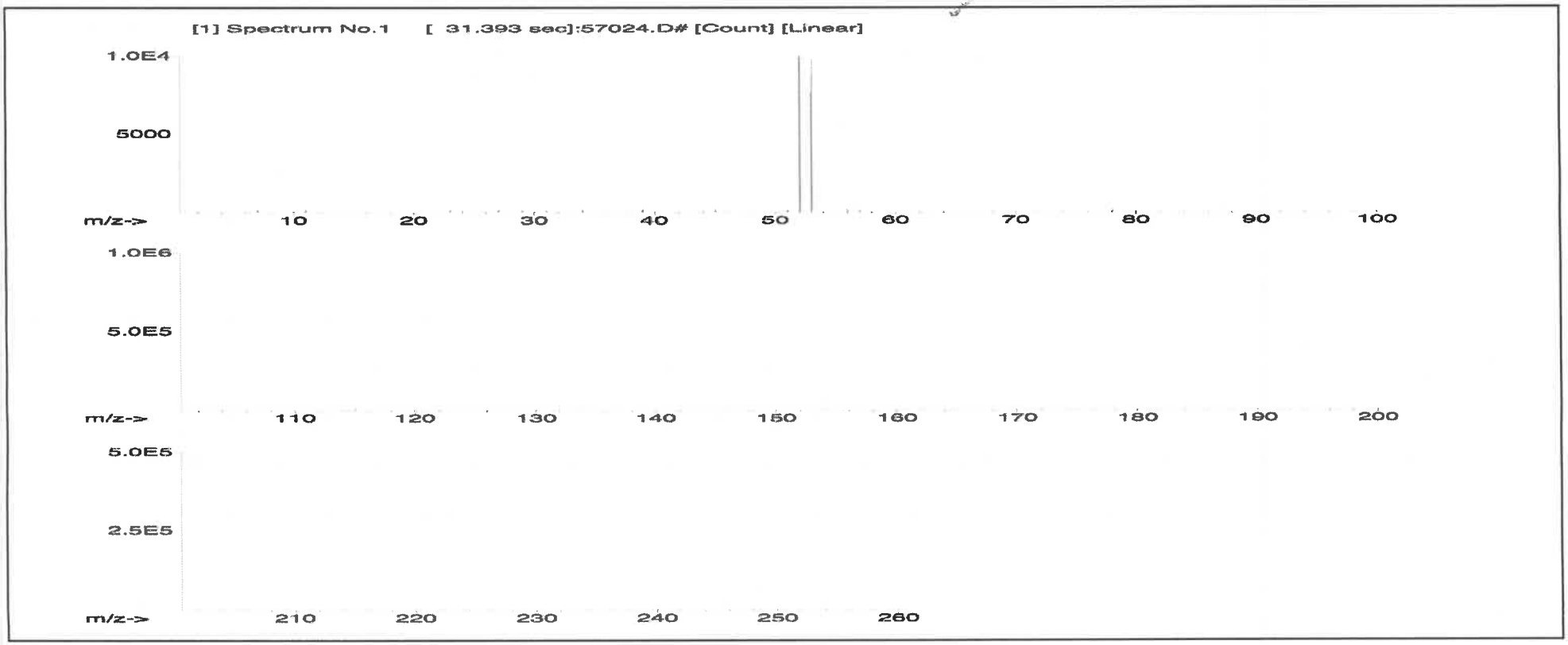
867

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



868

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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* 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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M5697 R: 10/27/23

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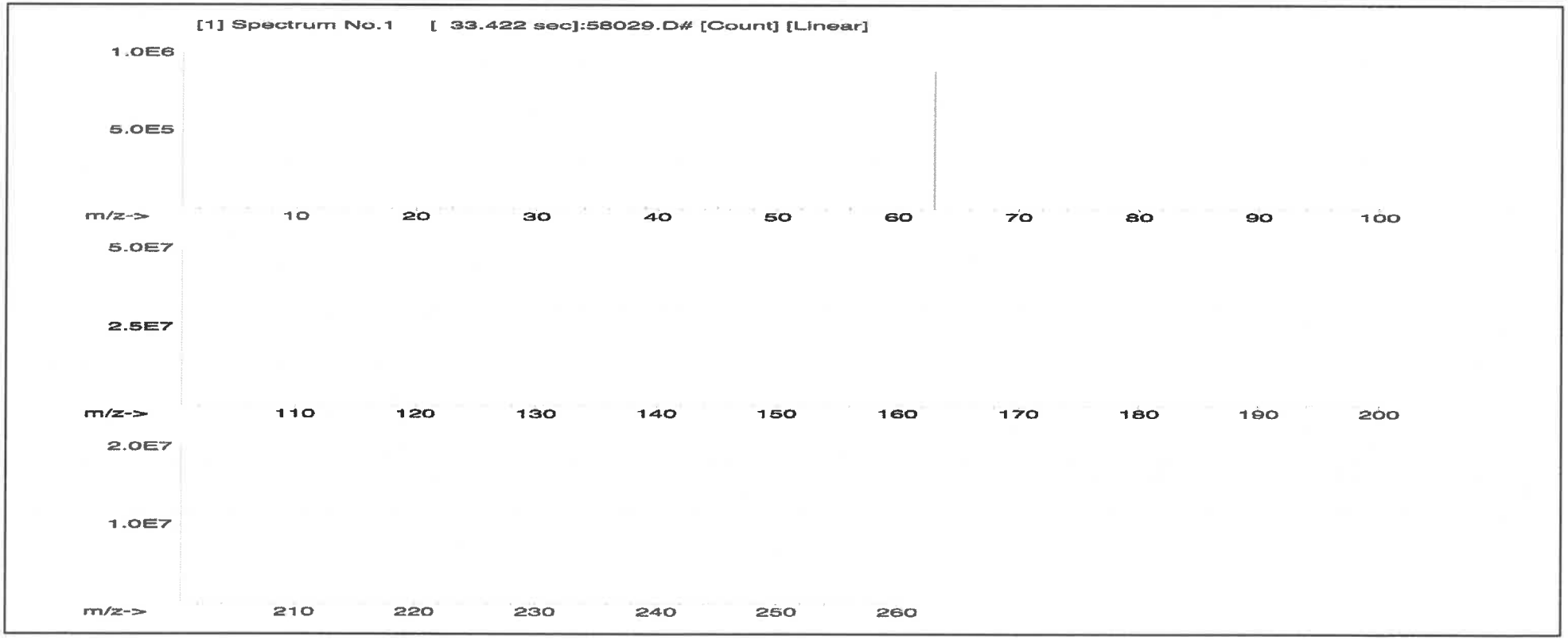
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

698

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



870

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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).

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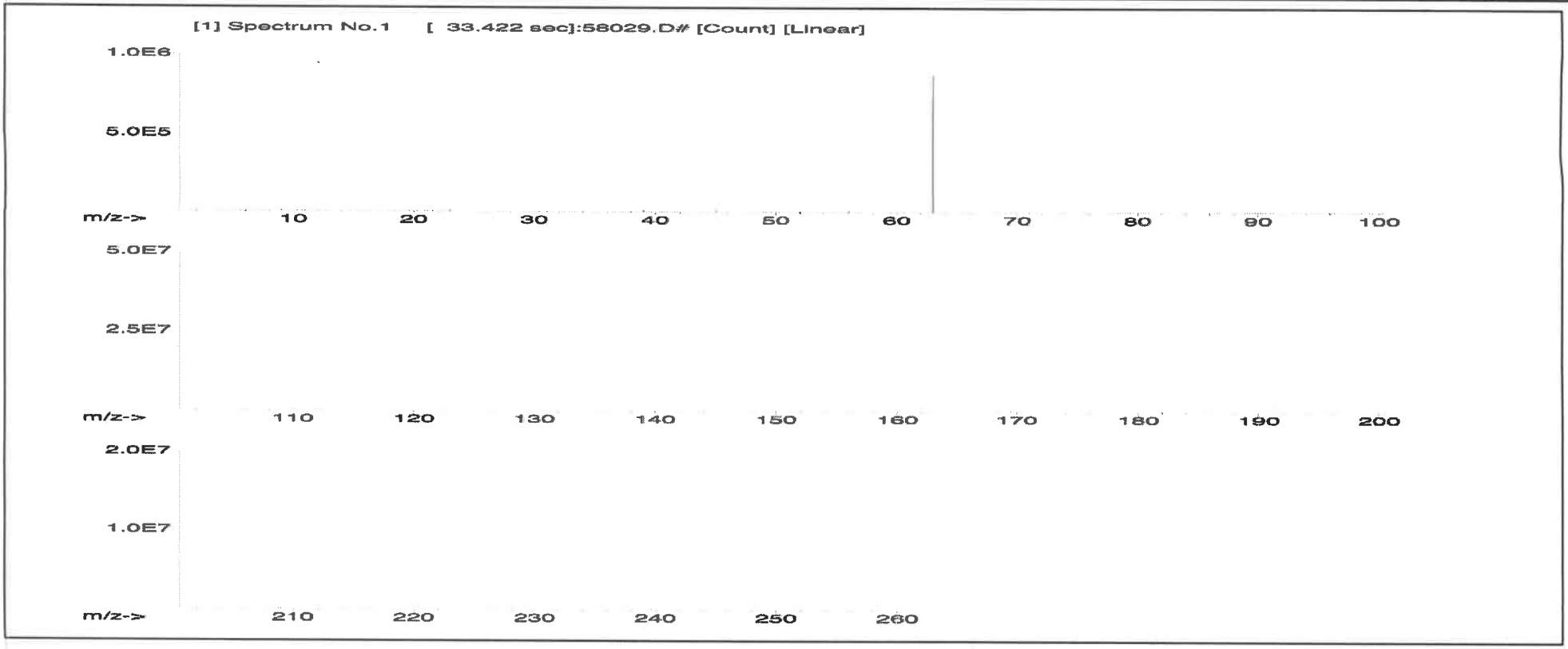
871

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



872

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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* 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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M5768 M5769 (BP) R:1/3/24

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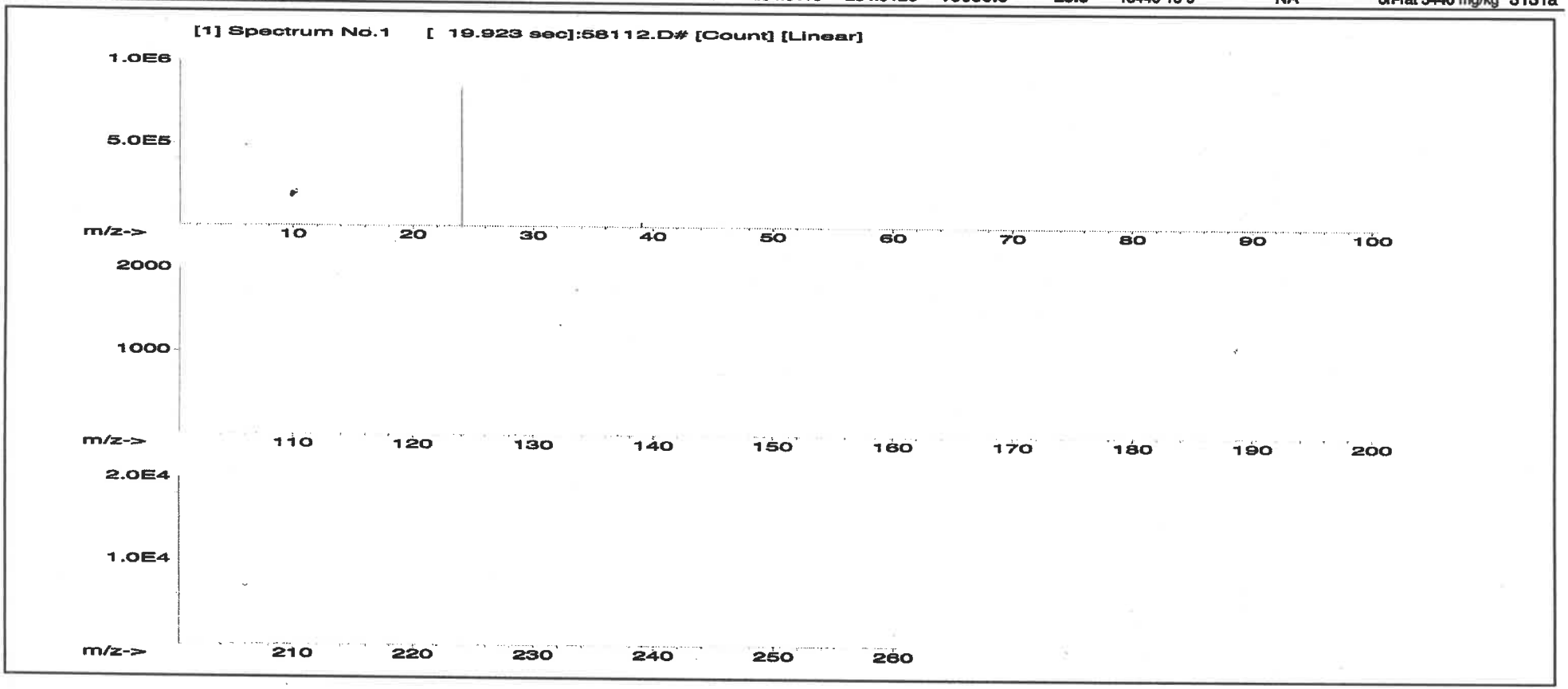
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58112**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**091823**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	091826			
Recommended Storage:	Ambient (20 °C)	M5768, M5769 (BP) R: 1/3/24		
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	091823
Reviewed By:	Pedro L. Rentas	091823

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	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



874

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:

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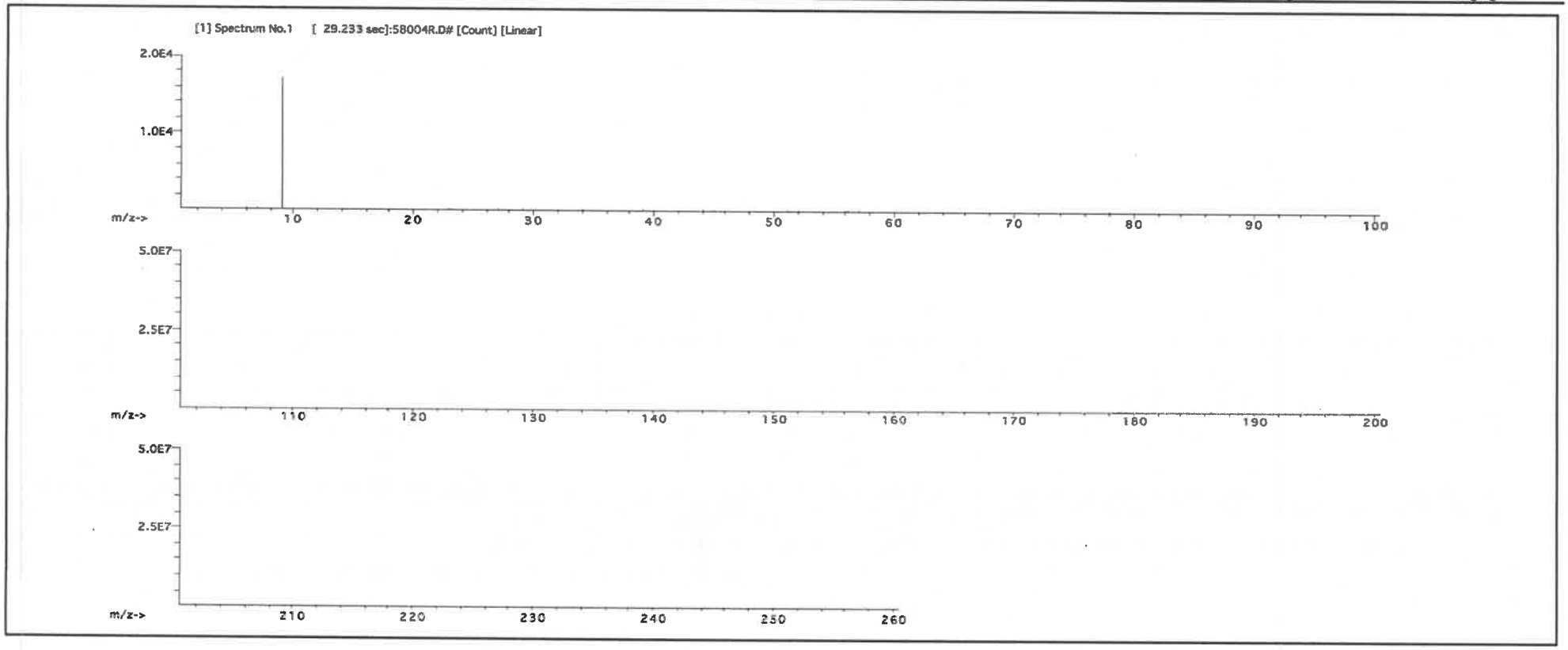
875

