

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

ME28M0

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-01

% Solids: 93.1 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.27	J	12/10/2024	1428
7440-38-2	Arsenic	2.6		12/10/2024	1428
7440-39-3	Barium	77		12/10/2024	1428
7440-41-7	Beryllium	0.95		12/10/2024	1428
7440-43-9	Cadmium	0.29	J	12/10/2024	1428
7440-47-3	Chromium	770	D	12/10/2024	1609
7440-48-4	Cobalt	2.6		12/10/2024	1428
7440-50-8	Copper	20	*	12/10/2024	1428
7439-92-1	Lead	12		12/10/2024	1428
7439-96-5	Manganese	19000	D	12/10/2024	1612
7440-02-0	Nickel	21	*	12/10/2024	1428
7782-49-2	Selenium	0.45	J	12/10/2024	1428
7440-22-4	Silver	0.099	J	12/10/2024	1428
7440-28-0	Thallium	0.058	J	12/10/2024	1428
7440-62-2	Vanadium	430	D	12/10/2024	1609
7440-66-6	Zinc	69		12/10/2024	1428

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

Comments:

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ME28M1

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-02

% Solids: 85.9 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.21	J	12/10/2024	1431
7440-38-2	Arsenic	2.3		12/10/2024	1431
7440-39-3	Barium	110		12/10/2024	1431
7440-41-7	Beryllium	1.6		12/10/2024	1431
7440-43-9	Cadmium	0.48		12/10/2024	1431
7440-47-3	Chromium	1200	D	12/10/2024	1615
7440-48-4	Cobalt	4.0		12/10/2024	1431
7440-50-8	Copper	23	*	12/10/2024	1431
7439-92-1	Lead	32		12/10/2024	1431
7439-96-5	Manganese	18000	D	12/10/2024	1615
7440-02-0	Nickel	160	*	12/10/2024	1431
7782-49-2	Selenium	1.0	J	12/10/2024	1431
7440-22-4	Silver	0.18	J	12/10/2024	1431
7440-28-0	Thallium	0.43	U	12/10/2024	1431
7440-62-2	Vanadium	190		12/10/2024	1431
7440-66-6	Zinc	83		12/10/2024	1431

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

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ME28M2

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-03

% Solids: 84.6 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.19	J	12/10/2024	1434
7440-38-2	Arsenic	3.6		12/10/2024	1434
7440-39-3	Barium	67		12/10/2024	1434
7440-41-7	Beryllium	0.73		12/10/2024	1434
7440-43-9	Cadmium	0.23	J	12/10/2024	1434
7440-47-3	Chromium	270		12/10/2024	1434
7440-48-4	Cobalt	4.2		12/10/2024	1434
7440-50-8	Copper	16	*	12/10/2024	1434
7439-92-1	Lead	13		12/10/2024	1434
7439-96-5	Manganese	6600	D	12/10/2024	1618
7440-02-0	Nickel	31	*	12/10/2024	1434
7782-49-2	Selenium	0.39	J	12/10/2024	1434
7440-22-4	Silver	0.070	J	12/10/2024	1434
7440-28-0	Thallium	0.12	J	12/10/2024	1434
7440-62-2	Vanadium	120		12/10/2024	1434
7440-66-6	Zinc	46		12/10/2024	1434

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

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ME28M3

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-04

% Solids: 89.9 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.30	J	12/10/2024	1438
7440-38-2	Arsenic	5.6		12/10/2024	1438
7440-39-3	Barium	110		12/10/2024	1438
7440-41-7	Beryllium	0.18	J	12/10/2024	1438
7440-43-9	Cadmium	0.25	J	12/10/2024	1438
7440-47-3	Chromium	6.2		12/10/2024	1438
7440-48-4	Cobalt	4.3		12/10/2024	1438
7440-50-8	Copper	9.5	*	12/10/2024	1438
7439-92-1	Lead	5.0		12/10/2024	1438
7439-96-5	Manganese	220		12/10/2024	1438
7440-02-0	Nickel	13	*	12/10/2024	1438
7782-49-2	Selenium	2.3	U	12/10/2024	1438
7440-22-4	Silver	0.060	J	12/10/2024	1438
7440-28-0	Thallium	0.14	J	12/10/2024	1438
7440-62-2	Vanadium	9.6		12/10/2024	1438
7440-66-6	Zinc	69		12/10/2024	1438

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

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ME28M4

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-05

% Solids: 92.5 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.21	J	12/10/2024	1441
7440-38-2	Arsenic	2.9		12/10/2024	1441
7440-39-3	Barium	38		12/10/2024	1441
7440-41-7	Beryllium	0.071	J	12/10/2024	1441
7440-43-9	Cadmium	0.44	U	12/10/2024	1441
7440-47-3	Chromium	3.9		12/10/2024	1441
7440-48-4	Cobalt	1.9		12/10/2024	1441
7440-50-8	Copper	5.7	*	12/10/2024	1441
7439-92-1	Lead	9.8		12/10/2024	1441
7439-96-5	Manganese	83		12/10/2024	1441
7440-02-0	Nickel	7.3	*	12/10/2024	1441
7782-49-2	Selenium	2.2	U	12/10/2024	1441
7440-22-4	Silver	0.080	J	12/10/2024	1441
7440-28-0	Thallium	0.11	J	12/10/2024	1441
7440-62-2	Vanadium	3.9		12/10/2024	1441
7440-66-6	Zinc	6.7		12/10/2024	1441

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

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ME28M5

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-06

% Solids: 95.8 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.26	J	12/10/2024	1450
7440-38-2	Arsenic	0.54		12/10/2024	1450
7440-39-3	Barium	55		12/10/2024	1450
7440-41-7	Beryllium	0.36	U	12/10/2024	1450
7440-43-9	Cadmium	0.36	U	12/10/2024	1450
7440-47-3	Chromium	2.0		12/10/2024	1450
7440-48-4	Cobalt	0.43		12/10/2024	1450
7440-50-8	Copper	4.5	*	12/10/2024	1450
7439-92-1	Lead	4.0		12/10/2024	1450
7439-96-5	Manganese	23		12/10/2024	1450
7440-02-0	Nickel	3.0	*	12/10/2024	1450
7782-49-2	Selenium	1.8	U	12/10/2024	1450
7440-22-4	Silver	0.046	J	12/10/2024	1450
7440-28-0	Thallium	0.050	J	12/10/2024	1450
7440-62-2	Vanadium	1.6	J	12/10/2024	1450
7440-66-6	Zinc	8.1		12/10/2024	1450

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

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ME28M6

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-07

% Solids: 90.7 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.093	J	12/10/2024	1453
7440-38-2	Arsenic	1.1		12/10/2024	1453
7440-39-3	Barium	120		12/10/2024	1453
7440-41-7	Beryllium	0.42	U	12/10/2024	1453
7440-43-9	Cadmium	0.42	U	12/10/2024	1453
7440-47-3	Chromium	7.2		12/10/2024	1453
7440-48-4	Cobalt	0.87		12/10/2024	1453
7440-50-8	Copper	3.4	*	12/10/2024	1453
7439-92-1	Lead	1.9		12/10/2024	1453
7439-96-5	Manganese	45		12/10/2024	1453
7440-02-0	Nickel	3.4	*	12/10/2024	1453
7782-49-2	Selenium	2.1	U	12/10/2024	1453
7440-22-4	Silver	0.038	J	12/10/2024	1453
7440-28-0	Thallium	0.063	J	12/10/2024	1453
7440-62-2	Vanadium	4.5		12/10/2024	1453
7440-66-6	Zinc	5.6		12/10/2024	1453

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

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ME28M7

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-08

% Solids: 91.6 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.26	J	12/10/2024	1456
7440-38-2	Arsenic	5.9		12/10/2024	1456
7440-39-3	Barium	130		12/10/2024	1456
7440-41-7	Beryllium	0.20	J	12/10/2024	1456
7440-43-9	Cadmium	0.31	J	12/10/2024	1456
7440-47-3	Chromium	7.2		12/10/2024	1456
7440-48-4	Cobalt	4.9		12/10/2024	1456
7440-50-8	Copper	23	*	12/10/2024	1456
7439-92-1	Lead	5.5		12/10/2024	1456
7439-96-5	Manganese	280		12/10/2024	1456
7440-02-0	Nickel	26	*	12/10/2024	1456
7782-49-2	Selenium	2.2	U	12/10/2024	1456
7440-22-4	Silver	0.048	J	12/10/2024	1456
7440-28-0	Thallium	0.11	J	12/10/2024	1456
7440-62-2	Vanadium	11		12/10/2024	1456
7440-66-6	Zinc	38		12/10/2024	1456

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

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ME28M8

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-09

% Solids: 87.1 Date Received: 12/03/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.15	J	12/10/2024	1459
7440-38-2	Arsenic	2.5		12/10/2024	1459
7440-39-3	Barium	100		12/10/2024	1459
7440-41-7	Beryllium	0.11	J	12/10/2024	1459
7440-43-9	Cadmium	0.44	U	12/10/2024	1459
7440-47-3	Chromium	9.2		12/10/2024	1459
7440-48-4	Cobalt	2.6		12/10/2024	1459
7440-50-8	Copper	14	*	12/10/2024	1459
7439-92-1	Lead	3.4		12/10/2024	1459
7439-96-5	Manganese	130		12/10/2024	1459
7440-02-0	Nickel	16	*	12/10/2024	1459
7782-49-2	Selenium	2.2	U	12/10/2024	1459
7440-22-4	Silver	0.031	J	12/10/2024	1459
7440-28-0	Thallium	0.083	J	12/10/2024	1459
7440-62-2	Vanadium	7.0		12/10/2024	1459
7440-66-6	Zinc	14		12/10/2024	1459

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

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ME28M9

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-10

% Solids: 78.9 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.22	J	12/10/2024	1503
7440-38-2	Arsenic	7.6		12/10/2024	1503
7440-39-3	Barium	65		12/10/2024	1503
7440-41-7	Beryllium	0.61		12/10/2024	1503
7440-43-9	Cadmium	0.36	J	12/10/2024	1503
7440-47-3	Chromium	12		12/10/2024	1503
7440-48-4	Cobalt	10		12/10/2024	1503
7440-50-8	Copper	47	*	12/10/2024	1503
7439-92-1	Lead	21		12/10/2024	1503
7439-96-5	Manganese	810		12/10/2024	1503
7440-02-0	Nickel	56	*	12/10/2024	1503
7782-49-2	Selenium	2.5	U	12/10/2024	1503
7440-22-4	Silver	0.059	J	12/10/2024	1503
7440-28-0	Thallium	0.17	J	12/10/2024	1503
7440-62-2	Vanadium	18		12/10/2024	1503
7440-66-6	Zinc	52		12/10/2024	1503

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

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ME28N0

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-11

% Solids: 87.5 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.18	J	12/10/2024	1506
7440-38-2	Arsenic	10		12/10/2024	1506
7440-39-3	Barium	61		12/10/2024	1506
7440-41-7	Beryllium	0.69		12/10/2024	1506
7440-43-9	Cadmium	0.19	J	12/10/2024	1506
7440-47-3	Chromium	15		12/10/2024	1506
7440-48-4	Cobalt	12		12/10/2024	1506
7440-50-8	Copper	23	*	12/10/2024	1506
7439-92-1	Lead	16		12/10/2024	1506
7439-96-5	Manganese	470		12/10/2024	1506
7440-02-0	Nickel	27	*	12/10/2024	1506
7782-49-2	Selenium	2.4	U	12/10/2024	1506
7440-22-4	Silver	0.49	U	12/10/2024	1506
7440-28-0	Thallium	0.23	J	12/10/2024	1506
7440-62-2	Vanadium	23		12/10/2024	1506
7440-66-6	Zinc	58		12/10/2024	1506

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

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ME28N1

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-12

% Solids: 91.6 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.38	J	12/10/2024	1509
7440-38-2	Arsenic	12		12/10/2024	1509
7440-39-3	Barium	24		12/10/2024	1509
7440-41-7	Beryllium	0.33	J	12/10/2024	1509
7440-43-9	Cadmium	0.18	J	12/10/2024	1509
7440-47-3	Chromium	11		12/10/2024	1509
7440-48-4	Cobalt	7.0		12/10/2024	1509
7440-50-8	Copper	17	*	12/10/2024	1509
7439-92-1	Lead	8.9		12/10/2024	1509
7439-96-5	Manganese	350		12/10/2024	1509
7440-02-0	Nickel	20	*	12/10/2024	1509
7782-49-2	Selenium	2.3	U	12/10/2024	1509
7440-22-4	Silver	0.041	J	12/10/2024	1509
7440-28-0	Thallium	0.11	J	12/10/2024	1509
7440-62-2	Vanadium	14		12/10/2024	1509
7440-66-6	Zinc	44		12/10/2024	1509

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

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ME28N2

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-13

% Solids: 80.9 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.19	J	12/10/2024	1512
7440-38-2	Arsenic	9.7		12/10/2024	1512
7440-39-3	Barium	96		12/10/2024	1512
7440-41-7	Beryllium	0.68		12/10/2024	1512
7440-43-9	Cadmium	0.16	J	12/10/2024	1512
7440-47-3	Chromium	19		12/10/2024	1512
7440-48-4	Cobalt	11		12/10/2024	1512
7440-50-8	Copper	23	*	12/10/2024	1512
7439-92-1	Lead	12		12/10/2024	1512
7439-96-5	Manganese	400		12/10/2024	1512
7440-02-0	Nickel	31	*	12/10/2024	1512
7782-49-2	Selenium	2.4	U	12/10/2024	1512
7440-22-4	Silver	0.033	J	12/10/2024	1512
7440-28-0	Thallium	0.19	J	12/10/2024	1512
7440-62-2	Vanadium	26		12/10/2024	1512
7440-66-6	Zinc	55		12/10/2024	1512

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

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ME28N3

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-14

% Solids: 89.6 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.18	J	12/10/2024	1515
7440-38-2	Arsenic	5.6		12/10/2024	1515
7440-39-3	Barium	36		12/10/2024	1515
7440-41-7	Beryllium	0.31	J	12/10/2024	1515
7440-43-9	Cadmium	0.13	J	12/10/2024	1515
7440-47-3	Chromium	8.6		12/10/2024	1515
7440-48-4	Cobalt	6.3		12/10/2024	1515
7440-50-8	Copper	16	*	12/10/2024	1515
7439-92-1	Lead	8.7		12/10/2024	1515
7439-96-5	Manganese	440		12/10/2024	1515
7440-02-0	Nickel	16	*	12/10/2024	1515
7782-49-2	Selenium	2.2	U	12/10/2024	1515
7440-22-4	Silver	0.031	J	12/10/2024	1515
7440-28-0	Thallium	0.16	J	12/10/2024	1515
7440-62-2	Vanadium	11		12/10/2024	1515
7440-66-6	Zinc	38		12/10/2024	1515

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

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

ME28N4

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
 Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0
 Matrix: SOIL Lab Sample ID: P5067-15
 % Solids: 51.4 Date Received: 12/04/2024
 Analytical Method: ICP_MS
 Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.46	J	12/10/2024	1519
7440-38-2	Arsenic	13		12/10/2024	1519
7440-39-3	Barium	130		12/10/2024	1519
7440-41-7	Beryllium	0.73	J	12/10/2024	1519
7440-43-9	Cadmium	1.2		12/10/2024	1519
7440-47-3	Chromium	20		12/10/2024	1519
7440-48-4	Cobalt	9.1		12/10/2024	1519
7440-50-8	Copper	33	*	12/10/2024	1519
7439-92-1	Lead	94		12/10/2024	1519
7439-96-5	Manganese	440		12/10/2024	1519
7440-02-0	Nickel	28	*	12/10/2024	1519
7782-49-2	Selenium	0.79	J	12/10/2024	1519
7440-22-4	Silver	0.16	J	12/10/2024	1519
7440-28-0	Thallium	0.37	J	12/10/2024	1519
7440-62-2	Vanadium	32		12/10/2024	1519
7440-66-6	Zinc	200		12/10/2024	1519

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

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

ME28N5

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-16

% Solids: 76.4 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.17	J	12/10/2024	1522
7440-38-2	Arsenic	7.4		12/10/2024	1522
7440-39-3	Barium	66		12/10/2024	1522
7440-41-7	Beryllium	0.63		12/10/2024	1522
7440-43-9	Cadmium	0.29	J	12/10/2024	1522
7440-47-3	Chromium	17		12/10/2024	1522
7440-48-4	Cobalt	10		12/10/2024	1522
7440-50-8	Copper	22	*	12/10/2024	1522
7439-92-1	Lead	19		12/10/2024	1522
7439-96-5	Manganese	520		12/10/2024	1522
7440-02-0	Nickel	23	*	12/10/2024	1522
7782-49-2	Selenium	2.3	U	12/10/2024	1522
7440-22-4	Silver	0.055	J	12/10/2024	1522
7440-28-0	Thallium	0.18	J	12/10/2024	1522
7440-62-2	Vanadium	22		12/10/2024	1522
7440-66-6	Zinc	68		12/10/2024	1522

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

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

ME28N6

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-17

% Solids: 81.4 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.17	J	12/10/2024	1525
7440-38-2	Arsenic	8.4		12/10/2024	1525
7440-39-3	Barium	69		12/10/2024	1525
7440-41-7	Beryllium	0.70		12/10/2024	1525
7440-43-9	Cadmium	0.25	J	12/10/2024	1525
7440-47-3	Chromium	17		12/10/2024	1525
7440-48-4	Cobalt	11		12/10/2024	1525
7440-50-8	Copper	24	*	12/10/2024	1525
7439-92-1	Lead	15		12/10/2024	1525
7439-96-5	Manganese	570		12/10/2024	1525
7440-02-0	Nickel	28	*	12/10/2024	1525
7782-49-2	Selenium	2.3	U	12/10/2024	1525
7440-22-4	Silver	0.032	J	12/10/2024	1525
7440-28-0	Thallium	0.20	J	12/10/2024	1525
7440-62-2	Vanadium	23		12/10/2024	1525
7440-66-6	Zinc	65		12/10/2024	1525

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

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

ME28N7

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
 Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0
 Matrix: SOIL Lab Sample ID: P5067-18
 % Solids: 90.2 Date Received: 12/04/2024
 Analytical Method: ICP_MS
 Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	0.22	J	12/10/2024	1528
7440-38-2	Arsenic	5.2		12/10/2024	1528
7440-39-3	Barium	64		12/10/2024	1528
7440-41-7	Beryllium	0.23	J	12/10/2024	1528
7440-43-9	Cadmium	0.24	J	12/10/2024	1528
7440-47-3	Chromium	9.4		12/10/2024	1528
7440-48-4	Cobalt	5.9		12/10/2024	1528
7440-50-8	Copper	11	*	12/10/2024	1528
7439-92-1	Lead	5.7		12/10/2024	1528
7439-96-5	Manganese	280		12/10/2024	1528
7440-02-0	Nickel	16	*	12/10/2024	1528
7782-49-2	Selenium	2.1	U	12/10/2024	1528
7440-22-4	Silver	0.042	J	12/10/2024	1528
7440-28-0	Thallium	0.097	J	12/10/2024	1528
7440-62-2	Vanadium	13		12/10/2024	1528
7440-66-6	Zinc	34		12/10/2024	1528

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

Comments:

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

ME28N8

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28M0

Matrix: SOIL Lab Sample ID: P5067-19

% Solids: 78.1 Date Received: 12/04/2024

Analytical Method: ICP_MS

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-36-0	Antimony	2.1		12/10/2024	1531
7440-38-2	Arsenic	4.5		12/10/2024	1531
7440-39-3	Barium	56		12/10/2024	1531
7440-41-7	Beryllium	0.57		12/10/2024	1531
7440-43-9	Cadmium	0.49	U	12/10/2024	1531
7440-47-3	Chromium	14		12/10/2024	1531
7440-48-4	Cobalt	4.6		12/10/2024	1531
7440-50-8	Copper	17	*	12/10/2024	1531
7439-92-1	Lead	25		12/10/2024	1531
7439-96-5	Manganese	450		12/10/2024	1531
7440-02-0	Nickel	14	*	12/10/2024	1531
7782-49-2	Selenium	2.5	U	12/10/2024	1531
7440-22-4	Silver	0.49	U	12/10/2024	1531
7440-28-0	Thallium	0.098	J	12/10/2024	1531
7440-62-2	Vanadium	9.6		12/10/2024	1531
7440-66-6	Zinc	36		12/10/2024	1531

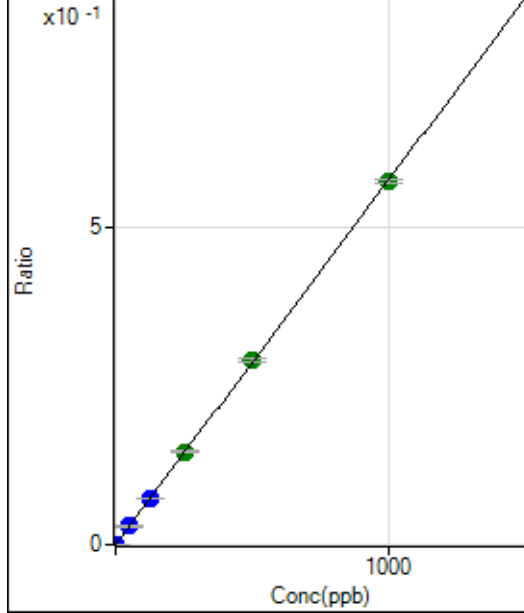
NOTE: Hardness (total) is reported in mg/L

Comments:

Batch Folder: D:\Agilent\ICPMH\1\DATA\P8121024MS.b\
Analysis File: P8121024MS.batch.bin
DA Date-Time: 2024-12-10 17:30:55
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2024-12-10 11:14:39
2	006CALS.d	S02	2024-12-10 11:21:17
3	007CALB.d	S03	2024-12-10 11:24:34
4	008CALS.d	S04	2024-12-10 11:27:36
5	009CALS.d	S05	2024-12-10 11:30:28
6	010CALS.d	S06	2024-12-10 11:33:15
7	011CALS.d	S07	2024-12-10 11:36:01
8	012CALS.d	S08	2024-12-10 11:38:48

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	228.31	0.0000	P	7.9
2	☐	1.000	1.085	7910.73	0.0006	P	2.6
3	☐	50.000	50.210	355978.42	0.0288	P	2.7
4	☐	125.000	126.036	880989.57	0.0723	P	0.6
5	☐	250.000	255.774	1790272.94	0.1467	A	1.7
6	☐	500.000	506.269	3461283.02	0.2904	A	1.2
7	☐	1000.000	995.282	6563868.64	0.5710	A	1.0
8	☐			1375.73	0.0001	P	11.3

$$y = 5.7364E-004 * x + 1.9179E-005$$

$$R = 1.0000$$

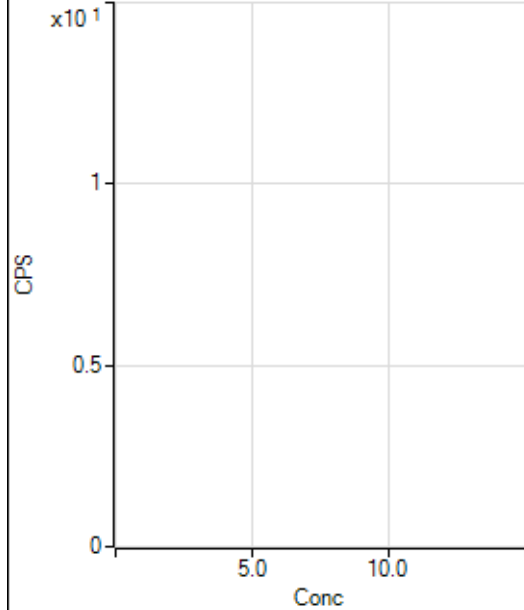
$$DL = 0.007908$$

$$BEC = 0.03343$$

Weight: <None>

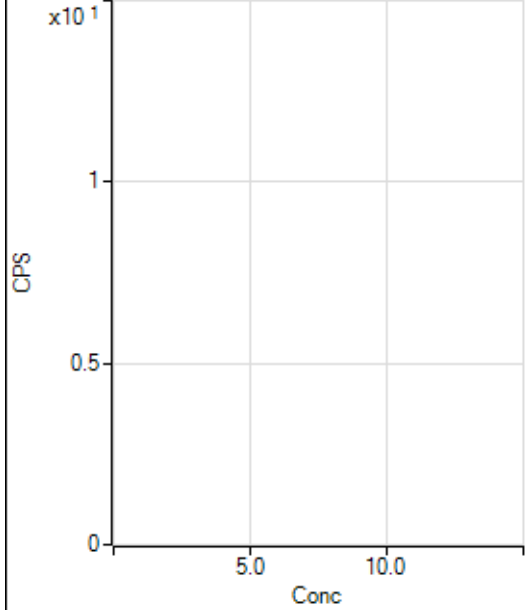
Min Conc: 0

12 C [No Gas] No available calibration points



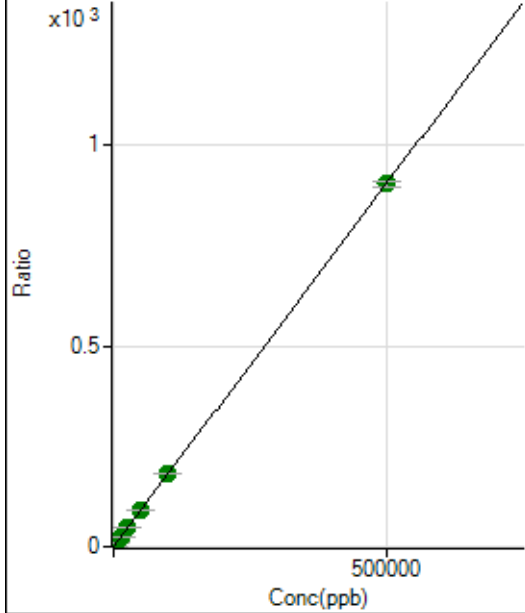
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			5595309.01		A	1.0
2	☐			6154427.83		A	1.1
3	☐			6070140.33		A	1.0
4	☐			6154342.41		A	0.6
5	☐			6105187.89		A	0.3
6	☐			6481762.41		A	0.7
7	☐			6786606.50		A	2.3
8	☐			4903598.99		A	2.0

12 C [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38773.22		P	0.5
2	☐			42327.43		P	1.3
3	☐			41677.86		P	0.7
4	☐			43484.03		P	0.4
5	☐			43914.23		P	0.5
6	☐			46418.47		P	0.2
7	☐			52174.38		P	0.4
8	☐			47885.31		P	0.2

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	47577.20	0.1120	P	7.6
2	☐	500.000	504.231	432734.25	1.0242	P	0.8
3	☐	5000.000	5296.767	3889415.98	9.6942	A	3.2
4	☐	12500.000	13429.957	9640965.13	24.4076	A	2.5
5	☐	25000.000	25594.329	18713255.70	46.4137	A	1.2
6	☐	50000.000	50624.847	36979544.45	91.6954	A	1.2
7	☐	100000.00	100759.30	71177476.71	182.3917	A	0.6
8	☐	500000.00	499729.71	317220448.6	904.1533	A	1.6

$$y = 0.0018 * x + 0.1120$$

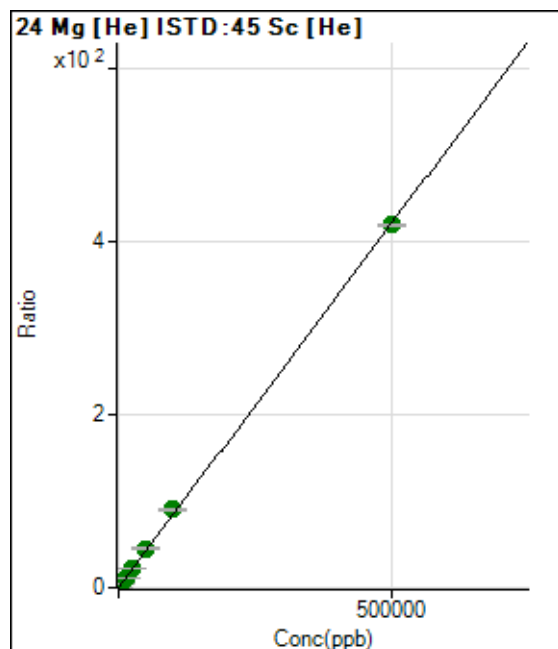
$$R = 1.0000$$

$$DL = 14.16$$

$$BEC = 61.93$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	603.36	0.0014	P	15.8
2	☐	500.000	559.078	199323.02	0.4717	P	0.1
3	☐	5000.000	5742.813	1938507.73	4.8326	A	3.8
4	☐	12500.000	14317.206	4757905.83	12.0458	A	2.6
5	☐	25000.000	27300.078	9260094.86	22.9676	A	0.6
6	☐	50000.000	53602.786	18185079.45	45.0948	A	1.9
7	☐	100000.00	107243.93	35208406.70	90.2205	A	1.1
8	☐	500000.00	498023.01	147001457.8	418.9638	A	0.7

$$y = 8.4125E-004 * x + 0.0014$$

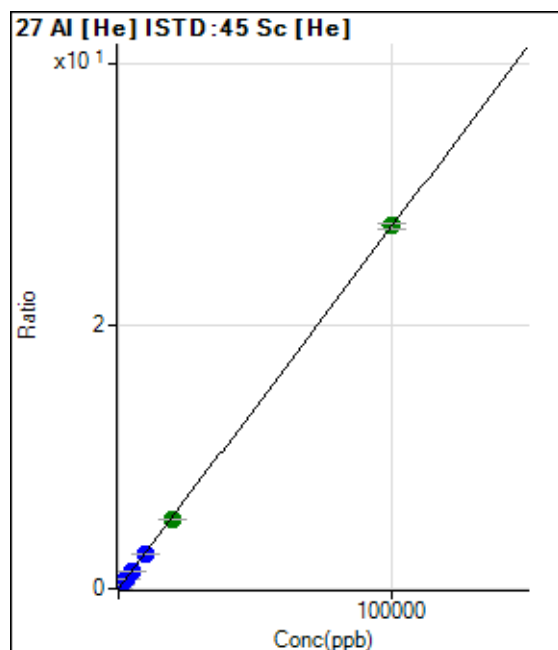
$$R = 0.9999$$

$$DL = 0.8042$$

$$BEC = 1.692$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	823.37	0.0019	P	5.4
2	☐	20.000	13.094	2343.55	0.0055	P	1.8
3	☐	1000.000	996.679	110964.50	0.2767	P	4.8
4	☐	2500.000	2536.572	276945.94	0.7012	P	2.9
5	☐	5000.000	4789.955	533160.82	1.3224	P	0.4
6	☐	10000.000	9367.146	1042172.60	2.5842	P	1.2
7	☐	20000.000	19258.444	2072608.61	5.3110	A	1.1
8	☐	100000.00	100221.21	9694064.99	27.6301	A	1.3

$$y = 2.7567E-004 * x + 0.0019$$

$$R = 1.0000$$

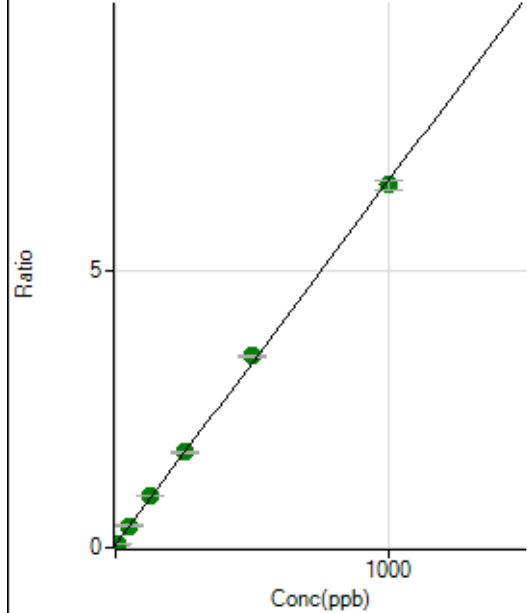
$$DL = 1.148$$

$$BEC = 7.025$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	986218.30	0.0514	A	8.0
2	☐	10.000	0.289	1065590.77	0.0533	A	2.8
3	☐	50.000	52.007	7742518.98	0.3923	A	4.1
4	☐	125.000	132.359	17839022.23	0.9188	A	0.2
5	☐	250.000	254.293	33724592.27	1.7179	A	0.9
6	☐	500.000	518.823	65514543.47	3.4514	A	1.5
7	☐	1000.000	988.592	121720070.4	6.5298	A	2.6
8	☐			1035858.09	0.0651	A	4.3