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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877

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

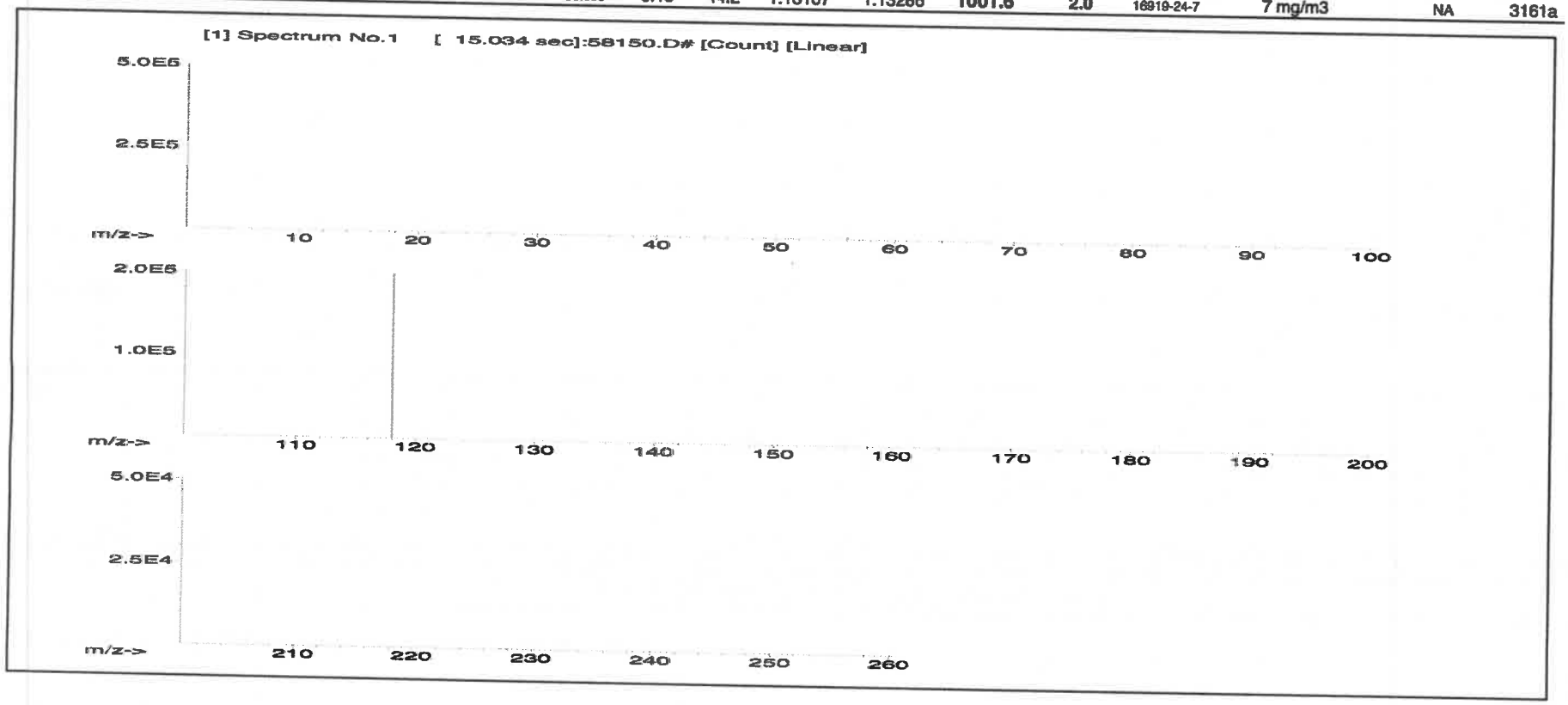
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



878

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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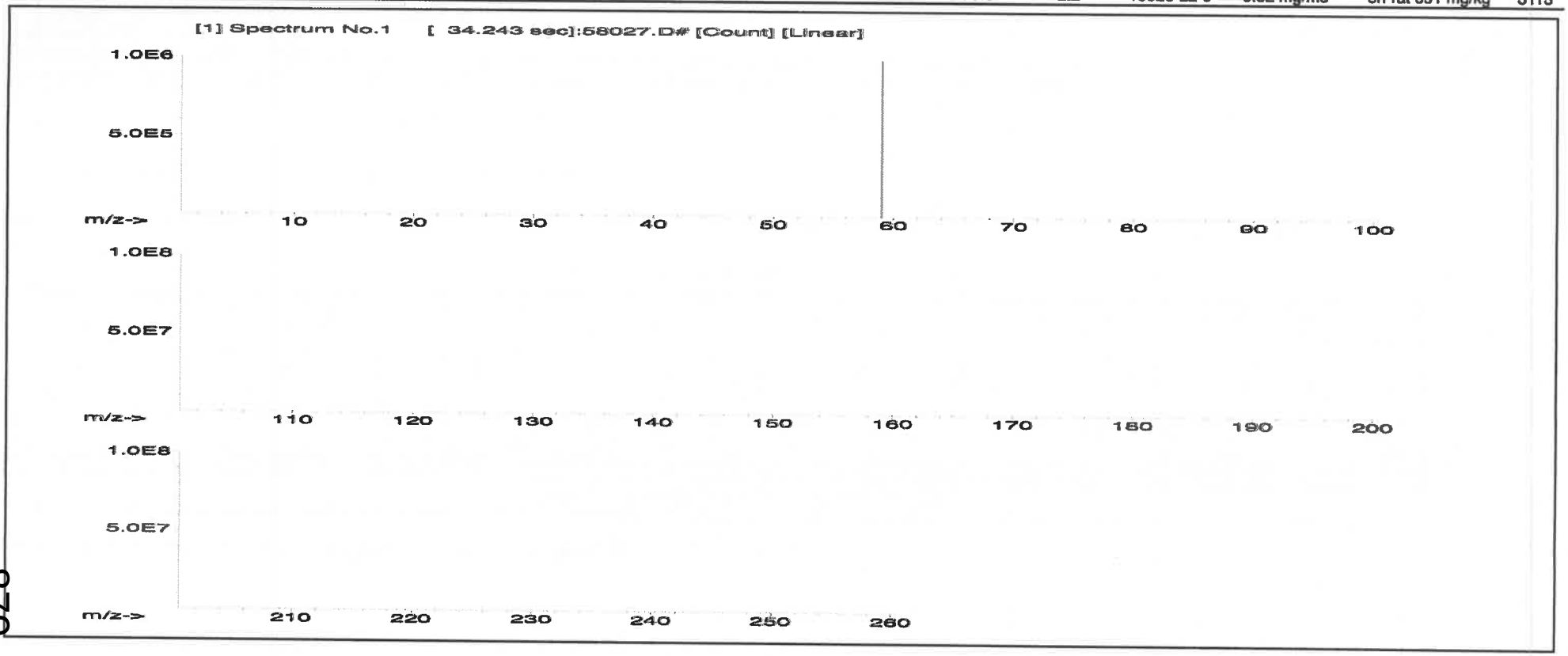
CERTIFIED WEIGHT REPORT:

		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



879

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.

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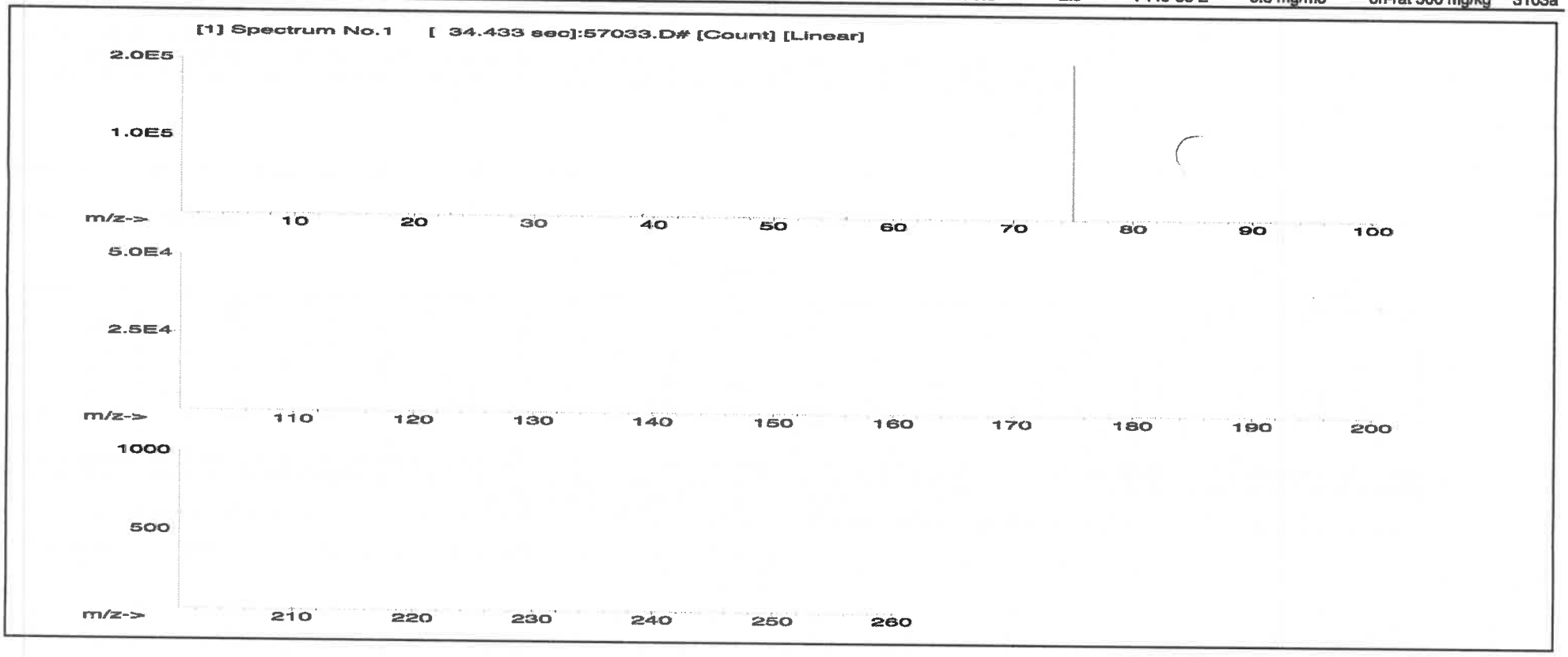
CERTIFIED **WEIGHT** REPORT:

		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



882

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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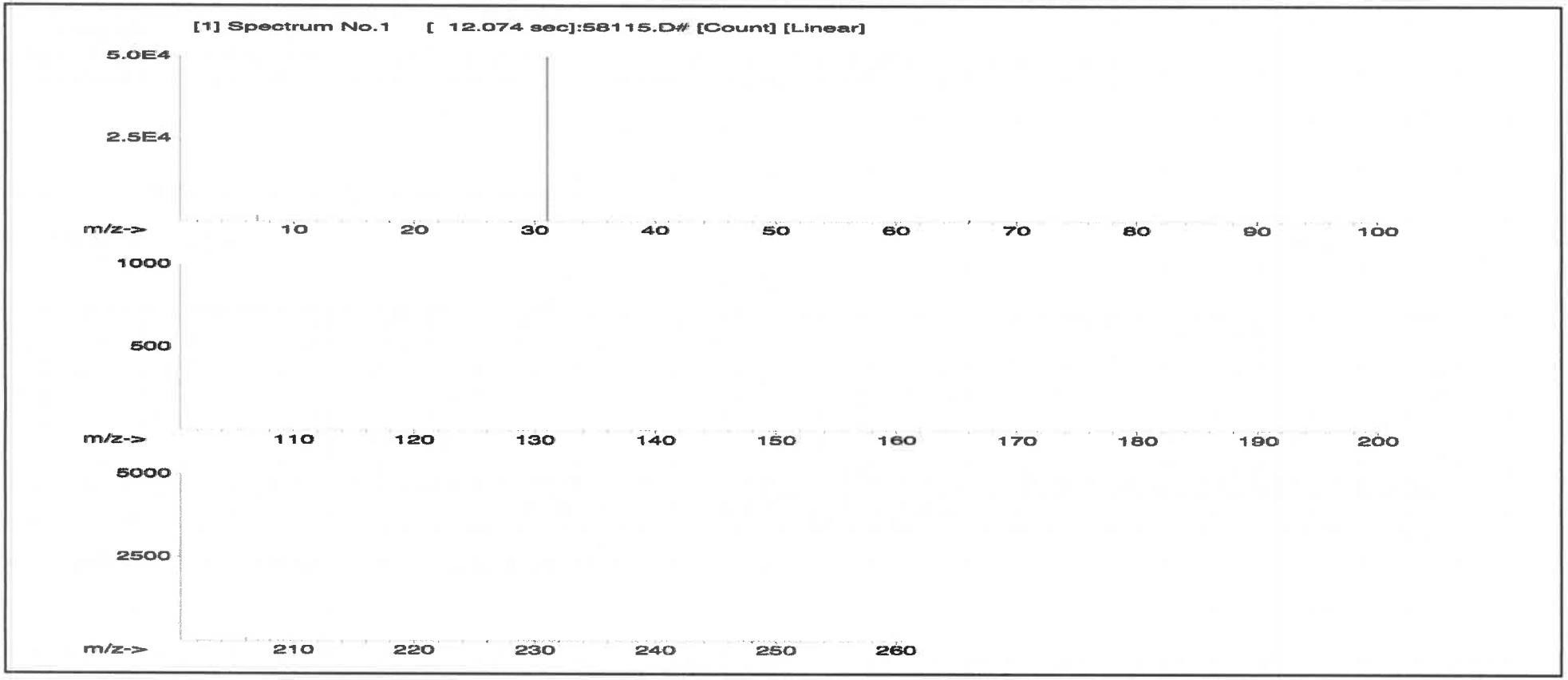
883

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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* 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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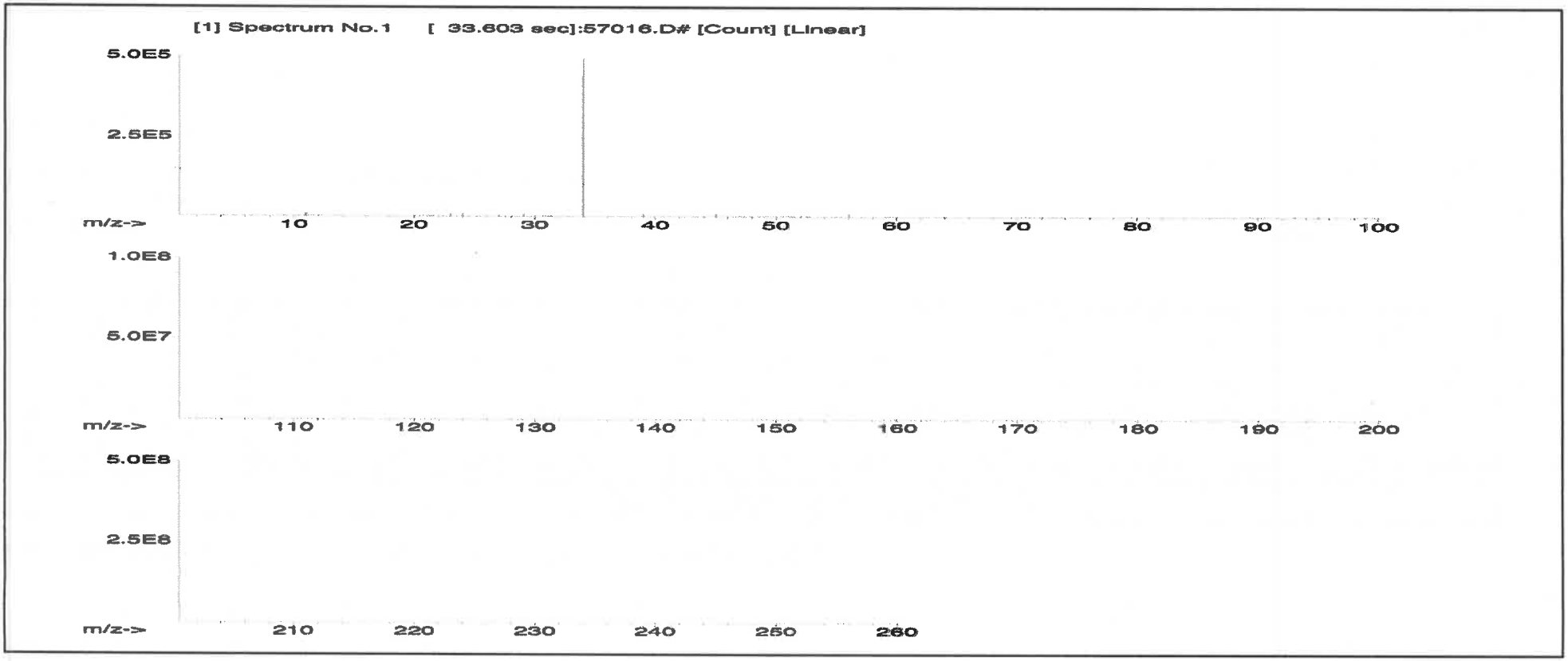
885