$$y = 0.0066 * x + 0.0514$$

$$R = 0.9996$$

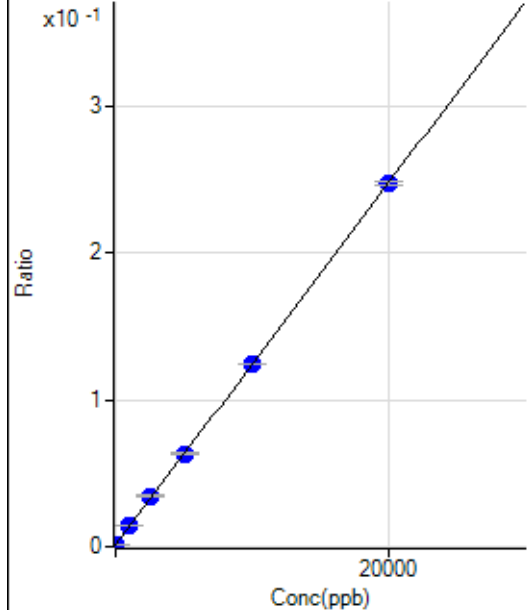
$$DL = 1.883$$

$$BEC = 7.851$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	-13.619	401.12	0.0009	P	15.3
2	☐	0.000	13.619	541.13	0.0013	P	2.7
3	☐	1000.000	1084.917	5803.43	0.0145	P	3.4
4	☐	2500.000	2693.281	13531.96	0.0343	P	3.0
5	☐	5000.000	5059.806	25554.83	0.0634	P	1.8
6	☐	10000.000	10000.489	50086.06	0.1242	P	1.0
7	☐	20000.000	19956.398	96278.51	0.2467	P	1.1
8	☐			331.12	0.0009	P	3.2

$$y = 1.2307E-005 * x + 0.0011$$

$$R = 1.0000$$

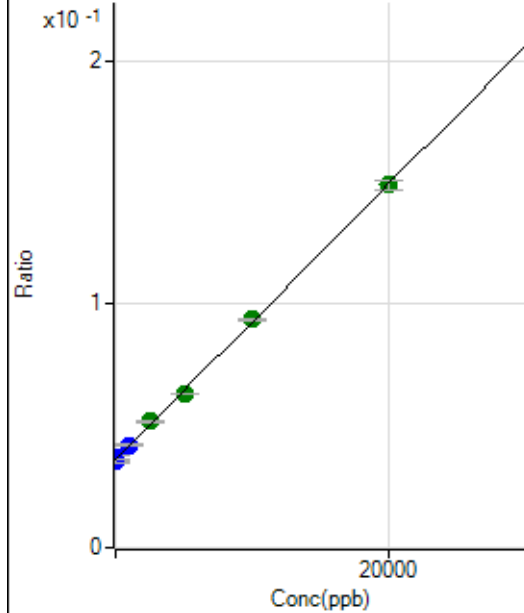
$$DL = 21.79$$

$$BEC = 90.43$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	119.768	705768.15	0.0368	P	7.3
2	☐	0.000	-119.768	708130.15	0.0355	P	3.1
3	☐	1000.000	1054.366	831138.45	0.0421	P	2.9
4	☐	2500.000	2761.958	1005036.82	0.0518	A	1.0
5	☐	5000.000	4772.923	1239758.05	0.0632	A	1.2
6	☐	10000.000	10188.749	1780830.53	0.0938	A	1.0
7	☐	20000.000	19926.932	2776490.13	0.1489	A	2.6
8	☐			536871.88	0.0337	P	4.4

$$y = 5.6616E-006 * x + 0.0361$$

R = 0.9997

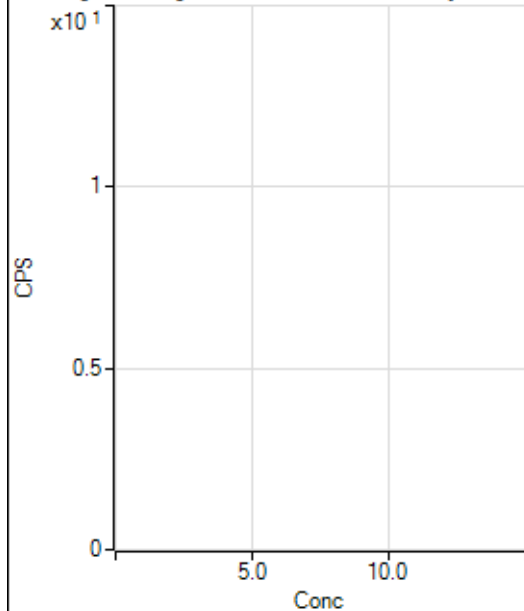
DL = 1002

BEC = 6382

Weight: <None>

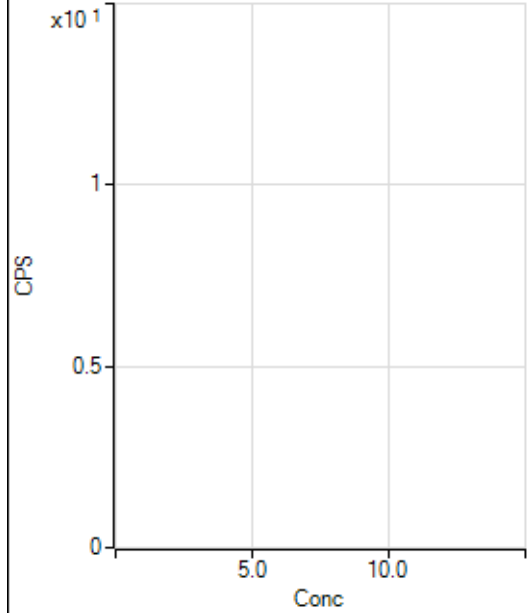
Min Conc: 0

35 Cl [No Gas] No available calibration points



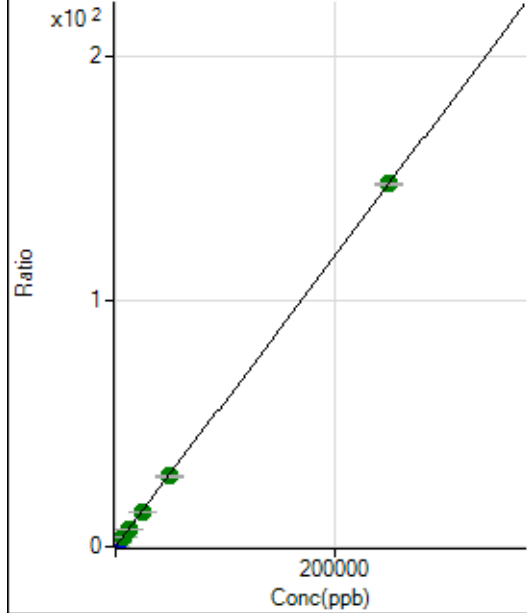
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			107350.79		P	0.6
2	☐			107856.95		P	0.3
3	☐			107099.04		P	0.4
4	☐			113398.39		P	0.7
5	☐			116456.06		P	0.4
6	☐			140426.69		P	1.3
7	☐			184389.36		P	3.0
8	☐			93451.35		P	2.5

35 Cl [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			478.90		P	8.0
2	☐			414.46		P	8.9
3	☐			437.79		P	4.9
4	☐			521.13		P	8.1
5	☐			517.79		P	0.7
6	☐			612.24		P	12.5
7	☐			821.14		P	3.9
8	☐			436.68		P	9.3

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	16278.17	0.0383	P	8.4
2	☐	500.000	492.105	138939.80	0.3288	P	0.4
3	☐	2500.000	2514.634	610676.20	1.5227	P	4.6
4	☐	6250.000	6462.342	1521906.17	3.8530	A	2.5
5	☐	12500.000	12376.460	2961006.69	7.3441	A	0.6
6	☐	25000.000	24135.729	5761229.63	14.2856	A	1.5
7	☐	50000.000	48534.300	11195301.22	28.6880	A	0.9
8	☐	250000.00	250380.30	51870609.23	147.8369	A	0.9

$$y = 5.9030E-004 * x + 0.0383$$

$$R = 1.0000$$

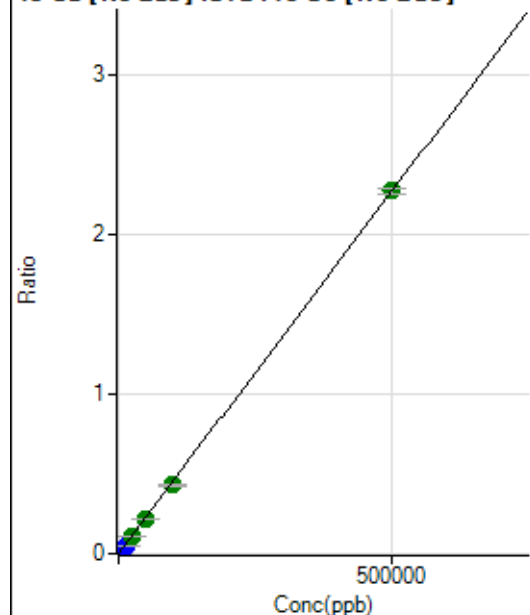
$$DL = 16.45$$

$$BEC = 64.96$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2000.16	0.0001	P	7.8
2	☐	500.000	479.006	45425.99	0.0023	P	1.8
3	☐	5000.000	4637.118	416630.37	0.0211	P	3.3
4	☐	12500.000	11842.609	1043278.76	0.0537	P	0.8
5	☐	25000.000	23615.953	2101565.06	0.1071	A	1.6
6	☐	50000.000	47924.877	4122048.52	0.2171	A	1.4
7	☐	100000.00	95177.281	8037011.75	0.4311	A	2.1
8	☐	500000.00	501261.34	36124458.07	2.2702	A	1.7

$$y = 4.5288E-006 * x + 1.0433E-004$$

R = 0.9999

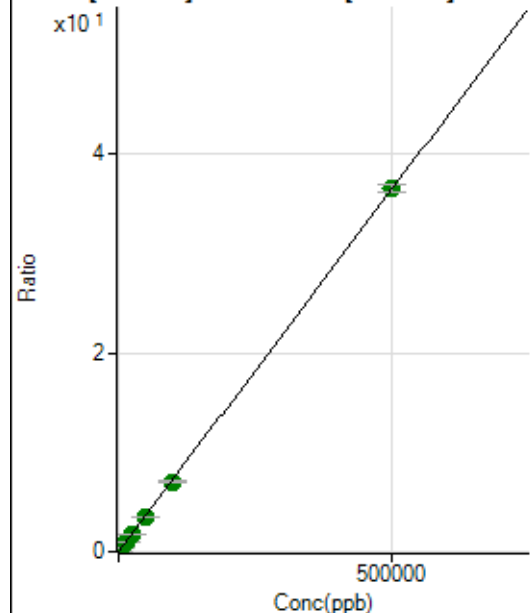
DL = 5.359

BEC = 23.04

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	45366.77	0.0024	P	6.3
2	☐	500.000	483.227	750440.88	0.0376	P	2.5
3	☐	5000.000	4743.883	6870038.58	0.3479	A	2.2
4	☐	12500.000	12042.365	17076809.88	0.8796	A	0.8
5	☐	25000.000	23556.993	33734474.22	1.7184	A	0.3
6	☐	50000.000	47758.211	66085181.24	3.4813	A	0.5
7	☐	100000.00	96111.503	130560696.9	7.0037	A	1.9
8	☐	500000.00	501088.04	580869884.6	36.5045	A	2.0

$$y = 7.2846E-005 * x + 0.0024$$

R = 1.0000

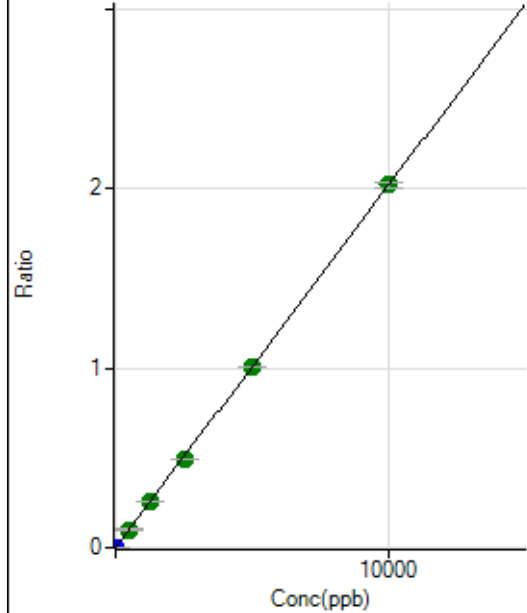
DL = 6.14

BEC = 32.46

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	312.23	0.0000	P	17.9
2	☐	5.000	5.042	20637.13	0.0010	P	2.1
3	☐	500.000	498.134	1983684.47	0.1005	A	3.2
4	☐	1250.000	1259.380	4931737.91	0.2540	A	0.8
5	☐	2500.000	2447.168	9689422.84	0.4936	A	0.7
6	☐	5000.000	4999.465	19140893.19	1.0083	A	0.6
7	☐	10000.000	10012.397	37644687.22	2.0194	A	1.9
8	☐			3627.16	0.0002	P	7.8

$$y = 2.0169E-004 * x + 1.6111E-005$$

$$R = 1.0000$$

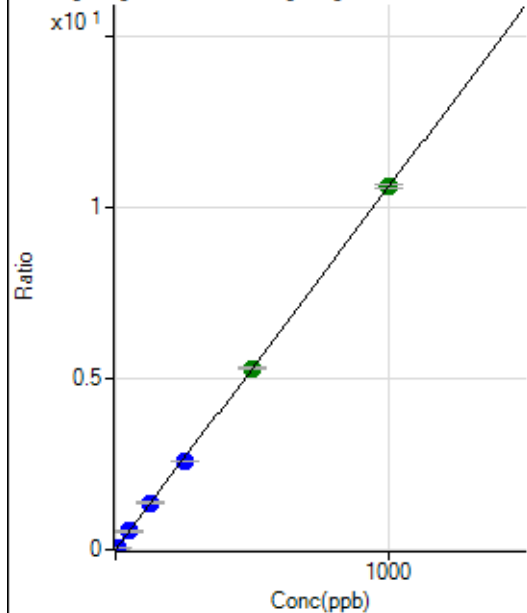
$$DL = 0.0429$$

$$BEC = 0.07988$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	20.00	0.0000	P	28.4
2	☐	5.000	5.083	22750.38	0.0538	P	0.4
3	☐	50.000	50.843	215919.61	0.5382	P	3.5
4	☐	125.000	129.087	539685.44	1.3664	P	2.9
5	☐	250.000	245.685	1048516.84	2.6006	P	0.3
6	☐	500.000	500.012	2134523.11	5.2927	A	1.0
7	☐	1000.000	1000.519	4132761.88	10.5906	A	1.0
8	☐			527.79	0.0015	P	2.7

$$y = 0.0106 * x + 4.6882E-005$$

$$R = 1.0000$$

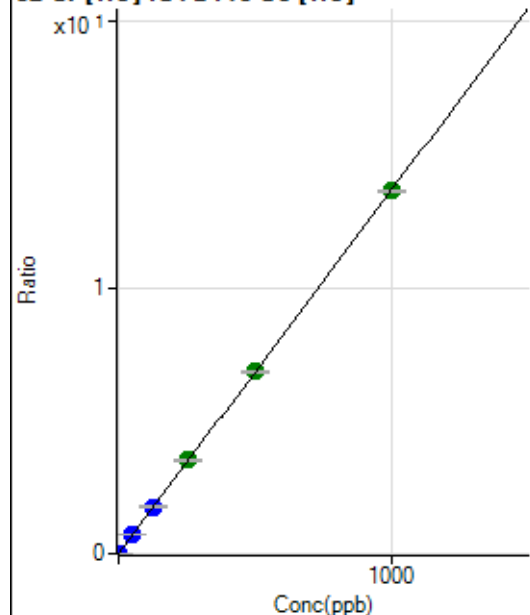
$$DL = 0.003777$$

$$BEC = 0.004429$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1364.52	0.0032	P	13.0
2	☐	2.000	2.058	13236.20	0.0313	P	0.9
3	☐	50.000	51.112	281298.41	0.7013	P	4.2
4	☐	125.000	128.254	693102.64	1.7550	P	3.2
5	☐	250.000	256.649	1414615.01	3.5087	A	2.1
6	☐	500.000	500.081	2755857.94	6.8336	A	1.5
7	☐	1000.000	997.835	5319908.12	13.6323	A	0.4
8	☐			8000.94	0.0228	P	14.7

$$y = 0.0137 * x + 0.0032$$

$$R = 1.0000$$

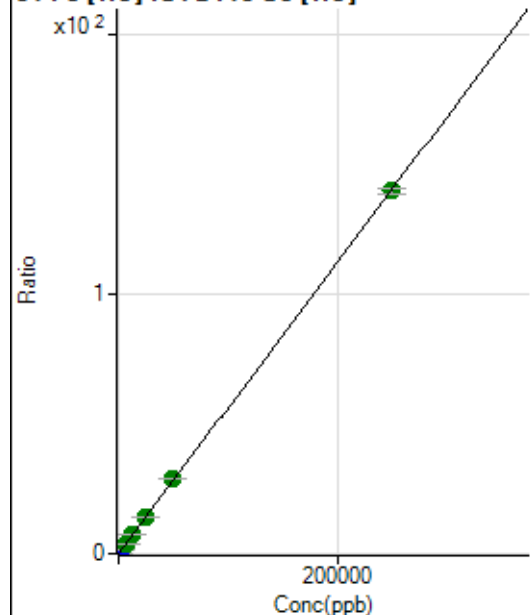
$$DL = 0.09226$$

$$BEC = 0.236$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	618.91	0.0015	P	18.0
2	☐	50.000	53.836	13357.44	0.0316	P	2.8
3	☐	2500.000	2688.582	604602.24	1.5073	P	4.0
4	☐	6250.000	6992.915	1547327.01	3.9181	A	3.6
5	☐	12500.000	13258.649	2994593.57	7.4274	A	0.6
6	☐	25000.000	25583.266	5779281.16	14.3303	A	1.2
7	☐	50000.000	51827.483	11328181.50	29.0293	A	0.8
8	☐	250000.00	249517.78	49032147.60	139.7528	A	1.4

$$y = 5.6009E-004 * x + 0.0015$$

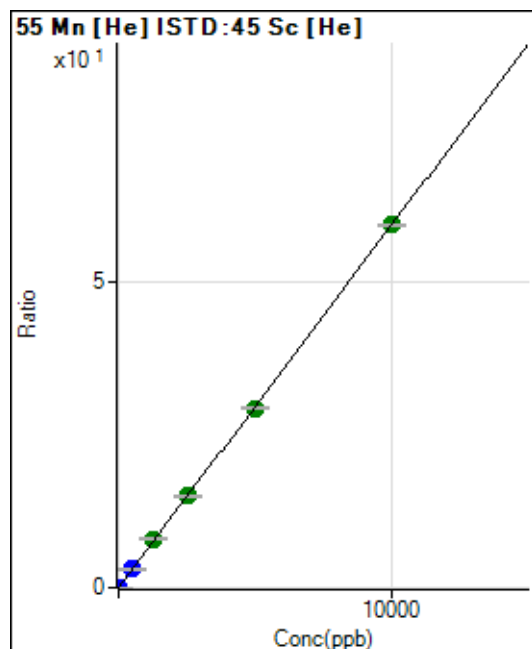
$$R = 1.0000$$

$$DL = 1.401$$

$$BEC = 2.6$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	496.68	0.0012	P	21.0
2	☐	1.000	0.978	2950.33	0.0070	P	2.7
3	☐	500.000	513.394	1222479.72	3.0476	P	3.9
4	☐	1250.000	1343.441	3149719.54	7.9731	A	1.9
5	☐	2500.000	2523.686	6038153.94	14.9766	A	0.7
6	☐	5000.000	4951.241	11849179.68	29.3815	A	1.6
7	☐	10000.000	10006.108	23171370.76	59.3768	A	0.7
8	☐			7169.65	0.0204	P	2.9

$$y = 0.0059 * x + 0.0012$$

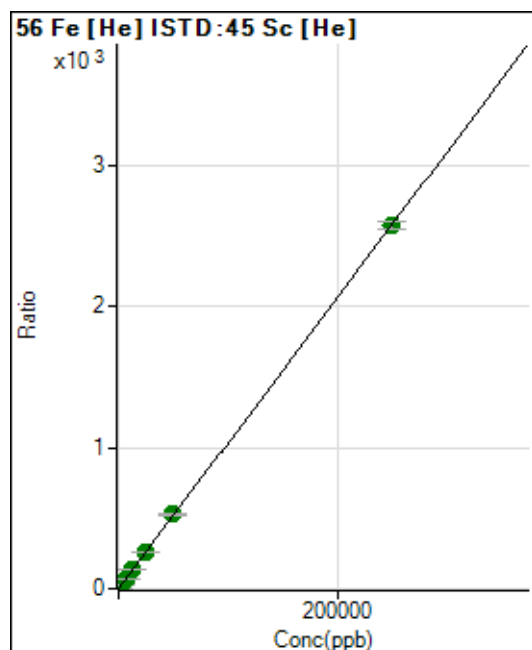
$$R = 0.9999$$

$$DL = 0.1253$$

$$BEC = 0.1986$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6654.95	0.0157	P	11.1
2	☐	50.000	53.737	240121.46	0.5683	P	0.9
3	☐	2500.000	2721.629	11235102.19	28.0055	A	3.5
4	☐	6250.000	6848.621	27827369.86	70.4484	A	2.6
5	☐	12500.000	13014.557	53969049.75	133.8602	A	0.4
6	☐	25000.000	25433.142	105485575.1	261.5756	A	1.7
7	☐	50000.000	51084.585	205034163.6	525.3805	A	1.7
8	☐	250000.00	249696.85	900940608.8	2567.951	A	2.0

$$y = 0.0103 * x + 0.0157$$

$$R = 1.0000$$

$$DL = 0.5086$$

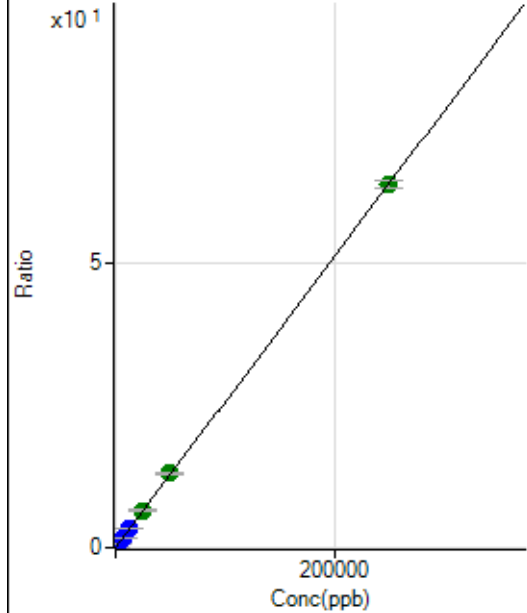
$$BEC = 1.526$$

Weight: <None>

Min Conc: 0

Calibration for 006CALS.d

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	164.45	0.0004	P	18.5
2	☐	50.000	52.379	5830.14	0.0138	P	1.9
3	☐	2500.000	2655.878	272907.61	0.6803	P	3.7
4	☐	6250.000	6644.360	671968.91	1.7014	P	3.0
5	☐	12500.000	12641.963	1305025.52	3.2369	P	0.2
6	☐	25000.000	25742.252	2657701.89	6.5907	A	2.8
7	☐	50000.000	50971.854	5092458.47	13.0497	A	0.5
8	☐	250000.00	249712.88	22427977.72	63.9293	A	2.2

$$y = 2.5601E-004 * x + 3.8944E-004$$

$$R = 1.0000$$

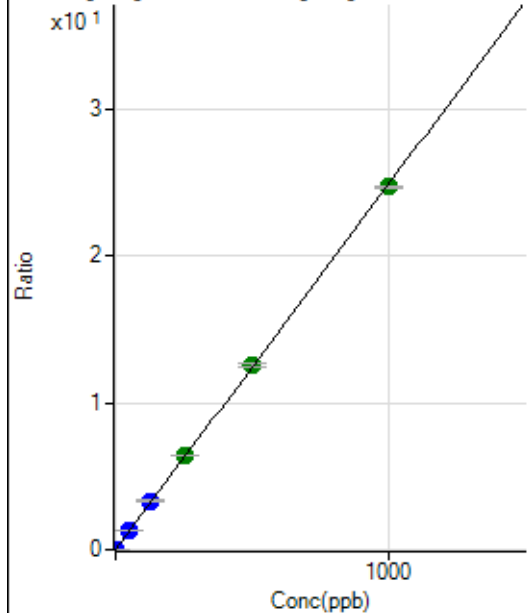
$$DL = 0.8435$$

$$BEC = 1.521$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	122.22	0.0003	P	14.6
2	☐	1.000	1.112	11810.53	0.0280	P	1.7
3	☐	50.000	52.723	526274.39	1.3120	P	3.9
4	☐	125.000	132.499	1302097.37	3.2968	P	2.9
5	☐	250.000	260.257	2610705.34	6.4753	A	0.1
6	☐	500.000	506.644	5083184.96	12.6053	A	2.1
7	☐	1000.000	993.040	9641603.54	24.7065	A	0.7
8	☐			18452.02	0.0526	P	1.5

$$y = 0.0249 * x + 2.8675E-004$$

$$R = 0.9999$$

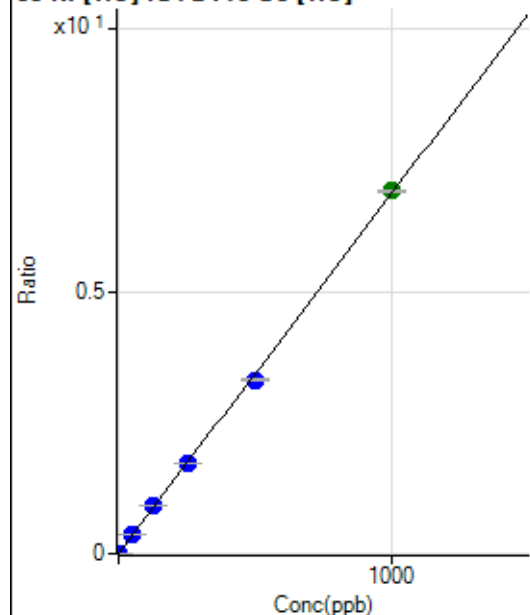
$$DL = 0.005054$$

$$BEC = 0.01153$$

Weight: <None>

Min Conc: 0

⁶⁰Ni [He] ISTD: ⁴⁵Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	625.57	0.0015	P	3.2
2	☐	1.000	1.021	3578.27	0.0085	P	3.0
3	☐	50.000	52.994	146386.73	0.3649	P	3.9
4	☐	125.000	132.710	360108.30	0.9117	P	2.4
5	☐	250.000	249.478	690451.62	1.7125	P	0.4
6	☐	500.000	482.220	1334383.60	3.3088	P	1.3
7	☐	1000.000	1007.907	2698258.16	6.9143	A	0.2
8	☐			6552.68	0.0187	P	3.3

$$y = 0.0069 * x + 0.0015$$

$$R = 0.9997$$

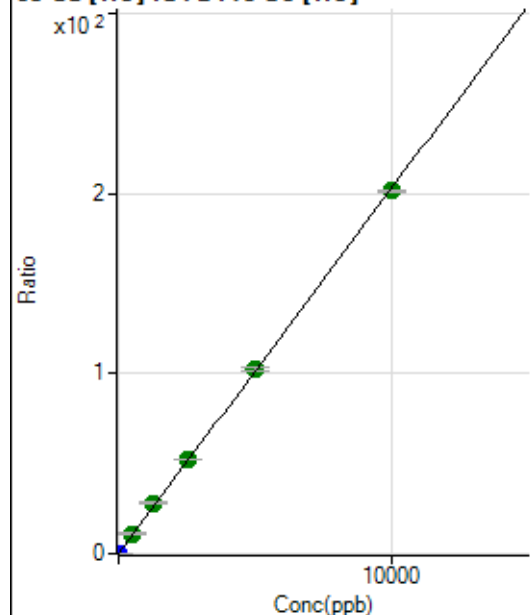
$$DL = 0.02079$$

$$BEC = 0.2142$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD: ⁴⁵Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5725.65	0.0135	P	6.7
2	☐	2.000	2.329	25629.85	0.0607	P	1.8
3	☐	500.000	551.551	4488168.06	11.1911	A	4.7
4	☐	1250.000	1384.496	11088568.45	28.0715	A	2.7
5	☐	2500.000	2582.771	21108655.38	52.3556	A	1.0
6	☐	5000.000	5059.574	41354471.33	102.5501	A	2.2
7	☐	10000.000	9930.131	78539495.50	201.2562	A	0.3
8	☐			15459.59	0.0441	P	0.6

$$y = 0.0203 * x + 0.0135$$

$$R = 0.9999$$

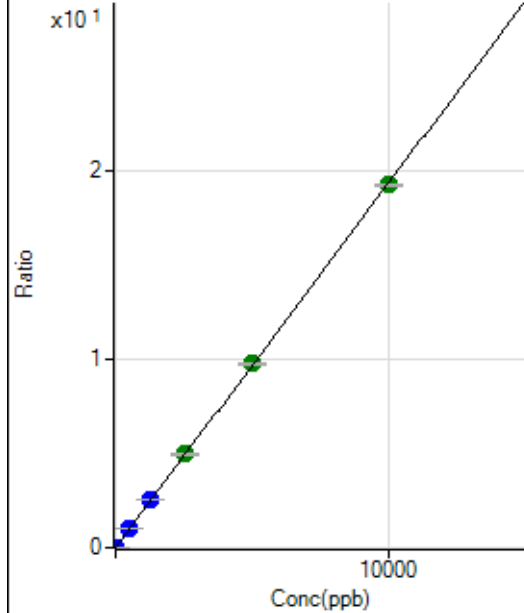
$$DL = 0.1345$$

$$BEC = 0.6649$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD: ⁴⁵Sc [He]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	808.92	0.0019	P	5.5
2	☐	2.000	5.599	5378.85	0.0127	P	5.4
3	☐	500.000	523.440	406946.29	1.0146	P	4.4
4	☐	1250.000	1315.069	1005631.18	2.5463	P	3.1
5	☐	2500.000	2565.281	2001863.58	4.9652	A	0.7
6	☐	5000.000	5042.728	3935322.86	9.7585	A	1.8
7	☐	10000.000	9953.009	7515697.60	19.2589	A	0.2
8	☐			3659.40	0.0104	P	0.9

$$y = 0.0019 * x + 0.0019$$

$$R = 1.0000$$

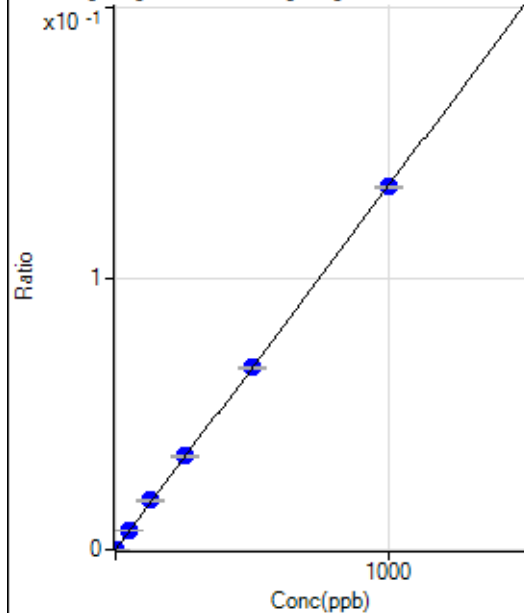
$$DL = 0.1626$$

$$BEC = 0.9818$$

Weight: <None>

Min Conc: 0

⁷⁵As [He] ISTD: ⁸⁹Y [He]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5.56	0.0000	P	90.5
2	☐	1.000	1.041	477.79	0.0001	P	7.8
3	☐	50.000	53.361	23367.23	0.0072	P	2.8
4	☐	125.000	135.082	57857.03	0.0181	P	3.6
5	☐	250.000	257.940	113088.07	0.0346	P	2.6
6	☐	500.000	499.463	223169.42	0.0670	P	1.1
7	☐	1000.000	996.855	435330.27	0.1338	P	0.8
8	☐			235.56	0.0001	P	6.5

$$y = 1.3418E-004 * x + 1.6977E-006$$

$$R = 0.9999$$

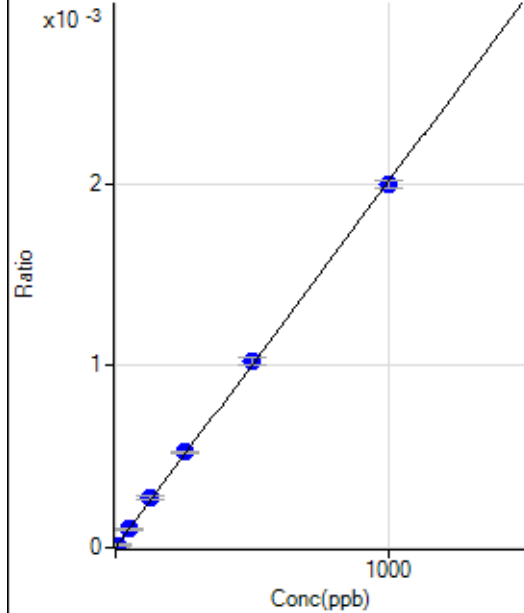
$$DL = 0.03436$$

$$BEC = 0.01265$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.2
2	☐	5.000	6.860	47.78	0.0000	P	29.5
3	☐	50.000	52.224	343.34	0.0001	P	9.7
4	☐	125.000	135.691	871.15	0.0003	P	9.4
5	☐	250.000	260.682	1714.57	0.0005	P	1.2
6	☐	500.000	509.422	3412.67	0.0010	P	4.7
7	☐	1000.000	991.162	6488.22	0.0020	P	2.2
8	☐			8.89	0.0000	P	58.3

$$y = 2.0110\text{E-}006 * x + 3.4926\text{E-}007$$

$$R = 0.9998$$

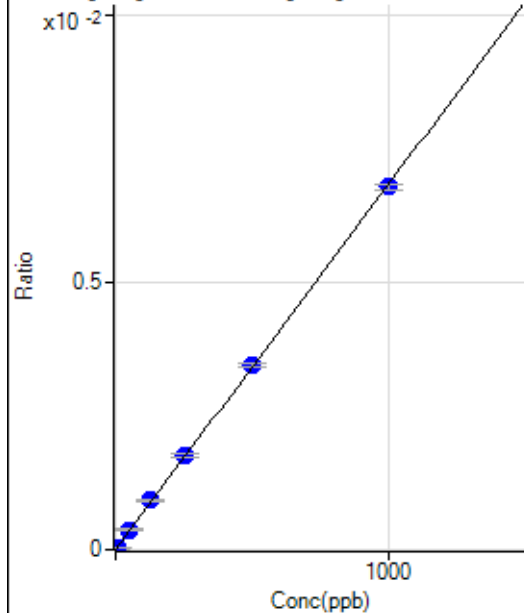
$$DL = 0.9025$$

$$BEC = 0.1737$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.78	0.0000	P	111.7
2	☐	5.000	6.015	146.67	0.0000	P	14.8
3	☐	50.000	52.540	1176.73	0.0004	P	9.3
4	☐	125.000	135.447	2958.12	0.0009	P	4.8
5	☐	250.000	257.771	5756.80	0.0018	P	4.3
6	☐	500.000	507.108	11537.05	0.0035	P	2.2
7	☐	1000.000	993.065	22075.16	0.0068	P	1.5
8	☐			21.11	0.0000	P	17.3

$$y = 6.8281\text{E-}006 * x + 2.2627\text{E-}006$$

$$R = 0.9999$$

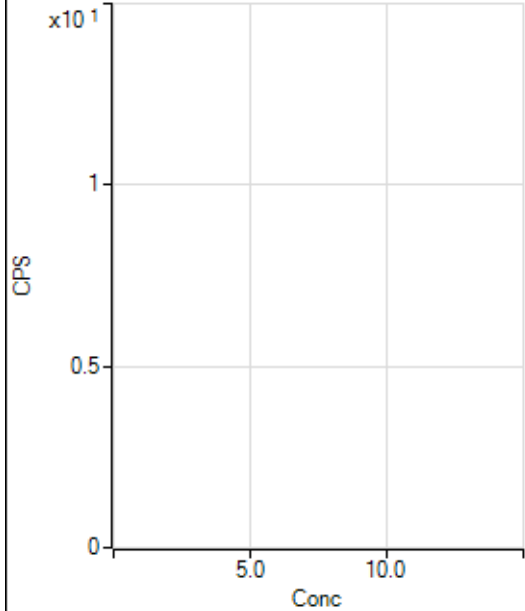
$$DL = 1.111$$

$$BEC = 0.3314$$

Weight: <None>

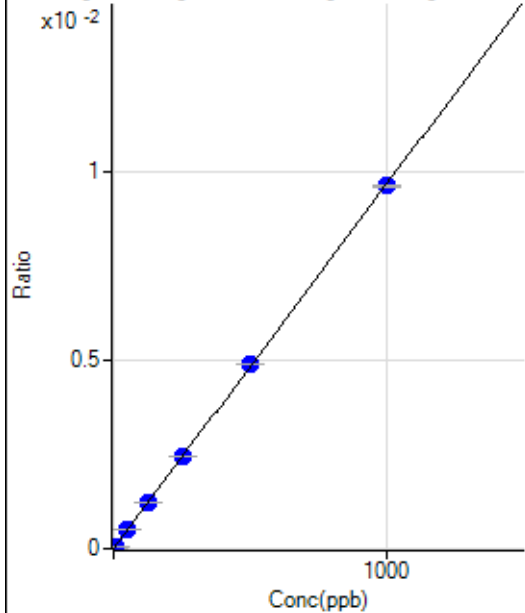
Min Conc: 0

81 Br [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12371.13		P	0.5
2	☐			11449.19		P	1.8
3	☐			11051.11		P	1.6
4	☐			11047.78		P	2.6
5	☐			11075.57		P	2.3
6	☐			11153.44		P	3.2
7	☐			11190.10		P	1.8
8	☐			11336.90		P	0.8