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



886

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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887

CERTIFIED WEIGHT REPORT:

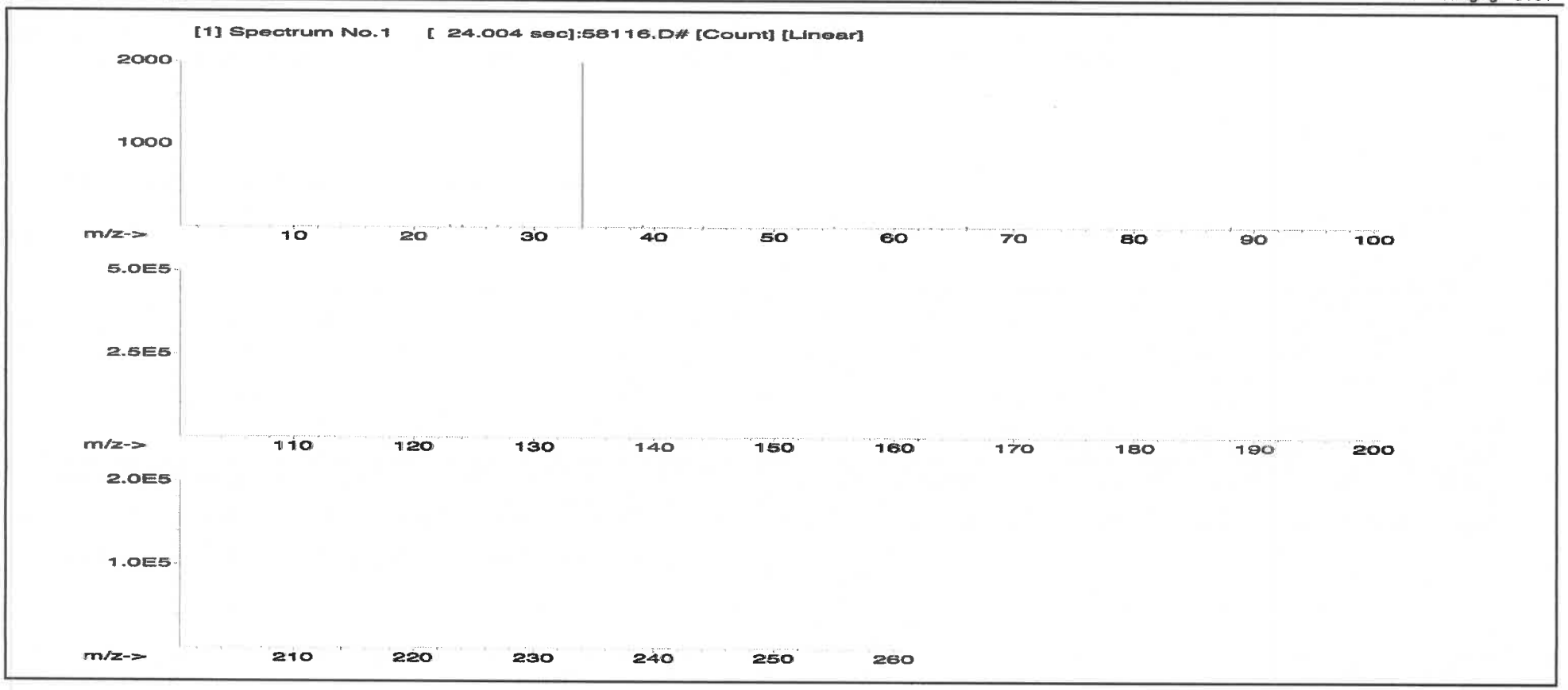
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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



888

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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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

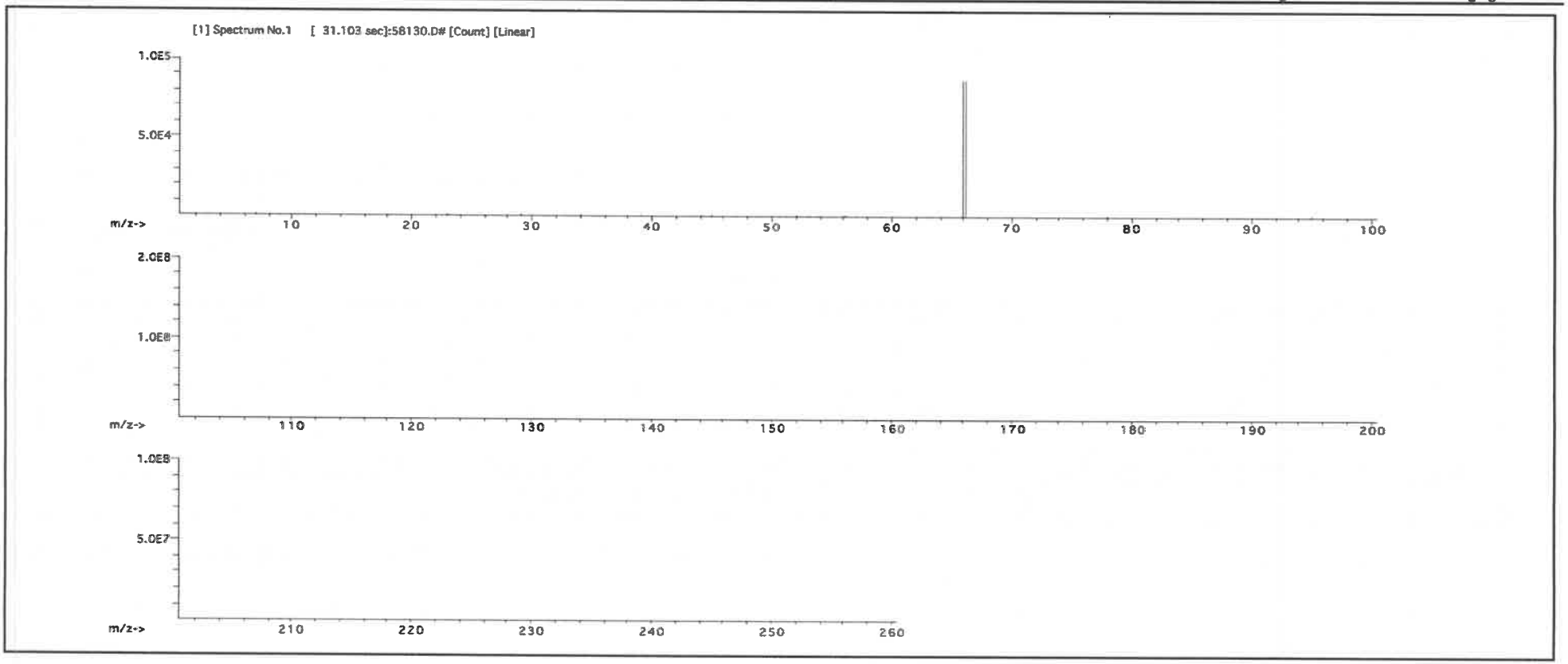
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

688

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



890

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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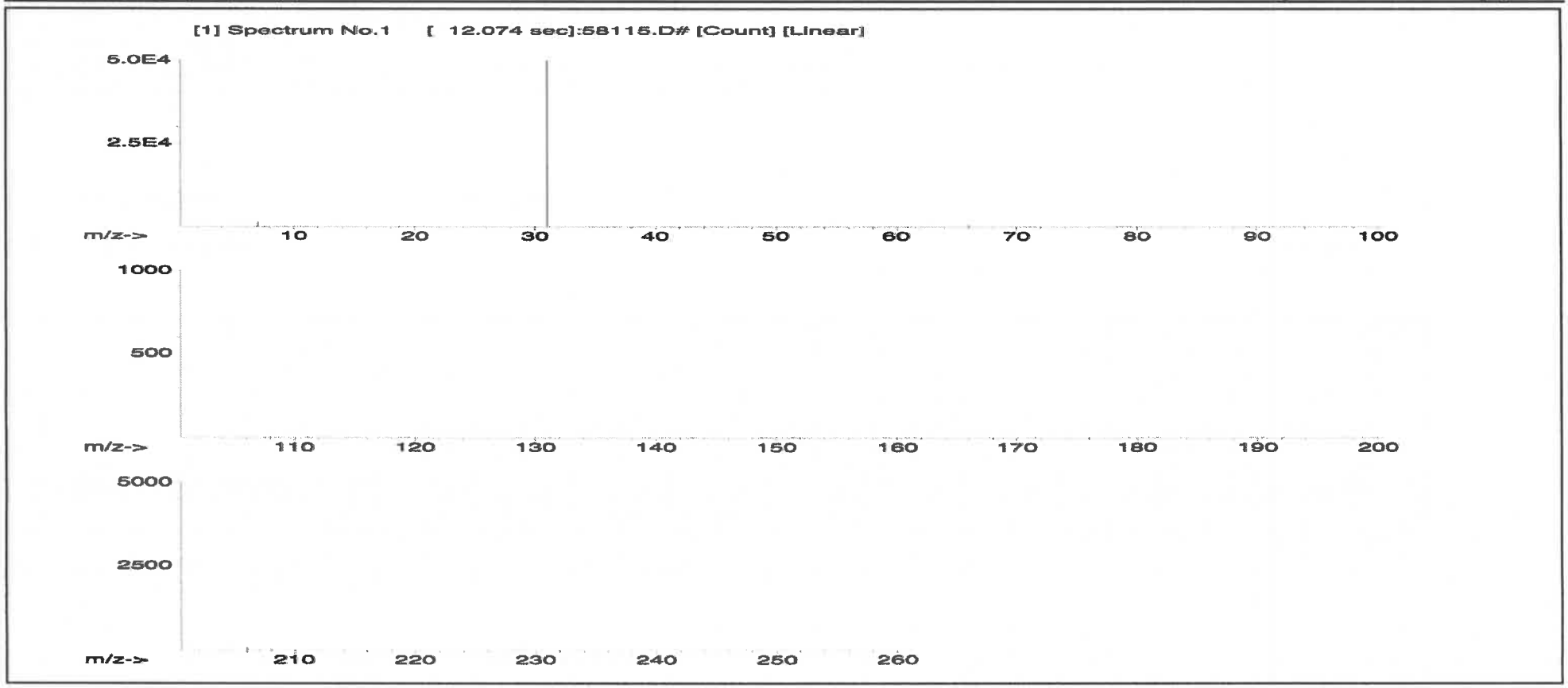
891

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



892

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:

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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

M5960 KK R. 6/11/24

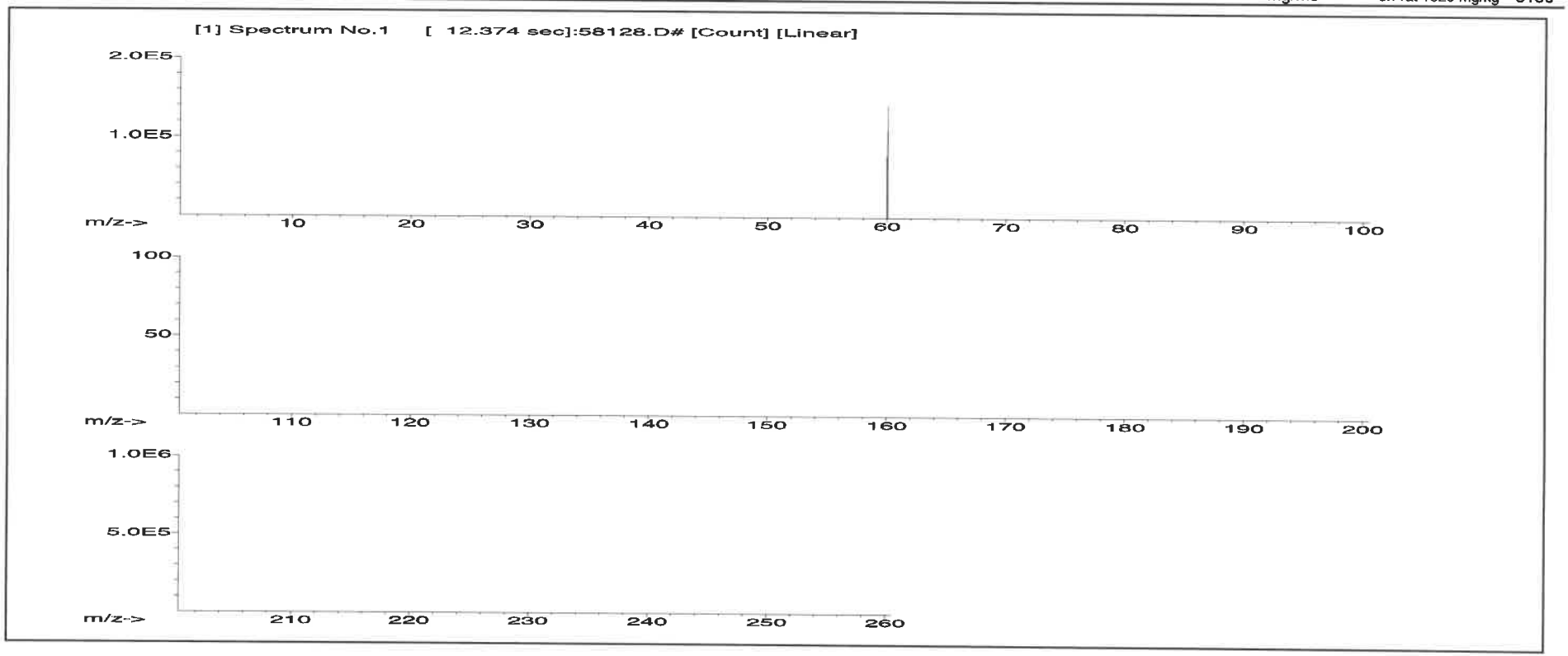
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