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	-5.50	0.0000	P	-700.
2	☐	5.000	4.538	1950.41	0.0000	P	3.6
3	☐	50.000	50.993	22117.05	0.0005	P	3.2
4	☐	125.000	128.626	55159.67	0.0012	P	0.6
5	☐	250.000	251.475	108470.22	0.0024	P	0.6
6	☐	500.000	506.661	215156.66	0.0049	P	0.1
7	☐	1000.000	995.800	413939.67	0.0096	P	0.3
8	☐			68.20	0.0000	P	79.3

$$y = 9.6641E-006 * x - 1.3219E-007$$

$$R = 1.0000$$

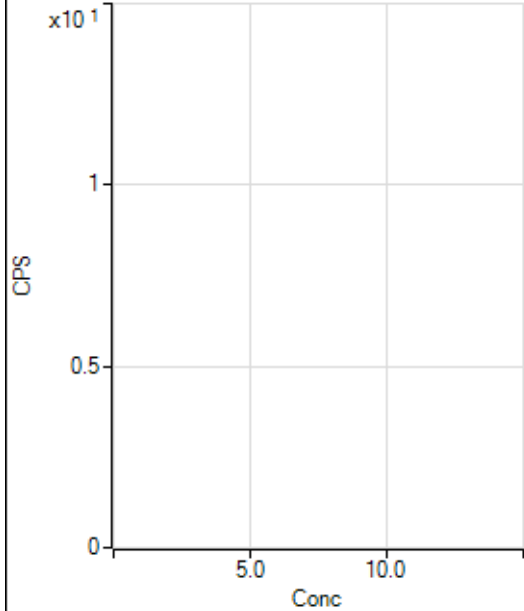
$$DL = 0.2875$$

$$BEC = -0.01368$$

Weight: <None>

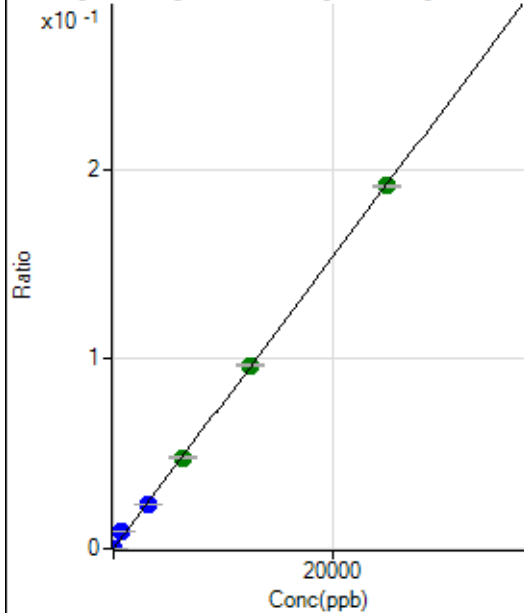
Min Conc: 0

83 Kr [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			352.23		P	10.8
2	☐			337.79		P	5.8
3	☐			316.68		P	6.6
4	☐			370.01		P	10.2
5	☐			325.56		P	9.7
6	☐			314.45		P	4.4
7	☐			404.46		P	6.3
8	☐			457.79		P	5.4

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	675.58	0.0000	P	6.2
2	☐	1.000	24.794	9189.77	0.0002	P	0.9
3	☐	625.000	1196.843	413348.08	0.0092	P	2.4
4	☐	3125.000	3037.454	1035883.95	0.0233	P	0.2
5	☐	6250.000	6266.513	2148686.32	0.0481	A	1.5
6	☐	12500.000	12607.700	4255110.77	0.0968	A	1.3
7	☐	25000.000	24938.668	8238436.27	0.1915	A	0.2
8	☐			21041.47	0.0006	P	1.3

$$y = 7.6794E-006 * x + 1.5603E-005$$

$$R = 0.9997$$

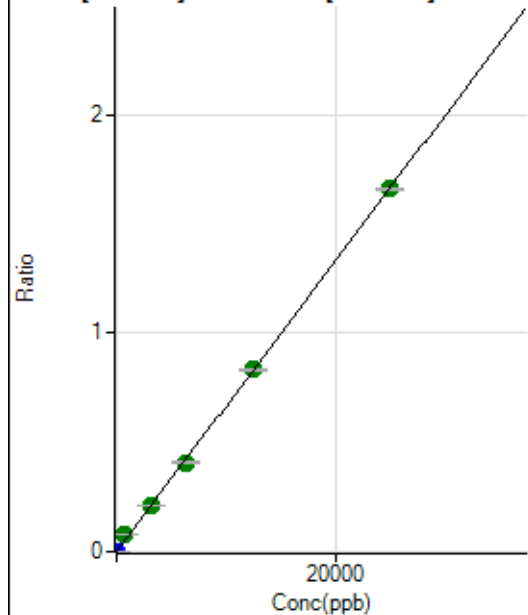
$$DL = 0.3787$$

$$BEC = 2.032$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1068.94	0.0000	P	10.7
2	☐	1.000	25.123	75554.01	0.0017	P	1.7
3	☐	625.000	1228.908	3665784.43	0.0817	A	4.1
4	☐	3125.000	3157.415	9310272.15	0.2098	A	1.0
5	☐	6250.000	6135.367	18195343.20	0.4076	A	1.1
6	☐	12500.000	12534.570	36594058.34	0.8328	A	0.9
7	☐	25000.000	24992.223	71422040.05	1.6604	A	0.6
8	☐			179826.42	0.0048	P	0.3

$$y = 6.6438E-005 * x + 2.4732E-005$$

$$R = 0.9997$$

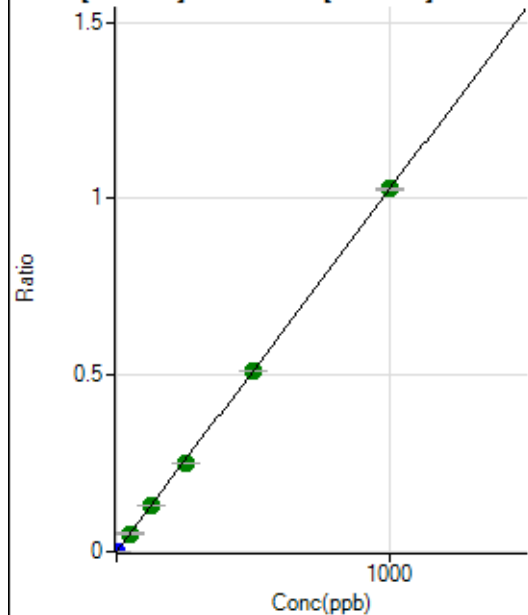
$$DL = 0.1193$$

$$BEC = 0.3723$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1949.05	0.0000	P	6.4
2	☐	1.000	0.957	45837.29	0.0010	P	2.0
3	☐	50.000	49.990	2305767.97	0.0514	A	3.3
4	☐	125.000	125.024	5698101.31	0.1284	A	0.3
5	☐	250.000	245.267	11240644.41	0.2518	A	0.8
6	☐	500.000	499.444	22532769.66	0.5128	A	0.7
7	☐	1000.000	1001.459	44223441.01	1.0281	A	0.7
8	☐			19314.73	0.0005	P	1.6

$$y = 0.0010 * x + 4.4959E-005$$

$$R = 1.0000$$

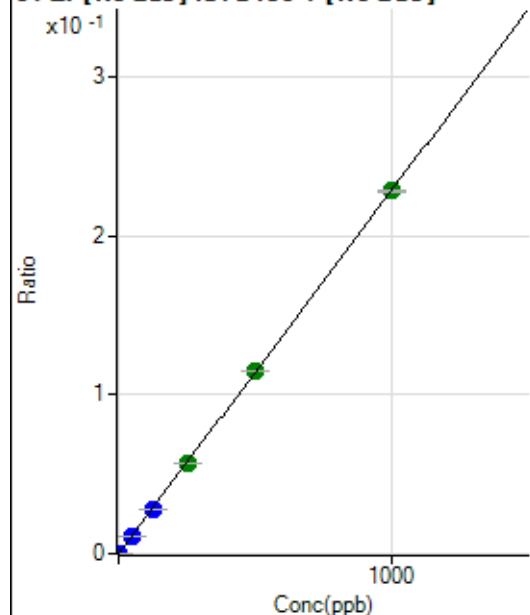
$$DL = 0.008381$$

$$BEC = 0.0438$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	345.57	0.0000	P	18.2
2	☐	1.000	0.960	10145.99	0.0002	P	0.8
3	☐	50.000	47.224	485029.38	0.0108	P	2.6
4	☐	125.000	120.144	1219224.29	0.0275	P	0.8
5	☐	250.000	248.502	2536055.50	0.0568	A	0.6
6	☐	500.000	503.727	5060574.72	0.1152	A	0.4
7	☐	1000.000	999.257	9826240.90	0.2284	A	0.3
8	☐			4366.30	0.0001	P	5.0

$$y = 2.2861E-004 * x + 7.9364E-006$$

$$R = 1.0000$$

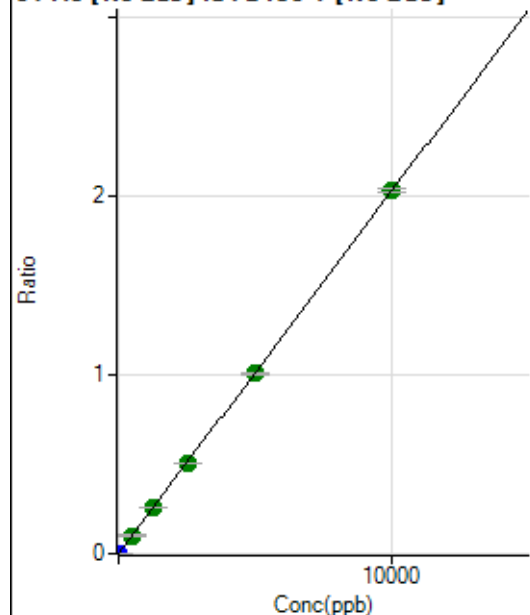
$$DL = 0.01896$$

$$BEC = 0.03472$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	680.02	0.0000	P	5.9
2	☐	5.000	5.830	53397.41	0.0012	P	2.6
3	☐	500.000	496.996	4522611.22	0.1007	A	3.2
4	☐	1250.000	1261.485	11347282.05	0.2557	A	0.6
5	☐	2500.000	2483.357	22466085.78	0.5033	A	1.2
6	☐	5000.000	4981.934	44367886.01	1.0097	A	0.8
7	☐	10000.000	10011.908	87279942.03	2.0291	A	1.0
8	☐			13039.61	0.0003	P	6.9

$$y = 2.0267E-004 * x + 1.5673E-005$$

$$R = 1.0000$$

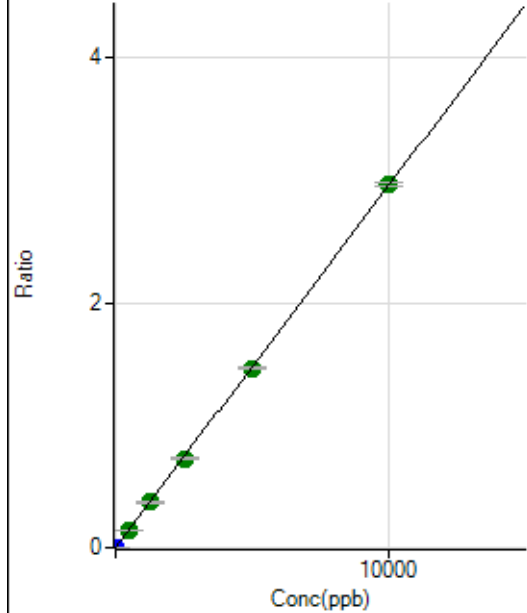
$$DL = 0.01362$$

$$BEC = 0.07733$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	246.67	0.0000	P	9.5
2	☐	5.000	4.901	64836.93	0.0015	P	0.7
3	☐	500.000	495.235	6568444.83	0.1463	A	2.7
4	☐	1250.000	1249.314	16378874.34	0.3691	A	1.1
5	☐	2500.000	2468.628	32552477.01	0.7293	A	0.4
6	☐	5000.000	4964.399	64443996.26	1.4666	A	0.9
7	☐	10000.000	10025.967	127401742.5	2.9619	A	1.1
8	☐			12439.06	0.0003	P	8.5

$$y = 2.9542\text{E-}004 * x + 5.6700\text{E-}006$$

$$R = 1.0000$$

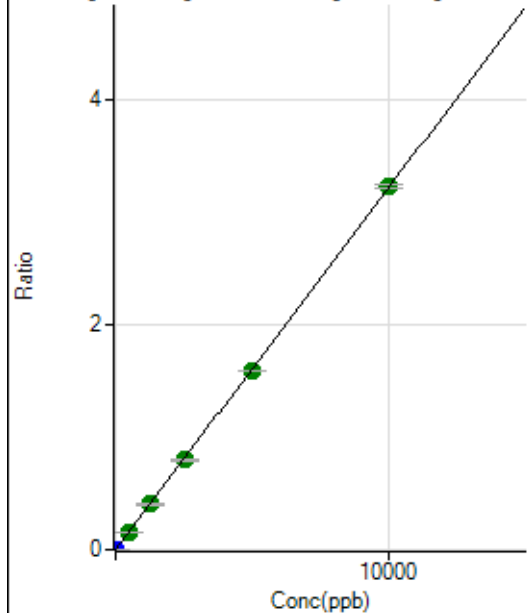
$$DL = 0.005477$$

$$BEC = 0.01919$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	316.67	0.0000	P	15.7
2	☐	5.000	4.943	71173.30	0.0016	P	0.9
3	☐	500.000	490.966	7081858.85	0.1578	A	3.1
4	☐	1250.000	1253.329	17871326.82	0.4027	A	1.1
5	☐	2500.000	2483.295	35614184.47	0.7979	A	1.9
6	☐	5000.000	4942.333	69778860.63	1.5880	A	0.4
7	☐	10000.000	10033.045	138658499.0	3.2236	A	1.2
8	☐			19225.77	0.0005	P	8.6

$$y = 3.2130\text{E-}004 * x + 7.3198\text{E-}006$$

$$R = 1.0000$$

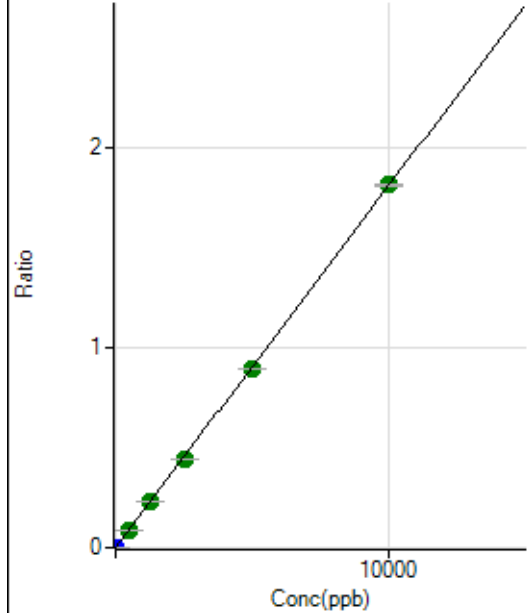
$$DL = 0.01075$$

$$BEC = 0.02278$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	147.78	0.0000	P	4.7
2	☐	5.000	4.947	39981.87	0.0009	P	1.7
3	☐	500.000	496.493	4023000.67	0.0896	A	3.2
4	☐	1250.000	1260.248	10094558.88	0.2275	A	1.3
5	☐	2500.000	2466.626	19872383.03	0.4452	A	0.3
6	☐	5000.000	4952.458	39280235.80	0.8939	A	0.1
7	☐	10000.000	10031.009	77878527.73	1.8105	A	0.7
8	☐			6892.91	0.0002	P	14.2

$$y = 1.8049E-004 * x + 3.4063E-006$$

$$R = 1.0000$$

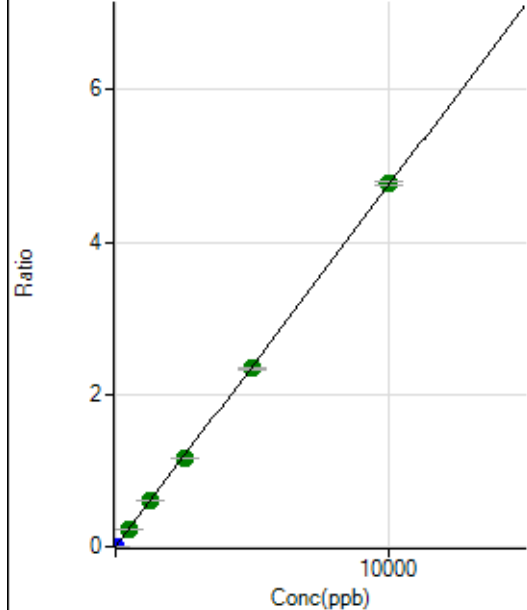
$$DL = 0.002672$$

$$BEC = 0.01887$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	323.34	0.0000	P	19.2
2	☐	5.000	4.873	103475.65	0.0023	P	1.9
3	☐	500.000	489.827	10435412.97	0.2324	A	2.8
4	☐	1250.000	1256.236	26453981.83	0.5961	A	0.5
5	☐	2500.000	2458.178	52063680.34	1.1664	A	0.3
6	☐	5000.000	4933.784	102875381.8	2.3411	A	0.6
7	☐	10000.000	10043.292	204984354.7	4.7656	A	1.0
8	☐			16501.16	0.0004	P	11.8

$$y = 4.7450E-004 * x + 7.5054E-006$$

$$R = 1.0000$$

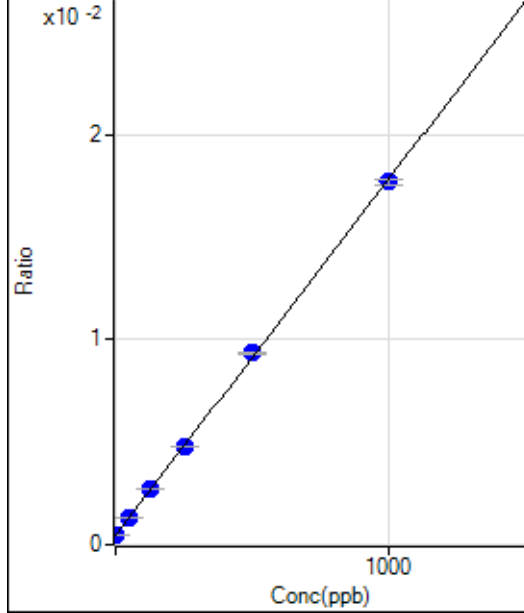
$$DL = 0.009089$$

$$BEC = 0.01582$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16387.73	0.0004	P	1.6
2	☐	1.000	0.878	17352.11	0.0005	P	1.5
3	☐	50.000	51.070	50560.05	0.0013	P	0.9
4	☐	125.000	130.569	101796.71	0.0027	P	2.1
5	☐	250.000	250.569	182917.21	0.0048	P	0.9
6	☐	500.000	512.044	350231.99	0.0093	P	1.0
7	☐	1000.000	993.086	657596.29	0.0177	P	1.5
8	☐			14155.15	0.0004	P	0.5

$$y = 1.7355E-005 * x + 4.4986E-004$$

$$R = 0.9999$$

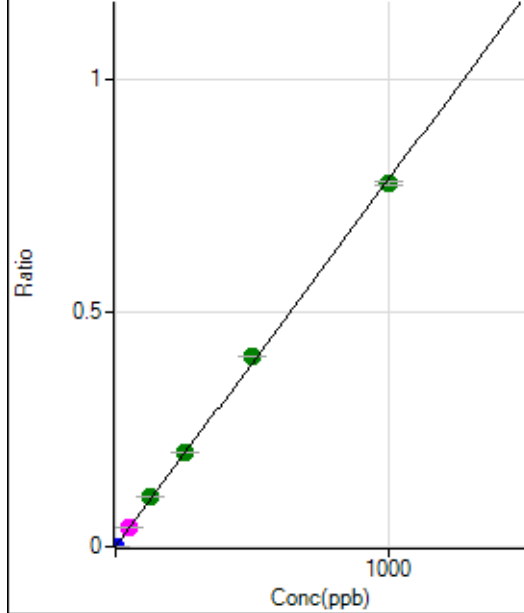
$$DL = 1.208$$

$$BEC = 25.92$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	260.51	0.0000	P	8.5
2	☐	1.000	1.057	31255.10	0.0008	P	1.9
3	☐	50.000	52.913	1573024.72	0.0416	M	3.9
4	☐	125.000	136.245	4012153.31	0.1070	A	1.5
5	☐	250.000	256.708	7687410.78	0.2017	A	0.5
6	☐	500.000	517.518	15251302.44	0.4065	A	0.5
7	☐	1000.000	988.012	28860546.58	0.7761	A	1.2
8	☐			3535.18	0.0001	P	7.0

$$y = 7.8555E-004 * x + 7.1678E-006$$

$$R = 0.9997$$

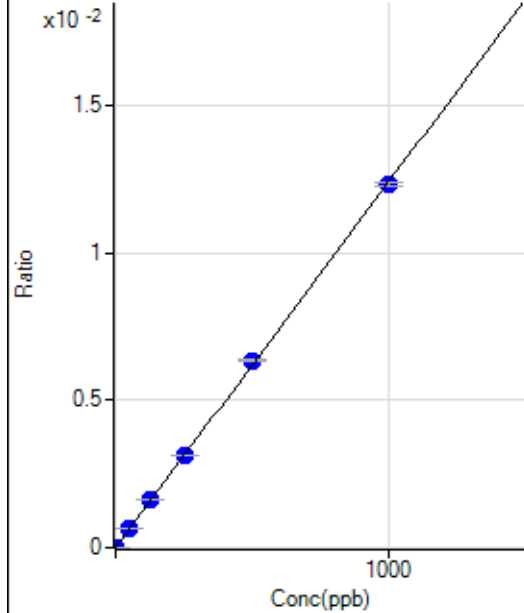
$$DL = 0.002323$$

$$BEC = 0.009125$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45.56	0.0000	P	13.9
2	☐	1.000	1.050	532.24	0.0000	P	6.6
3	☐	50.000	51.852	24356.01	0.0006	P	1.1
4	☐	125.000	131.134	60957.50	0.0016	P	1.3
5	☐	250.000	252.782	119430.95	0.0031	P	1.4
6	☐	500.000	511.485	237772.36	0.0063	P	1.0
7	☐	1000.000	992.703	457419.40	0.0123	P	1.0
8	☐			215.56	0.0000	P	7.5

$$y = 1.2390E-005 * x + 1.2557E-006$$

R = 0.9999

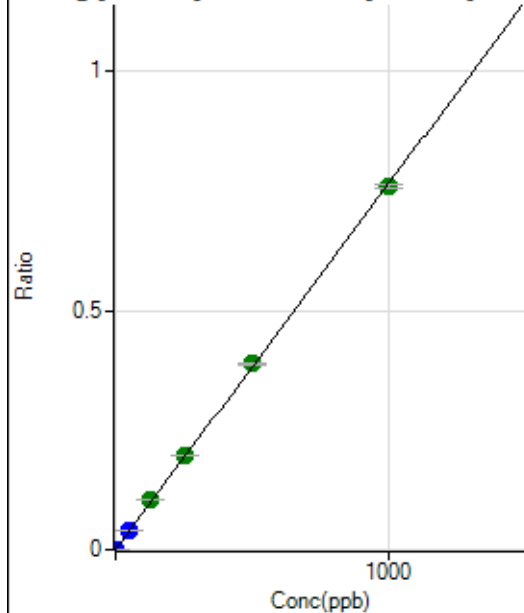
DL = 0.04225

BEC = 0.1013

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	95.56	0.0000	P	19.4
2	☐	1.000	1.062	30370.14	0.0008	P	1.2
3	☐	50.000	51.857	1499191.44	0.0396	P	1.9
4	☐	125.000	135.189	3872237.96	0.1033	A	1.5
5	☐	250.000	258.806	7538217.94	0.1978	A	0.8
6	☐	500.000	509.083	14591831.03	0.3890	A	0.9
7	☐	1000.000	991.890	28182757.08	0.7579	A	0.9
8	☐			3230.42	0.0001	P	5.1

$$y = 7.6409E-004 * x + 2.6270E-006$$

R = 0.9999

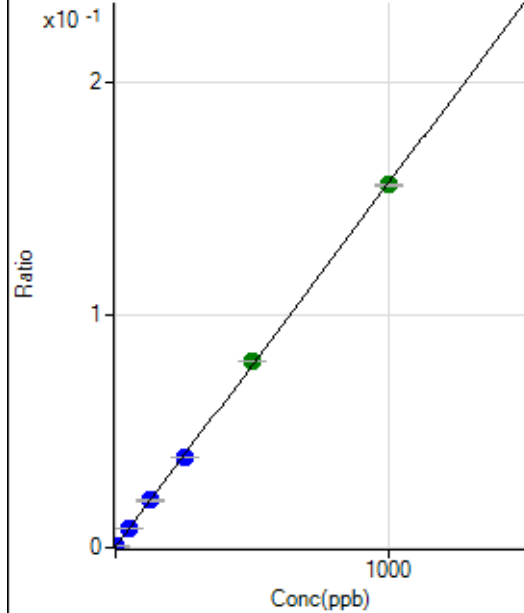
DL = 0.001997

BEC = 0.003438

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	11461.75	0.0003	P	1.6
2	☐	1.000	1.085	18052.08	0.0005	P	0.8
3	☐	50.000	50.348	309138.50	0.0082	P	1.1
4	☐	125.000	127.687	758536.62	0.0202	P	2.2
5	☐	250.000	245.603	1472771.58	0.0386	P	0.9
6	☐	500.000	510.472	2999804.93	0.0800	A	0.8
7	☐	1000.000	995.510	5787698.53	0.1556	A	0.7
8	☐			10495.51	0.0003	P	0.8

$$y = 1.5603E-004 * x + 3.1463E-004$$

$$R = 0.9999$$

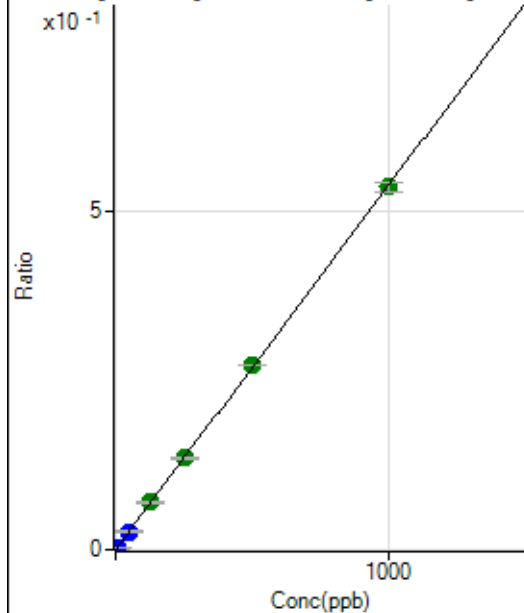
$$DL = 0.09416$$

$$BEC = 2.016$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3753.89	0.0001	P	8.6
2	☐	5.000	5.118	106543.77	0.0029	P	1.3
3	☐	50.000	49.478	1010436.51	0.0267	P	2.4
4	☐	125.000	130.103	2626289.84	0.0701	A	1.5
5	☐	250.000	251.529	5159643.88	0.1354	A	1.0
6	☐	500.000	506.108	10213047.49	0.2723	A	0.4
7	☐	1000.000	995.952	19916835.40	0.5357	A	2.9
8	☐			6203.68	0.0002	P	0.6

$$y = 5.3773E-004 * x + 1.0352E-004$$

$$R = 1.0000$$

$$DL = 0.04962$$

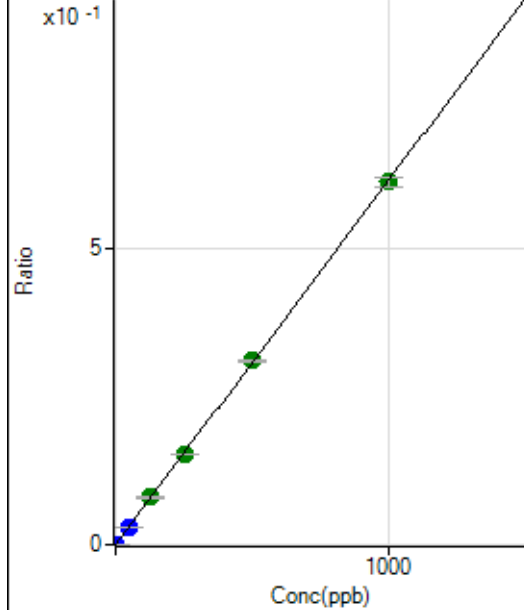
$$BEC = 0.1925$$

Weight: <None>

Min Conc: 0

Calibration for 006CALS.d

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45.56	0.0000	P	37.1
2	☐	2.000	2.063	47208.88	0.0013	P	2.3
3	☐	50.000	48.601	1127117.54	0.0298	P	1.9
4	☐	125.000	130.082	2988653.46	0.0797	A	1.9
5	☐	250.000	250.476	5852743.25	0.1535	A	0.3
6	☐	500.000	506.002	11634458.86	0.3102	A	1.2
7	☐	1000.000	996.315	22706339.94	0.6107	A	2.4
8	☐			8586.19	0.0003	P	2.5

$$y = 6.1295E-004 * x + 1.2297E-006$$

$$R = 1.0000$$

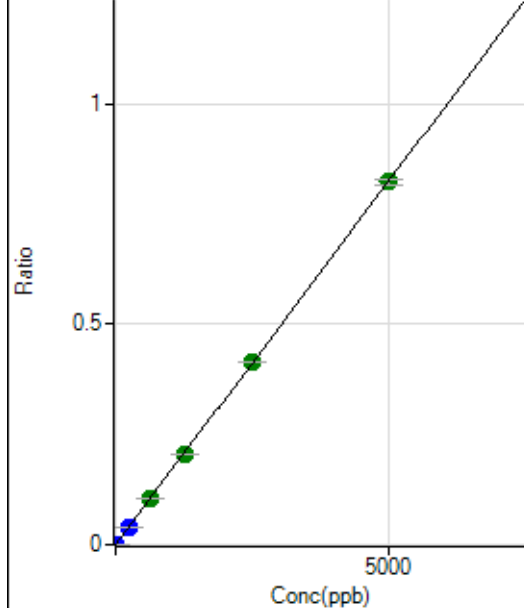
$$DL = 0.002235$$

$$BEC = 0.002006$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	117.78	0.0000	P	24.3
2	☐	10.000	10.018	61677.51	0.0017	P	0.1
3	☐	250.000	239.210	1490495.22	0.0394	P	2.5
4	☐	625.000	637.351	3934843.69	0.1050	A	1.0
5	☐	1250.000	1236.955	7766046.07	0.2037	A	0.5
6	☐	2500.000	2516.711	15548316.02	0.4145	A	0.9
7	☐	5000.000	4993.902	30581508.99	0.8224	A	1.6
8	☐			9309.94	0.0003	P	2.5

$$y = 1.6469E-004 * x + 3.2710E-006$$

$$R = 1.0000$$

$$DL = 0.01451$$

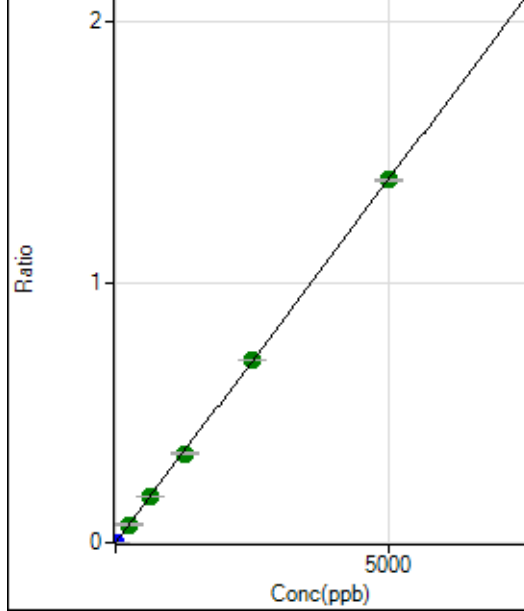
$$BEC = 0.01986$$

Weight: <None>

Min Conc: 0

Calibration for 006CALS.d

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	197.78	0.0000	P	12.1
2	☐	10.000	10.088	105127.19	0.0028	P	0.8
3	☐	250.000	250.670	2643534.11	0.0699	A	3.6
4	☐	625.000	636.689	6653597.19	0.1775	A	1.2
5	☐	1250.000	1220.850	12972741.19	0.3404	A	2.2
6	☐	2500.000	2521.530	26370857.39	0.7030	A	0.4
7	☐	5000.000	4995.028	51781768.12	1.3925	A	0.7
8	☐			16041.82	0.0005	P	0.7

$$y = 2.7878E-004 * x + 5.4600E-006$$

$$R = 1.0000$$

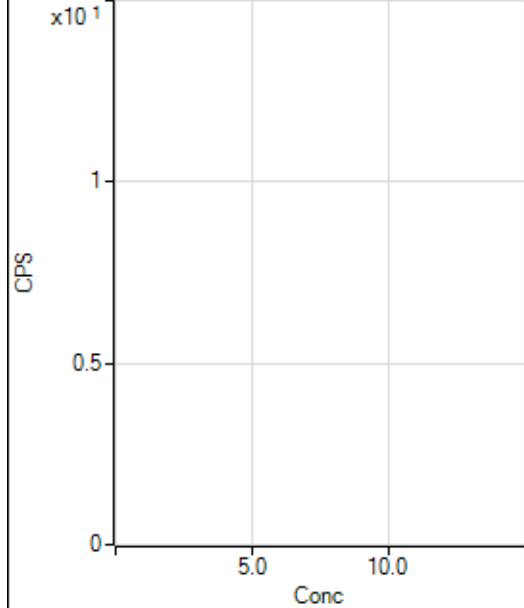
$$DL = 0.007134$$

$$BEC = 0.01959$$

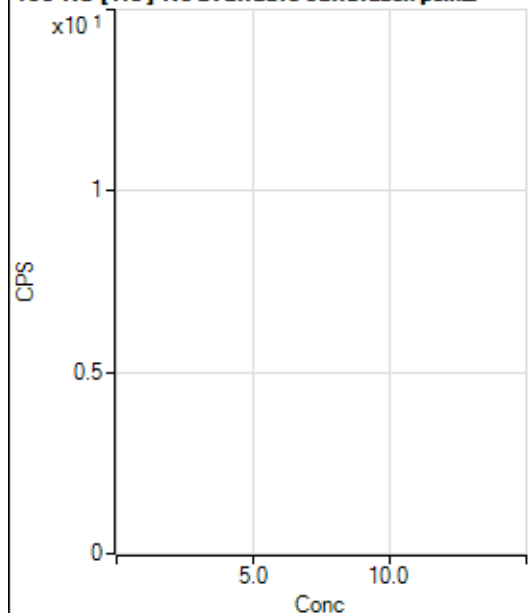
Weight: <None>

Min Conc: 0

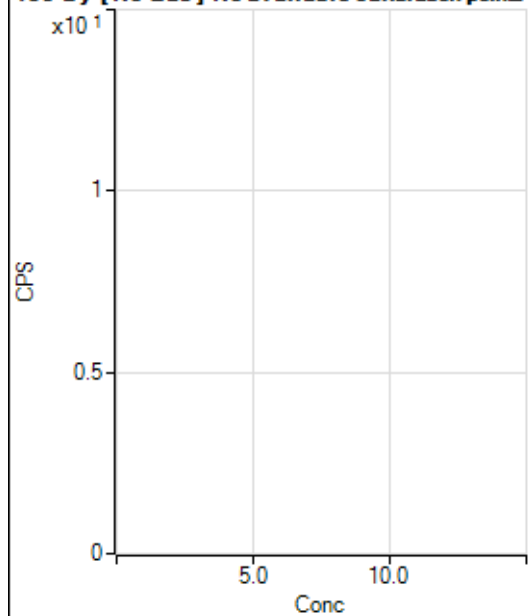
150 Nd [No Gas] No available calibration points



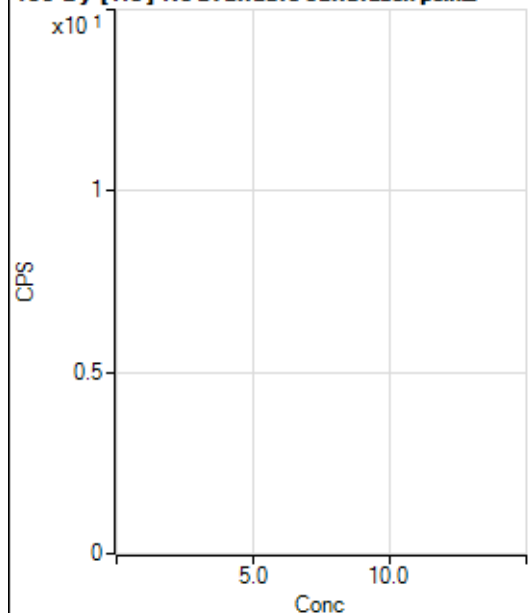
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			24.44		P	7.9
2	☐			38.89		P	26.2
3	☐			181.12		P	28.6
4	☐			346.67		P	11.1
5	☐			678.91		P	6.9
6	☐			1326.75		P	6.7
7	☐			2629.17		P	5.1
8	☐			470.01		P	6.3

150 Nd [He] No available calibration points

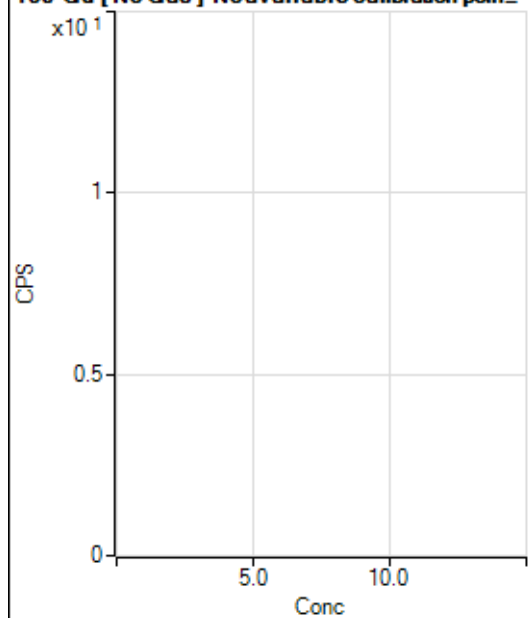
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐			5.56		P	91.6
3	☐			8.89		P	114.5
4	☐			25.55		P	27.1
5	☐			43.33		P	33.5
6	☐			72.22		P	21.8
7	☐			134.45		P	23.4
8	☐			101.11		P	8.3

156 Dy [No Gas] No available calibration points

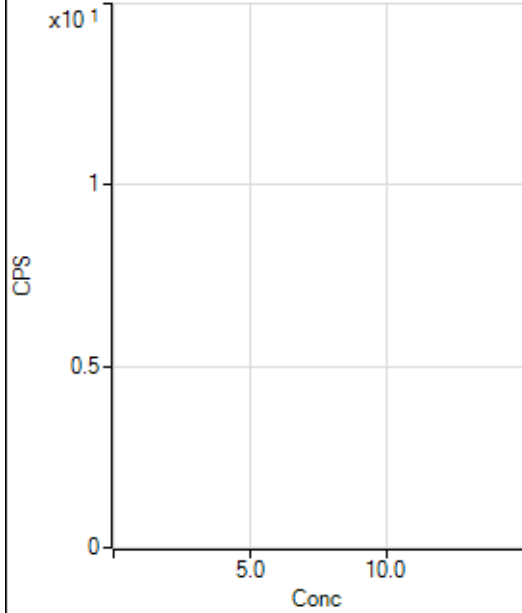
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			31.11		P	16.4
2	☐			25.56		P	74.2
3	☐			53.34		P	21.6
4	☐			114.45		P	16.0
5	☐			190.00		P	10.7
6	☐			377.79		P	3.7
7	☐			746.69		P	9.1
8	☐			1053.39		P	8.2

156 Dy [He] No available calibration points

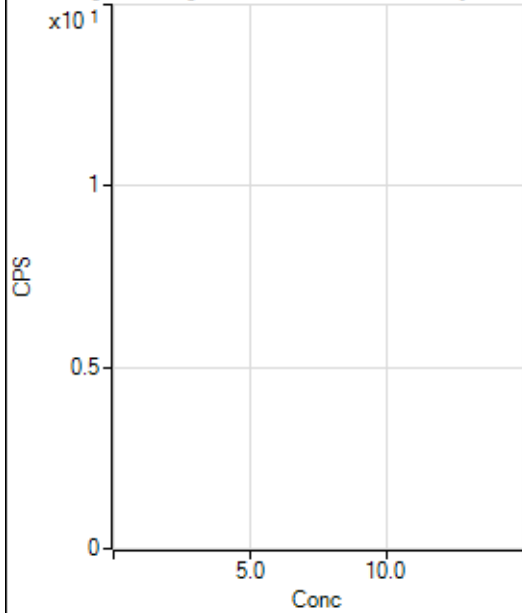
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	57.3
2	☐			13.33		P	50.0
3	☐			8.89		P	78.1
4	☐			18.89		P	51.0
5	☐			31.11		P	22.3
6	☐			60.00		P	47.5
7	☐			132.23		P	23.4
8	☐			302.23		P	13.3

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

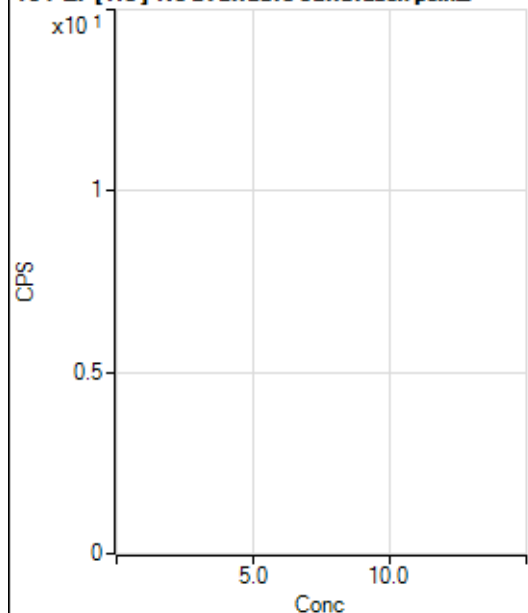
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			361.12		P	16.8
2	☐			327.79		P	14.1
3	☐			366.68		P	5.5
4	☐			398.90		P	15.3
5	☐			374.45		P	4.5
6	☐			450.01		P	12.4
7	☐			604.47		P	2.5
8	☐			1130.06		P	2.6

160 Gd [He] No available calibration points

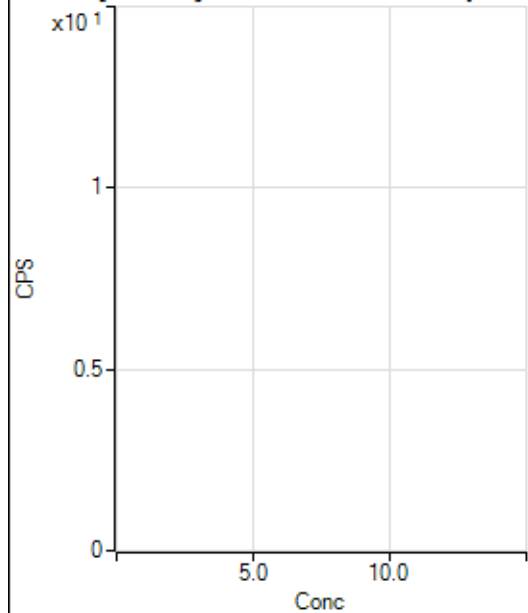
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			53.33		P	22.5
2	☐			70.00		P	9.5
3	☐			78.89		P	19.1
4	☐			75.55		P	14.2
5	☐			96.67		P	12.4
6	☐			133.34		P	29.5
7	☐			162.23		P	26.8
8	☐			362.23		P	6.1

164 Er [No Gas] No available calibration points

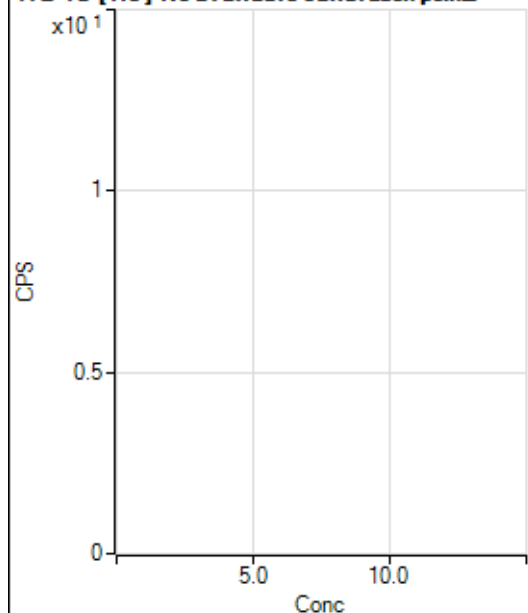
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			173.34		P	23.6
2	☐			168.89		P	13.1
3	☐			196.67		P	7.4
4	☐			212.23		P	19.4
5	☐			293.34		P	23.5
6	☐			358.90		P	7.9
7	☐			541.13		P	11.2
8	☐			1045.61		P	4.3

164 Er [He] No available calibration points

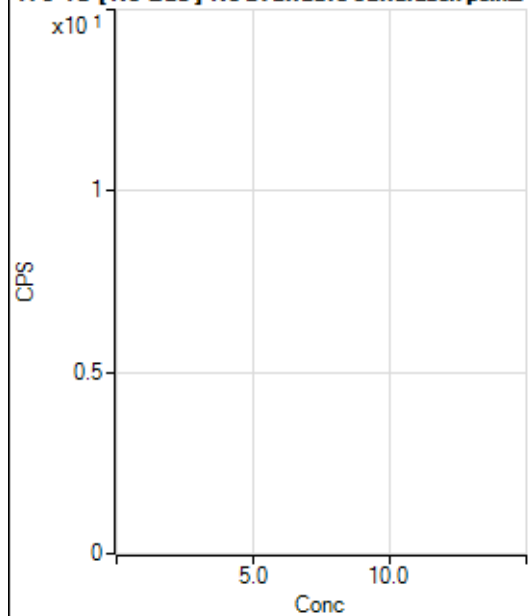
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			51.11		P	18.8
2	☐			62.22		P	12.4
3	☐			65.56		P	22.9
4	☐			73.33		P	32.8
5	☐			102.22		P	18.8
6	☐			141.11		P	16.8
7	☐			154.45		P	12.5
8	☐			353.34		P	3.4

172 Yb [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			202.22		P	8.3
2	☐			198.89		P	14.3
3	☐			203.34		P	5.9
4	☐			231.11		P	8.3
5	☐			290.01		P	15.0
6	☐			368.90		P	0.5
7	☐			555.57		P	8.6
8	☐			1185.62		P	10.8

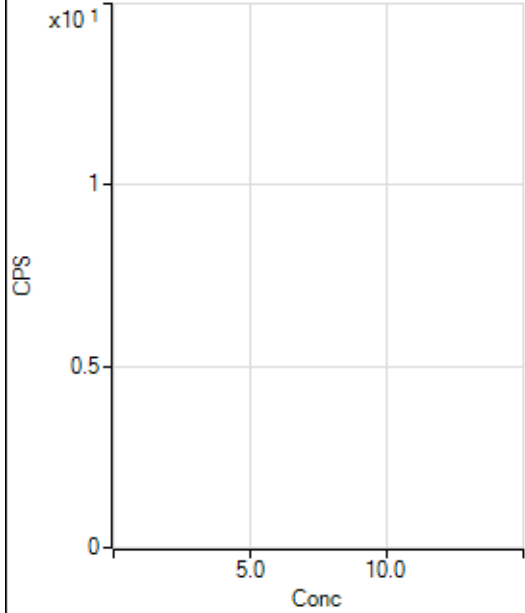
172 Yb [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			78.89		P	12.9
2	☐			70.00		P	12.6
3	☐			62.22		P	6.2
4	☐			90.00		P	13.4
5	☐			130.00		P	9.2
6	☐			135.56		P	23.2
7	☐			235.56		P	16.4
8	☐			494.46		P	2.4

176 Yb [No Gas] No available calibration points

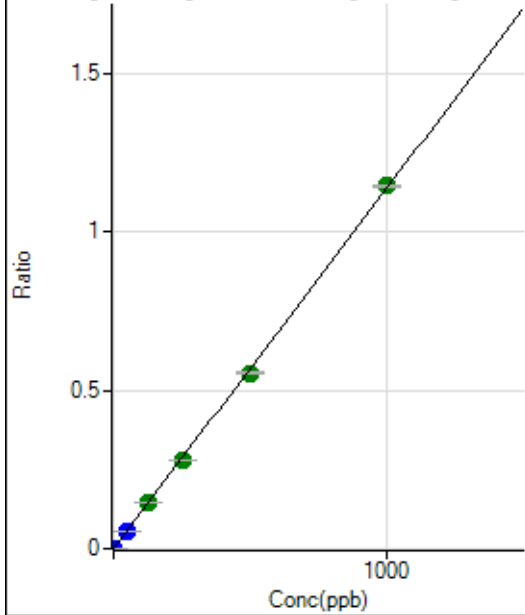
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5594.59		P	9.6
2	☐			5813.56		P	3.0
3	☐			11438.40		P	0.5
4	☐			19708.13		P	1.2
5	☐			34395.80		P	0.7
6	☐			62841.86		P	0.5
7	☐			118851.20		P	0.2
8	☐			5711.29		P	2.9

176 Yb [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1324.53		P	13.2
2	☐			1213.40		P	2.4
3	☐			2957.03		P	2.3
4	☐			6072.56		P	2.5
5	☐			10949.06		P	1.6
6	☐			20757.48		P	0.9
7	☐			39245.90		P	1.2
8	☐			1273.41		P	3.6

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	175.56	0.0000	P	14.5
2	☐	1.000	0.974	25161.04	0.0011	P	1.7
3	☐	50.000	46.719	1211665.90	0.0531	P	2.5
4	☐	125.000	126.824	3192801.58	0.1440	A	1.5
5	☐	250.000	244.171	6304656.85	0.2773	A	0.1
6	☐	500.000	487.937	12321708.57	0.5541	A	1.2
7	☐	1000.000	1007.425	24374673.53	1.1440	A	0.7
8	☐			1287.86	0.0001	P	20.2

$$y = 0.0011 * x + 7.9887E-006$$

$$R = 0.9999$$

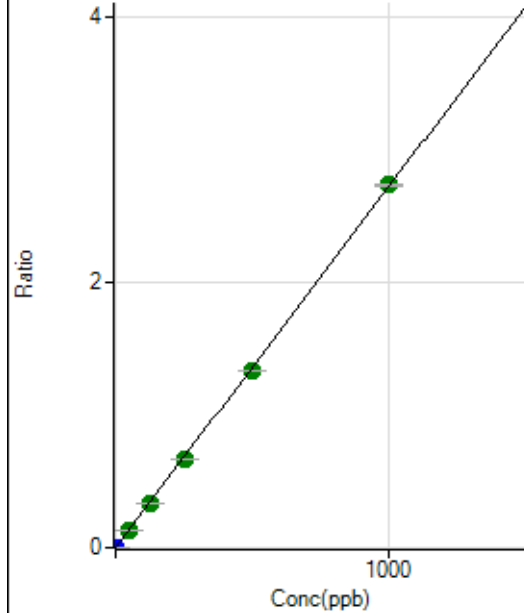
$$DL = 0.003055$$

$$BEC = 0.007035$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	378.90	0.0000	P	9.2
2	☐	1.000	0.973	60116.19	0.0027	P	1.6
3	☐	50.000	48.707	3023878.91	0.1324	A	2.3
4	☐	125.000	124.672	7512777.80	0.3389	A	0.6
5	☐	250.000	244.439	15107735.33	0.6645	A	0.9
6	☐	500.000	489.907	29613475.95	1.3317	A	0.3
7	☐	1000.000	1006.542	58296499.69	2.7361	A	0.5
8	☐			3019.27	0.0002	P	13.2

$$y = 0.0027 * x + 1.7351E-005$$

$$R = 0.9999$$

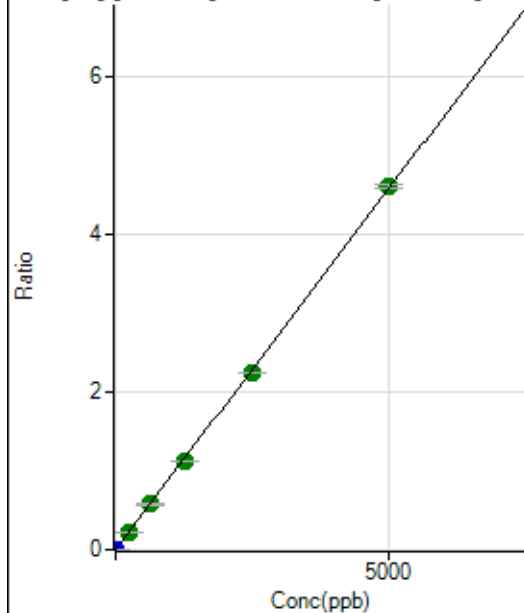
$$DL = 0.001753$$

$$BEC = 0.006383$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1142.28	0.0001	P	13.4
2	☐	1.000	0.952	20862.39	0.0009	P	1.9
3	☐	250.000	244.222	5107871.80	0.2236	A	0.9
4	☐	625.000	628.741	12760748.01	0.5756	A	1.5
5	☐	1250.000	1222.540	25447985.45	1.1192	A	0.6
6	☐	2500.000	2457.083	50019714.81	2.2494	A	0.5
7	☐	5000.000	5028.145	98070429.65	4.6031	A	1.0
8	☐			13656.18	0.0008	P	0.7

$$y = 9.1547E-004 * x + 5.2385E-005$$

$$R = 0.9999$$

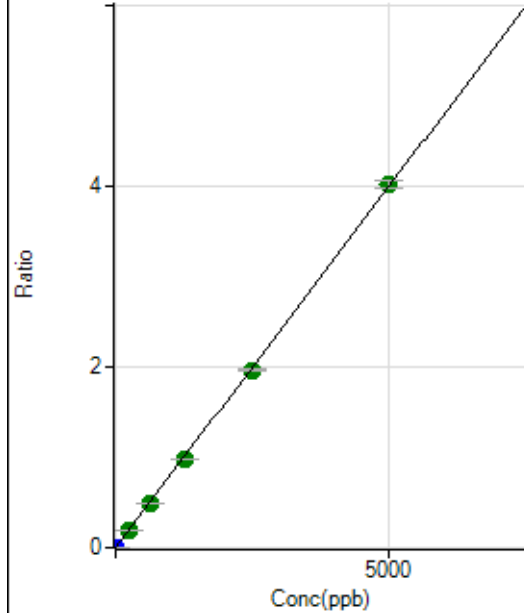
$$DL = 0.023$$

$$BEC = 0.05722$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	942.26	0.0000	P	6.4
2	☐	1.000	0.975	18522.20	0.0008	P	2.0
3	☐	250.000	242.313	4412146.67	0.1932	A	0.3
4	☐	625.000	622.436	10998171.09	0.4961	A	1.3
5	☐	1250.000	1219.456	22099500.22	0.9720	A	0.3
6	☐	2500.000	2456.238	43531989.35	1.9577	A	1.3
7	☐	5000.000	5030.222	85411188.73	4.0092	A	2.1
8	☐			11924.45	0.0007	P	0.5

$$y = 7.9702E-004 * x + 4.3102E-005$$

$$R = 0.9999$$

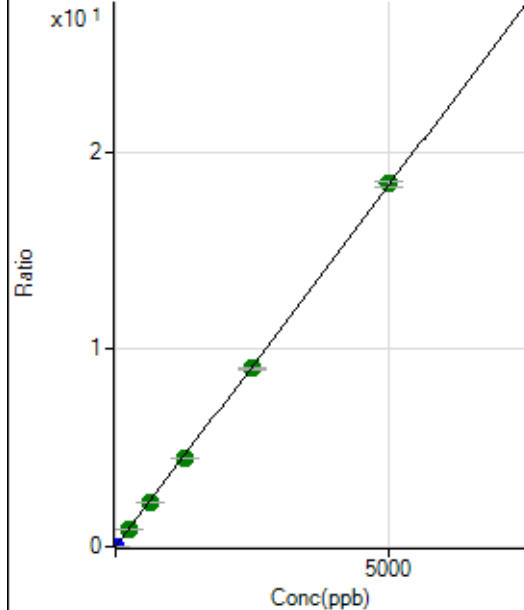
$$DL = 0.01034$$

$$BEC = 0.05408$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4449.23	0.0002	P	10.1
2	☐	1.000	0.963	84215.17	0.0037	P	1.6
3	☐	250.000	240.851	20127234.28	0.8813	A	1.6
4	☐	625.000	621.949	50441872.59	2.2755	A	0.8
5	☐	1250.000	1221.469	101604813.2	4.4687	A	0.3
6	☐	2500.000	2465.496	200567274.7	9.0198	A	0.8
7	☐	5000.000	5025.223	391667293.0	18.3841	A	1.4
8	☐			54550.84	0.0031	P	0.9

$$y = 0.0037 * x + 2.0378E-004$$

$$R = 0.9999$$

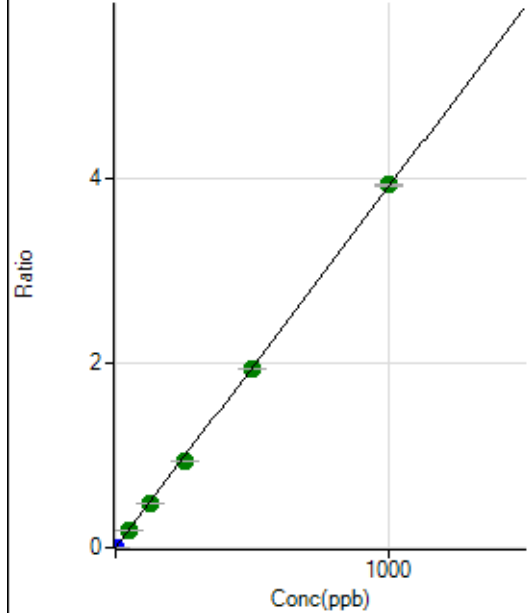
$$DL = 0.01691$$

$$BEC = 0.0557$$

Weight: <None>

Min Conc: 0

238 U [No Gas] ISTD : 209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	134.45	0.0000	P	5.7
2	☐	1.000	0.914	80929.74	0.0036	P	2.2
3	☐	50.000	46.795	4183673.69	0.1832	A	1.3
4	☐	125.000	121.231	10519619.50	0.4746	A	0.1
5	☐	250.000	240.531	21407892.04	0.9415	A	0.4
6	☐	500.000	494.383	43033796.02	1.9352	A	0.4
7	☐	1000.000	1005.807	83887369.31	3.9371	A	0.5
8	☐			1397.87	0.0001	P	3.9

$$y = 0.0039 * x + 6.1275E-006$$

$$R = 0.9999$$

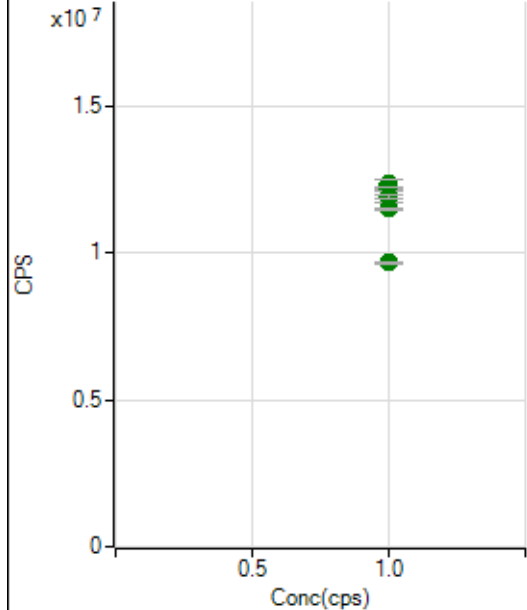
$$DL = 0.0002695$$

$$BEC = 0.001565$$

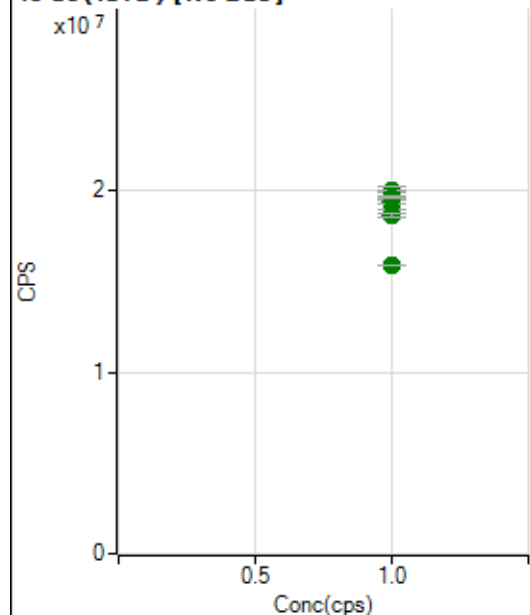
Weight: <None>

Min Conc: 0

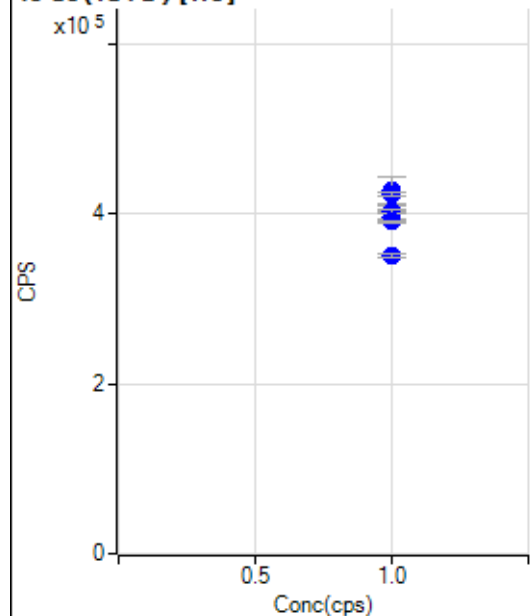
6 Li (ISTD) [No Gas]