M5961 R: 6/11/24

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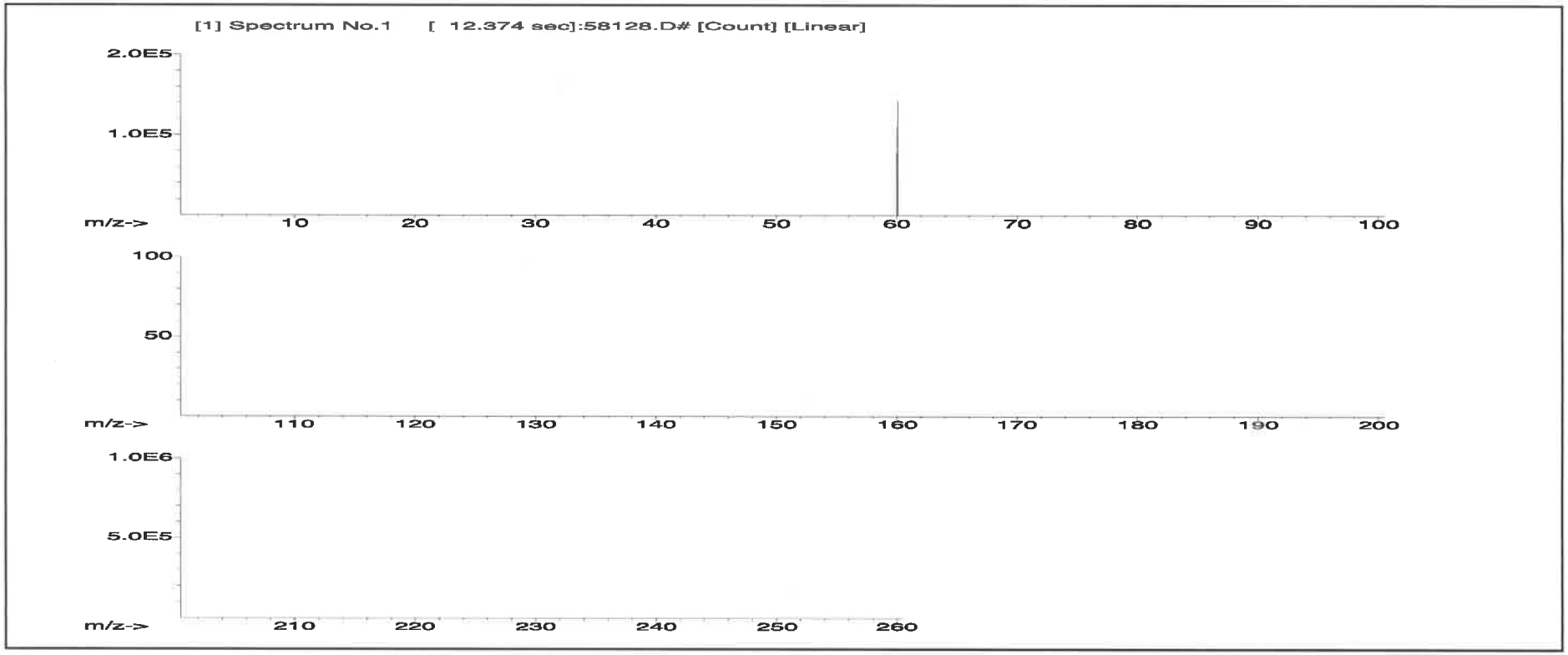
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57028**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**041124**			
Description:	**Nickel (Ni)**			
		2%	5.0 (mL)	Nitric Acid
Expiration Date:	041127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	249.85	0.002	Flask Uncertainty	

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



900

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5962 R! 06/14/24.

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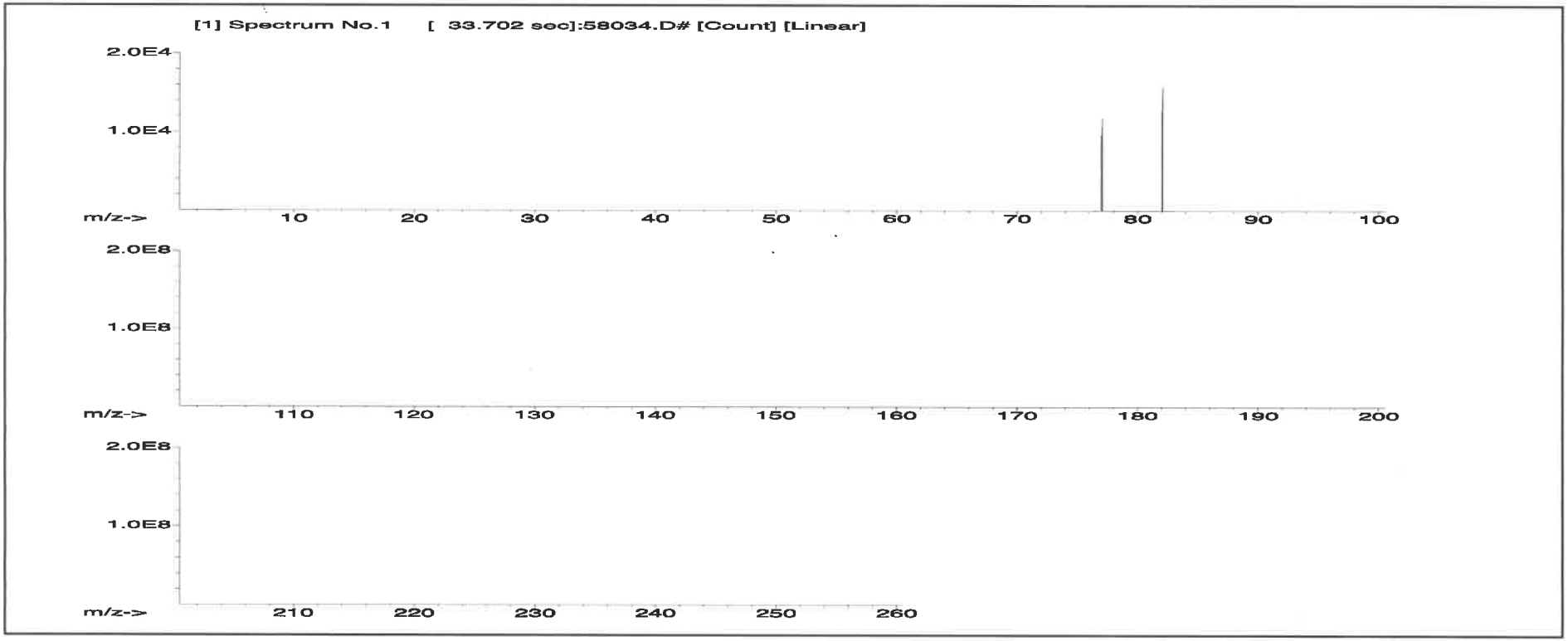
CERTIFIED WEIGHT REPORT:

		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



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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	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.
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Certificate of Analysis

M5976, M5977
R: 02/22/24

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1.0 ACCREDITATION / REGISTRATION

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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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 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

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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

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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.

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

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M5978, M5979

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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:	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:

$X_{CRM/RM} = \Sigma(w_i)(\bar{x}_i)$

$\bar{x}_i$ = 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:

$X_{CRM/RM} = (\bar{x}_a)\,(u_{char\ a})$

$\bar{x}_a$ = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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		

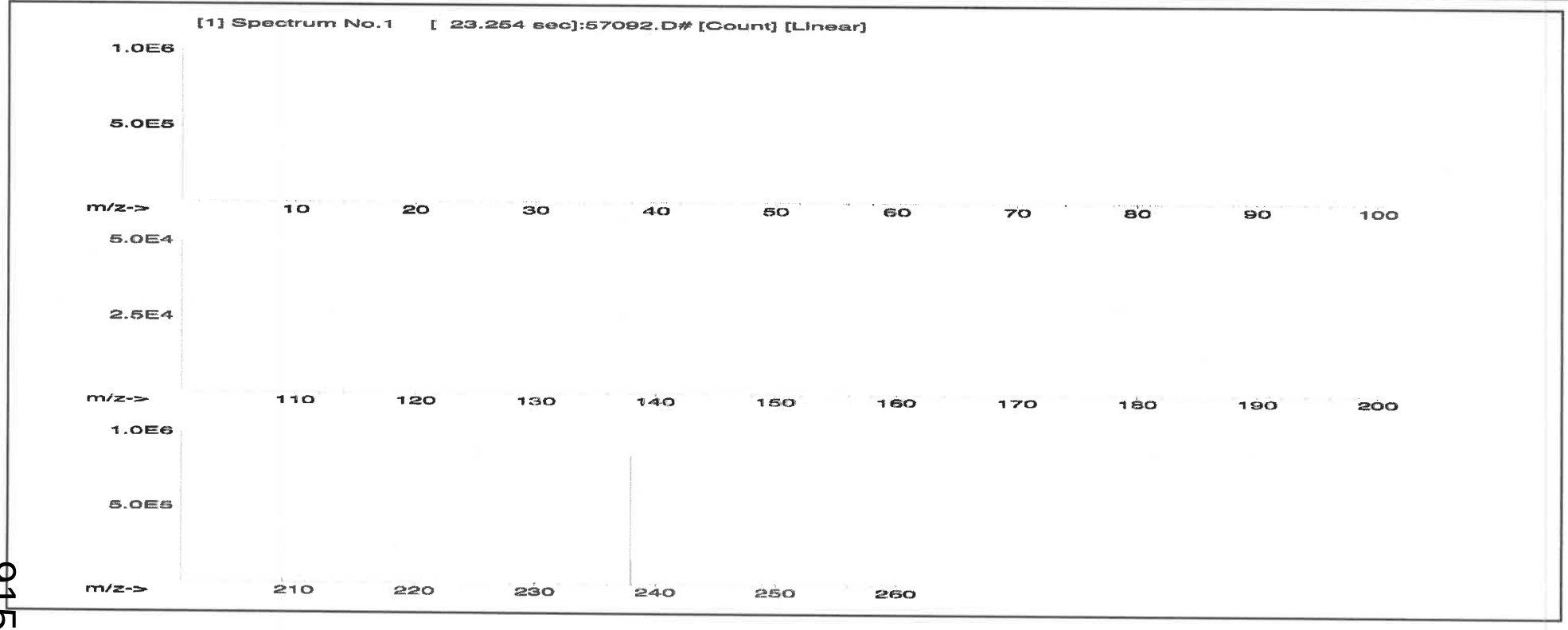
Giovanni Esposito

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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Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5983 R: 6/11/24

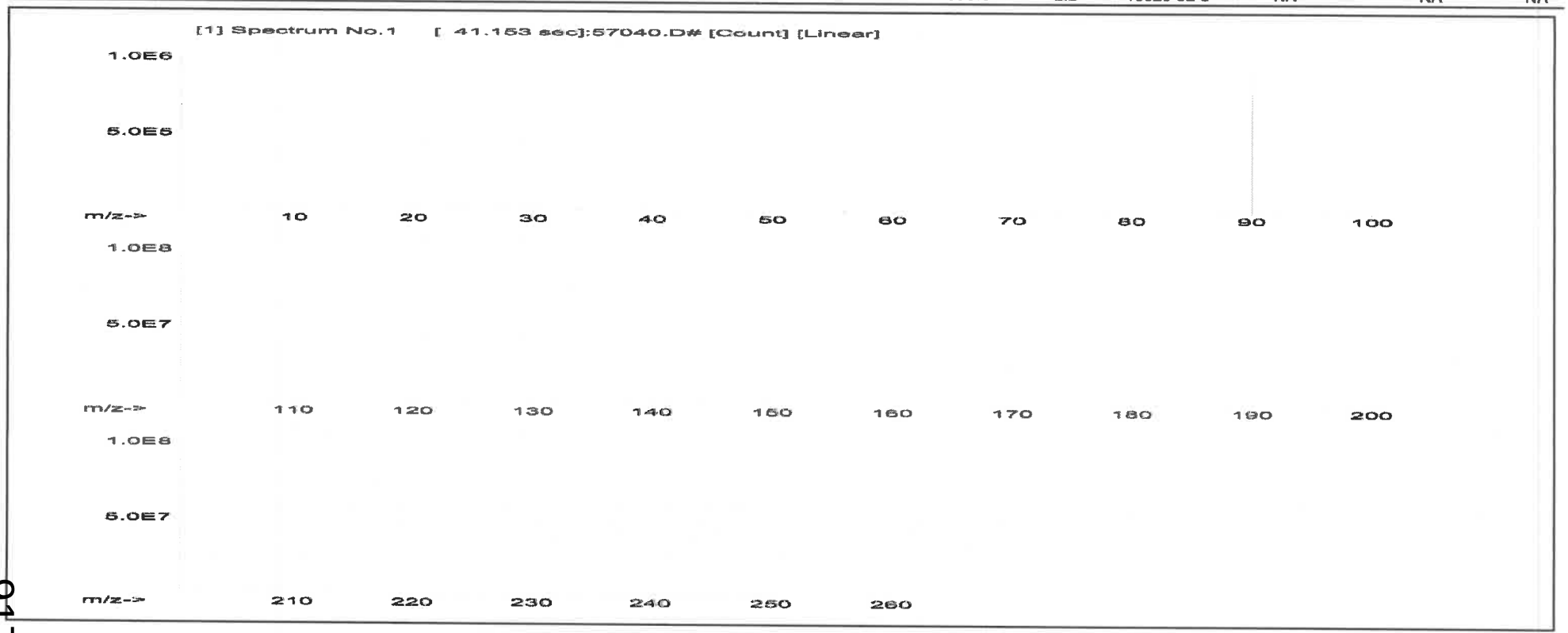
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57040**	21110221	Nitric Acid	
Lot Number:	**071423**			
Description:	**Zirconium (Zr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071426			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071423
Reviewed By:	Pedro L. Rentas	071423

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	13520-92-8	NA	NA	NA



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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	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	T

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/2024
M5999

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-SPK-1
Lot Number:	T2-MEB721963
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Manganese, Nickel, Vanadium, Zinc, Cobalt, 250 µg/mL ea: Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Chromium, Cr	200.0 ± 1.1 µg/mL
Cobalt, Co	500.0 ± 2.4 µg/mL	Copper, Cu	250.0 ± 1.0 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Received — 08/01/2024
paper
M6039
M6040

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.192
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R 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

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

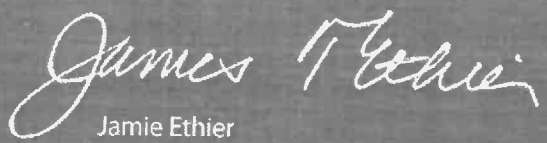
930

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

931

Nitric Acid 69%
CMOS

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R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

934

CERTIFIED WEIGHT REPORT:

R→ 1/13/25

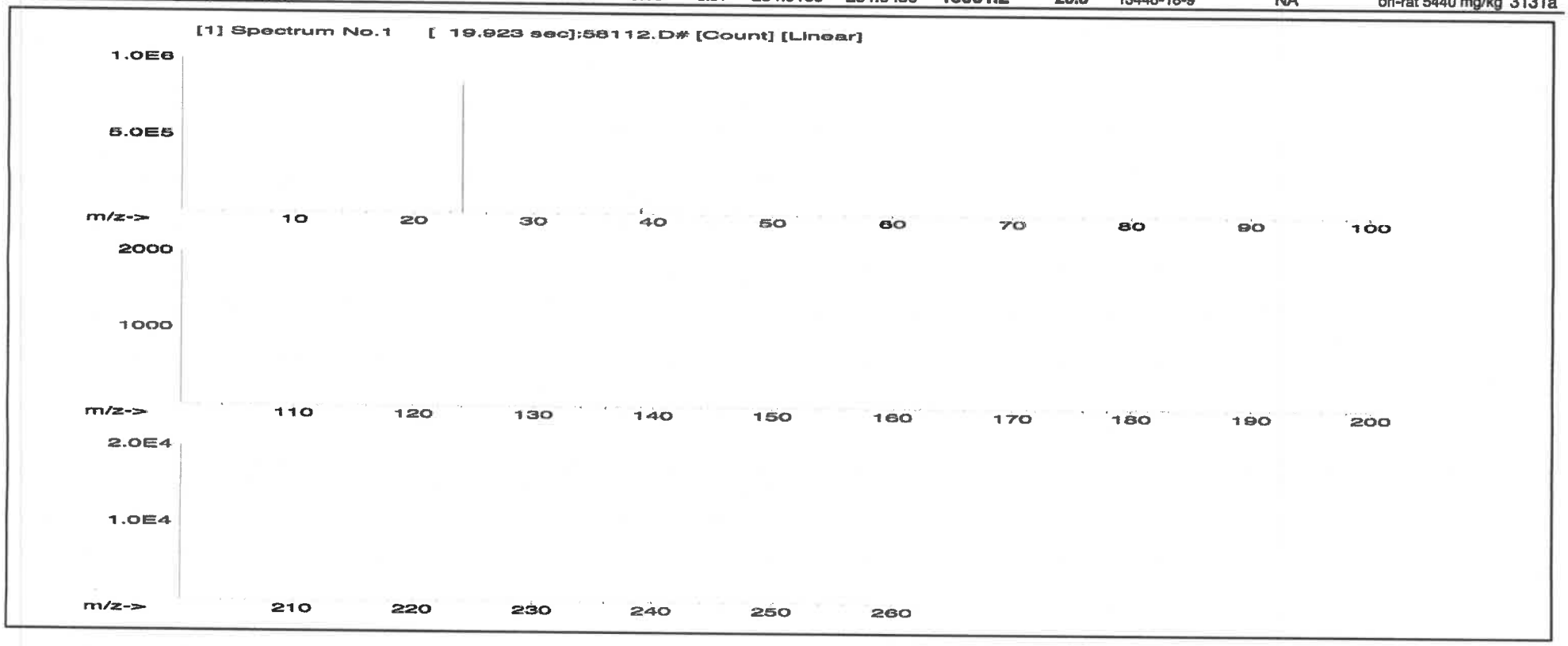
M 6127

Part Number:	**58112**		**Lot #**		
Lot Number:	**112124**	**Solvent:**	24012496	Nitric Acid	
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	112127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
Reviewed By:	Pedro L. Rentas	112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