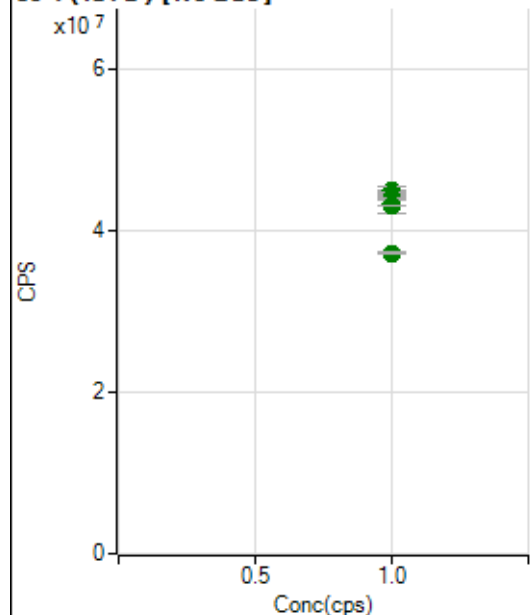
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11928944.52		A	4.0
2	☐	1.000		12338666.13		A	2.2
3	☐	1.000		12355738.78		A	2.2
4	☐	1.000		12182480.75		A	1.1
5	☐	1.000		12201219.24		A	1.1
6	☐	1.000		11918678.10		A	1.3
7	☐	1.000		11496477.75		A	0.3
8	☐	1.000		9675526.93		A	0.6

45 Sc (ISTD) [No Gas]

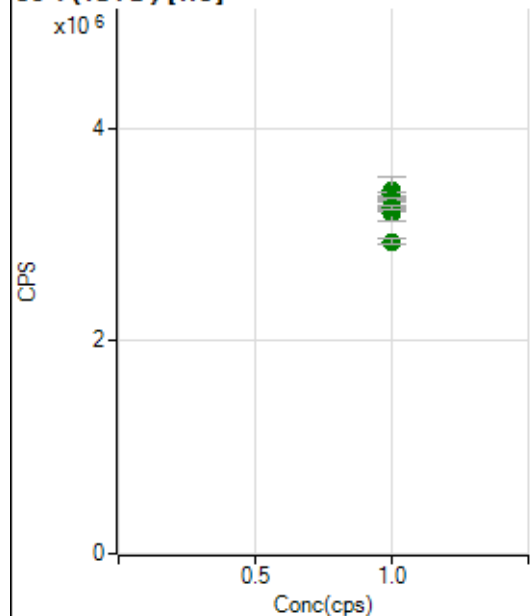
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19240273.88		A	7.0
2	☐	1.000		19986289.01		A	2.9
3	☐	1.000		19753621.37		A	2.9
4	☐	1.000		19415113.88		A	1.0
5	☐	1.000		19631449.43		A	0.5
6	☐	1.000		18982694.72		A	0.3
7	☐	1.000		18644659.31		A	1.3
8	☐	1.000		15912957.40		A	0.4

45 Sc (ISTD) [He]

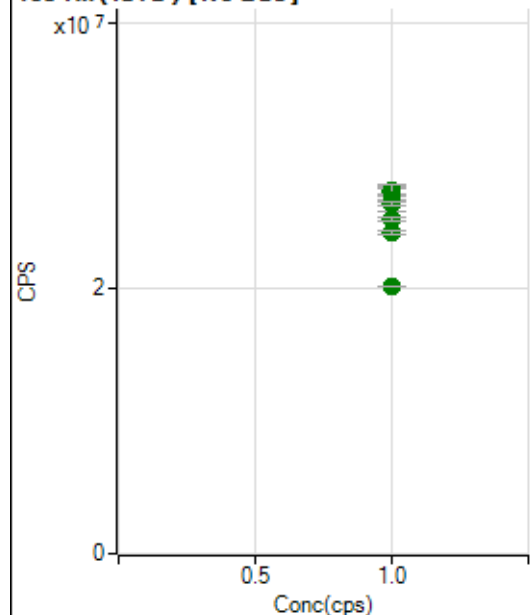
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		426426.18		P	8.2
2	☐	1.000		422519.37		P	0.8
3	☐	1.000		401577.02		P	4.3
4	☐	1.000		395199.43		P	3.2
5	☐	1.000		403176.93		P	0.2
6	☐	1.000		403320.46		P	1.1
7	☐	1.000		390242.72		P	0.5
8	☐	1.000		350890.69		P	1.3

89 Y (ISTD) [No Gas]

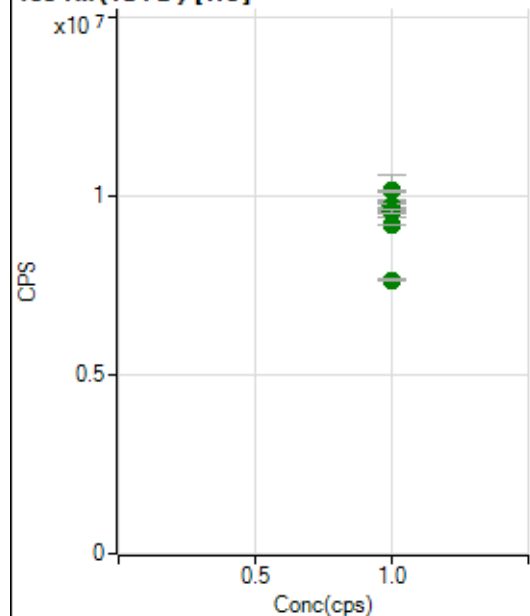
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		43391017.97		A	5.6
2	☐	1.000		44611835.45		A	1.5
3	☐	1.000		44914141.55		A	2.5
4	☐	1.000		44379821.56		A	0.7
5	☐	1.000		44635644.89		A	0.3
6	☐	1.000		43942925.45		A	0.5
7	☐	1.000		43013961.86		A	0.1
8	☐	1.000		37252172.78		A	0.8

89 Y (ISTD) [He]

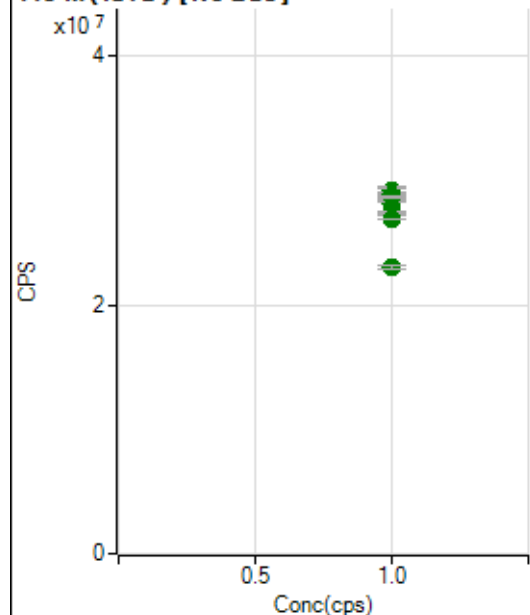
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3410246.23		A	8.0
2	☐	1.000		3381375.92		A	1.0
3	☐	1.000		3264368.60		A	3.4
4	☐	1.000		3194842.31		A	4.0
5	☐	1.000		3268319.33		A	2.0
6	☐	1.000		3330066.27		A	0.6
7	☐	1.000		3254685.99		A	0.8
8	☐	1.000		2935336.59		A	1.8

103 Rh (ISTD) [No Gas]

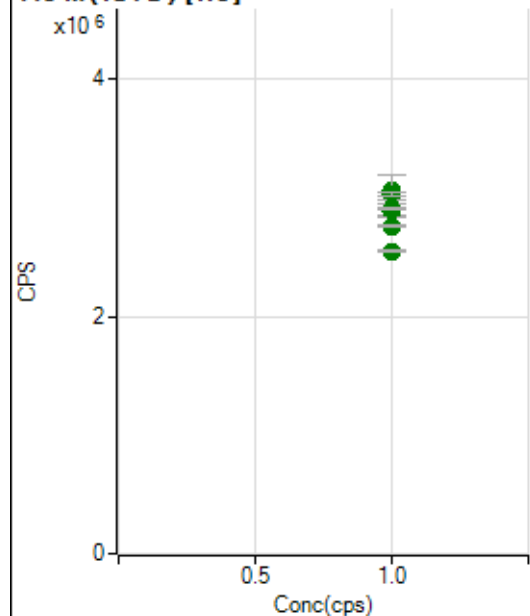
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		26692958.49		A	7.0
2	☐	1.000		27252366.54		A	1.7
3	☐	1.000		27320620.42		A	3.0
4	☐	1.000		26582838.77		A	0.8
5	☐	1.000		26385968.22		A	1.0
6	☐	1.000		25218871.84		A	0.9
7	☐	1.000		24218302.14		A	1.4
8	☐	1.000		20108908.04		A	0.3

103 Rh (ISTD) [He]

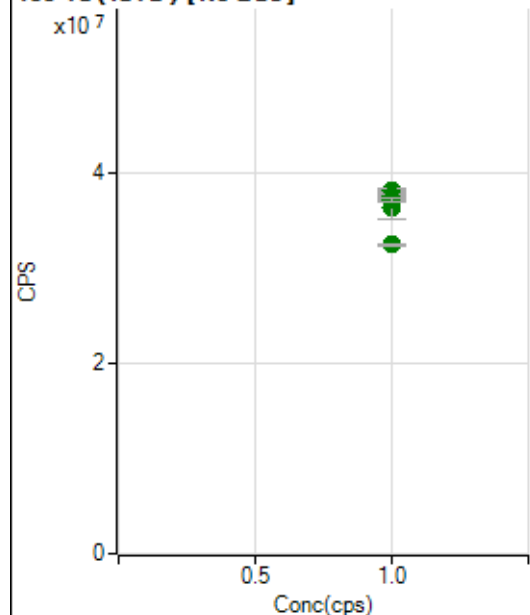
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10135226.86		A	8.9
2	☐	1.000		10140856.86		A	0.7
3	☐	1.000		9722469.85		A	3.7
4	☐	1.000		9598339.92		A	4.5
5	☐	1.000		9714686.94		A	1.2
6	☐	1.000		9567103.33		A	1.0
7	☐	1.000		9183395.14		A	0.2
8	☐	1.000		7648241.48		A	0.7

115 In (ISTD) [No Gas]

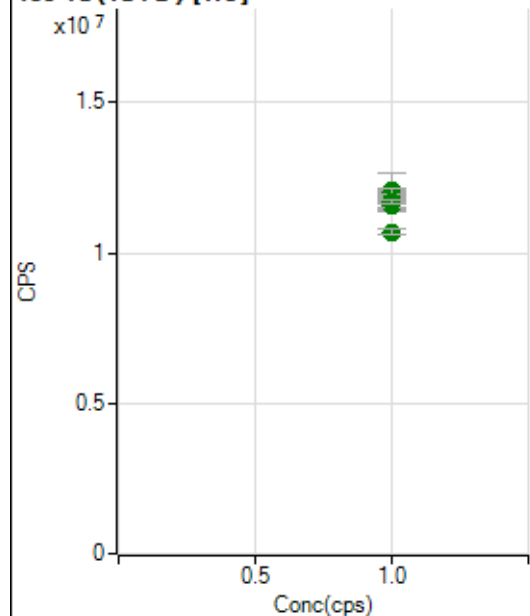
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		28188818.89		A	6.6
2	☐	1.000		29149457.35		A	2.1
3	☐	1.000		28954216.39		A	2.6
4	☐	1.000		28397608.77		A	0.7
5	☐	1.000		28666962.24		A	0.3
6	☐	1.000		27435985.97		A	0.7
7	☐	1.000		26833024.13		A	0.2
8	☐	1.000		23040280.40		A	1.2

115 In (ISTD) [He]

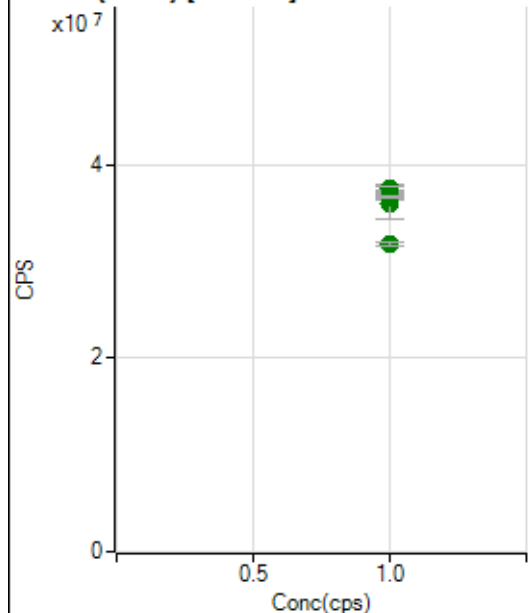
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3055684.63		A	8.8
2	☐	1.000		3029787.78		A	0.7
3	☐	1.000		2912913.14		A	4.1
4	☐	1.000		2875500.85		A	3.0
5	☐	1.000		2921423.76		A	1.7
6	☐	1.000		2902601.97		A	0.7
7	☐	1.000		2757253.10		A	0.3
8	☐	1.000		2547022.56		A	0.5

159 Tb (ISTD) [No Gas]

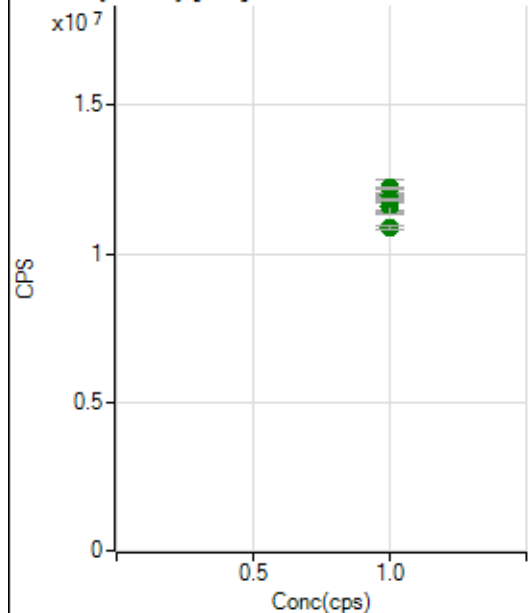
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		36414941.68		A	7.4
2	☐	1.000		37310003.06		A	0.8
3	☐	1.000		37841845.82		A	1.8
4	☐	1.000		37489963.05		A	1.6
5	☐	1.000		38121200.82		A	1.1
6	☐	1.000		37514415.83		A	1.0
7	☐	1.000		37187398.06		A	1.0
8	☐	1.000		32452552.01		A	0.4

159 Tb (ISTD) [He]

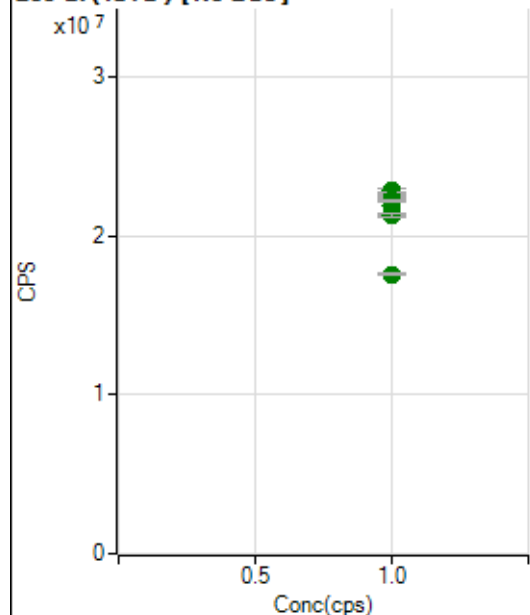
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12055572.46		A	9.8
2	☐	1.000		12059745.24		A	0.8
3	☐	1.000		11553450.94		A	2.5
4	☐	1.000		11590690.11		A	2.0
5	☐	1.000		11843682.32		A	0.6
6	☐	1.000		12044392.18		A	1.3
7	☐	1.000		11706264.55		A	0.8
8	☐	1.000		10706024.28		A	1.2

165 Ho (ISTD) [No Gas]

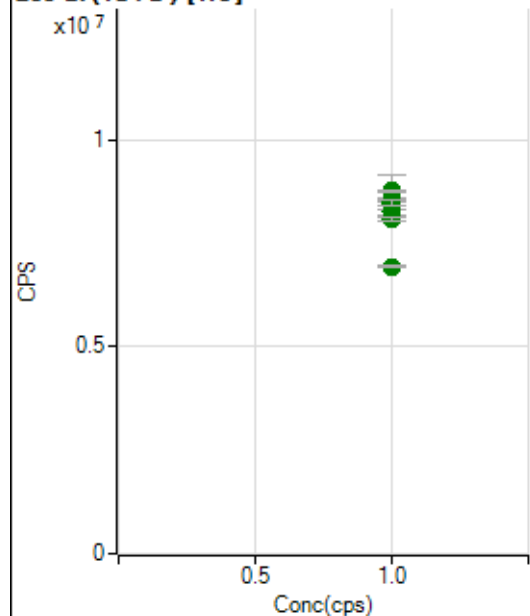
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		35864886.97		A	8.8
2	☐	1.000		36656366.40		A	1.2
3	☐	1.000		37451901.11		A	3.1
4	☐	1.000		36833128.06		A	0.9
5	☐	1.000		37484003.89		A	1.4
6	☐	1.000		36765823.34		A	0.9
7	☐	1.000		36608712.23		A	0.8
8	☐	1.000		31859855.91		A	1.4

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12013460.24		A	8.7
2	☐	1.000		11925923.15		A	0.8
3	☐	1.000		11579235.66		A	2.8
4	☐	1.000		11590096.91		A	4.0
5	☐	1.000		11994594.40		A	1.2
6	☐	1.000		12224319.68		A	0.5
7	☐	1.000		11843176.49		A	0.5
8	☐	1.000		10898889.49		A	1.1

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21916368.42		A	5.9
2	☐	1.000		22592481.61		A	1.8
3	☐	1.000		22841199.94		A	1.7
4	☐	1.000		22167262.72		A	0.3
5	☐	1.000		22736838.55		A	0.3
6	☐	1.000		22236925.78		A	0.6
7	☐	1.000		21306634.96		A	1.0
8	☐	1.000		17611570.29		A	0.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8746540.50		A	9.2
2	☐	1.000		8773722.58		A	0.7
3	☐	1.000		8465640.08		A	3.2
4	☐	1.000		8290530.64		A	3.1
5	☐	1.000		8453491.40		A	1.3
6	☐	1.000		8497217.79		A	1.5
7	☐	1.000		8096360.36		A	0.9
8	☐	1.000		6947482.12		A	1.1

US EPA Tune Check Report

Reviewed By:jasw
On:12/11/2024
11:09:19 PM
Inst Id :P8
ClientSampleId
:TUNE001

Operator Name Jaswal

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\P8121024MS.b

Acq. Date-Time 2024-12-10 10:30:35

Report Comment ---

Instrument Name G8403A SG19224459

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		37599	375992.26			0.785	5.000
24		859114	8591140.00			0.683	5.000
25		114918	1149181.97			0.632	5.000
26		132998	1329978.94			0.606	5.000
59		226506	2265064.69			0.694	5.000
113		26001	260011.09			0.464	5.000
115		342826	3428257.16			0.677	5.000
206		82800	827999.05			0.849	5.000
207		72839	728390.67			0.378	5.000
208		179078	1790780.81			1.234	5.000
220		1	7.90			34.201	

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	37785	37966	37615	37220	37411
24	849726	865784	858922	859915	861223
25	114413	114603	115364	114243	115968
26	133426	132570	134016	131907	133071
59	223863	226412	226989	227876	227392
113	26068	25874	26097	25865	26102
115	344990	341872	344112	339212	343942
206	82396	82878	82122	82653	83951
207	72776	72942	72505	73245	72727
208	176936	180164	178174	182405	177712

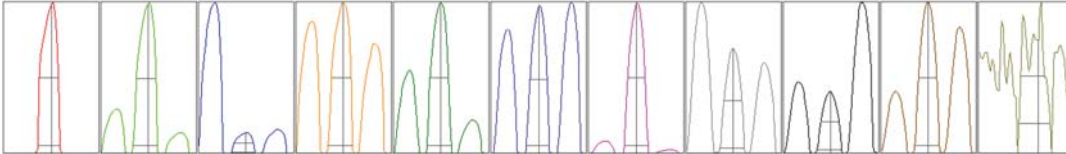
US EPA Tune Check Report

Reviewed By:jasw
On:12/11/2024
11:09:19 PM
Inst Id :P8
ClientSampleId
:TUNE001

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

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	69325.41	9.05	8.90 - 9.10	
24	1492880.19	24.00	23.90 - 24.10	
25	200529.24	25.00	24.90 - 25.10	
26	230078.65	26.00	25.90 - 26.10	
59	418852.77	59.00	58.90 - 59.10	
113	51533.33	113.05	112.90 - 113.10	
115	675337.80	115.05	114.90 - 115.10	
206	156725.55	206.00	205.90 - 206.10	
207	134719.41	207.00	206.90 - 207.10	
208	330545.07	208.00	207.90 - 208.10	
220	0.90	220.40	-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.59	0.695	0.900	
24	0.61	0.775	0.900	
25	0.61	0.740	0.900	
26	0.62	0.776	0.900	
59	0.57	0.773	0.900	
113	0.53	0.718	0.900	
115	0.53	0.730	0.900	
206	0.56	0.766	0.900	
207	0.57	0.785	0.900	
208	0.56	0.778	0.900	
220	0.76	0.972		

Integration Time [sec] 0.1

Acquisition Time [sec] 256.770000000002

Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.78 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

Reviewed By:jasw
On:12/11/2024
11:09:19 PM
Inst Id :P8
ClientSampleId
:TUNE001

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

Lens Parameters

Extract 1	-6.0 V	Omega Lens	10.3 V	Deflect	15.2 V
Extract 2	-220.0 V	Cell Entrance	-30 V	Plate Bias	-50 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	4.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	121	Axis Gain	0.9965	QP Bias	-4.0 V
Mass Offset	126	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	0.8 mm	Torch V	-1.1 mm
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EM

Discriminator	4.1 mV	Analog HV	2165 V	Pulse HV	1040 V
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[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		42000	419996.23			0.477	
89		34222	342219.13			0.307	
205		48675	486746.42			0.334	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	42011	42308	42037	41825	41817
89	34334	34106	34276	34113	34280
205	48932	48692	48514	48674	48561

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.78 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	-6.0 V	Omega Lens	10.3 V	Deflect	3.2 V
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US EPA Tune Check Report

Reviewed By:jasw
On:12/11/2024
11:09:19 PM
Inst Id :P8
ClientSampleId
:TUNE001

Extract 2	-220.0 V	Cell Entrance	-50 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-70 V		
Cell Parameters					
Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination 5.0 V	
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		
QP Parameters					
Mass Gain	121	Axis Gain	0.9965	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	0.02		
Hardware Settings					
Torch					
Torch H	0.8 mm	Torch V	-1.1 mm		
EM					
Discriminator	4.1 mV	Analog HV	2165 V	Pulse HV	1040 V

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P8
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:14:39 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.35	0.06	-0.41	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	0.00	0.01	-0.01	0.00	N/A	ppb
Barium	135-1	0.00	0.00	-0.01	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	0.00	0.00	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	0.02	-0.01	-0.01	0.00	N/A	ppb
Cadmium	106-1	0.16	-0.46	0.30	0.00	N/A	ppb
Cadmium	111-1	0.01	-0.04	0.02	0.00	N/A	ppb
Calcium	43-1	0.87	1.18	-2.05	0.00	N/A	ppb
Calcium	44-1	1.20	1.16	-2.36	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.01	-0.03	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.02	0.03	-0.05	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	54-2	-0.26	0.54	-0.28	0.00	N/A	ppb
Iron	56-2	0.18	-0.03	-0.15	0.00	N/A	ppb
Iron	57-2	0.27	0.02	-0.29	0.00	N/A	ppb
Krypton	83-1						cps
Lead	206-1	0.01	0.00	-0.01	0.00	N/A	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P8
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:14:39 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	208-1	0.01	0.00	-0.01	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.31	-0.14	-0.17	0.00	N/A	ppb
Manganese	55-2	0.03	0.02	-0.05	0.00	N/A	ppb
Molybdenum	94-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.00	0.00	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	0.00	0.01	-0.01	0.00	N/A	ppb
Phosphorus	31-2	-16.62	-0.65	-23.59	-13.62		ppb
Potassium	39-2	3.32	3.01	-6.33	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	0.09	-0.10	0.02	0.00	N/A	ppb
Selenium	77-2	0.35	-0.17	-0.17	0.00	N/A	ppb
Selenium	78-2	-0.33	0.40	-0.07	0.00	N/A	ppb
Silicon	28-1	0.47	0.24	-0.71	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	4.02	1.17	-5.20	0.00	N/A	ppb
Strontium	86-1	0.02	0.12	-0.13	0.00	N/A	ppb
Strontium	88-1	0.02	0.03	-0.05	0.00	N/A	ppb
Sulfur	34-1	384.04	404.28	-429.02	119.77	396.91	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	-0.02	0.00	N/A	ppb
Titanium	47-1	0.00	-0.01	0.01	0.00	N/A	ppb
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb

LB Number :LB133874

Operator :Jaswal

Lab Sample ID :S00

Instrumnet Name :P8

Client Sample ID :S0

Dilution Factor :1

Date & Time Acquired :2024-12-10 11:14:39

DataFile Name :004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	0.06	-0.04	-0.02	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	-0.01	0.00	0.00	N/A	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P8
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:21:17 DataFile Name : 006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13.50	12.83	12.95	13.09	2.73	ppb
Antimony	121-1	2.02	2.11	2.06	2.06	2.27	ppb
Arsenic	75-2	1.08	1.10	0.95	1.04	7.94	ppb
Barium	135-1	10.02	10.02	10.01	10.02	0.08	ppb
Barium	137-1	10.05	10.18	10.04	10.09	0.77	ppb
Beryllium	9-1	1.06	1.08	1.11	1.08	2.67	ppb
Bismuth	209-1				103		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	1.12	0.97	1.07	1.05	7.19	ppb
Cadmium	106-1	0.86	1.29	0.49	0.88	45.25	ppb
Cadmium	111-1	1.08	1.11	1.06	1.08	2.35	ppb
Calcium	43-1	469.10	481.44	486.48	479.01	1.87	ppb
Calcium	44-1	468.18	489.06	492.44	483.23	2.72	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.05	2.04	2.08	2.06	1.02	ppb
Cobalt	59-2	1.12	1.09	1.13	1.11	1.68	ppb
Copper	63-2	2.28	2.31	2.39	2.33	2.38	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				102		%
Holmium	165-2				99		%
Indium	115-1				103		%
Indium	115-2				99		%
Iron	54-2	55.62	53.33	52.56	53.84	2.96	ppb
Iron	56-2	53.16	53.88	54.17	53.74	0.97	ppb
Iron	57-2	52.75	51.23	53.16	52.38	1.94	ppb
Krypton	83-1						cps
Lead	206-1	0.93	0.96	0.97	0.95	2.01	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P8
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:21:17 DataFile Name : 006CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.95	0.99	0.98	0.97	2.12	ppb
Lead	208-1	0.94	0.97	0.98	0.96	1.69	ppb
Lithium	6-1				103		%
Magnesium	24-2	559.38	558.63	559.22	559.08	0.07	ppb
Manganese	55-2	1.01	0.96	0.96	0.98	3.28	ppb
Molybdenum	94-1	5.73	5.75	6.01	5.83	2.65	ppb
Molybdenum	95-1	4.86	4.91	4.93	4.90	0.74	ppb
Molybdenum	96-1	4.90	4.95	4.98	4.94	0.87	ppb
Molybdenum	97-1	4.87	5.03	4.94	4.95	1.66	ppb
Molybdenum	98-1	4.77	4.90	4.95	4.87	1.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.98	1.03	1.06	1.02	3.62	ppb
Phosphorus	31-2	15.12	15.31	10.42	13.62	20.33	ppb
Potassium	39-2	493.65	489.74	492.93	492.11	0.42	ppb
Rhodium	103-1				102		%
Rhodium	103-2				100		%
Scandium	45-1				104		%
Scandium	45-2				99		%
Selenium	82-1	4.39	4.71	4.51	4.54	3.61	ppb
Selenium	77-2	9.17	6.25	5.16	6.86	30.24	ppb
Selenium	78-2	5.61	5.35	7.09	6.01	15.66	ppb
Silicon	28-1	0.06	0.30	0.51	0.29	78.48	ppb
Silver	107-1	1.03	1.07	1.07	1.06	1.88	ppb
Silver	109-1	1.05	1.06	1.08	1.06	1.23	ppb
Sodium	23-2	500.69	502.67	509.33	504.23	0.90	ppb
Strontium	86-1	24.76	24.57	25.05	24.79	0.97	ppb
Strontium	88-1	24.66	25.23	25.49	25.12	1.70	ppb
Sulfur	34-1	-336.48	-53.85	31.03	-119.77		ppb
Terbium	159-1				102		%
Terbium	159-2				100		%
Thallium	203-1	0.96	0.98	0.99	0.97	1.72	ppb
Thallium	205-1	0.95	0.98	0.98	0.97	1.58	ppb
Tin	118-1	5.06	5.19	5.10	5.12	1.33	ppb
Titanium	47-1	4.93	5.07	5.13	5.04	2.11	ppb
Uranium	238-1	0.89	0.93	0.93	0.91	2.16	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P8
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:21:17 DataFile Name : 006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	5.06	5.09	5.10	5.08	0.43	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				99		%
Zinc	66-2	5.24	5.95	5.61	5.60	6.34	ppb
Zirconium	90-1	0.94	0.95	0.98	0.96	2.12	ppb
Zirconium	91-1	0.95	0.97	0.96	0.96	0.82	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P8
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:24:34 DataFile Name : 007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	944.21	1006.86	1038.96	996.68	4.83	ppb
Antimony	121-1	48.51	49.59	47.71	48.60	1.94	ppb
Arsenic	75-2	51.85	54.86	53.37	53.36	2.82	ppb
Barium	135-1	240.17	244.66	232.80	239.21	2.50	ppb
Barium	137-1	252.89	258.36	240.76	250.67	3.59	ppb
Beryllium	9-1	50.12	51.62	48.89	50.21	2.72	ppb
Bismuth	209-1				104		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	51.86	52.41	51.28	51.85	1.08	ppb
Cadmium	106-1	50.80	51.86	50.55	51.07	1.36	ppb
Cadmium	111-1	50.60	50.76	49.68	50.35	1.17	ppb
Calcium	43-1	4690.46	4756.64	4464.26	4637.12	3.31	ppb
Calcium	44-1	4791.65	4818.35	4621.65	4743.88	2.25	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	49.01	50.99	53.33	51.11	4.23	ppb
Cobalt	59-2	50.84	52.38	54.94	52.72	3.93	ppb
Copper	63-2	524.33	554.96	575.37	551.55	4.66	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				96		%
Indium	115-1				103		%
Indium	115-2				95		%
Iron	54-2	2587.94	2677.54	2800.27	2688.58	3.96	ppb
Iron	56-2	2625.19	2724.65	2815.05	2721.63	3.49	ppb
Iron	57-2	2556.40	2656.61	2754.63	2655.88	3.73	ppb
Krypton	83-1						cps
Lead	206-1	245.94	244.92	241.81	244.22	0.88	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P8
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:24:34 DataFile Name : 007CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	242.37	243.04	241.53	242.31	0.31	ppb
Lead	208-1	240.65	244.84	237.06	240.85	1.62	ppb
Lithium	6-1				104		%
Magnesium	24-2	5521.01	5745.66	5961.76	5742.81	3.84	ppb
Manganese	55-2	493.57	512.99	533.62	513.39	3.90	ppb
Molybdenum	94-1	504.18	507.97	478.84	497.00	3.19	ppb
Molybdenum	95-1	496.91	507.68	481.11	495.23	2.70	ppb
Molybdenum	96-1	486.50	507.69	478.71	490.97	3.05	ppb
Molybdenum	97-1	498.21	511.67	479.60	496.49	3.24	ppb
Molybdenum	98-1	496.97	498.37	474.14	489.83	2.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	50.80	53.29	54.89	52.99	3.89	ppb
Phosphorus	31-2	1040.51	1095.49	1118.75	1084.92	3.70	ppb
Potassium	39-2	2399.63	2506.57	2637.70	2514.63	4.74	ppb
Rhodium	103-1				102		%
Rhodium	103-2				96		%
Scandium	45-1				103		%
Scandium	45-2				94		%
Selenium	82-1	51.63	52.22	49.13	50.99	3.22	ppb
Selenium	77-2	46.78	56.87	53.02	52.22	9.75	ppb
Selenium	78-2	49.51	49.92	58.19	52.54	9.32	ppb
Silicon	28-1	52.62	54.08	49.32	52.01	4.69	ppb
Silver	107-1	50.98	55.12	52.64	52.91	3.93	ppb
Silver	109-1	52.08	52.74	50.75	51.86	1.95	ppb
Sodium	23-2	5138.07	5276.65	5475.58	5296.77	3.20	ppb
Strontium	86-1	1192.75	1227.09	1170.69	1196.84	2.37	ppb
Strontium	88-1	1209.58	1285.93	1191.22	1228.91	4.09	ppb
Sulfur	34-1	1145.34	1212.61	805.14	1054.37	20.72	ppb
Terbium	159-1				104		%
Terbium	159-2				96		%
Thallium	203-1	45.65	48.00	46.50	46.72	2.55	ppb
Thallium	205-1	48.56	49.87	47.68	48.71	2.26	ppb
Tin	118-1	49.69	50.55	48.19	49.48	2.42	ppb
Titanium	47-1	502.59	511.47	480.34	498.13	3.22	ppb
Uranium	238-1	46.94	47.32	46.12	46.80	1.31	ppb

3

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P8
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:27:36 DataFile Name : 008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2455.10	2559.91	2594.70	2536.57	2.86	ppb
Antimony	121-1	131.79	127.23	131.23	130.08	1.91	ppb
Arsenic	75-2	129.96	135.63	139.66	135.08	3.61	ppb
Barium	135-1	639.30	630.09	642.67	637.35	1.02	ppb
Barium	137-1	640.30	627.73	642.03	636.69	1.23	ppb
Beryllium	9-1	125.55	125.59	126.96	126.04	0.64	ppb
Bismuth	209-1				101		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	129.53	131.06	132.81	131.13	1.25	ppb
Cadmium	106-1	131.91	126.86	132.94	130.57	2.49	ppb
Cadmium	111-1	127.72	124.83	130.52	127.69	2.23	ppb
Calcium	43-1	11765.10	11945.87	11816.86	11842.61	0.79	ppb
Calcium	44-1	11934.32	12130.67	12062.11	12042.37	0.83	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	123.70	129.43	131.63	128.25	3.19	ppb
Cobalt	59-2	128.44	133.06	135.99	132.50	2.87	ppb
Copper	63-2	1356.72	1370.29	1426.48	1384.50	2.67	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				96		%
Indium	115-1				101		%
Indium	115-2				94		%
Iron	54-2	6764.41	6950.10	7264.24	6992.92	3.61	ppb
Iron	56-2	6647.66	6971.94	6926.26	6848.62	2.56	ppb
Iron	57-2	6413.09	6733.69	6786.29	6644.36	3.04	ppb
Krypton	83-1						cps
Lead	206-1	621.13	639.28	625.81	628.74	1.50	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P8
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:27:36 DataFile Name : 008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	613.65	629.10	624.56	622.44	1.28	ppb
Lead	208-1	616.31	625.33	624.20	621.95	0.79	ppb
Lithium	6-1				102		%
Magnesium	24-2	13918.21	14391.40	14642.01	14317.21	2.57	ppb
Manganese	55-2	1317.39	1345.18	1367.75	1343.44	1.88	ppb
Molybdenum	94-1	1264.79	1266.73	1252.94	1261.48	0.59	ppb
Molybdenum	95-1	1240.90	1241.43	1265.62	1249.31	1.13	ppb
Molybdenum	96-1	1238.29	1255.74	1265.95	1253.33	1.12	ppb
Molybdenum	97-1	1268.80	1241.28	1270.66	1260.25	1.31	ppb
Molybdenum	98-1	1260.41	1248.73	1259.57	1256.24	0.52	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	129.27	133.25	135.61	132.71	2.42	ppb
Phosphorus	31-2	2599.51	2759.44	2720.89	2693.28	3.10	ppb
Potassium	39-2	6277.21	6515.75	6594.06	6462.34	2.55	ppb
Rhodium	103-1				100		%
Rhodium	103-2				95		%
Scandium	45-1				101		%
Scandium	45-2				93		%
Selenium	82-1	127.89	128.54	129.45	128.63	0.61	ppb
Selenium	77-2	121.99	147.26	137.81	135.69	9.41	ppb
Selenium	78-2	128.10	137.67	140.57	135.45	4.82	ppb
Silicon	28-1	132.47	132.57	132.03	132.36	0.22	ppb
Silver	107-1	137.90	133.94	136.89	136.25	1.51	ppb
Silver	109-1	137.32	133.15	135.10	135.19	1.55	ppb
Sodium	23-2	13090.27	13448.74	13750.87	13429.96	2.46	ppb
Strontium	86-1	3042.22	3032.68	3037.47	3037.45	0.16	ppb
Strontium	88-1	3174.14	3120.05	3178.05	3157.42	1.03	ppb
Sulfur	34-1	2691.32	2870.61	2723.94	2761.96	3.46	ppb
Terbium	159-1				103		%
Terbium	159-2				96		%
Thallium	203-1	125.25	128.93	126.30	126.82	1.50	ppb
Thallium	205-1	124.95	125.26	123.81	124.67	0.61	ppb
Tin	118-1	131.80	127.88	130.63	130.10	1.55	ppb
Titanium	47-1	1254.47	1271.51	1252.16	1259.38	0.84	ppb
Uranium	238-1	121.12	121.36	121.22	121.23	0.10	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P8
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:27:36 DataFile Name : 008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	124.84	130.47	131.95	129.09	2.91	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				94		%
Zinc	66-2	1268.81	1330.26	1346.14	1315.07	3.11	ppb
Zirconium	90-1	124.68	125.46	124.94	125.02	0.32	ppb
Zirconium	91-1	119.82	119.33	121.29	120.14	0.85	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P8
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:30:28 DataFile Name : 009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4810.07	4785.78	4774.02	4789.96	0.38	ppb
Antimony	121-1	250.84	250.84	249.75	250.48	0.25	ppb
Arsenic	75-2	252.55	265.36	255.91	257.94	2.58	ppb
Barium	135-1	1230.16	1237.02	1243.68	1236.95	0.55	ppb
Barium	137-1	1233.78	1190.17	1238.61	1220.85	2.19	ppb
Beryllium	9-1	253.83	252.83	260.66	255.77	1.67	ppb
Bismuth	209-1				104		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	256.27	249.16	252.91	252.78	1.41	ppb
Cadmium	106-1	251.05	247.85	252.81	250.57	1.00	ppb
Cadmium	111-1	246.02	243.26	247.53	245.60	0.88	ppb
Calcium	43-1	23474.03	23330.24	24043.58	23615.95	1.60	ppb
Calcium	44-1	23485.84	23558.58	23626.56	23556.99	0.30	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	261.50	251.01	257.43	256.65	2.06	ppb
Cobalt	59-2	260.25	260.61	259.91	260.26	0.14	ppb
Copper	63-2	2612.34	2563.25	2572.73	2582.77	1.01	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				100		%
Indium	115-1				102		%
Indium	115-2				96		%
Iron	54-2	13309.36	13293.21	13173.39	13258.65	0.56	ppb
Iron	56-2	12971.20	13000.72	13071.75	13014.56	0.40	ppb
Iron	57-2	12673.24	12616.00	12636.65	12641.96	0.23	ppb
Krypton	83-1						cps
Lead	206-1	1229.69	1214.42	1223.51	1222.54	0.63	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P8
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:30:28 DataFile Name : 009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1221.51	1221.16	1215.70	1219.46	0.27	ppb
Lead	208-1	1219.27	1225.06	1220.07	1221.47	0.26	ppb
Lithium	6-1				102		%
Magnesium	24-2	27436.83	27336.55	27126.86	27300.08	0.58	ppb
Manganese	55-2	2506.35	2523.38	2541.33	2523.69	0.69	ppb
Molybdenum	94-1	2471.34	2516.64	2462.09	2483.36	1.18	ppb
Molybdenum	95-1	2478.15	2469.80	2457.93	2468.63	0.41	ppb
Molybdenum	96-1	2533.95	2441.62	2474.31	2483.29	1.89	ppb
Molybdenum	97-1	2461.77	2463.33	2474.77	2466.63	0.29	ppb
Molybdenum	98-1	2449.12	2463.53	2461.89	2458.18	0.32	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	249.96	248.22	250.26	249.48	0.44	ppb
Phosphorus	31-2	5069.13	4961.50	5148.79	5059.81	1.86	ppb
Potassium	39-2	12434.35	12406.61	12288.43	12376.46	0.63	ppb
Rhodium	103-1				99		%
Rhodium	103-2				96		%
Scandium	45-1				102		%
Scandium	45-2				95		%
Selenium	82-1	250.47	250.73	253.23	251.48	0.61	ppb
Selenium	77-2	263.12	261.69	257.24	260.68	1.18	ppb
Selenium	78-2	247.85	269.56	255.91	257.77	4.26	ppb
Silicon	28-1	256.12	255.15	251.61	254.29	0.93	ppb
Silver	107-1	257.62	255.14	257.37	256.71	0.53	ppb
Silver	109-1	260.80	256.70	258.92	258.81	0.79	ppb
Sodium	23-2	25723.83	25816.42	25242.74	25594.33	1.20	ppb
Strontium	86-1	6344.91	6165.12	6289.51	6266.51	1.47	ppb
Strontium	88-1	6195.71	6058.53	6151.86	6135.37	1.14	ppb
Sulfur	34-1	4921.26	4706.70	4690.81	4772.92	2.70	ppb
Terbium	159-1				105		%
Terbium	159-2				98		%
Thallium	203-1	244.03	244.58	243.91	244.17	0.15	ppb
Thallium	205-1	246.85	243.88	242.59	244.44	0.89	ppb
Tin	118-1	254.46	249.40	250.73	251.53	1.04	ppb
Titanium	47-1	2455.35	2427.87	2458.28	2447.17	0.69	ppb
Uranium	238-1	240.02	239.98	241.60	240.53	0.39	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P8
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:30:28 DataFile Name : 009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	246.36	244.93	245.76	245.69	0.29	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				96		%
Zinc	66-2	2567.08	2581.44	2547.33	2565.28	0.67	ppb
Zirconium	90-1	243.27	247.08	245.46	245.27	0.78	ppb
Zirconium	91-1	250.02	247.17	248.32	248.50	0.58	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P8
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:33:15 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9448.12	9408.82	9244.50	9367.15	1.15	ppb
Antimony	121-1	512.73	503.74	501.55	506.00	1.17	ppb
Arsenic	75-2	499.97	504.63	493.79	499.46	1.09	ppb
Barium	135-1	2540.11	2512.16	2497.86	2516.71	0.85	ppb
Barium	137-1	2524.20	2529.24	2511.15	2521.53	0.37	ppb
Beryllium	9-1	513.15	500.98	504.68	506.27	1.23	ppb
Bismuth	209-1				101		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	517.13	507.16	510.17	511.48	1.00	ppb
Cadmium	106-1	518.10	509.27	508.76	512.04	1.03	ppb
Cadmium	111-1	507.69	508.64	515.09	510.47	0.79	ppb
Calcium	43-1	48095.10	47190.64	48488.89	47924.88	1.39	ppb
Calcium	44-1	48000.57	47529.40	47744.67	47758.21	0.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	501.85	506.31	492.08	500.08	1.46	ppb
Cobalt	59-2	513.04	512.39	494.49	506.64	2.08	ppb
Copper	63-2	5067.08	5167.61	4944.03	5059.57	2.21	ppb
Dysprosium	156-1						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				95		%
Iron	54-2	25919.13	25533.85	25296.82	25583.27	1.23	ppb
Iron	56-2	25711.92	25651.50	24936.00	25433.14	1.70	ppb
Iron	57-2	26492.63	25667.54	25066.59	25742.25	2.78	ppb
Krypton	83-1						cps
Lead	206-1	2455.21	2469.65	2446.38	2457.08	0.48	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P8
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:33:15 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2452.63	2490.44	2425.65	2456.24	1.32	ppb
Lead	208-1	2468.14	2483.15	2445.20	2465.50	0.78	ppb
Lithium	6-1				100		%
Magnesium	24-2	54336.86	54058.69	52412.81	53602.79	1.94	ppb
Manganese	55-2	4923.97	5042.18	4887.57	4951.24	1.63	ppb
Molybdenum	94-1	5012.31	4935.58	4997.91	4981.93	0.82	ppb
Molybdenum	95-1	4974.68	4913.66	5004.86	4964.40	0.94	ppb
Molybdenum	96-1	4938.04	4927.48	4961.48	4942.33	0.35	ppb
Molybdenum	97-1	4949.50	4948.79	4959.08	4952.46	0.12	ppb
Molybdenum	98-1	4965.93	4932.61	4902.81	4933.78	0.64	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	486.40	485.21	475.05	482.22	1.29	ppb
Phosphorus	31-2	9979.76	10105.56	9916.14	10000.49	0.96	ppb
Potassium	39-2	23992.18	24560.41	23854.60	24135.73	1.55	ppb
Rhodium	103-1				94		%
Rhodium	103-2				94		%
Scandium	45-1				99		%
Scandium	45-2				95		%
Selenium	82-1	506.98	505.89	507.12	506.66	0.13	ppb
Selenium	77-2	482.61	516.16	529.49	509.42	4.74	ppb
Selenium	78-2	501.21	520.11	500.01	507.11	2.22	ppb
Silicon	28-1	519.11	526.51	510.85	518.82	1.51	ppb
Silver	107-1	518.48	519.31	514.76	517.52	0.47	ppb
Silver	109-1	513.85	505.12	508.28	509.08	0.87	ppb
Sodium	23-2	50781.66	51129.33	49963.55	50624.85	1.18	ppb
Strontium	86-1	12476.55	12559.51	12787.04	12607.70	1.28	ppb
Strontium	88-1	12568.20	12408.61	12626.90	12534.57	0.90	ppb
Sulfur	34-1	10189.25	10351.22	10025.77	10188.75	1.60	ppb
Terbium	159-1				103		%
Terbium	159-2				100		%
Thallium	203-1	492.92	481.55	489.34	487.94	1.19	ppb
Thallium	205-1	491.36	488.32	490.04	489.91	0.31	ppb
Tin	118-1	508.37	504.32	505.64	506.11	0.41	ppb
Titanium	47-1	4996.81	5029.86	4971.73	4999.46	0.58	ppb
Uranium	238-1	495.17	492.14	495.84	494.38	0.40	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P8
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:33:15 DataFile Name : 010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	505.36	499.49	495.18	500.01	1.02	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				101		%
Yttrium	89-2				98		%
Zinc	66-2	5057.26	5125.41	4945.52	5042.73	1.80	ppb
Zirconium	90-1	501.95	500.92	495.47	499.44	0.70	ppb
Zirconium	91-1	501.35	504.28	505.55	503.73	0.43	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P8
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:36:01 DataFile Name : 011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19510.08	19095.70	19169.55	19258.44	1.15	ppb
Antimony	121-1	993.96	1021.40	973.58	996.31	2.41	ppb
Arsenic	75-2	987.51	1002.49	1000.56	996.86	0.82	ppb
Barium	135-1	4969.03	5083.91	4928.77	4993.90	1.61	ppb
Barium	137-1	5015.23	5015.57	4954.29	4995.03	0.71	ppb
Beryllium	9-1	1000.20	1002.14	983.50	995.28	1.03	ppb
Bismuth	209-1				97		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	999.48	996.75	981.88	992.70	0.95	ppb
Cadmium	106-1	990.64	1009.69	978.92	993.09	1.56	ppb
Cadmium	111-1	991.13	1003.98	991.42	995.51	0.74	ppb
Calcium	43-1	96204.42	96496.15	92831.27	95177.28	2.14	ppb
Calcium	44-1	97548.45	96684.86	94101.20	96111.50	1.87	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1001.50	994.31	997.69	997.84	0.36	ppb
Cobalt	59-2	999.83	985.99	993.29	993.04	0.70	ppb
Copper	63-2	9957.53	9931.89	9900.97	9930.13	0.29	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				99		%
Indium	115-1				95		%
Indium	115-2				90		%
Iron	54-2	51418.67	51848.78	52215.00	51827.48	0.77	ppb
Iron	56-2	52069.33	50579.61	50604.82	51084.58	1.67	ppb
Iron	57-2	50814.51	50841.56	51259.49	50971.85	0.49	ppb
Krypton	83-1						cps
Lead	206-1	5060.38	4967.59	5056.46	5028.14	1.04	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P8
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:36:01 DataFile Name : 011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	5102.56	4911.51	5076.60	5030.22	2.06	ppb
Lead	208-1	5075.68	4948.08	5051.90	5025.22	1.35	ppb
Lithium	6-1				96		%
Magnesium	24-2	108544.70	106097.66	107089.44	107243.93	1.15	ppb
Manganese	55-2	10062.88	9930.65	10024.79	10006.11	0.68	ppb
Molybdenum	94-1	9972.60	10120.64	9942.48	10011.91	0.95	ppb
Molybdenum	95-1	9955.35	10157.04	9965.51	10025.97	1.13	ppb
Molybdenum	96-1	10010.53	10163.05	9925.55	10033.05	1.20	ppb
Molybdenum	97-1	10006.32	10108.05	9978.66	10031.01	0.68	ppb
Molybdenum	98-1	10100.35	10106.08	9923.44	10043.29	1.03	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1010.25	1006.72	1006.75	1007.91	0.20	ppb
Phosphorus	31-2	19976.78	19722.40	20170.02	19956.40	1.12	ppb
Potassium	39-2	48904.70	48084.09	48614.11	48534.30	0.86	ppb
Rhodium	103-1				91		%
Rhodium	103-2				91		%
Scandium	45-1				97		%
Scandium	45-2				92		%
Selenium	82-1	995.12	999.51	992.77	995.80	0.34	ppb
Selenium	77-2	970.52	988.25	1014.72	991.16	2.24	ppb
Selenium	78-2	976.34	1001.99	1000.86	993.07	1.46	ppb
Silicon	28-1	1012.78	991.82	961.18	988.59	2.63	ppb
Silver	107-1	987.76	999.53	976.74	988.01	1.15	ppb
Silver	109-1	994.63	999.07	981.97	991.89	0.89	ppb
Sodium	23-2	101383.63	100152.84	100741.45	100759.31	0.61	ppb
Strontium	86-1	24998.12	24903.90	24913.99	24938.67	0.21	ppb
Strontium	88-1	25074.37	25079.99	24822.31	24992.22	0.59	ppb
Sulfur	34-1	20302.45	20342.88	19135.46	19926.93	3.44	ppb
Terbium	159-1				102		%
Terbium	159-2				97		%
Thallium	203-1	1014.37	1000.80	1007.11	1007.42	0.67	ppb
Thallium	205-1	1012.47	1005.14	1002.01	1006.54	0.53	ppb
Tin	118-1	1015.15	1009.84	962.86	995.95	2.89	ppb
Titanium	47-1	10102.48	10145.03	9789.68	10012.40	1.94	ppb
Uranium	238-1	1011.15	1005.30	1000.97	1005.81	0.51	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P8
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:36:01 DataFile Name : 011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	990.94	999.60	1011.02	1000.52	1.01	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				95		%
Zinc	66-2	9966.98	9966.02	9926.03	9953.01	0.23	ppb
Zirconium	90-1	1004.97	1005.78	993.62	1001.46	0.68	ppb
Zirconium	91-1	999.33	1002.61	995.83	999.26	0.34	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P8
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:38:48 DataFile Name : 012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	99235.80	99730.95	101696.91	100221.22	1.30	ppb
Antimony	121-1	0.43	0.42	0.44	0.43	2.55	ppb
Arsenic	75-2	0.56	0.57	0.63	0.59	6.65	ppb
Barium	135-1	1.73	1.68	1.76	1.72	2.49	ppb
Barium	137-1	1.75	1.77	1.74	1.75	0.74	ppb
Beryllium	9-1	0.25	0.20	0.20	0.21	13.07	ppb
Bismuth	209-1				80		%
Bismuth	209-2				79		%
Bromine	81-1						cps
Cadmium	108-1	0.40	0.42	0.48	0.43	9.25	ppb
Cadmium	106-1	-0.79	-0.66	-0.91	-0.79		ppb
Cadmium	111-1	0.05	0.07	0.04	0.06	30.52	ppb
Calcium	43-1	511123.27	496436.22	496224.54	501261.34	1.70	ppb
Calcium	44-1	511737.75	499129.59	492396.81	501088.05	1.96	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.28	1.71	1.30	1.43	17.07	ppb
Cobalt	59-2	2.07	2.09	2.14	2.10	1.54	ppb
Copper	63-2	1.50	1.52	1.50	1.51	0.89	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				89		%
Holmium	165-2				91		%
Indium	115-1				82		%
Indium	115-2				83		%
Iron	54-2	247311.89	247829.82	253411.64	249517.78	1.36	ppb
Iron	56-2	249443.38	244934.06	254713.14	249696.86	1.96	ppb
Iron	57-2	244704.22	248684.67	255749.77	249712.89	2.24	ppb
Krypton	83-1						cps
Lead	206-1	0.78	0.79	0.80	0.79	0.70	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P8
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:38:48 DataFile Name : 012CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.80	0.79	0.79	0.80	0.56	ppb
Lead	208-1	0.79	0.79	0.80	0.79	0.94	ppb
Lithium	6-1				81		%
Magnesium	24-2	495699.19	496309.52	502060.33	498023.01	0.70	ppb
Manganese	55-2	3.32	3.13	3.28	3.25	3.04	ppb
Molybdenum	94-1	1.78	1.61	1.55	1.65	7.20	ppb
Molybdenum	95-1	1.22	1.04	1.07	1.11	8.64	ppb
Molybdenum	96-1	1.74	1.52	1.49	1.58	8.69	ppb
Molybdenum	97-1	1.17	0.93	0.92	1.01	14.48	ppb
Molybdenum	98-1	1.04	0.88	0.83	0.92	11.97	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.41	2.54	2.58	2.51	3.61	ppb
Phosphorus	31-2	-16.20	-13.73	-11.28	-13.74		ppb
Potassium	39-2	248756.13	249496.34	252888.44	250380.31	0.88	ppb
Rhodium	103-1				75		%
Rhodium	103-2				75		%
Scandium	45-1				83		%
Scandium	45-2				82		%
Selenium	82-1	0.30	0.27	0.03	0.20	73.97	ppb
Selenium	77-2	0.38	1.53	2.11	1.34	65.81	ppb
Selenium	78-2	0.81	0.84	0.51	0.72	25.25	ppb
Silicon	28-1	2.53	2.05	1.67	2.08	20.50	ppb
Silver	107-1	0.14	0.13	0.12	0.13	7.47	ppb
Silver	109-1	0.13	0.13	0.12	0.13	5.26	ppb
Sodium	23-2	498820.98	492226.00	508142.16	499729.72	1.60	ppb
Strontium	86-1	72.58	71.25	70.72	71.52	1.35	ppb
Strontium	88-1	72.13	72.55	72.19	72.29	0.32	ppb
Sulfur	34-1	-141.39	-462.54	-661.64	-421.86		ppb
Terbium	159-1				89		%
Terbium	159-2				89		%
Thallium	203-1	0.07	0.05	0.05	0.06	22.63	ppb
Thallium	205-1	0.07	0.05	0.05	0.06	14.70	ppb
Tin	118-1	0.16	0.16	0.16	0.16	1.24	ppb
Titanium	47-1	1.04	0.97	1.14	1.05	8.34	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	4.22	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P8
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:38:48 DataFile Name : 012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.13	0.14	0.14	0.14	2.76	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				86		%
Yttrium	89-2				86		%
Zinc	66-2	4.44	4.43	4.35	4.41	1.09	ppb
Zirconium	90-1	0.46	0.47	0.45	0.46	1.70	ppb
Zirconium	91-1	0.47	0.51	0.46	0.48	5.33	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P8
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:26:58 DataFile Name : 013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	484.51	479.33	481.08	481.64	0.55	ppb
Antimony	121-1	217.04	214.39	213.96	215.13	0.78	ppb
Arsenic	75-2	220.55	219.09	215.11	218.25	1.29	ppb
Barium	135-1	102.61	102.09	104.73	103.14	1.36	ppb
Barium	137-1	104.58	103.14	104.74	104.15	0.85	ppb
Beryllium	9-1	109.11	105.07	108.27	107.48	1.98	ppb
Bismuth	209-1				100		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	90.11	88.37	88.51	89.00	1.08	ppb
Cadmium	106-1	86.64	84.19	86.04	85.62	1.49	ppb
Cadmium	111-1	108.15	106.90	107.53	107.53	0.58	ppb
Calcium	43-1	1889.21	1851.82	1924.81	1888.61	1.93	ppb
Calcium	44-1	1915.23	1919.76	1973.25	1936.08	1.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	101.64	101.93	101.76	101.78	0.14	ppb
Cobalt	59-2	104.45	106.14	104.54	105.05	0.90	ppb
Copper	63-2	98.28	98.97	98.89	98.71	0.38	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				99		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	54-2	2117.05	2127.35	2114.18	2119.53	0.33	ppb
Iron	56-2	2046.88	2071.47	2068.89	2062.42	0.66	ppb
Iron	57-2	2024.63	2058.56	2015.96	2033.05	1.11	ppb
Krypton	83-1						cps
Lead	206-1	205.95	210.59	214.55	210.36	2.05	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P8
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:26:58 DataFile Name : 013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	199.45	201.62	205.04	202.04	1.40	ppb
Lead	208-1	203.86	201.70	208.30	204.62	1.64	ppb
Lithium	6-1				107		%
Magnesium	24-2	1268.60	1278.18	1261.05	1269.27	0.68	ppb
Manganese	55-2	99.10	100.18	100.10	99.79	0.60	ppb
Molybdenum	94-1	0.11	0.12	0.10	0.11	8.76	ppb
Molybdenum	95-1	0.10	0.09	0.09	0.09	9.70	ppb
Molybdenum	96-1	0.11	0.12	0.11	0.11	4.82	ppb
Molybdenum	97-1	0.10	0.07	0.09	0.09	14.81	ppb
Molybdenum	98-1	0.08	0.08	0.08	0.08	1.29	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	104.23	106.58	104.97	105.26	1.14	ppb
Phosphorus	31-2	-18.37	-24.57	-16.38	-19.77		ppb
Potassium	39-2	1955.37	1952.04	1946.69	1951.37	0.22	ppb
Rhodium	103-1				100		%
Rhodium	103-2				99		%
Scandium	45-1				102		%
Scandium	45-2				102		%
Selenium	82-1	205.85	203.93	211.57	207.12	1.92	ppb
Selenium	77-2	225.74	220.83	234.72	227.10	3.10	ppb
Selenium	78-2	226.50	232.90	219.36	226.25	2.99	ppb
Silicon	28-1	-0.40	-0.51	-0.38	-0.43		ppb
Silver	107-1	54.48	55.07	54.02	54.52	0.96	ppb
Silver	109-1	53.56	53.63	54.04	53.74	0.48	ppb
Sodium	23-2	2073.34	2078.97	2065.12	2072.48	0.34	ppb
Strontium	86-1	5.82	6.22	6.60	6.21	6.28	ppb
Strontium	88-1	6.22	6.36	6.59	6.39	2.90	ppb
Sulfur	34-1	-25.94	-93.78	99.65	-6.69		ppb
Terbium	159-1				100		%
Terbium	159-2				97		%
Thallium	203-1	203.08	203.08	209.27	205.14	1.74	ppb
Thallium	205-1	203.60	199.17	206.32	203.03	1.78	ppb
Tin	118-1	-0.05	-0.06	-0.04	-0.05		ppb
Titanium	47-1	0.12	0.09	0.11	0.11	14.34	ppb
Uranium	238-1	0.00	0.00	0.01	0.00	11.10	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P8
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:26:58 DataFile Name : 013ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	98.63	99.86	98.10	98.87	0.91	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	197.11	199.10	197.22	197.81	0.57	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	9.91	ppb
Zirconium	91-1	0.09	0.09	0.08	0.08	5.59	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P8
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:30:08 DataFile Name : 014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-5.62	-5.64	-5.74	-5.67		ppb
Antimony	121-1	0.03	0.03	0.03	0.03	11.04	ppb
Arsenic	75-2	0.00	0.02	0.01	0.01	81.86	ppb
Barium	135-1	0.02	0.02	0.01	0.02	23.67	ppb
Barium	137-1	0.01	0.02	0.01	0.01	15.01	ppb
Beryllium	9-1	0.02	0.01	0.02	0.02	30.96	ppb
Bismuth	209-1				100		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	-0.05	-0.04	-0.03	-0.04		ppb
Cadmium	106-1	-1.55	-2.27	-2.88	-2.23		ppb
Cadmium	111-1	-0.11	-0.17	-0.22	-0.16		ppb
Calcium	43-1	12.74	11.47	7.96	10.72	23.07	ppb
Calcium	44-1	8.94	8.80	8.27	8.67	4.07	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	-0.01	0.00	-0.01		ppb
Cobalt	59-2	0.00	0.01	0.00	0.00	112.02	ppb
Copper	63-2	-0.12	-0.12	-0.08	-0.11		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				100		%
Indium	115-1				101		%
Indium	115-2				101		%
Iron	54-2	0.15	-0.04	-0.11	0.00	7804.84	ppb
Iron	56-2	0.21	0.11	0.11	0.15	38.47	ppb
Iron	57-2	0.26	0.03	0.36	0.22	78.52	ppb
Krypton	83-1						cps
Lead	206-1	0.03	0.03	0.03	0.03	9.35	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P8
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:30:08 DataFile Name : 014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.03	0.03	0.03	0.03	3.22	ppb
Lead	208-1	0.03	0.03	0.03	0.03	3.21	ppb
Lithium	6-1				105		%
Magnesium	24-2	0.27	0.31	0.41	0.33	21.15	ppb
Manganese	55-2	-0.01	-0.01	-0.02	-0.01		ppb
Molybdenum	94-1	0.03	0.01	0.01	0.02	47.24	ppb
Molybdenum	95-1	0.02	0.02	0.01	0.02	20.57	ppb
Molybdenum	96-1	0.01	0.02	0.01	0.01	18.34	ppb
Molybdenum	97-1	0.02	0.01	0.01	0.01	37.13	ppb
Molybdenum	98-1	0.02	0.01	0.01	0.01	25.00	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.05	0.06	0.06	0.05	10.73	ppb
Phosphorus	31-2	-20.80	-14.08	-23.00	-19.29		ppb
Potassium	39-2	8.97	8.90	7.56	8.48	9.38	ppb
Rhodium	103-1				101		%
Rhodium	103-2				102		%
Scandium	45-1				104		%
Scandium	45-2				103		%
Selenium	82-1	0.06	0.10	0.02	0.06	63.03	ppb
Selenium	77-2	-0.17	0.30	0.30	0.14	191.92	ppb
Selenium	78-2	0.37	0.65	0.23	0.42	51.84	ppb
Silicon	28-1	-0.41	-0.35	-0.57	-0.44		ppb
Silver	107-1	0.04	0.03	0.02	0.03	21.63	ppb
Silver	109-1	0.04	0.03	0.03	0.03	20.44	ppb
Sodium	23-2	13.71	12.43	11.97	12.70	7.12	ppb
Strontium	86-1	-0.17	-0.04	-0.02	-0.07		ppb
Strontium	88-1	0.38	0.31	0.33	0.34	10.30	ppb
Sulfur	34-1	-159.68	-197.08	-283.54	-213.43		ppb
Terbium	159-1				100		%
Terbium	159-2				99		%
Thallium	203-1	0.01	0.01	0.01	0.01	26.27	ppb
Thallium	205-1	0.02	0.01	0.01	0.01	17.13	ppb
Tin	118-1	-0.03	-0.04	0.00	-0.02		ppb
Titanium	47-1	0.05	0.05	0.03	0.04	25.87	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P8
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:30:08 DataFile Name : 014CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00	59.91	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				102		%
Zinc	66-2	0.94	0.86	0.68	0.83	16.56	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	-0.01	0.01	0.00		ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P8
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:33:29 DataFile Name : 015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	91315.83	90711.93	90991.51	91006.42	0.33	ppb
Antimony	121-1	1.12	1.14	1.12	1.13	1.45	ppb
Arsenic	75-2	0.31	0.33	0.29	0.31	6.04	ppb
Barium	135-1	1.39	1.44	1.41	1.41	1.70	ppb
Barium	137-1	1.39	1.45	1.44	1.43	2.13	ppb
Beryllium	9-1	0.29	0.27	0.30	0.29	4.34	ppb
Bismuth	209-1				93		%
Bismuth	209-2				90		%