935

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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

936

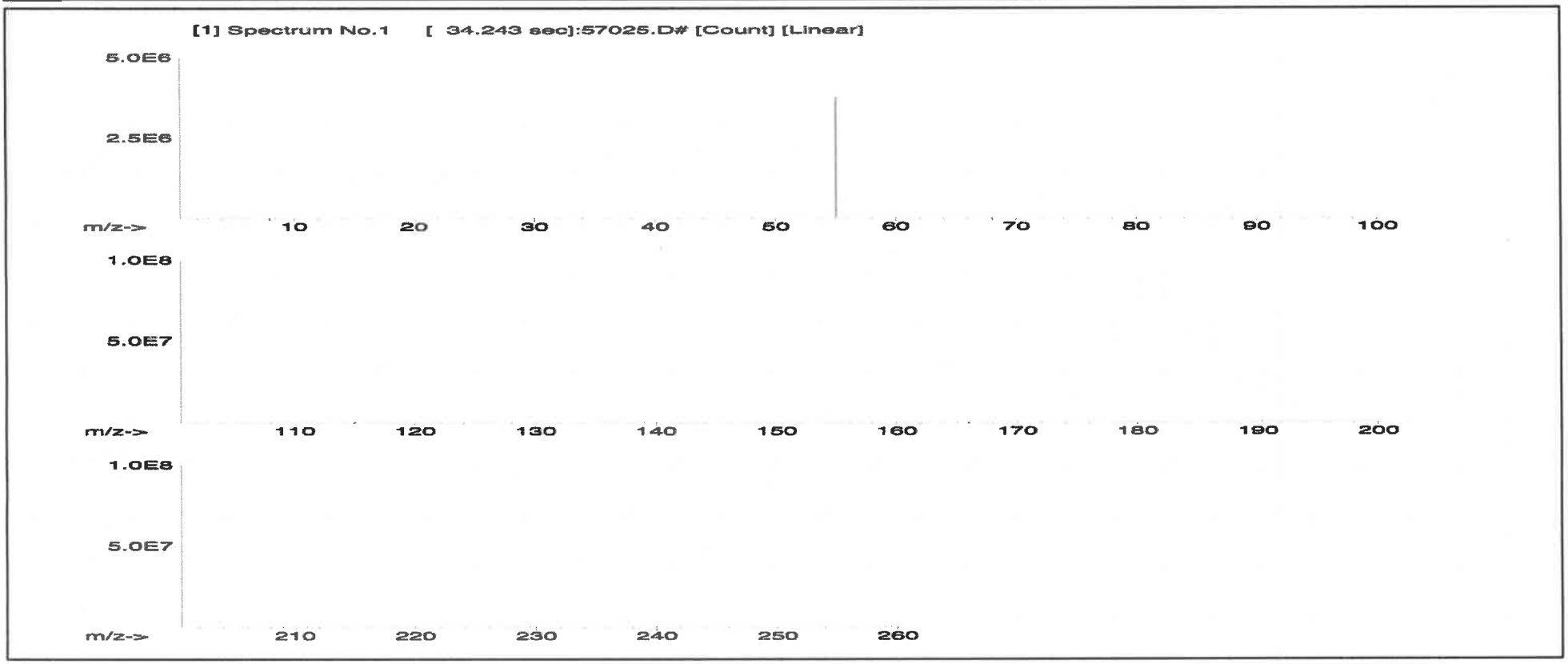
CERTIFIED WEIGHT REPORT:

R->1/13/25
M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Giovanni Esposito		
Formulated By:	Giovanni Esposito	101124
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



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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	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

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

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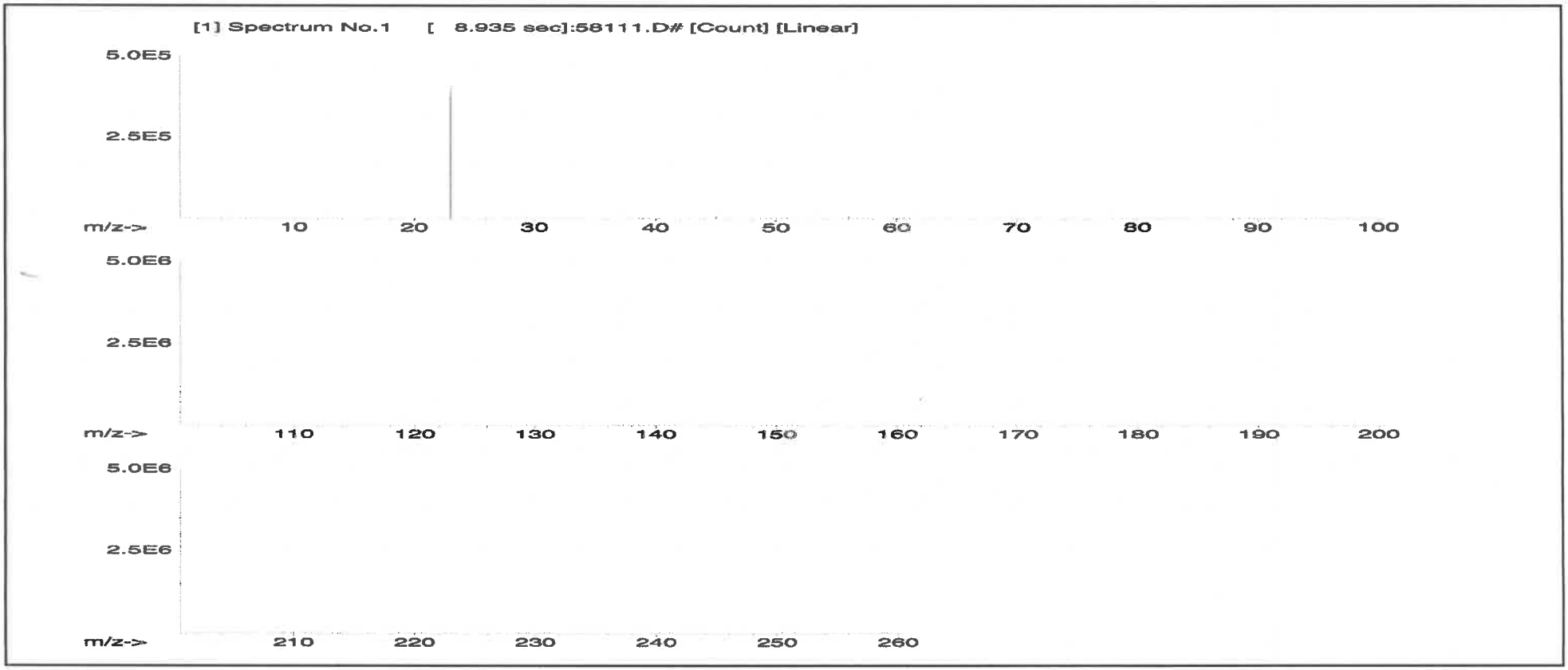
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**122223**			
Description:	**Sodium (Na)**			
		2%	60.0 (mL)	Nitric Acid
Expiration Date:	122226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	3000.4	0.06	Flask Uncertainty	

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



939

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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

A: 4/11/22

Certificate of Analysis

M5738, M5739, M5740, M5741, M5742, M5743

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ISS
Lot Number:	S2-MEB709511
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 µg/mL ea:

Bismuth, Holmium,
Indium, 6-Lithium,
Rhodium, Scandium,
Terbium, Yttrium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.03 µg/mL	Bismuth, Bi	10.00 ± 0.05 µg/mL
Holmium, Ho	10.00 ± 0.05 µg/mL	Indium, In	10.00 ± 0.04 µg/mL
Rhodium, Rh	10.00 ± 0.07 µg/mL	Scandium, Sc	10.00 ± 0.04 µg/mL
Terbium, Tb	10.00 ± 0.04 µg/mL	Yttrium, Y	10.00 ± 0.04 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 °C)

Assay Information:

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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.

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APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
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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.

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R: 01/03/24 M5802, M5803

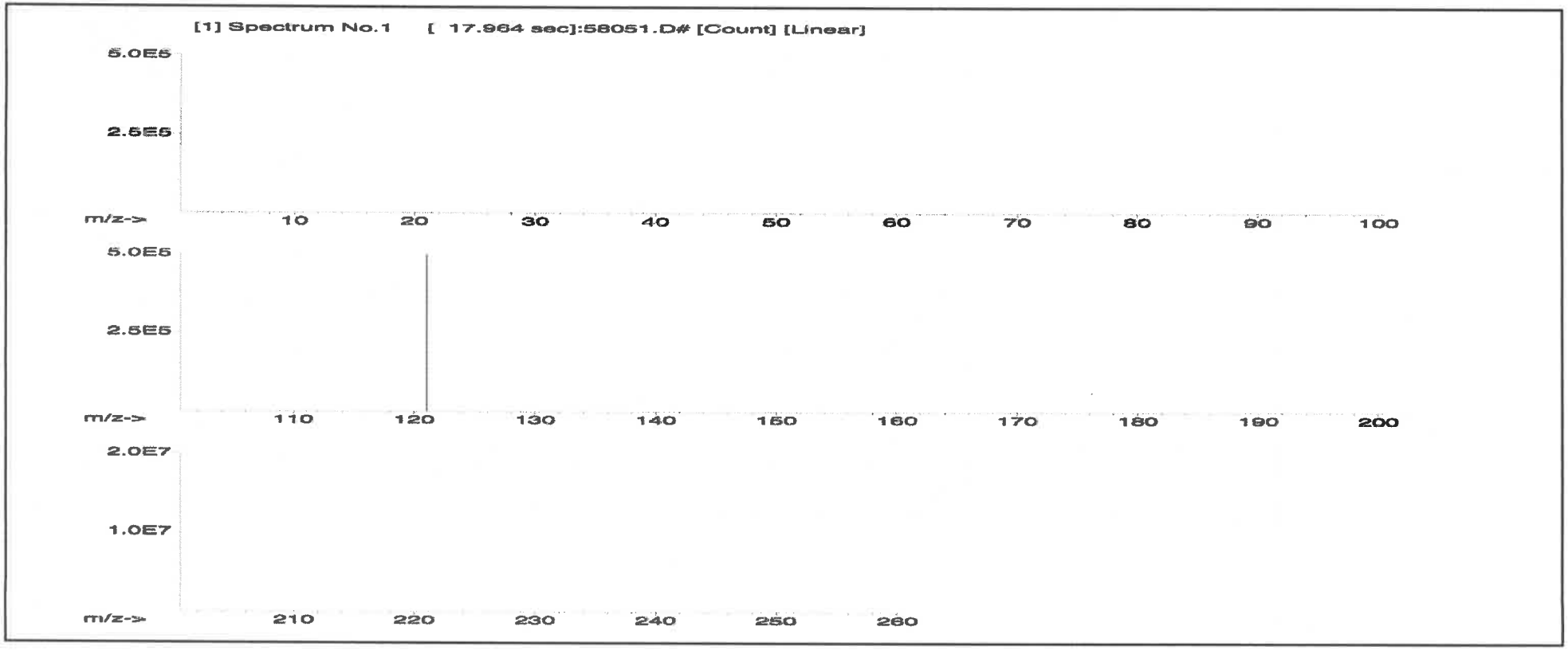
948

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



949

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).

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Certified Reference Material CRM

M6030

R: 8/5/24

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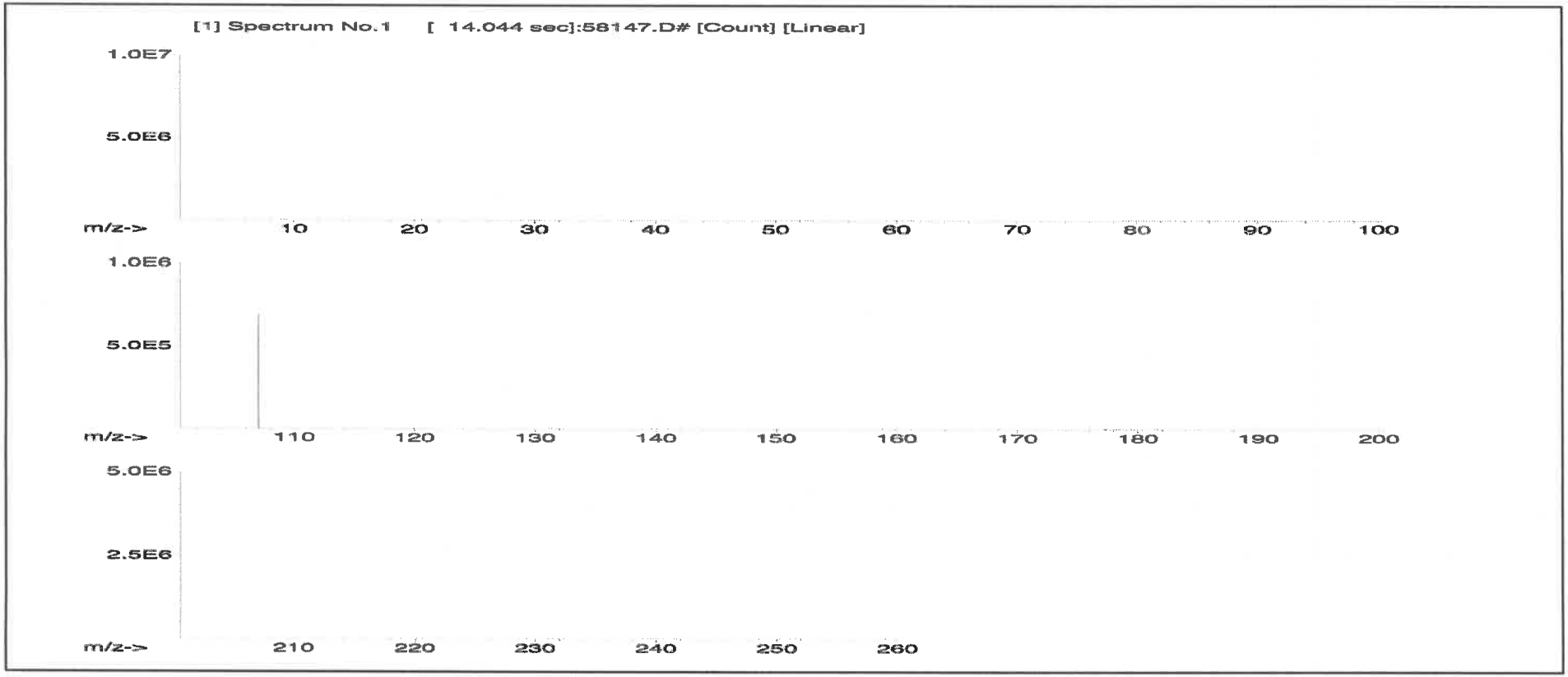
CERTIFIED WEIGHT REPORT:

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).

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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 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.

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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

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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

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Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

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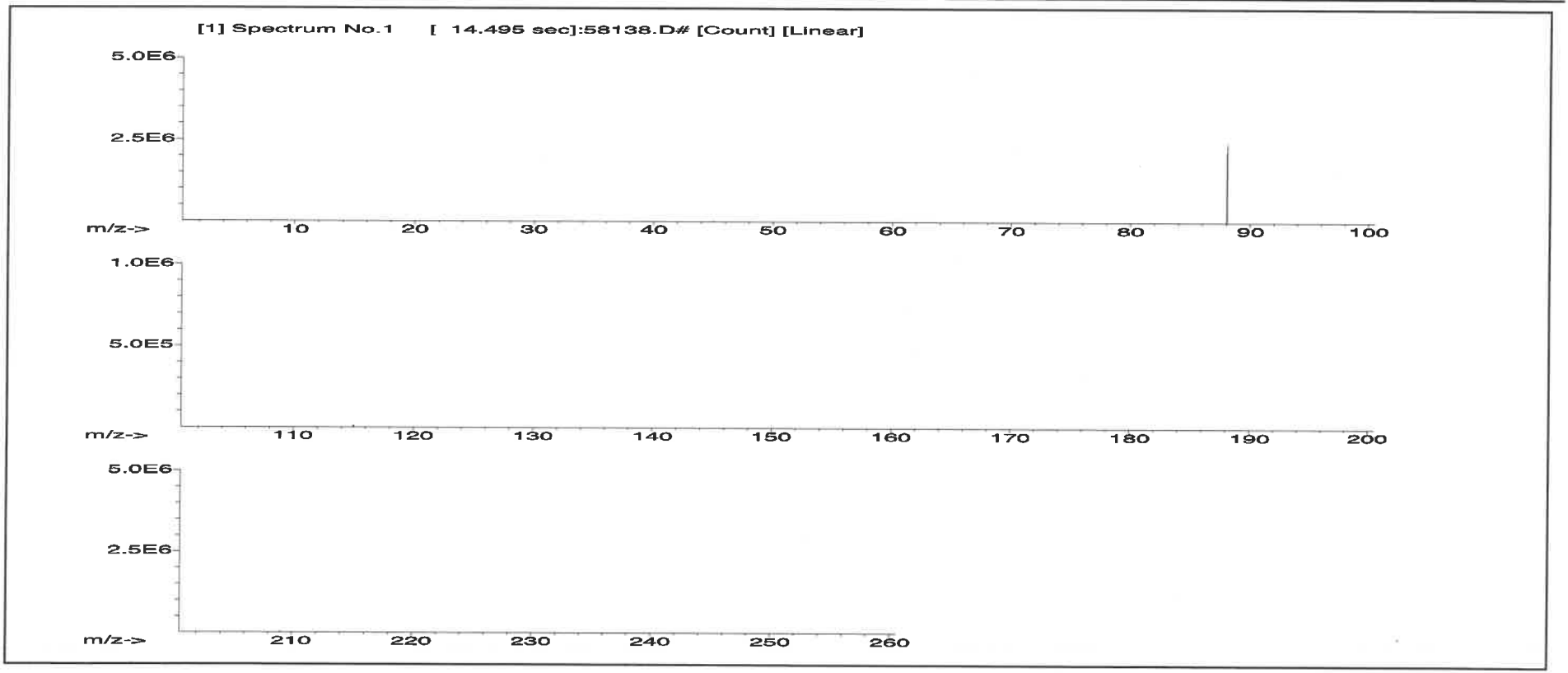
CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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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.
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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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Certified Reference Material CRM

R ! 8/5/24

M6023

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AR-1539 Certificate Number
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958

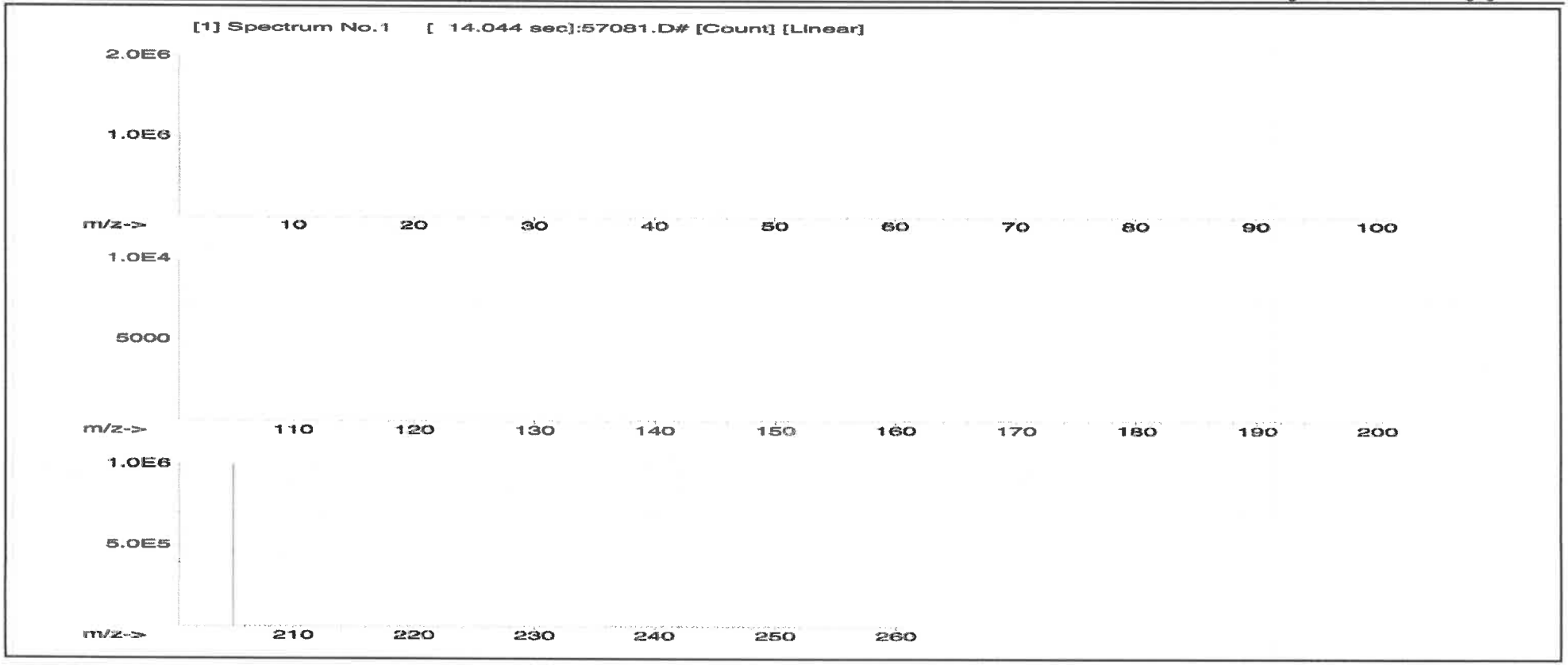
CERTIFIED WEIGHT REPORT:

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



959

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:

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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.
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Certified Reference Material CRM

M6021

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AR-1539 Certificate Number
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Rc. 8/5/24

960

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	

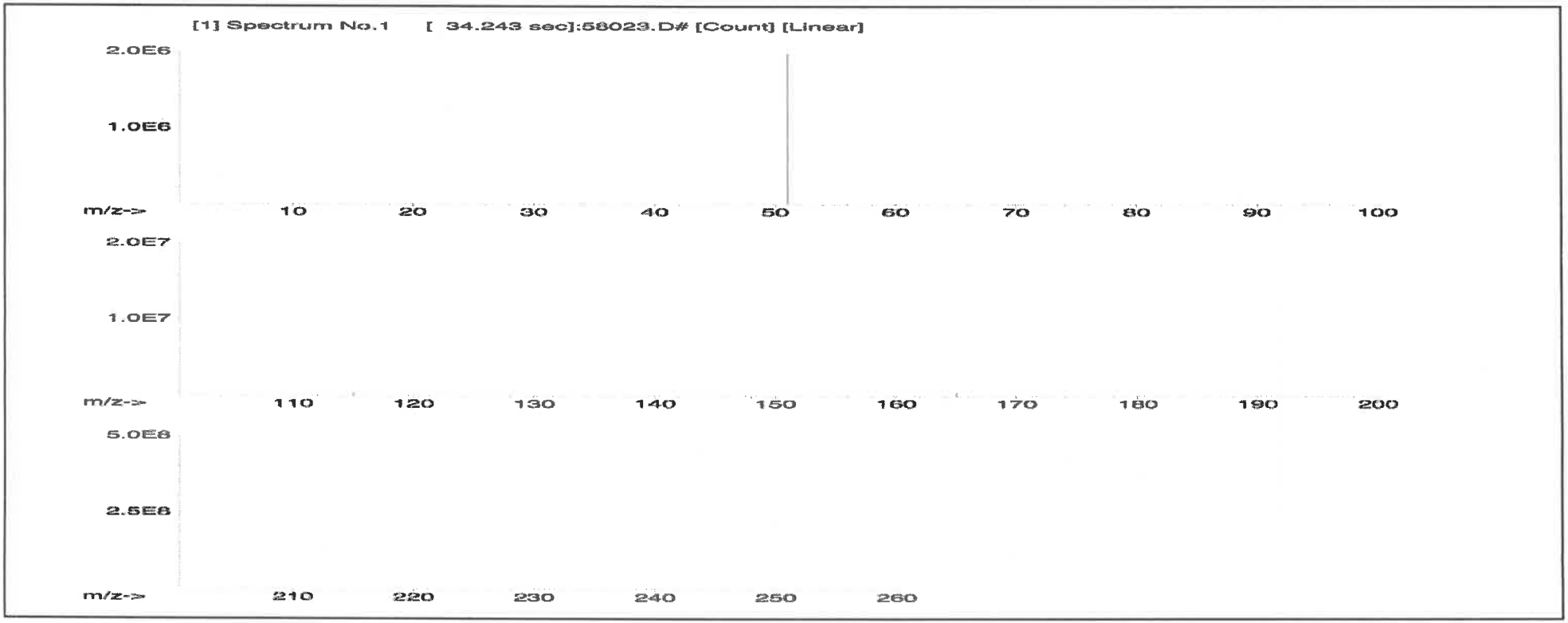
Aleah O'Brady

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



961

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:

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Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166471

SJ
02/04/25

M200.8-Trace Elements-22

SOP ID : ~~M3050B-Digestion-20~~, MSFAM01.1-Metals ICPMS-2

SDG No : A6313 **Start Digest Date:** 02/01/2025 **Time :** 10:55 **Temp :** 95 °C

Matrix : SOIL **End Digest Date:** 02/01/2025 **Time :** 13:05 **Temp :** 95 °C

Pippete ID: ICP A **Digestion tube ID:** M6054

Balance ID : M SC-2 **Block thermometer ID:** MET-DIG. # 5

Filter paper ID : N/A **Dig Technician Signature:** SJ

pH Strip ID : N/A **Supervisor Signature:**

Hood ID : #3 **Temp :** **1.** 95°C **2.** N/A

Block ID: **1.** HOT BLOCK #5 **2.** N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP84092
Spike Sol. B	1.00	MP84074
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	4.00	MP84041
1.4 HCL SOLN	10.00	MP82128
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #5 Cell #34 Temp: 95 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
02/01/25 14:05	SJ. met digestion	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB166471

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
PB166471BL	PBS471	N/A	1.00	500	Colorless	Colorless	Fine	N/A	N/A	1
PB166471BS	LCS471	N/A	1.00	500	Colorless	Colorless	Fine	N/A	MP84092	2
Q1246-01	A6313	N/A	1.23	500	Brown	Yellow	Medium	N/A	N/A	3
Q1246-02	A6314	N/A	1.30	500	Brown	Yellow	Medium	N/A	N/A	4
Q1246-03	A6325	N/A	4.13	500	Brown	Yellow	Medium	N/A	N/A	5
Q1246-04	A6326	N/A	1.22	500	Brown	Yellow	Medium	N/A	N/A	6
Q1246-05	A6331	N/A	5.44	500	Brown	Yellow	Medium	N/A	N/A	7
Q1246-06	A6332	N/A	1.23	500	Brown	Yellow	Medium	N/A	N/A	8
Q1246-07	A6333	N/A	6.44	500	Brown	Yellow	Medium	N/A	N/A	9
Q1246-08	A6334	N/A	6.20	500	Brown	Yellow	Medium	N/A	N/A	10
Q1246-09	A6342	N/A	1.48	500	Brown	Yellow	Medium	N/A	N/A	11
Q1246-10	A6342D	N/A	1.37	500	Brown	Yellow	Medium	N/A	N/A	12
Q1246-11	A6342S	N/A	1.28	500	Brown	Yellow	Medium	N/A	MP84074	13
Q1246-12	A6343	N/A	1.35	500	Brown	Yellow	Medium	N/A	N/A	14
Q1246-13	A6344	N/A	1.33	500	Brown	Yellow	Medium	N/A	N/A	15
Q1246-14	A6345	N/A	1.47	500	Brown	Yellow	Medium	N/A	N/A	16
Q1246-15	A6346	N/A	1.23	500	Brown	Yellow	Medium	N/A	N/A	17
Q1246-16	A6347	N/A	1.27	500	Brown	Yellow	Medium	N/A	N/A	18

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

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB134522

Review By	Sarabjit Jaswal	Review On	2/5/2025 7:11:46 AM
Supervise By	Eman Mughal	Supervise On	2/5/2025 9:21:10 AM

STD. NAME	STD REF.#
ICAL Standard	MP84042,MP84050,MP84049,MP84047,MP84046,MP84045,MP84044,MP84043,MP84073
ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	MP84317
LCS Standard	MP84092
Chk Standard	MP84057,MP84056

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE001	TUNE	02/02/25 13:51		Jaswal	OK
2	S00	S0	CAL1	02/02/25 14:25		Jaswal	OK
3	S02	S02	CAL3	02/02/25 14:28		Jaswal	OK
4	S03	S03	CAL4	02/02/25 14:32		Jaswal	OK
5	S04	S04	CAL5	02/02/25 14:35		Jaswal	OK
6	S05	S05	CAL6	02/02/25 14:38		Jaswal	OK
7	S06	S06	CAL7	02/02/25 14:40		Jaswal	OK
8	S07	S07	CAL8	02/02/25 14:43		Jaswal	OK
9	S08	S08	CAL9	02/02/25 14:46		Jaswal	OK
10	ICV001	ICV001	ICV	02/02/25 14:51		Jaswal	OK
11	ICB001	ICB001	ICB	02/02/25 14:55		Jaswal	OK
12	ICSA001	ICSA001	ICSA	02/02/25 15:01	Inst. paused for review	Jaswal	OK
13	ICSAB001	ICSAB001	ICSAB	02/02/25 15:04		Jaswal	OK
14	CCV001	CCV001	CCV	02/02/25 15:07		Jaswal	OK
15	CCB001	CCB001	CCB	02/02/25 15:14	Inst. paused for review	Jaswal	OK
16	PB166384BL	PBS384	MB	02/02/25 15:17		Jaswal	OK
17	PB166384BS	LCS384	LCS	02/02/25 15:20		Jaswal	OK
18	PB166471BL	PBS471	MB	02/02/25 15:24		Jaswal	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	MP84317
LCS Standard	MP84092
Chk Standard	MP84057,MP84056

19	PB166471BS	LCS471	LCS	02/02/25 15:27		Jaswal	OK
20	Q1223-05	A6305	SAM	02/02/25 15:30	Cr High	Jaswal	Dilution
21	Q1223-06	A6305D	DUP	02/02/25 15:33	Cr High	Jaswal	Dilution
22	Q1223-05L	A6305L	SD	02/02/25 15:36	Cr High	Jaswal	Dilution
23	Q1223-07	A6305S	MS	02/02/25 15:39	Cr High, MS Fail For Sb(Below RL),Se(Below RL),Zn	Jaswal	Dilution
24	Q1246-09	A6342	SAM	02/02/25 15:42		Jaswal	OK
25	Q1246-10	A6342D	DUP	02/02/25 15:46		Jaswal	OK
26	Q1246-09L	A6342L	SD	02/02/25 15:49		Jaswal	OK
27	Q1246-11	A6342S	MS	02/02/25 15:52	MS Fail For Se(Below RL)	Jaswal	OK
28	Q1223-08	A6306	SAM	02/02/25 15:55	Cr High	Jaswal	Dilution
29	Q1223-09	A6307	SAM	02/02/25 15:58		Jaswal	OK
30	Q1223-10	A6308	SAM	02/02/25 16:02	Cr High	Jaswal	Dilution
31	Q1223-11	A6309	SAM	02/02/25 16:05		Jaswal	OK
32	Q1223-12	A6320	SAM	02/02/25 16:08		Jaswal	OK
33	Q1223-13	A6321	SAM	02/02/25 16:11	Cr High	Jaswal	Dilution
34	Q1223-14	A6322	SAM	02/02/25 16:14	Cr High	Jaswal	Dilution
35	Q1223-15	A6323	SAM	02/02/25 16:17	Cr High	Jaswal	Dilution
36	Q1223-16	A6324	SAM	02/02/25 16:20		Jaswal	OK
37	CCV002	CCV002	CCV	02/02/25 16:24		Jaswal	OK