Bromine	81-1						cps
Cadmium	108-1	18.11	17.90	16.73	17.58	4.23	ppb
Cadmium	106-1	-3.33	-4.35	-4.25	-3.97		ppb
Cadmium	111-1	0.42	0.32	0.29	0.34	19.98	ppb
Calcium	43-1	94588.12	95034.26	97453.19	95691.86	1.61	ppb
Calcium	44-1	94507.39	94440.06	97844.43	95597.29	2.04	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	19.46	19.74	19.59	19.60	0.71	ppb
Cobalt	59-2	1.14	1.19	1.13	1.15	2.70	ppb
Copper	63-2	7.15	7.22	7.20	7.19	0.51	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				97		%
Indium	115-1				95		%
Indium	115-2				92		%
Iron	54-2	100816.26	101111.16	100637.77	100855.06	0.24	ppb
Iron	56-2	101650.08	101876.43	100166.84	101231.11	0.92	ppb
Iron	57-2	101035.61	101243.60	102908.44	101729.22	1.01	ppb
Krypton	83-1						cps
Lead	206-1	4.76	4.63	4.76	4.72	1.60	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P8
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:33:29 DataFile Name : 015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.31	4.21	4.26	4.26	1.09	ppb
Lead	208-1	4.46	4.34	4.44	4.41	1.49	ppb
Lithium	6-1				96		%
Magnesium	24-2	102355.33	103053.35	102146.87	102518.52	0.46	ppb
Manganese	55-2	8.01	7.92	7.69	7.87	2.08	ppb
Molybdenum	94-1	1617.51	1578.55	1617.82	1604.63	1.41	ppb
Molybdenum	95-1	1953.01	1945.27	1949.89	1949.39	0.20	ppb
Molybdenum	96-1	1901.61	1893.72	1930.63	1908.65	1.02	ppb
Molybdenum	97-1	1950.74	1911.99	1983.30	1948.68	1.83	ppb
Molybdenum	98-1	1935.21	1907.86	1953.70	1932.25	1.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.17	5.17	5.21	5.19	0.48	ppb
Phosphorus	31-2	104684.65	105271.41	105596.85	105184.30	0.44	ppb
Potassium	39-2	96840.84	97249.97	98262.07	97450.96	0.75	ppb
Rhodium	103-1				90		%
Rhodium	103-2				91		%
Scandium	45-1				97		%
Scandium	45-2				96		%
Selenium	82-1	0.05	-0.13	0.11	0.01	1087.02	ppb
Selenium	77-2	-0.17	-0.17	1.84	0.50	233.51	ppb
Selenium	78-2	-0.04	0.56	0.41	0.31	100.68	ppb
Silicon	28-1	2.74	2.57	2.61	2.64	3.40	ppb
Silver	107-1	0.08	0.07	0.08	0.08	7.89	ppb
Silver	109-1	0.09	0.08	0.08	0.08	6.70	ppb
Sodium	23-2	101061.40	101839.66	102285.23	101728.76	0.61	ppb
Strontium	86-1	835.12	828.14	842.62	835.29	0.87	ppb
Strontium	88-1	850.74	870.72	884.47	868.64	1.95	ppb
Sulfur	34-1	99691.18	99646.87	100853.72	100063.93	0.68	ppb
Terbium	159-1				100		%
Terbium	159-2				96		%
Thallium	203-1	0.08	0.07	0.07	0.07	9.57	ppb
Thallium	205-1	0.08	0.07	0.07	0.07	6.71	ppb
Tin	118-1	0.12	0.11	0.10	0.11	10.24	ppb
Titanium	47-1	2084.34	2051.07	2084.50	2073.30	0.93	ppb
Uranium	238-1	0.02	0.02	0.02	0.02	0.72	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P8
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:33:29 DataFile Name : 015ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.15	0.16	0.16	0.16	1.97	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				97		%
Zinc	66-2	10.32	10.85	10.67	10.61	2.53	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	4.70	ppb
Zirconium	91-1	0.01	0.01	0.02	0.01	48.27	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P8
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:36:33 DataFile Name : 016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	89683.89	89288.35	89728.88	89567.04	0.27	ppb
Antimony	121-1	20.86	21.04	20.85	20.92	0.50	ppb
Arsenic	75-2	21.04	21.78	20.94	21.25	2.15	ppb
Barium	135-1	21.24	21.57	21.03	21.28	1.26	ppb
Barium	137-1	21.59	21.72	21.49	21.60	0.52	ppb
Beryllium	9-1	21.03	21.09	20.80	20.97	0.74	ppb
Bismuth	209-1				94		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	32.45	33.26	33.18	32.97	1.37	ppb
Cadmium	106-1	11.94	11.82	11.68	11.81	1.11	ppb
Cadmium	111-1	19.71	19.57	19.51	19.60	0.52	ppb
Calcium	43-1	92215.07	92085.53	92732.80	92344.47	0.37	ppb
Calcium	44-1	92331.71	94018.53	93749.84	93366.69	0.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	38.60	38.55	38.81	38.65	0.35	ppb
Cobalt	59-2	20.62	20.77	20.79	20.72	0.46	ppb
Copper	63-2	25.58	25.57	25.45	25.53	0.28	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				100		%
Indium	115-1				99		%
Indium	115-2				95		%
Iron	54-2	99633.31	98477.04	99340.01	99150.12	0.61	ppb
Iron	56-2	100453.37	100119.93	99265.76	99946.35	0.61	ppb
Iron	57-2	101221.65	99769.34	99745.32	100245.43	0.84	ppb
Krypton	83-1						cps
Lead	206-1	24.79	24.92	24.99	24.90	0.40	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P8
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:36:33 DataFile Name : 016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	23.75	24.02	24.05	23.94	0.70	ppb
Lead	208-1	23.92	24.21	24.20	24.11	0.69	ppb
Lithium	6-1				96		%
Magnesium	24-2	100820.71	99952.61	101008.31	100593.88	0.56	ppb
Manganese	55-2	26.53	26.22	26.34	26.36	0.61	ppb
Molybdenum	94-1	1567.77	1602.92	1592.21	1587.63	1.13	ppb
Molybdenum	95-1	1909.66	1951.07	1941.59	1934.11	1.12	ppb
Molybdenum	96-1	1840.59	1913.64	1871.63	1875.29	1.95	ppb
Molybdenum	97-1	1890.38	1978.50	1888.99	1919.29	2.67	ppb
Molybdenum	98-1	1905.02	1958.41	1933.78	1932.40	1.38	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	24.15	24.25	24.47	24.29	0.67	ppb
Phosphorus	31-2	103430.62	103307.61	103049.65	103262.63	0.19	ppb
Potassium	39-2	96913.22	96595.70	98568.04	97358.99	1.09	ppb
Rhodium	103-1				94		%
Rhodium	103-2				93		%
Scandium	45-1				103		%
Scandium	45-2				100		%
Selenium	82-1	19.57	20.25	20.72	20.18	2.87	ppb
Selenium	77-2	18.68	24.55	18.81	20.68	16.21	ppb
Selenium	78-2	21.03	22.23	21.89	21.71	2.84	ppb
Silicon	28-1	2.49	2.59	2.54	2.54	2.02	ppb
Silver	107-1	18.46	18.89	18.61	18.65	1.18	ppb
Silver	109-1	18.70	18.99	18.96	18.88	0.84	ppb
Sodium	23-2	101367.63	100869.24	100784.42	101007.09	0.31	ppb
Strontium	86-1	820.00	832.43	815.02	822.48	1.09	ppb
Strontium	88-1	858.42	877.76	863.25	866.48	1.16	ppb
Sulfur	34-1	95968.33	97581.29	96530.62	96693.41	0.85	ppb
Terbium	159-1				102		%
Terbium	159-2				100		%
Thallium	203-1	19.78	20.07	20.16	20.00	0.99	ppb
Thallium	205-1	19.99	20.24	20.51	20.25	1.30	ppb
Tin	118-1	0.12	0.13	0.12	0.12	2.44	ppb
Titanium	47-1	1996.05	2023.93	2000.21	2006.73	0.75	ppb
Uranium	238-1	0.01	0.02	0.01	0.01	4.26	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P8
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:36:33 DataFile Name : 016ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	19.71	19.30	19.74	19.58	1.24	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				100		%
Zinc	66-2	29.81	29.68	29.15	29.54	1.19	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	18.27	ppb
Zirconium	91-1	0.02	0.01	0.02	0.02	19.08	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P8
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:39:41 DataFile Name : 017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50282.58	56955.68	53243.08	53493.78	6.25	ppb
Antimony	121-1	501.72	508.25	495.61	501.86	1.26	ppb
Arsenic	75-2	501.92	565.45	548.78	538.72	6.11	ppb
Barium	135-1	2488.62	2569.01	2516.98	2524.87	1.61	ppb
Barium	137-1	2484.82	2575.12	2489.47	2516.47	2.02	ppb
Beryllium	9-1	505.56	539.35	520.85	521.92	3.24	ppb
Bismuth	209-1				90		%
Bismuth	209-2				82		%
Bromine	81-1						cps
Cadmium	108-1	488.11	507.14	488.82	494.69	2.18	ppb
Cadmium	106-1	491.09	504.83	480.88	492.27	2.44	ppb
Cadmium	111-1	485.83	505.98	488.41	493.41	2.22	ppb
Calcium	43-1	234660.28	237976.72	238354.91	236997.30	0.86	ppb
Calcium	44-1	235017.42	242484.45	238521.09	238674.32	1.57	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	499.43	564.42	529.74	531.20	6.12	ppb
Cobalt	59-2	488.88	545.52	521.24	518.55	5.48	ppb
Copper	63-2	4766.80	5257.12	4948.66	4990.86	4.97	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				98		%
Holmium	165-2				92		%
Indium	115-1				93		%
Indium	115-2				86		%
Iron	54-2	125377.77	141548.01	132241.42	133055.73	6.10	ppb
Iron	56-2	127329.47	140206.70	132618.34	133384.84	4.85	ppb
Iron	57-2	125165.90	139819.97	131160.88	132048.92	5.58	ppb
Krypton	83-1						cps
Lead	206-1	2520.79	2541.93	2541.30	2534.68	0.47	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P8
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:39:41 DataFile Name : 017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2511.40	2505.41	2535.83	2517.55	0.64	ppb
Lead	208-1	2520.63	2551.39	2528.14	2533.39	0.63	ppb
Lithium	6-1				91		%
Magnesium	24-2	255343.40	283664.06	268696.85	269234.77	5.26	ppb
Manganese	55-2	4994.45	5598.29	5256.79	5283.18	5.73	ppb
Molybdenum	94-1	4934.44	5160.77	4989.67	5028.29	2.35	ppb
Molybdenum	95-1	4909.38	5131.16	5043.82	5028.12	2.22	ppb
Molybdenum	96-1	4934.91	5048.17	4962.69	4981.93	1.18	ppb
Molybdenum	97-1	5009.13	5063.07	4944.52	5005.57	1.19	ppb
Molybdenum	98-1	4948.00	5058.73	4928.77	4978.50	1.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	455.05	512.77	476.17	481.33	6.07	ppb
Phosphorus	31-2	10137.88	11489.31	10540.58	10722.59	6.47	ppb
Potassium	39-2	126403.87	141577.96	134183.36	134055.06	5.66	ppb
Rhodium	103-1				87		%
Rhodium	103-2				82		%
Scandium	45-1				98		%
Scandium	45-2				91		%
Selenium	82-1	481.21	496.03	487.43	488.22	1.52	ppb
Selenium	77-2	501.48	553.28	525.83	526.86	4.92	ppb
Selenium	78-2	511.60	575.56	542.42	543.19	5.89	ppb
Silicon	28-1	518.99	520.15	526.05	521.73	0.73	ppb
Silver	107-1	485.52	498.33	471.05	484.97	2.81	ppb
Silver	109-1	476.30	492.62	479.26	482.73	1.80	ppb
Sodium	23-2	255043.53	285634.54	273116.15	271264.74	5.67	ppb
Strontium	86-1	12686.24	12897.82	12722.92	12768.99	0.89	ppb
Strontium	88-1	12482.44	12705.34	12650.45	12612.75	0.92	ppb
Sulfur	34-1	9773.08	9529.36	9802.02	9701.49	1.54	ppb
Terbium	159-1				99		%
Terbium	159-2				91		%
Thallium	203-1	508.78	509.33	515.61	511.24	0.74	ppb
Thallium	205-1	508.47	515.82	516.85	513.71	0.89	ppb
Tin	118-1	508.88	514.51	501.99	508.46	1.23	ppb
Titanium	47-1	5006.28	5117.26	4989.75	5037.76	1.38	ppb
Uranium	238-1	520.66	527.98	516.45	521.70	1.12	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P8
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:39:41 DataFile Name : 017CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	508.87	576.12	543.89	542.96	6.19	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				99		%
Yttrium	89-2				91		%
Zinc	66-2	4688.23	5309.28	4980.11	4992.54	6.22	ppb
Zirconium	90-1	497.91	521.69	504.11	507.90	2.43	ppb
Zirconium	91-1	492.56	521.01	507.78	507.12	2.81	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P8
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:04:34 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-5.95	-6.28	-6.20	-6.14		ppb
Antimony	121-1	0.00	0.00	0.00	0.00	9.61	ppb
Arsenic	75-2	-0.01	-0.01	0.01	-0.01		ppb
Barium	135-1	0.00	-0.01	0.00	0.00		ppb
Barium	137-1	0.00	0.00	0.00	0.00	335.88	ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	11.28	ppb
Bismuth	209-1				103		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	0.01	0.03	-0.02	0.00	669.38	ppb
Cadmium	106-1	-2.60	-2.96	-2.51	-2.69		ppb
Cadmium	111-1	-0.20	-0.23	-0.19	-0.21		ppb
Calcium	43-1	0.84	0.00	0.28	0.37	114.84	ppb
Calcium	44-1	-0.78	-0.98	-1.19	-0.99		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.02	0.00	0.00	-0.01		ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	-0.06	-0.03	-0.08	-0.06		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				105		%
Indium	115-2				104		%
Iron	54-2	0.12	-0.03	-0.02	0.02	351.03	ppb
Iron	56-2	0.02	0.04	0.10	0.05	82.56	ppb
Iron	57-2	0.48	0.12	-0.06	0.18	154.81	ppb
Krypton	83-1						cps
Lead	206-1	0.02	0.02	0.02	0.02	11.72	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P8
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:04:34 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.02	0.02	0.02	0.02	7.43	ppb
Lead	208-1	0.02	0.02	0.02	0.02	4.45	ppb
Lithium	6-1				105		%
Magnesium	24-2	-0.20	-0.28	-0.19	-0.23		ppb
Manganese	55-2	-0.07	-0.07	-0.06	-0.07		ppb
Molybdenum	94-1	0.02	0.02	0.00	0.01	62.09	ppb
Molybdenum	95-1	0.04	0.02	0.01	0.02	52.45	ppb
Molybdenum	96-1	0.02	0.01	0.00	0.01	97.74	ppb
Molybdenum	97-1	0.01	0.01	0.01	0.01	49.54	ppb
Molybdenum	98-1	0.02	0.01	0.01	0.01	52.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.02	-0.03	-0.05	-0.03		ppb
Phosphorus	31-2	-16.54	-16.30	-34.48	-22.44		ppb
Potassium	39-2	22.95	26.30	22.52	23.92	8.65	ppb
Rhodium	103-1				106		%
Rhodium	103-2				105		%
Scandium	45-1				109		%
Scandium	45-2				107		%
Selenium	82-1	-0.02	-0.01	0.04	0.00	3816.94	ppb
Selenium	77-2	0.28	0.29	-0.17	0.13	200.25	ppb
Selenium	78-2	0.75	0.48	0.62	0.62	21.26	ppb
Silicon	28-1	-0.42	-0.60	-0.72	-0.58		ppb
Silver	107-1	0.01	0.01	0.00	0.00	24.59	ppb
Silver	109-1	0.01	0.00	0.01	0.00	14.76	ppb
Sodium	23-2	35.57	38.65	36.57	36.93	4.25	ppb
Strontium	86-1	-0.13	-0.24	-0.17	-0.18		ppb
Strontium	88-1	0.03	0.03	0.03	0.03	6.14	ppb
Sulfur	34-1	-179.03	-193.00	-343.53	-238.52		ppb
Terbium	159-1				103		%
Terbium	159-2				100		%
Thallium	203-1	0.01	0.01	0.01	0.01	22.75	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	4.00	ppb
Tin	118-1	-0.03	-0.05	-0.04	-0.04		ppb
Titanium	47-1	0.07	0.05	0.05	0.06	16.08	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P8
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:04:34 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				106		%
Zinc	66-2	-0.18	-0.25	-0.11	-0.18		ppb
Zirconium	90-1	0.00	0.00	-0.01	0.00		ppb
Zirconium	91-1	0.00	0.00	0.00	0.00		ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BL Instrumnet Name : P8
Client Sample ID : PBS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:13:00 DataFile Name : 021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-5.64	-6.09	-5.60	-5.78		ppb
Antimony	121-1	0.00	0.00	0.00	0.00	51.52	ppb
Arsenic	75-2	-0.01	0.00	-0.01	-0.01		ppb
Barium	135-1	0.00	0.00	0.00	0.00	1807.77	ppb
Barium	137-1	0.00	0.00	-0.01	0.00		ppb
Beryllium	9-1	0.01	0.01	0.01	0.01	25.87	ppb
Bismuth	209-1				93		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	0.00	-0.04	-0.01	-0.02		ppb
Cadmium	106-1	-2.98	-3.09	-3.89	-3.32		ppb
Cadmium	111-1	-0.23	-0.24	-0.30	-0.26		ppb
Calcium	43-1	-4.42	-3.94	-5.31	-4.56		ppb
Calcium	44-1	-5.51	-6.39	-4.11	-5.34		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.00	-0.01	0.00	1315.24	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	0.02	0.01	0.05	0.03	89.26	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				92		%
Holmium	165-2				93		%
Indium	115-1				95		%
Indium	115-2				94		%
Iron	54-2	0.18	0.15	0.08	0.14	38.01	ppb
Iron	56-2	0.07	0.16	0.13	0.12	35.04	ppb
Iron	57-2	0.06	0.19	0.23	0.16	53.97	ppb
Krypton	83-1						cps
Lead	206-1	0.02	0.03	0.04	0.03	27.66	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BL Instrumnet Name : P8
Client Sample ID : PBS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:13:00 DataFile Name : 021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.03	0.02	0.03	0.03	8.54	ppb
Lead	208-1	0.02	0.02	0.03	0.03	17.97	ppb
Lithium	6-1				95		%
Magnesium	24-2	-0.31	-0.37	-0.17	-0.28		ppb
Manganese	55-2	0.09	0.11	0.08	0.10	17.40	ppb
Molybdenum	94-1	0.00	0.01	0.00	0.00	124.91	ppb
Molybdenum	95-1	0.01	0.01	0.02	0.01	25.76	ppb
Molybdenum	96-1	0.01	0.00	0.01	0.00	59.03	ppb
Molybdenum	97-1	0.01	0.00	0.01	0.00	110.13	ppb
Molybdenum	98-1	0.01	0.00	0.00	0.00	118.16	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.06	-0.04	-0.03		ppb
Phosphorus	31-2	-32.53	-23.64	-19.35	-25.17		ppb
Potassium	39-2	31.58	26.94	29.18	29.23	7.95	ppb
Rhodium	103-1				95		%
Rhodium	103-2				94		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	0.20	0.19	-0.06	0.11	132.91	ppb
Selenium	77-2	-0.17	0.33	0.33	0.16	178.73	ppb
Selenium	78-2	1.04	0.41	0.27	0.57	72.05	ppb
Silicon	28-1	-0.26	-0.14	0.43	0.01	4272.39	ppb
Silver	107-1	0.01	0.01	0.01	0.01	28.36	ppb
Silver	109-1	0.01	0.01	0.01	0.01	20.91	ppb
Sodium	23-2	46.40	40.25	43.59	43.41	7.10	ppb
Strontium	86-1	-0.13	-0.16	-0.06	-0.12		ppb
Strontium	88-1	-0.04	-0.07	-0.03	-0.05		ppb
Sulfur	34-1	124.11	64.54	575.57	254.74	109.70	ppb
Terbium	159-1				93		%
Terbium	159-2				91		%
Thallium	203-1	0.01	0.00	0.00	0.00	40.62	ppb
Thallium	205-1	0.01	0.01	0.01	0.01	20.24	ppb
Tin	118-1	0.08	0.07	0.08	0.08	9.75	ppb
Titanium	47-1	0.05	0.04	0.04	0.04	16.39	ppb
Uranium	238-1	0.00	0.00	0.00	0.00		ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BL Instrumnet Name : P8
Client Sample ID : PBS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:13:00 DataFile Name : 021CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.00	0.00	0.00	0.00		ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				96		%
Yttrium	89-2				95		%
Zinc	66-2	0.30	0.11	0.40	0.27	55.06	ppb
Zirconium	90-1	-0.01	-0.01	0.00	-0.01		ppb
Zirconium	91-1	0.00	0.00	0.00	0.00		ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BS Instrumnet Name : P8
Client Sample ID : LCS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:25:06 DataFile Name : 024LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	35.56	31.21	32.60	33.12	6.70	ppb
Antimony	121-1	3.69	3.76	3.89	3.78	2.64	ppb
Arsenic	75-2	2.22	2.19	2.32	2.24	3.01	ppb
Barium	135-1	17.87	18.36	18.93	18.39	2.90	ppb
Barium	137-1	18.32	18.59	18.98	18.63	1.77	ppb
Beryllium	9-1	2.00	1.90	1.93	1.94	2.60	ppb
Bismuth	209-1				103		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	1.91	1.92	1.93	1.92	0.65	ppb
Cadmium	106-1	-0.91	-0.30	-0.85	-0.69		ppb
Cadmium	111-1	1.78	1.81	1.82	1.80	1.15	ppb
Calcium	43-1	873.72	894.36	888.23	885.43	1.20	ppb
Calcium	44-1	912.43	945.89	937.41	931.91	1.87	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	3.93	3.69	3.85	3.82	3.23	ppb
Cobalt	59-2	2.01	1.94	2.05	2.00	2.73	ppb
Copper	63-2	4.18	3.91	4.08	4.06	3.33	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				101		%
Holmium	165-2				98		%
Indium	115-1				102		%
Indium	115-2				99		%
Iron	54-2	410.28	390.44	402.72	401.15	2.50	ppb
Iron	56-2	430.80	401.71	427.24	419.92	3.78	ppb
Iron	57-2	413.20	377.68	401.27	397.38	4.55	ppb
Krypton	83-1						cps
Lead	206-1	1.84	1.85	1.88	1.86	1.28	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BS Instrumnet Name : P8
Client Sample ID : LCS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:25:06 DataFile Name : 024LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	1.81	1.86	1.87	1.85	1.62	ppb
Lead	208-1	1.84	1.85	1.86	1.85	0.42	ppb
Lithium	6-1				108		%
Magnesium	24-2	1062.41	999.67	1043.96	1035.35	3.11	ppb
Manganese	55-2	2.15	1.99	2.08	2.07	3.97	ppb
Molybdenum	94-1	10.71	10.95	10.96	10.87	1.35	ppb
Molybdenum	95-1	9.03	9.15	9.32	9.16	1.59	ppb
Molybdenum	96-1	9.02	9.29	9.39	9.23	2.03	ppb
Molybdenum	97-1	8.86	9.30	9.20	9.12	2.50	ppb
Molybdenum	98-1	8.86	9.11	9.14	9.04	1.70	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.01	1.86	2.02	1.97	4.60	ppb
Phosphorus	31-2	46.17	19.34	35.62	33.71	40.09	ppb
Potassium	39-2	1009.48	941.27	984.08	978.27	3.52	ppb
Rhodium	103-1				103		%
Rhodium	103-2				98		%
Scandium	45-1				106		%
Scandium	45-2				101		%
Selenium	82-1	8.60	9.07	9.29	8.99	3.93	ppb
Selenium	77-2	9.21	11.67	12.45	11.11	15.22	ppb
Selenium	78-2	10.43	11.81	9.54	10.59	10.79	ppb
Silicon	28-1	2.55	2.68	2.61	2.61	2.49	ppb
Silver	107-1	1.90	1.93	2.00	1.94	2.48	ppb
Silver	109-1	1.93	1.96	2.03	1.97	2.45	ppb
Sodium	23-2	1057.10	994.53	1037.98	1029.87	3.11	ppb
Strontium	86-1	44.68	45.22	47.26	45.72	2.98	ppb
Strontium	88-1	45.26	45.98	46.50	45.91	1.36	ppb
Sulfur	34-1	-57.49	76.16	41.78	20.15	344.41	ppb
Terbium	159-1				103		%
Terbium	159-2				97		%
Thallium	203-1	1.78	1.82	1.83	1.81	1.43	ppb
Thallium	205-1	1.80	1.82	1.84	1.82	1.04	ppb
Tin	118-1	9.63	9.58	9.82	9.68	1.31	ppb
Titanium	47-1	2.21	2.43	2.33	2.33	4.62	ppb
Uranium	238-1	1.72	1.69	1.70	1.71	0.90	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BS Instrumnet Name : P8
Client Sample ID : LCS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:25:06 DataFile Name : 024LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	10.23	9.53	10.08	9.95	3.70	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				100		%
Zinc	66-2	9.77	9.61	10.31	9.90	3.69	ppb
Zirconium	90-1	1.78	1.84	1.80	1.81	1.54	ppb
Zirconium	91-1	1.75	1.84	1.80	1.80	2.45	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:28:22 DataFile Name : 025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	26044.87	26201.64	25953.92	26066.81	0.48	ppb
Antimony	121-1	0.65	0.67	0.66	0.66	1.42	ppb
Arsenic	75-2	6.09	6.49	6.27	6.28	3.17	ppb
Barium	135-1	175.86	177.94	178.16	177.32	0.71	ppb
Barium	137-1	187.80	186.85	184.23	186.29	0.99	ppb
Beryllium	9-1	2.31	2.32	2.27	2.30	1.27	ppb
Bismuth	209-1				94		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	5.82	6.07	6.02	5.97	2.24	ppb
Cadmium	106-1	8.34	8.15	8.99	8.49	5.20	ppb
Cadmium	111-1	0.70	0.69	0.75	0.71	4.33	ppb
Calcium	43-1	412497.97	406333.74	409843.74	409558.48	0.75	ppb
Calcium	44-1	410977.21	405943.11	405283.37	407401.23	0.76	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1810.71	1812.16	1801.22	1808.03	0.33	ppb
Cobalt	59-2	6.43	6.36	6.33	6.37	0.79	ppb
Copper	63-2	47.43	47.81	47.21	47.48	0.64	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				97		%
Indium	115-1				96		%
Indium	115-2				93		%
Iron	54-2	325856.38	327999.15	328525.00	327460.18	0.43	ppb
Iron	56-2	321581.51	328100.30	327800.20	325827.34	1.13	ppb
Iron	57-2	328547.90	326827.97	325054.14	326810.00	0.53	ppb
Krypton	83-1						cps
Lead	206-1	30.15	30.90	30.91	30.65	1.42	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:28:22 DataFile Name : 025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	28.93	29.36	29.33	29.21	0.82	ppb
Lead	208-1	29.37	29.61	29.65	29.54	0.51	ppb
Lithium	6-1				100		%
Magnesium	24-2	84215.96	85190.40	83456.21	84287.52	1.03	ppb
Manganese	55-2	44113.63	45019.96	44872.38	44668.65	1.09	ppb
Molybdenum	94-1	87.14	89.12	87.81	88.02	1.14	ppb
Molybdenum	95-1	11.38	11.49	11.40	11.42	0.50	ppb
Molybdenum	96-1	19.44	19.75	19.96	19.72	1.31	ppb
Molybdenum	97-1	10.92	11.15	11.10	11.06	1.09	ppb
Molybdenum	98-1	10.69	10.83	10.81	10.78	0.73	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	51.02	51.72	50.93	51.22	0.84	ppb
Phosphorus	31-2	5610.36	5598.30	5594.72	5601.13	0.15	ppb
Potassium	39-2	1070.53	1089.62	1072.90	1077.68	0.97	ppb
Rhodium	103-1				91		%
Rhodium	103-2				90		%
Scandium	45-1				104		%
Scandium	45-2				99		%
Selenium	82-1	1.04	1.05	1.19	1.09	7.54	ppb
Selenium	77-2	15.08	19.30	15.90	16.76	13.33	ppb
Selenium	78-2	4.72	5.12	4.68	4.84	4.95	ppb
Silicon	28-1	6036.66	5914.02	6060.24	6003.64	1.31	ppb
Silver	107-1	0.27	0.23	0.21	0.24	11.55	ppb
Silver	109-1	0.59	0.57	0.55	0.57	3.21	ppb
Sodium	23-2	954.06	962.57	953.72	956.78	0.52	ppb
Strontium	86-1	12141.67	12133.16	12433.36	12236.06	1.40	ppb
Strontium	88-1	11991.76	12007.10	12029.45	12009.44	0.16	ppb
Sulfur	34-1	11679.82	11270.76	11794.21	11581.60	2.38	ppb
Terbium	159-1				102		%
Terbium	159-2				97		%
Thallium	203-1	0.15	0.14	0.14	0.14	6.56	ppb
Thallium	205-1	0.15	0.14	0.14	0.14	5.53	ppb
Tin	118-1	2.74	2.70	2.77	2.73	1.30	ppb
Titanium	47-1	4123.85	4143.40	4140.57	4135.94	0.26	ppb
Uranium	238-1	3.26	3.32	3.28	3.29	0.92	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:28:22 DataFile Name : 025AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	1012.77	1024.40	1007.71	1014.96	0.84	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				105		%
Yttrium	89-2				102		%
Zinc	66-2	167.38	168.31	168.62	168.10	0.38	ppb
Zirconium	90-1	44.45	45.88	44.95	45.09	1.62	ppb
Zirconium	91-1	42.49	43.10	42.93	42.84	0.74	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:31:31 DataFile Name : 026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	33210.36	33389.09	32694.97	33098.14	1.09	ppb
Antimony	121-1	0.48	0.47	0.48	0.48	1.67	ppb
Arsenic	75-2	5.51	5.54	4.87	5.31	7.13	ppb
Barium	135-1	257.68	259.82	258.47	258.66	0.42	ppb
Barium	137-1	265.49	258.47	263.41	262.45	1.37	ppb
Beryllium	9-1	3.77	3.70	3.66	3.71	1.43	ppb
Bismuth	209-1				94		%
Bismuth	209-2				89		%
Bromine	81-1						cps
Cadmium	108-1	5.70	5.66	5.78	5.71	1.12	ppb
Cadmium	106-1	7.96	8.65	8.38	8.33	4.20	ppb
Cadmium	111-1	1.11	1.12	1.12	1.12	0.53	ppb
Calcium	43-1	433159.31	427408.85	421956.08	427508.08	1.31	ppb
Calcium	44-1	432159.95	424773.20	423867.39	426933.51	1.07	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2728.54	2713.84	2702.11	2714.83	0.49	ppb
Cobalt	59-2	9.33	9.23	9.27	9.28	0.52	ppb
Copper	63-2	53.51	53.20	53.07	53.26	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				102		%
Holmium	165-2				98		%
Indium	115-1				97		%
Indium	115-2				94		%
Iron	54-2	301137.35	302375.46	302660.16	302057.66	0.27	ppb
Iron	56-2	297300.65	301461.19	293371.67	297377.84	1.36	ppb
Iron	57-2	302701.08	300085.15	298614.02	300466.75	0.69	ppb
Krypton	83-1						cps
Lead	206-1	74.25	75.39	72.88	74.17	1.69	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:31:31 DataFile Name : 026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	72.41	72.03	71.11	71.85	0.93	ppb
Lead	208-1	75.36	74.91	73.35	74.54	1.42	ppb
Lithium	6-1				99		%
Magnesium	24-2	83853.25	84144.65	83578.02	83858.64	0.34	ppb
Manganese	55-2	40913.65	40964.63	40079.39	40652.56	1.22	ppb
Molybdenum	94-1	83.98	84.11	85.61	84.56	1.07	ppb
Molybdenum	95-1	23.28	23.26	23.51	23.35	0.61	ppb
Molybdenum	96-1	29.89	29.97	30.03	29.96	0.23	ppb