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ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	MP84317
LCS Standard	MP84092
Chk Standard	MP84057,MP84056

38	CCB002	CCB002	CCB	02/02/25 16:29		Jaswal	OK
39	Q1246-01	A6313	SAM	02/02/25 16:32		Jaswal	OK
40	Q1246-02	A6314	SAM	02/02/25 16:35		Jaswal	OK
41	Q1246-03	A6325	SAM	02/02/25 16:38		Jaswal	OK
42	Q1246-04	A6326	SAM	02/02/25 16:42		Jaswal	OK
43	Q1246-05	A6331	SAM	02/02/25 16:45		Jaswal	OK
44	Q1246-06	A6332	SAM	02/02/25 16:48		Jaswal	OK
45	Q1246-07	A6333	SAM	02/02/25 16:51		Jaswal	OK
46	Q1246-08	A6334	SAM	02/02/25 16:54		Jaswal	OK
47	Q1223-01	A6301	SAM	02/02/25 16:57		Jaswal	OK
48	Q1223-02	A6302	SAM	02/02/25 17:01	Cr,Mn High	Jaswal	Dilution
49	Q1223-03	A6303	SAM	02/02/25 17:04		Jaswal	OK
50	Q1223-04	A6304	SAM	02/02/25 17:07		Jaswal	OK
51	Q1246-12	A6343	SAM	02/02/25 17:10		Jaswal	OK
52	Q1246-13	A6344	SAM	02/02/25 17:13		Jaswal	OK
53	Q1246-14	A6345	SAM	02/02/25 17:16		Jaswal	OK
54	Q1246-15	A6346	SAM	02/02/25 17:20		Jaswal	OK
55	Q1246-16	A6347	SAM	02/02/25 17:23		Jaswal	OK
56	Q1223-05DL	A6305	SAM	02/02/25 17:26	2X For Cr	Jaswal	Confirms
57	Q1223-06DL	A6305D	DUP	02/02/25 17:29	2X For Cr	Jaswal	Confirms

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

Instrument ID: P7

Daily Analysis Runlog For Sequence/QCBatch ID # LB134522

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Supervise By	Eman Mughal	Supervise On	2/5/2025 9:21:10 AM

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ICV Standard	MP84051
CCV Standard	MP84052
ICSA Standard	MP84053,MP84054
CRI Standard	MP84317
LCS Standard	MP84092
Chk Standard	MP84057,MP84056

58	Q1223-05LDL	A6305L	SD	02/02/25 17:32	10X For Cr	Jaswal	Confirms
59	Q1223-07DL	A6305S	MS	02/02/25 17:35	2X For Cr	Jaswal	Confirms
60	Q1223-08DL	A6306	SAM	02/02/25 17:38	2X For Cr	Jaswal	Confirms
61	Q1223-10DL	A6308	SAM	02/02/25 17:42	25X For Cr	Jaswal	Confirms
62	Q1223-13DL	A6321	SAM	02/02/25 17:45	5X For Cr	Jaswal	Confirms
63	Q1223-14DL	A6322	SAM	02/02/25 17:48	5X For Cr	Jaswal	Confirms
64	Q1223-15DL	A6323	SAM	02/02/25 17:51	5X For Cr	Jaswal	Confirms
65	CCV003	CCV003	CCV	02/02/25 17:54		Jaswal	OK
66	CCB003	CCB003	CCB	02/02/25 17:57		Jaswal	OK
67	Q1223-02DL	A6302	SAM	02/02/25 18:00	2X For Cr,Mn Still Mn High	Jaswal	Dilution
68	Q1223-02DL2	A6302	SAM	02/02/25 18:04	5X For Mn	Jaswal	Confirms
69	Q1223-05A	A6305A	PS	02/02/25 18:07	PS For Sb,Se,Zn(0.01ml mp84317,0.04ml mp84318,0.0044ml m5819-10ml sample)	Jaswal	OK
70	Q1246-09A	A6342A	PS	02/02/25 18:10	PS For Se(0.01ml mp84317-10ml sample)	Jaswal	OK
71	CCV004	CCV004	CCV	02/02/25 18:13		Jaswal	OK
72	CCB004	CCB004	CCB	02/02/25 18:16		Jaswal	OK

ERA

A Waters Company

Instructions for Catalog # 540QR
Metals in Soil
Revision 111122

Description:
- This standard is packaged in a 2-ounce glass jar containing approximately 30 grams of soil.
- This standard is not preserved.
- The standard can be stored at room temperature.
- The standard will contain all the analytes listed in the ranges specified on the data reporting form.

Before you Begin:
- The Mercury in this standard should be determined using the digestion and analytical procedures in the current version of EPA method 7471, or equivalent.
- The other metals in this standard should be determined using EPA digestion methods 3050 or 3051 followed by your normal analysis procedures.
- This standard should not be analyzed for Hexavalent Chromium. A separate standard, ERA catalog number 921QR, is available for Hexavalent Chromium.
- Although all ERA soil standards have been thoroughly blended prior to shipping, the standards should be homogenized prior to taking an aliquot for analysis due to settling which may occur during shipping.
- The percent moisture of this standard should be determined, and your analytical results adjusted accordingly and reported on a dry weight basis.

Instructions:
1. Open the Metals in Soil standard in a fume hood to avoid inhalation of dust.
2. Mix the sample well prior to removing aliquots for analysis.
3. Digest and analyze the standard using your normal procedures.
4. Determine the percent moisture of an aliquot of the Metals in Soil standard.
5. Report your results as mg/kg on a dry weight basis.

Safety:
ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website www.eraqc.com.

EPA SAMPLE NO.

A6313

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-01

% Solids: 100 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	9.5	D	02/03/2025	1439

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

Comments:

EPA SAMPLE NO.

A6314

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-02

% Solids: 100 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	24	D	02/03/2025	1453

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

Comments:

EPA SAMPLE NO.

A6325

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-03

% Solids: 28.7 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.12		02/03/2025	1349

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

Comments:

EPA SAMPLE NO.

A6326

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-04

% Solids: 37.5 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.13	J	02/03/2025	1351

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

Comments:

EPA SAMPLE NO.

A6331

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-05

% Solids: 15.5 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.19		02/03/2025	1354

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

Comments:

EPA SAMPLE NO.

A6332

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-06

% Solids: 35.9 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.15	J	02/03/2025	1356

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

Comments:

EPA SAMPLE NO.

A6333

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-07

% Solids: 23.3 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.19		02/03/2025	1358

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

Comments:

EPA SAMPLE NO.

A6334

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-08

% Solids: 21.3 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.19		02/03/2025	1401

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

Comments:

EPA SAMPLE NO.

A6342

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-09

% Solids: 61.9 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.053	J	02/03/2025	1403

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

Comments:

EPA SAMPLE NO.

A6343

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-12

% Solids: 53.1 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.088	J	02/03/2025	1410

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

Comments:

EPA SAMPLE NO.

A6344

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-13

% Solids: 38.1 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.080	J	02/03/2025	1412

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

Comments:

EPA SAMPLE NO.

A6345

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-14

% Solids: 33.4 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.074	J	02/03/2025	1414

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

Comments:

EPA SAMPLE NO.

A6346

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-15

% Solids: 67.6 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.029	J	02/03/2025	1416

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

Comments:

EPA SAMPLE NO.

A6347

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51952 MA No. : SDG No.: A6313

Matrix: SOIL Lab Sample ID: Q1246-16

% Solids: 52.4 Date Received: 01/31/2025

Analytical Method: Hg

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7439-97-6	Mercury	0.066	J	02/03/2025	1423

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

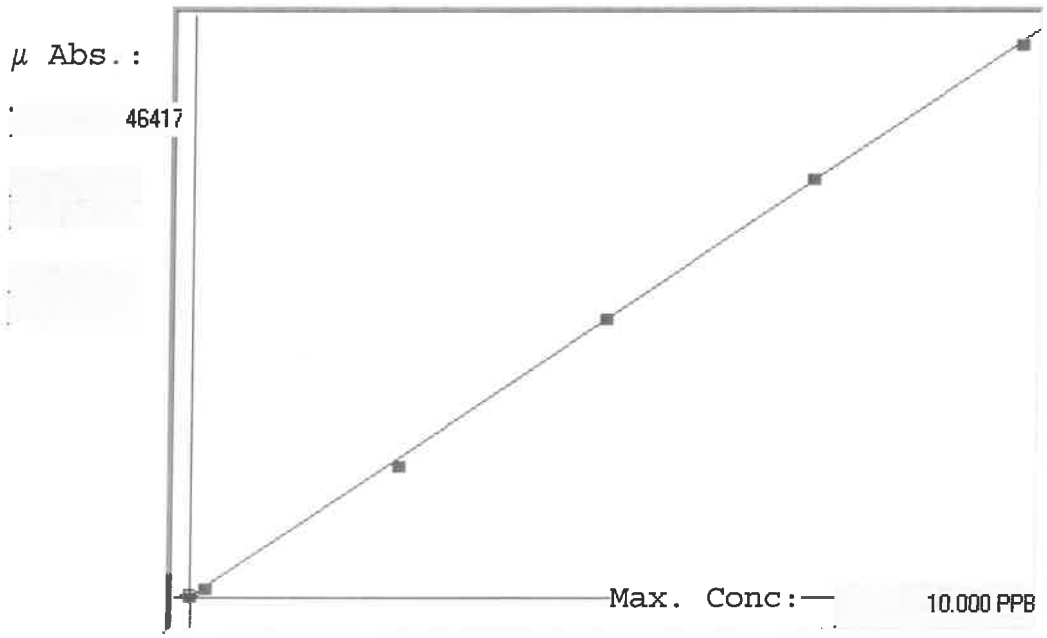
Comments:

Reviewed By:mohan
On:2/4/2025 2:01:42 PM
Inst Id :CV1

LB1341528

SFAM01.1 Instrument ID: CV1

Linear



A= 0.0000e+000

B= 2.1452e-004 slope

C= 5.0198e-004 y=mx+c

Rho= 0.9998348

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	C/CV
0.00	0.000	0.062	0.062	285	0.000	285					F
0.05	0.050										-6
0.20	0.200	0.188	-0.012	874	0.0 %	874					-5
2.50	2.500	2.379	-0.121	11085	0.0 %	11085					1
5.00	5.000	5.062	0.062	23594	0.0 %	23594					1
7.50	7.500	7.552	0.052	35200	0.0 %	35200					0
10.0	10.000	9.958	-0.042	46417	0.0 %	46417					

Reviewed By:mohan
On:2/4/2025 2:01:42 PM
Inst Id :CV1

LB134528

INSTRUMENT ID : CV1

Sample ID	Extended ID	µ Abs.	Conc.		Stnd Conc	Method	Units	Date	Type
0	S0	285	-		0	SFAM01.1	PPB	2/3/2025 13:00	Std
0.2	S01	874	-		0.2	SFAM01.1	PPB	2/3/2025 13:02	Std
2.5	S02	11085	-		2.5	SFAM01.1	PPB	2/3/2025 13:05	Std
5	S03	23594	-		5	SFAM01.1	PPB	2/3/2025 13:07	Std
7.5	S04	35200	-		7.5	SFAM01.1	PPB	2/3/2025 13:09	Std
10	S05	46417	-		10	SFAM01.1	PPB	2/3/2025 13:14	Std
ICV080	ICV080	18086	3.8804	-		SFAM01.1	PPB	2/3/2025 13:20	SMPL
ICB080	ICB080	-35	-0.007	-		SFAM01.1	PPB	2/3/2025 13:22	SMPL
CCV007	CCV007	23664	5.077	-		SFAM01.1	PPB	2/3/2025 13:24	SMPL
CCB007	CCB007	27	0.0063	-		SFAM01.1	PPB	2/3/2025 13:26	SMPL
PB166499BL	PBS499	217	0.0471	-		SFAM01.1	PPB	2/3/2025 13:29	SMPL
Q1163-01	ME2946	5299	1.1373	-		SFAM01.1	PPB	2/3/2025 13:31	SMPL
Q1163-02	ME2947	1282	0.2755	-		SFAM01.1	PPB	2/3/2025 13:33	SMPL
Q1163-03	ME2947D	1538	0.3304	-		SFAM01.1	PPB	2/3/2025 13:35	SMPL
Q1163-04	ME2947S	12973	2.7835	-		SFAM01.1	PPB	2/3/2025 13:42	SMPL
Q1246-01	A6313	208658	44.7628	-		SFAM01.1	PPB	2/3/2025 13:45	SMPL
Q1246-02	A6314	371900	HIGH	-		SFAM01.1	PPB	2/3/2025 13:47	
Q1246-03	A6325	2566	0.551	-		SFAM01.1	PPB	2/3/2025 13:49	SMPL
Q1246-04	A6326	1320	0.2837	-		SFAM01.1	PPB	2/3/2025 13:51	SMPL
Q1246-05	A6331	4596	0.9865	-		SFAM01.1	PPB	2/3/2025 13:54	SMPL
Q1246-06	A6332	1400	0.3008	-		SFAM01.1	PPB	2/3/2025 13:56	SMPL
Q1246-07	A6333	5665	1.2158	-		SFAM01.1	PPB	2/3/2025 13:58	SMPL
Q1246-08	A6334	4683	1.0051	-		SFAM01.1	PPB	2/3/2025 14:01	SMPL
Q1246-09	A6342	807	0.1736	-		SFAM01.1	PPB	2/3/2025 14:03	SMPL
Q1246-10	A6342D	915	0.1968	-		SFAM01.1	PPB	2/3/2025 14:05	SMPL
Q1246-11	A6342S	12091	2.5943	-		SFAM01.1	PPB	2/3/2025 14:07	SMPL
Q1246-12	A6343	1171	0.2517	-		SFAM01.1	PPB	2/3/2025 14:10	SMPL
Q1246-13	A6344	850	0.1828	-		SFAM01.1	PPB	2/3/2025 14:12	SMPL
Q1246-14	A6345	685	0.1475	-		SFAM01.1	PPB	2/3/2025 14:14	SMPL
Q1246-15	A6346	540	0.1163	-		SFAM01.1	PPB	2/3/2025 14:16	SMPL
CCV008	CCV008	24221	5.1965	-		SFAM01.1	PPB	2/3/2025 14:19	SMPL
CCB008	CCB008	-36	-0.0072	-		SFAM01.1	PPB	2/3/2025 14:21	SMPL
Q1246-16	A6347	933	0.2007	-		SFAM01.1	PPB	2/3/2025 14:23	SMPL
Q1246-01DLX10	A6313	23939	5.136	-		SFAM01.1	PPB	2/3/2025 14:39	SMPL
Q1246-02DLX25	A6314	23691	5.0828	-		SFAM01.1	PPB	2/3/2025 14:53	SMPL
CCV009	CCV009	23484	5.0384	-		SFAM01.1	PPB	2/3/2025 14:57	SMPL
CCB009	CCB009	-91	-0.019	-		SFAM01.1	PPB	2/3/2025 15:00	SMPL

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Prep Standard - Chemical Standard Summary

Order ID : Q1246

Test : Mercury

Prepbatch ID : PB166499,

Sequence ID/Qc Batch ID: LB134528,

Standard ID :
MP83692,MP83694,MP84319,MP84320,MP84321,MP84322,MP84323,MP84324,MP84325,MP84326,MP84327,MP84328,MP84329,MP84332,MP84333,

Chemical ID :
M4371,M4916,M5062,M5532,M5789,M5882,M5884,M6121,M6126,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
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP83692	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

FROM 100.00000gram of M4916 + 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	MP83694	12/18/2024	06/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 12/18/2024

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.	MP84319	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

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	MP84320	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 247.50000ml of W3112 = 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
1341	Hg 0.2 PPB STD	MP84321	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84319 = 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	MP84322	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84319 = 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	MP84323	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 242.50000ml of W3112 + 5.00000ml of MP84319 = 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	MP84324	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84319 = 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	MP84325	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84319 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP84326	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6126 + 245.00000ml of W3112 = 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
1351	ICB (Hg 0.00 PPB SOLUTION)	MP84327	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

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)	MP84328	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84319 = 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)	MP84329	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

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
887	AQUA REGIA FOR HG ON 7471A	MP84332	02/03/2025	02/04/2025	Mohan Bera	None	None	Sarabjit Jaswal 02/04/2025

FROM 150.00000ml of M6121 + 50.00000ml of M6126 = Final Quantity: 200.000 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
68	STANNOUS CHLORIDE SOLUTION	MP84333	02/03/2025	02/04/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 02/04/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = 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-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

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

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-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-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 #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

Certificate of Analysis

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

997

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

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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.

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

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

999

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.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF824
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

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

1006

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

1007

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

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB166499

SOP ID : M7471B-Mercury-18, MSFAM01.1-Mercury in Soil-2

SDG No : ME2946/A6313

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

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

Start Digest Date: 02/03/2025 **Time :** 11:50 **Temp :** 94 °C

End Digest Date: 02/03/2025 **Time :** 12:20 **Temp :** 94 °C

Digestion tube ID: M6054

Block thermometer ID: HG-DIG#1

Dig Technician Signature: MB

Supervisor Signature: MZ

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	100mL	MP84326
CCV	100mL	MP84328
Matrix Spike	1.0mL	MP84319
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	5.0mL	MP84332
KMnO4 (5%)	15.0mL	MP83692
Hydroxylamine HCL (12%)	6.0mL	MP83694
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

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	100mL	MP84320
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	100mL	MP84321
2.5 ppb	S2.5	100mL	MP84322
5.0 ppb	S5.0	100mL	MP84323
7.5 ppb	S7.5	100mL	MP84324
10.0 ppb	S10.0	100mL	MP84325
ICV	ICV	100mL	MP84326
ICB	ICB	100mL	MP84327
CCV	CCV	100mL	MP84328
CCB	CCB	100mL	MP84329
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
2/3/25 @ 12:40	MB - HG - LAB	MB - BENCH LAB
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

Soil/Sludge Mercury Preparation Sheet

PB166499

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
PB166499BL	PBS499	0.50	100	NA	N/A	2-1
Q1163-01	ME2946	0.51	100	NA	N/A	2
Q1163-02	ME2947	0.56	100	NA	N/A	3
Q1163-03	ME2947D	0.57	100	NA	N/A	4
Q1163-04	ME2947S	0.57	100	NA	MP84319	5
Q1246-01	A6313	0.54	100	NA	N/A	6
Q1246-02	A6314	0.52	100	NA	N/A	7
Q1246-03	A6325	1.60	100	NA	N/A	8
Q1246-04	A6326	0.57	100	NA	N/A	9
Q1246-05	A6331	3.30	100	NA	N/A	10
Q1246-06	A6332	0.57	100	NA	N/A	11
Q1246-07	A6333	2.75	100	NA	N/A	12
Q1246-08	A6334	2.55	100	NA	N/A	13
Q1246-09	A6342	0.53	100	NA	N/A	14
Q1246-10	A6342D	0.54	100	NA	N/A	15
Q1246-11	A6342S	0.59	100	NA	MP84319	16
Q1246-12	A6343	0.54	100	NA	N/A	17
Q1246-13	A6344	0.60	100	NA	N/A	18
Q1246-14	A6345	0.60	100	NA	N/A	19
Q1246-15	A6346	0.59	100	NA	N/A	20
Q1246-16	A6347	0.58	100	NA	N/A	21

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB134528

Review By	Sarabjit Jaswal	Review On	2/3/2025 8:20:37 PM
Supervise By	Mohan Bera	Supervise On	2/4/2025 2:01:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84323,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84327,MP84329,MP84333

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/03/25 13:00		Mohan	OK
2	S0.2	S01	CAL2	02/03/25 13:02		Mohan	OK
3	S2.5	S02	CAL3	02/03/25 13:05		Mohan	OK
4	S5	S03	CAL4	02/03/25 13:07		Mohan	OK
5	S7.5	S04	CAL5	02/03/25 13:09		Mohan	OK
6	S10	S05	CAL6	02/03/25 13:14		Mohan	OK
7	ICV080	ICV080	ICV	02/03/25 13:20		Mohan	OK
8	ICB080	ICB080	ICB	02/03/25 13:22		Mohan	OK
9	CCV007	CCV007	CCV	02/03/25 13:24		Mohan	OK
10	CCB007	CCB007	CCB	02/03/25 13:26		Mohan	OK
11	PB166499BL	PBS499	MB	02/03/25 13:29		Mohan	OK
12	Q1163-01	ME2946	SAM	02/03/25 13:31		Mohan	OK
13	Q1163-02	ME2947	SAM	02/03/25 13:33		Mohan	OK
14	Q1163-03	ME2947D	DUP	02/03/25 13:35		Mohan	OK
15	Q1163-04	ME2947S	MS	02/03/25 13:42		Mohan	OK
16	Q1246-01	A6313	SAM	02/03/25 13:45	High	Mohan	Dilution
17	Q1246-02	A6314	SAM	02/03/25 13:47	High	Mohan	Dilution
18	Q1246-03	A6325	SAM	02/03/25 13:49		Mohan	OK

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Fax : 908 789 8922

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Supervise By	Mohan Bera	Supervise On	2/4/2025 2:01:42 PM

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84323,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	
LCS Standard	
Chk Standard	MP84327,MP84329,MP84333

19	Q1246-04	A6326	SAM	02/03/25 13:51		Mohan	OK
20	Q1246-05	A6331	SAM	02/03/25 13:54		Mohan	OK
21	Q1246-06	A6332	SAM	02/03/25 13:56		Mohan	OK
22	Q1246-07	A6333	SAM	02/03/25 13:58		Mohan	OK
23	Q1246-08	A6334	SAM	02/03/25 14:01		Mohan	OK
24	Q1246-09	A6342	SAM	02/03/25 14:03		Mohan	OK
25	Q1246-10	A6342D	DUP	02/03/25 14:05		Mohan	OK
26	Q1246-11	A6342S	MS	02/03/25 14:07		Mohan	OK
27	Q1246-12	A6343	SAM	02/03/25 14:10		Mohan	OK
28	Q1246-13	A6344	SAM	02/03/25 14:12		Mohan	OK
29	Q1246-14	A6345	SAM	02/03/25 14:14		Mohan	OK
30	Q1246-15	A6346	SAM	02/03/25 14:16		Mohan	OK
31	CCV008	CCV008	CCV	02/03/25 14:19		Mohan	OK
32	CCB008	CCB008	CCB	02/03/25 14:21		Mohan	OK
33	Q1246-16	A6347	SAM	02/03/25 14:23		Mohan	OK
34	Q1246-01DL	A6313	SAM	02/03/25 14:39	Report 10X	Mohan	Confirms
35	Q1246-02DL	A6314	SAM	02/03/25 14:53	Report 25X	Mohan	Confirms
36	CCV009	CCV009	CCV	02/03/25 14:57		Mohan	OK
37	CCB009	CCB009	CCB	02/03/25 15:00		Mohan	OK

ERA

A Waters Company

Instructions for Catalog # 540QR
Metals in Soil
Revision 111122

Description:
- This standard is packaged in a 2-ounce glass jar containing approximately 30 grams of soil.
- This standard is not preserved.
- The standard can be stored at room temperature.
- The standard will contain all the analytes listed in the ranges specified on the data reporting form.

Before you Begin:
- The Mercury in this standard should be determined using the digestion and analytical procedures in the current version of EPA method 7471, or equivalent.
- The other metals in this standard should be determined using EPA digestion methods 3050 or 3051 followed by your normal analysis procedures.
- This standard should not be analyzed for Hexavalent Chromium. A separate standard, ERA catalog number 921QR, is available for Hexavalent Chromium.
- Although all ERA soil standards have been thoroughly blended prior to shipping, the standards should be homogenized prior to taking an aliquot for analysis due to settling which may occur during shipping.
- The percent moisture of this standard should be determined, and your analytical results adjusted accordingly and reported on a dry weight basis.

Instructions:
1. Open the Metals in Soil standard in a fume hood to avoid inhalation of dust.
2. Mix the sample well prior to removing aliquots for analysis.
3. Digest and analyze the standard using your normal procedures.
4. Determine the percent moisture of an aliquot of the Metals in Soil standard.
5. Report your results as mg/kg on a dry weight basis.

Safety:
ERA products may be hazardous and are intended for use by professional laboratory personnel trained in the competent handling of such materials. Responsibility for the safe use of these products rests entirely with the buyer and/or user. Safety Data Sheets (SDS) for all ERA products are available through our website www.eraqc.com.

ORIGIN ID:HEA (603) 513-1000
KARINA ZAWLINSKI
NOBIS ENGINEERING, INC
18 CHENELL DRIVE
CONCORD, NH 03301
UNITED STATES US

SHIP DATE: 30JAN25
ACTWGT: 40.00 LB
CAD: 109972084/INET4820
DIMS: 24x15x15 IN

BILL SENDER

TO **SOHIL JODHANI**
ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092
(908) 789-8900
INV:
PO:
REF: D00005.004.0412
DEPT:

1-31-25
9:35
2.0

58CJ3/EC17/C6C4

J251024121701uv

FedEx Express

FRI - 31 JAN 10:30A
PRIORITY OVERNIGHT

MPS# 0263 **7717 8326 5331**
Mstr# **7717 8326 3096**
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KARINA ZAWILINSKI
NOBIS ENGINEERING, INC
18 CHENELL DRIVE
CONCORD, NH 03301
UNITED STATES US

SHIP DATE: 30JAN25
ACTWGT: 40.00 LB
CAD: 109972084/INET4820
DIMS: 24x15x15 IN

BILL SENDER

TO **SOHIL JODHANI**
ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092
(908) 789-8900
INV:
PO:
REF: D00005.004.0412
DEPT:

1-31-25
9:35
1-9

58CJ3/EC17/C6C4

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PRIORITY OVERNIGHT

TRK# 0201 **7717 8326 3096**
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1 of 5

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Alliance TECHNICAL GROUP 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Login Summary Report

Order ID :	Q1246	Order Date :	1/31/2025 9:35:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51952	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	1/31/2025 9:35:00 AM	EDD Type :	EPA CLP
Date Sign Off :	1/31/2025 1:03:39 PM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
Q1246-01	A6313	Solid	01/09/2025		PT				
				Mercury		SFAM_HG	15	02/21/2025	02/21/2025
				Metals CLP MS FULL		SFAM_MS	15	02/21/2025	02/21/2025
				Metals CLP12		SFAM_AES	15	02/21/2025	02/21/2025
				Percent Solids		Chemtech -SOP	15	02/21/2025	02/21/2025
Q1246-02	A6314	Solid	01/09/2025		PT				
				Mercury		SFAM_HG	15	02/21/2025	02/21/2025
				Metals CLP MS FULL		SFAM_MS	15	02/21/2025	02/21/2025
				Metals CLP12		SFAM_AES	15	02/21/2025	02/21/2025
				Percent Solids		Chemtech -SOP	15	02/21/2025	02/21/2025
Q1246-03	A6325	Solid	01/29/2025						
				Mercury		SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL		SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12		SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids		Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-04	A6326	Solid	01/29/2025						
				Mercury		SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL		SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12		SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids		Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-05	A6331	Solid	01/29/2025						
				Mercury		SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL		SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12		SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids		Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-06	A6332	Solid	01/29/2025						
				Mercury		SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL		SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12		SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids		Chemtech -SOP	2	02/03/2025	02/21/2025

Q1246-07	A6333	Solid	01/29/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-08	A6334	Solid	01/29/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-09	A6342	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-10	A6342D	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-11	A6342S	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-12	A6343	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-13	A6344	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-14	A6345	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-15	A6346	Solid	01/30/2025					

				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025
Q1246-16	A6347	Solid	01/30/2025					
				Mercury	SFAM_HG	2	02/03/2025	02/21/2025
				Metals CLP MS FULL	SFAM_MS	2	02/03/2025	02/21/2025
				Metals CLP12	SFAM_AES	2	02/03/2025	02/21/2025
				Percent Solids	Chemtech -SOP	2	02/03/2025	02/21/2025

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB166472 **WorkList ID :** 187394 **Department :** Digestion **Date :** 02-01-2025 10:12:55

1020

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1246-01	A6313	Solid	Metals CLP12	Cool 4 deg C	USEP01	C11	01/09/2025	SFAM_AES
Q1246-02	A6314	Solid	Metals CLP12	Cool 4 deg C	USEP01	C11	01/09/2025	SFAM_AES
Q1246-03	A6325	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/29/2025	SFAM_AES
Q1246-04	A6326	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/29/2025	SFAM_AES
Q1246-05	A6331	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/29/2025	SFAM_AES
Q1246-06	A6332	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/29/2025	SFAM_AES
Q1246-07	A6333	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/29/2025	SFAM_AES
Q1246-08	A6334	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/29/2025	SFAM_AES
Q1246-09	A6342	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-10	A6342D	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-11	A6342S	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-12	A6343	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-13	A6344	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-14	A6345	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-15	A6346	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES
Q1246-16	A6347	Solid	Metals CLP12	Cool 4 deg C	USEP01		01/30/2025	SFAM_AES

Date/Time 02/01/25 10:30
Raw Sample Received by: SDS. met.dlv
Raw Sample Relinquished by: JM(SM)

Date/Time 02/01/25 11:30
Raw Sample Received by: JM/SM
Raw Sample Relinquished by: SDS. met.dlv

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB166471 **WorkList ID :** 187393 **Department :** Digestion **Date :** 02-01-2025 10:11:30

1021

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1246-01	A6313	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/09/2025	SFAM_MS
Q1246-02	A6314	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/09/2025	SFAM_MS
Q1246-03	A6325	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-04	A6326	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-05	A6331	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-06	A6332	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-07	A6333	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-08	A6334	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-09	A6342	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_MS
Q1246-10	A6342D	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS
Q1246-11	A6342S	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS
Q1246-12	A6343	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS
Q1246-13	A6344	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS
Q1246-14	A6345	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS
Q1246-15	A6346	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS
Q1246-16	A6347	Solid	Metals CLP MS FULL	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_MS

Date/Time 02/01/25 10:35
Raw Sample Received by: Shad. mct. dlo
Raw Sample Relinquished by: Jm ISM

Date/Time 02/01/25 11:35
Raw Sample Received by: Jm ISM
Raw Sample Relinquished by: Shad. mct. dlo.

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q1163_HgS **WorkList ID :** 187407 **Department :** Digestion **Date :** 02-03-2025 09:14:05

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1163-01	ME2946	Solid	Mercury	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_HG
Q1163-02	ME2947	Solid	Mercury	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_HG
Q1163-03	ME2947D	Solid	Mercury	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_HG
Q1163-04	ME2947S	Solid	Mercury	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_HG
Q1246-01	A6313	Solid	Mercury	Cool 4 deg C	USEP01	C31	01/21/2025	SFAM_HG
Q1246-02	A6314	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/09/2025	SFAM_HG
Q1246-15	A6346	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/09/2025	SFAM_HG
Q1246-16	A6347	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-09	A6342	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-10	A6342D	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-11	A6342S	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-12	A6343	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-13	A6344	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-14	A6345	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-03	A6325	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/30/2025	SFAM_HG
Q1246-04	A6326	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_HG
Q1246-05	A6331	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_HG
Q1246-06	A6332	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_HG
Q1246-07	A6333	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_HG
Q1246-08	A6334	Solid	Mercury	Cool 4 deg C	USEP01	C11	01/29/2025	SFAM_HG

1022

Date/Time 2/3/25 @ 11:25

Raw Sample Received by: MB - Dig. Lab

Raw Sample Relinquished by: MB - Dig. Lab

Date/Time 2/3/25 @ 12:20

Raw Sample Received by: MB - Dig. Lab

Raw Sample Relinquished by: MB - Dig. Lab