Molybdenum	97-1	22.88	23.16	22.96	23.00	0.63	ppb
Molybdenum	98-1	22.71	22.61	22.80	22.71	0.41	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	370.30	373.51	371.89	371.90	0.43	ppb
Phosphorus	31-2	3556.02	3574.79	3700.98	3610.60	2.18	ppb
Potassium	39-2	1546.55	1538.87	1547.85	1544.42	0.31	ppb
Rhodium	103-1				93		%
Rhodium	103-2				92		%
Scandium	45-1				106		%
Scandium	45-2				101		%
Selenium	82-1	2.55	2.44	2.19	2.40	7.59	ppb
Selenium	77-2	28.54	24.32	26.39	26.42	7.98	ppb
Selenium	78-2	6.92	6.88	8.32	7.37	11.10	ppb
Silicon	28-1	6039.36	6060.85	5923.09	6007.77	1.23	ppb
Silver	107-1	0.42	0.44	0.44	0.43	2.70	ppb
Silver	109-1	0.57	0.58	0.59	0.58	1.86	ppb
Sodium	23-2	982.56	981.47	976.24	980.09	0.34	ppb
Strontium	86-1	8031.15	8152.03	8022.44	8068.54	0.90	ppb
Strontium	88-1	7815.91	7878.74	7909.61	7868.09	0.61	ppb
Sulfur	34-1	18878.34	18999.99	18708.67	18862.33	0.78	ppb
Terbium	159-1				103		%
Terbium	159-2				96		%
Thallium	203-1	0.11	0.13	0.14	0.13	10.07	ppb
Thallium	205-1	0.12	0.13	0.13	0.12	4.74	ppb
Tin	118-1	2.53	2.57	2.66	2.59	2.61	ppb
Titanium	47-1	3102.58	3048.45	3070.46	3073.83	0.89	ppb
Uranium	238-1	3.91	3.90	3.78	3.86	1.87	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:31:31 DataFile Name : 026AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	436.26	437.81	441.31	438.46	0.59	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				105		%
Zinc	66-2	193.02	193.25	192.24	192.84	0.27	ppb
Zirconium	90-1	38.19	37.89	38.57	38.22	0.89	ppb
Zirconium	91-1	36.10	35.71	35.73	35.85	0.61	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:34:36 DataFile Name : 027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	17100.95	16944.67	16918.46	16988.03	0.58	ppb
Antimony	121-1	0.40	0.41	0.40	0.40	1.35	ppb
Arsenic	75-2	7.53	7.80	7.96	7.77	2.81	ppb
Barium	135-1	140.11	141.13	138.40	139.88	0.99	ppb
Barium	137-1	144.52	143.22	140.70	142.81	1.36	ppb
Beryllium	9-1	1.56	1.58	1.58	1.57	0.62	ppb
Bismuth	209-1				98		%
Bismuth	209-2				91		%
Bromine	81-1						cps
Cadmium	108-1	2.09	2.38	2.62	2.37	11.24	ppb
Cadmium	106-1	2.23	2.71	2.97	2.63	14.33	ppb
Cadmium	111-1	0.46	0.53	0.49	0.49	7.01	ppb
Calcium	43-1	204942.66	205985.87	210703.57	207210.70	1.48	ppb
Calcium	44-1	207628.67	207222.49	210968.92	208606.69	0.99	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	573.75	567.47	577.37	572.86	0.87	ppb
Cobalt	59-2	9.04	9.02	9.13	9.07	0.64	ppb
Copper	63-2	33.55	33.41	33.84	33.60	0.66	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				98		%
Indium	115-1				100		%
Indium	115-2				93		%
Iron	54-2	91312.59	90149.47	91799.39	91087.15	0.93	ppb
Iron	56-2	91277.47	90832.83	91481.81	91197.37	0.36	ppb
Iron	57-2	91054.53	91041.78	91814.81	91303.71	0.48	ppb
Krypton	83-1						cps
Lead	206-1	28.17	28.68	29.01	28.62	1.48	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:34:36 DataFile Name : 027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	26.79	27.81	27.48	27.36	1.89	ppb
Lead	208-1	27.41	28.15	28.07	27.88	1.46	ppb
Lithium	6-1				102		%
Magnesium	24-2	37714.27	38076.97	37296.87	37696.04	1.04	ppb
Manganese	55-2	14096.12	14031.49	14194.23	14107.28	0.58	ppb
Molybdenum	94-1	33.71	32.91	33.96	33.53	1.64	ppb
Molybdenum	95-1	6.46	6.40	6.39	6.42	0.64	ppb
Molybdenum	96-1	9.29	9.15	9.22	9.22	0.72	ppb
Molybdenum	97-1	6.37	6.35	6.44	6.39	0.71	ppb
Molybdenum	98-1	6.28	6.19	6.31	6.26	1.03	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	65.92	65.02	66.13	65.69	0.90	ppb
Phosphorus	31-2	1730.30	1641.05	1682.25	1684.53	2.65	ppb
Potassium	39-2	1246.17	1233.90	1235.90	1238.66	0.53	ppb
Rhodium	103-1				95		%
Rhodium	103-2				94		%
Scandium	45-1				105		%
Scandium	45-2				98		%
Selenium	82-1	0.82	0.80	0.87	0.83	4.83	ppb
Selenium	77-2	22.55	16.93	20.27	19.92	14.20	ppb
Selenium	78-2	6.65	5.26	5.83	5.92	11.78	ppb
Silicon	28-1	2035.69	2049.56	2093.30	2059.51	1.46	ppb
Silver	107-1	0.14	0.16	0.15	0.15	6.23	ppb
Silver	109-1	0.19	0.20	0.20	0.20	3.81	ppb
Sodium	23-2	639.10	626.76	633.70	633.19	0.98	ppb
Strontium	86-1	6572.80	6516.85	6429.35	6506.33	1.11	ppb
Strontium	88-1	6463.19	6379.12	6372.43	6404.92	0.79	ppb
Sulfur	34-1	4385.89	4252.87	5022.30	4553.69	9.03	ppb
Terbium	159-1				102		%
Terbium	159-2				96		%
Thallium	203-1	0.25	0.24	0.28	0.26	8.02	ppb
Thallium	205-1	0.24	0.26	0.27	0.26	4.99	ppb
Tin	118-1	1.21	1.25	1.24	1.23	1.73	ppb
Titanium	47-1	1022.17	1023.68	1046.37	1030.74	1.32	ppb
Uranium	238-1	1.88	1.95	1.95	1.92	2.06	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:34:36 DataFile Name : 027AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	245.94	245.22	249.62	246.92	0.96	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				101		%
Zinc	66-2	99.31	97.57	97.62	98.17	1.01	ppb
Zirconium	90-1	15.71	15.52	15.64	15.63	0.62	ppb
Zirconium	91-1	15.41	15.41	15.66	15.49	0.92	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-04 Instrumnet Name : P8
Client Sample ID : ME28M3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:38:03 DataFile Name : 028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6098.35	6084.95	6049.63	6077.64	0.41	ppb
Antimony	121-1	0.70	0.64	0.61	0.65	6.97	ppb
Arsenic	75-2	11.81	12.36	12.25	12.14	2.40	ppb
Barium	135-1	240.37	226.99	224.07	230.48	3.77	ppb
Barium	137-1	258.76	239.29	234.81	244.29	5.21	ppb
Beryllium	9-1	0.42	0.38	0.38	0.40	5.47	ppb
Bismuth	209-1				93		%
Bismuth	209-2				94		%
Bromine	81-1						cps
Cadmium	108-1	2.05	1.81	1.70	1.85	9.55	ppb
Cadmium	106-1	1.35	1.16	2.44	1.65	42.14	ppb
Cadmium	111-1	0.53	0.51	0.61	0.55	9.13	ppb
Calcium	43-1	288629.07	262875.57	260832.24	270778.96	5.72	ppb
Calcium	44-1	294047.10	269281.49	263532.74	275620.44	5.88	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13.45	13.55	13.55	13.52	0.41	ppb
Cobalt	59-2	9.42	9.34	9.38	9.38	0.39	ppb
Copper	63-2	20.50	20.63	20.56	20.57	0.32	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				99		%
Holmium	165-2				102		%
Indium	115-1				96		%
Indium	115-2				98		%
Iron	54-2	24935.26	24921.53	25175.61	25010.80	0.57	ppb
Iron	56-2	24764.10	25260.06	24461.23	24828.46	1.62	ppb
Iron	57-2	25483.26	25197.19	24996.99	25225.81	0.97	ppb
Krypton	83-1						cps
Lead	206-1	12.59	11.45	11.35	11.80	5.85	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-04 Instrumnet Name : P8
Client Sample ID : ME28M3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:38:03 DataFile Name : 028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	11.23	10.19	10.23	10.55	5.58	ppb
Lead	208-1	11.66	10.59	10.53	10.92	5.84	ppb
Lithium	6-1				100		%
Magnesium	24-2	105665.32	104827.29	104653.59	105048.73	0.51	ppb
Manganese	55-2	473.97	477.74	477.49	476.40	0.44	ppb
Molybdenum	94-1	25.27	23.19	22.49	23.65	6.11	ppb
Molybdenum	95-1	7.22	6.73	6.60	6.85	4.74	ppb
Molybdenum	96-1	9.13	8.27	8.25	8.55	5.83	ppb
Molybdenum	97-1	7.19	6.59	6.68	6.82	4.76	ppb
Molybdenum	98-1	7.12	6.51	6.50	6.71	5.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	28.39	28.53	28.71	28.54	0.57	ppb
Phosphorus	31-2	437.31	430.64	467.82	445.26	4.45	ppb
Potassium	39-2	1218.28	1237.28	1233.64	1229.74	0.82	ppb
Rhodium	103-1				93		%
Rhodium	103-2				98		%
Scandium	45-1				103		%
Scandium	45-2				104		%
Selenium	82-1	0.31	0.28	0.40	0.33	19.24	ppb
Selenium	77-2	16.61	20.75	14.49	17.28	18.40	ppb
Selenium	78-2	4.34	3.37	5.74	4.48	26.67	ppb
Silicon	28-1	402.56	337.83	317.81	352.73	12.56	ppb
Silver	107-1	0.12	0.13	0.15	0.13	10.48	ppb
Silver	109-1	0.11	0.12	0.14	0.12	10.56	ppb
Sodium	23-2	449.06	446.59	448.74	448.13	0.30	ppb
Strontium	86-1	64993.52	60983.63	58741.51	61572.89	5.14	ppb
Strontium	88-1	64017.61	60369.62	58523.87	60970.37	4.59	ppb
Sulfur	34-1	15681.82	14011.11	13225.25	14306.06	8.77	ppb
Terbium	159-1				99		%
Terbium	159-2				101		%
Thallium	203-1	0.31	0.27	0.28	0.29	7.55	ppb
Thallium	205-1	0.31	0.28	0.29	0.30	4.72	ppb
Tin	118-1	0.67	0.53	0.53	0.58	14.81	ppb
Titanium	47-1	157.54	148.18	144.49	150.07	4.48	ppb
Uranium	238-1	3.68	3.34	3.36	3.46	5.51	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-04 Instrumnet Name : P8
Client Sample ID : ME28M3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:38:03 DataFile Name : 028AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	20.74	21.09	21.11	20.98	1.00	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				102		%
Yttrium	89-2				105		%
Zinc	66-2	148.43	151.37	148.43	149.41	1.14	ppb
Zirconium	90-1	10.38	9.57	9.42	9.79	5.28	ppb
Zirconium	91-1	10.32	9.52	9.33	9.73	5.41	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-05 Instrumnet Name : P8
Client Sample ID : ME28M4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:41:14 DataFile Name : 029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	990.89	1014.33	1001.04	1002.09	1.17	ppb
Antimony	121-1	0.47	0.48	0.46	0.47	1.97	ppb
Arsenic	75-2	6.73	6.59	6.09	6.47	5.24	ppb
Barium	135-1	85.20	86.97	84.61	85.59	1.43	ppb
Barium	137-1	86.14	87.52	85.23	86.30	1.33	ppb
Beryllium	9-1	0.16	0.16	0.16	0.16	1.39	ppb
Bismuth	209-1				96		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Cadmium	108-1	0.49	0.46	0.56	0.50	10.54	ppb
Cadmium	106-1	-0.08	0.40	-0.43	-0.04		ppb
Cadmium	111-1	0.09	0.14	0.05	0.09	45.35	ppb
Calcium	43-1	331651.60	336177.89	342165.52	336665.00	1.57	ppb
Calcium	44-1	332473.08	333664.14	347735.64	337957.62	2.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8.69	8.68	8.82	8.73	0.88	ppb
Cobalt	59-2	4.34	4.34	4.29	4.32	0.68	ppb
Copper	63-2	12.84	13.08	12.92	12.95	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				102		%
Holmium	165-2				102		%
Indium	115-1				101		%
Indium	115-2				100		%
Iron	54-2	9792.95	9720.58	9894.51	9802.68	0.89	ppb
Iron	56-2	9748.97	9726.47	9652.76	9709.40	0.52	ppb
Iron	57-2	9340.76	9441.56	9358.36	9380.23	0.57	ppb
Krypton	83-1						cps
Lead	206-1	23.24	23.29	23.57	23.37	0.77	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-05 Instrumnet Name : P8
Client Sample ID : ME28M4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:41:14 DataFile Name : 029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	21.57	21.80	21.70	21.69	0.53	ppb
Lead	208-1	22.08	22.22	22.27	22.19	0.44	ppb
Lithium	6-1				104		%
Magnesium	24-2	205949.56	202733.47	202875.19	203852.74	0.89	ppb
Manganese	55-2	187.82	186.05	186.03	186.63	0.55	ppb
Molybdenum	94-1	7.62	7.78	7.76	7.72	1.11	ppb
Molybdenum	95-1	3.57	3.61	3.70	3.63	1.85	ppb
Molybdenum	96-1	3.96	4.00	4.02	3.99	0.69	ppb
Molybdenum	97-1	3.49	3.66	3.65	3.60	2.70	ppb
Molybdenum	98-1	3.54	3.56	3.62	3.57	1.15	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	16.35	16.46	16.32	16.38	0.43	ppb
Phosphorus	31-2	194.03	175.09	212.99	194.04	9.77	ppb
Potassium	39-2	503.76	507.79	497.06	502.87	1.08	ppb
Rhodium	103-1				98		%
Rhodium	103-2				97		%
Scandium	45-1				108		%
Scandium	45-2				106		%
Selenium	82-1	-0.24	-0.13	-0.12	-0.16		ppb
Selenium	77-2	8.67	7.99	5.31	7.32	24.27	ppb
Selenium	78-2	1.45	2.07	1.96	1.83	18.12	ppb
Silicon	28-1	148.09	151.65	152.02	150.59	1.44	ppb
Silver	107-1	0.14	0.18	0.21	0.18	19.15	ppb
Silver	109-1	0.13	0.17	0.20	0.17	19.38	ppb
Sodium	23-2	507.50	506.59	496.77	503.62	1.18	ppb
Strontium	86-1	15603.30	15659.74	15553.69	15605.58	0.34	ppb
Strontium	88-1	15619.31	15665.18	15610.42	15631.64	0.19	ppb
Sulfur	34-1	2477.87	2770.44	2961.57	2736.63	8.90	ppb
Terbium	159-1				103		%
Terbium	159-2				100		%
Thallium	203-1	0.25	0.25	0.26	0.25	0.63	ppb
Thallium	205-1	0.25	0.25	0.26	0.25	2.48	ppb
Tin	118-1	0.60	0.62	0.59	0.60	2.68	ppb
Titanium	47-1	22.40	22.56	23.00	22.65	1.38	ppb
Uranium	238-1	3.18	3.21	3.19	3.19	0.53	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-05 Instrumnet Name : P8
Client Sample ID : ME28M4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:41:14 DataFile Name : 029AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	8.73	8.74	8.73	8.73	0.07	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				106		%
Zinc	66-2	14.73	15.12	15.34	15.06	2.06	ppb
Zirconium	90-1	2.61	2.64	2.62	2.62	0.59	ppb
Zirconium	91-1	2.62	2.61	2.60	2.61	0.40	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P8
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:44:27 DataFile Name : 030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	50131.47	51041.97	51145.56	50773.00	1.10	ppb
Antimony	121-1	496.91	499.67	498.28	498.28	0.28	ppb
Arsenic	75-2	504.57	497.49	501.41	501.16	0.71	ppb
Barium	135-1	2482.97	2509.00	2545.05	2512.34	1.24	ppb
Barium	137-1	2445.39	2505.62	2527.96	2492.99	1.71	ppb
Beryllium	9-1	516.97	533.31	514.06	521.45	1.99	ppb
Bismuth	209-1				90		%
Bismuth	209-2				86		%
Bromine	81-1						cps
Cadmium	108-1	483.02	496.54	492.28	490.61	1.41	ppb
Cadmium	106-1	489.57	493.78	490.12	491.16	0.47	ppb
Cadmium	111-1	477.92	500.45	490.99	489.79	2.31	ppb
Calcium	43-1	233361.95	237181.30	230535.62	233692.96	1.43	ppb
Calcium	44-1	233616.48	235627.16	235481.96	234908.53	0.48	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	501.78	511.29	503.90	505.66	0.99	ppb
Cobalt	59-2	494.33	489.63	497.75	493.90	0.83	ppb
Copper	63-2	4767.88	4753.22	4762.04	4761.05	0.16	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				98		%
Indium	115-1				94		%
Indium	115-2				91		%
Iron	54-2	124862.22	126487.65	126167.51	125839.13	0.68	ppb
Iron	56-2	126774.43	125025.82	127162.73	126320.99	0.90	ppb
Iron	57-2	125373.58	126750.99	127768.87	126631.15	0.95	ppb
Krypton	83-1						cps
Lead	206-1	2581.12	2540.12	2561.83	2561.02	0.80	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P8
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:44:27 DataFile Name : 030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2571.93	2502.93	2566.94	2547.27	1.51	ppb
Lead	208-1	2554.58	2517.55	2573.90	2548.68	1.12	ppb
Lithium	6-1				94		%
Magnesium	24-2	253905.07	257105.31	258251.87	256420.75	0.88	ppb
Manganese	55-2	4945.72	4980.27	5036.28	4987.42	0.92	ppb
Molybdenum	94-1	4961.79	5105.00	5154.34	5073.71	1.97	ppb
Molybdenum	95-1	5034.40	5078.91	5102.28	5071.86	0.68	ppb
Molybdenum	96-1	5056.84	5101.69	5011.24	5056.59	0.89	ppb
Molybdenum	97-1	5014.10	5095.86	5110.89	5073.62	1.03	ppb
Molybdenum	98-1	4951.64	5113.17	5096.12	5053.65	1.76	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	449.56	452.67	454.94	452.39	0.60	ppb
Phosphorus	31-2	10080.22	10154.70	10229.19	10154.71	0.73	ppb
Potassium	39-2	126461.32	125109.79	127971.31	126514.14	1.13	ppb
Rhodium	103-1				89		%
Rhodium	103-2				87		%
Scandium	45-1				101		%
Scandium	45-2				96		%
Selenium	82-1	480.04	495.84	484.34	486.74	1.68	ppb
Selenium	77-2	467.72	537.69	501.55	502.32	6.97	ppb
Selenium	78-2	481.09	468.54	486.33	478.66	1.91	ppb
Silicon	28-1	513.76	516.19	515.16	515.04	0.24	ppb
Silver	107-1	479.80	488.81	484.96	484.52	0.93	ppb
Silver	109-1	470.72	487.27	489.00	482.33	2.09	ppb
Sodium	23-2	256384.56	256407.76	259243.95	257345.42	0.64	ppb
Strontium	86-1	12553.39	12940.00	12787.48	12760.29	1.53	ppb
Strontium	88-1	12409.72	12695.39	12697.17	12600.76	1.31	ppb
Sulfur	34-1	10020.88	9992.64	9728.12	9913.88	1.63	ppb
Terbium	159-1				100		%
Terbium	159-2				97		%
Thallium	203-1	515.20	505.42	516.32	512.31	1.17	ppb
Thallium	205-1	511.13	511.44	526.30	516.29	1.68	ppb
Tin	118-1	499.25	514.44	498.60	504.10	1.78	ppb
Titanium	47-1	5005.91	4998.61	5066.40	5023.64	0.74	ppb
Uranium	238-1	512.50	511.84	528.55	517.63	1.83	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P8
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:44:27 DataFile Name : 030CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	509.98	507.62	514.40	510.66	0.67	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				100		%
Yttrium	89-2				98		%
Zinc	66-2	4707.11	4750.46	4703.77	4720.45	0.55	ppb
Zirconium	90-1	497.84	509.37	516.43	507.88	1.85	ppb
Zirconium	91-1	499.83	508.19	519.19	509.07	1.91	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P8
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:47:08 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-5.38	-5.43	-5.40	-5.40		ppb
Antimony	121-1	0.10	0.08	0.07	0.08	17.59	ppb
Arsenic	75-2	0.00	0.02	0.00	0.01	128.12	ppb
Barium	135-1	0.05	0.05	0.05	0.05	11.02	ppb
Barium	137-1	0.05	0.05	0.05	0.05	2.77	ppb
Beryllium	9-1	0.08	0.07	0.06	0.07	11.52	ppb
Bismuth	209-1				104		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Cadmium	108-1	0.03	-0.01	0.02	0.02	140.13	ppb
Cadmium	106-1	-2.22	-3.06	-3.94	-3.07		ppb
Cadmium	111-1	-0.15	-0.21	-0.29	-0.22		ppb
Calcium	43-1	7.96	8.36	5.12	7.14	24.74	ppb
Calcium	44-1	7.54	6.81	5.38	6.58	16.67	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	0.01	0.00	0.00		ppb
Cobalt	59-2	0.01	0.00	0.00	0.00	125.52	ppb
Copper	63-2	-0.09	-0.15	-0.13	-0.13		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				103		%
Indium	115-1				104		%
Indium	115-2				102		%
Iron	54-2	2.87	2.06	1.98	2.30	21.43	ppb
Iron	56-2	2.17	2.13	1.97	2.09	5.15	ppb
Iron	57-2	2.18	2.19	2.58	2.32	9.91	ppb
Krypton	83-1						cps
Lead	206-1	0.12	0.14	0.12	0.13	7.25	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P8
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:47:08 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.14	0.13	0.12	0.13	5.20	ppb
Lead	208-1	0.13	0.13	0.12	0.13	4.97	ppb
Lithium	6-1				102		%
Magnesium	24-2	4.73	3.71	2.51	3.65	30.41	ppb
Manganese	55-2	0.07	0.03	0.06	0.05	44.77	ppb
Molybdenum	94-1	0.38	0.32	0.24	0.31	22.40	ppb
Molybdenum	95-1	0.45	0.34	0.27	0.35	25.56	ppb
Molybdenum	96-1	0.42	0.31	0.27	0.33	22.66	ppb
Molybdenum	97-1	0.45	0.33	0.26	0.35	27.46	ppb
Molybdenum	98-1	0.43	0.33	0.26	0.34	25.96	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.01	-0.05	-0.02	-0.03		ppb
Phosphorus	31-2	-42.66	-20.33	-27.36	-30.11		ppb
Potassium	39-2	31.30	32.93	30.94	31.72	3.33	ppb
Rhodium	103-1				103		%
Rhodium	103-2				104		%
Scandium	45-1				103		%
Scandium	45-2				100		%
Selenium	82-1	0.14	0.04	0.06	0.08	67.09	ppb
Selenium	77-2	-0.17	0.29	0.31	0.14	191.07	ppb
Selenium	78-2	0.08	0.50	0.24	0.27	76.95	ppb
Silicon	28-1	-0.01	-0.28	-0.09	-0.13		ppb
Silver	107-1	0.08	0.07	0.06	0.07	15.35	ppb
Silver	109-1	0.08	0.08	0.06	0.07	15.79	ppb
Sodium	23-2	88.43	84.08	84.04	85.52	2.95	ppb
Strontium	86-1	-0.04	0.47	-0.16	0.09	367.30	ppb
Strontium	88-1	0.40	0.41	0.40	0.40	1.20	ppb
Sulfur	34-1	-729.10	-694.31	-673.15	-698.85		ppb
Terbium	159-1				105		%
Terbium	159-2				102		%
Thallium	203-1	0.07	0.07	0.06	0.07	8.63	ppb
Thallium	205-1	0.07	0.07	0.06	0.07	8.92	ppb
Tin	118-1	0.00	-0.02	-0.02	-0.01		ppb
Titanium	47-1	0.21	0.18	0.17	0.19	12.33	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	11.40	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P8
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:47:08 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.00	0.01	0.00	70.69	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				104		%
Yttrium	89-2				103		%
Zinc	66-2	0.03	0.08	0.08	0.06	43.52	ppb
Zirconium	90-1	0.02	0.02	0.01	0.02	20.71	ppb
Zirconium	91-1	0.02	0.02	0.01	0.02	21.50	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-06 Instrumnet Name : P8
Client Sample ID : ME28M5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:50:29 DataFile Name : 032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	865.45	875.83	887.24	876.17	1.24	ppb
Antimony	121-1	0.71	0.74	0.72	0.72	2.23	ppb
Arsenic	75-2	1.45	1.54	1.58	1.53	4.32	ppb
Barium	135-1	142.69	145.58	148.23	145.50	1.91	ppb
Barium	137-1	154.97	151.24	155.63	153.95	1.54	ppb
Beryllium	9-1	0.11	0.10	0.10	0.10	4.03	ppb
Bismuth	209-1				101		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.17	0.14	0.24	0.18	27.32	ppb
Cadmium	106-1	-2.74	-2.72	-2.34	-2.60		ppb
Cadmium	111-1	-0.11	-0.10	-0.06	-0.09		ppb
Calcium	43-1	51517.99	51602.19	51606.37	51575.52	0.10	ppb
Calcium	44-1	51082.96	50938.35	51205.97	51075.76	0.26	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	5.61	5.54	5.68	5.61	1.32	ppb
Cobalt	59-2	1.21	1.23	1.21	1.22	0.89	ppb
Copper	63-2	12.62	12.69	12.89	12.73	1.08	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				105		%
Indium	115-1				105		%
Indium	115-2				102		%
Iron	54-2	3932.02	3913.16	4004.41	3949.86	1.22	ppb
Iron	56-2	4076.31	4109.54	4217.72	4134.52	1.79	ppb
Iron	57-2	3915.45	3965.47	4010.17	3963.70	1.20	ppb
Krypton	83-1						cps
Lead	206-1	11.80	11.93	11.75	11.83	0.79	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-06 Instrumnet Name : P8
Client Sample ID : ME28M5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:50:29 DataFile Name : 032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	11.19	11.32	11.16	11.23	0.75	ppb
Lead	208-1	11.31	11.44	11.37	11.38	0.57	ppb
Lithium	6-1				107		%
Magnesium	24-2	29117.30	29067.61	29573.17	29252.69	0.95	ppb
Manganese	55-2	64.69	65.16	66.30	65.38	1.26	ppb
Molybdenum	94-1	1.55	1.55	1.53	1.54	0.74	ppb
Molybdenum	95-1	0.76	0.73	0.74	0.74	2.37	ppb
Molybdenum	96-1	0.81	0.81	0.80	0.80	1.02	ppb
Molybdenum	97-1	0.73	0.76	0.73	0.74	2.85	ppb
Molybdenum	98-1	0.71	0.69	0.69	0.69	1.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.45	8.64	8.43	8.51	1.36	ppb
Phosphorus	31-2	45.62	30.16	34.44	36.74	21.73	ppb
Potassium	39-2	277.32	283.40	288.13	282.95	1.91	ppb
Rhodium	103-1				103		%
Rhodium	103-2				103		%
Scandium	45-1				109		%
Scandium	45-2				104		%
Selenium	82-1	-0.07	-0.18	-0.22	-0.16		ppb
Selenium	77-2	2.09	2.63	6.92	3.88	68.17	ppb
Selenium	78-2	0.74	0.49	0.50	0.58	23.60	ppb
Silicon	28-1	112.25	114.89	138.97	122.04	12.06	ppb
Silver	107-1	0.17	0.12	0.10	0.13	26.88	ppb
Silver	109-1	0.16	0.11	0.10	0.13	23.90	ppb
Sodium	23-2	194.67	195.11	199.26	196.35	1.29	ppb
Strontium	86-1	79863.82	81596.16	80595.37	80685.12	1.08	ppb
Strontium	88-1	79444.36	81107.18	80389.93	80313.82	1.04	ppb
Sulfur	34-1	1543.40	1614.44	1669.65	1609.16	3.93	ppb
Terbium	159-1				105		%
Terbium	159-2				103		%
Thallium	203-1	0.15	0.14	0.14	0.14	5.27	ppb
Thallium	205-1	0.15	0.14	0.14	0.14	2.98	ppb
Tin	118-1	1.35	1.31	1.34	1.33	1.74	ppb
Titanium	47-1	20.55	20.38	21.47	20.80	2.82	ppb
Uranium	238-1	0.27	0.29	0.28	0.28	2.38	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-06 Instrumnet Name : P8
Client Sample ID : ME28M5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:50:29 DataFile Name : 032AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.42	4.48	4.54	4.48	1.42	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				105		%
Zinc	66-2	22.60	22.40	23.02	22.68	1.41	ppb
Zirconium	90-1	0.49	0.50	0.50	0.50	1.04	ppb
Zirconium	91-1	0.49	0.51	0.48	0.49	2.46	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-07 Instrumnet Name : P8
Client Sample ID : ME28M6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:53:39 DataFile Name : 033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	1434.51	1410.90	1620.34	1488.58	7.71	ppb
Antimony	121-1	0.21	0.22	0.22	0.22	2.24	ppb
Arsenic	75-2	2.29	2.68	2.86	2.61	11.30	ppb
Barium	135-1	278.29	269.53	272.14	273.32	1.65	ppb
Barium	137-1	274.59	266.70	275.51	272.27	1.78	ppb
Beryllium	9-1	0.14	0.13	0.13	0.14	5.73	ppb
Bismuth	209-1				100		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	0.24	0.24	0.35	0.28	23.08	ppb
Cadmium	106-1	-0.80	-1.22	-0.42	-0.81		ppb
Cadmium	111-1	0.01	0.00	0.02	0.01	101.19	ppb
Calcium	43-1	160810.52	159367.18	165008.15	161728.61	1.81	ppb
Calcium	44-1	160121.03	158822.79	161549.84	160164.55	0.85	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	16.24	16.15	18.58	16.99	8.12	ppb
Cobalt	59-2	1.98	1.98	2.24	2.07	7.25	ppb
Copper	63-2	7.62	7.60	8.84	8.02	8.86	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				97		%
Indium	115-1				103		%
Indium	115-2				96		%
Iron	54-2	4666.95	4633.12	5257.08	4852.39	7.23	ppb
Iron	56-2	4817.20	4812.41	5337.82	4989.14	6.05	ppb
Iron	57-2	4576.12	4676.63	5152.69	4801.82	6.41	ppb
Krypton	83-1						cps
Lead	206-1	4.90	4.83	4.83	4.85	0.77	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-07 Instrumnet Name : P8
Client Sample ID : ME28M6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:53:39 DataFile Name : 033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	4.32	4.25	4.28	4.28	0.77	ppb
Lead	208-1	4.48	4.42	4.46	4.46	0.75	ppb
Lithium	6-1				107		%
Magnesium	24-2	95959.27	95805.05	109428.49	100397.60	7.79	ppb
Manganese	55-2	101.57	102.08	114.90	106.18	7.11	ppb
Molybdenum	94-1	3.95	3.85	3.84	3.88	1.52	ppb
Molybdenum	95-1	1.25	1.20	1.23	1.23	2.14	ppb
Molybdenum	96-1	1.48	1.43	1.48	1.47	1.82	ppb
Molybdenum	97-1	1.22	1.17	1.24	1.21	2.73	ppb
Molybdenum	98-1	1.14	1.16	1.17	1.16	1.20	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	7.76	7.79	8.92	8.16	8.08	ppb
Phosphorus	31-2	110.14	78.37	122.52	103.68	21.96	ppb
Potassium	39-2	388.17	388.88	448.82	408.62	8.52	ppb
Rhodium	103-1				100		%
Rhodium	103-2				96		%
Scandium	45-1				110		%
Scandium	45-2				101		%
Selenium	82-1	-0.03	-0.10	-0.03	-0.05		ppb
Selenium	77-2	8.04	9.25	10.06	9.12	11.14	ppb
Selenium	78-2	1.15	2.86	2.83	2.28	43.04	ppb
Silicon	28-1	154.18	147.34	154.95	152.15	2.75	ppb
Silver	107-1	0.07	0.09	0.10	0.09	21.71	ppb
Silver	109-1	0.07	0.08	0.10	0.08	21.73	ppb
Sodium	23-2	275.35	276.74	317.88	289.99	8.33	ppb
Strontium	86-1	170691.55	164048.35	165770.36	166836.75	2.07	ppb
Strontium	88-1	167196.11	164477.03	164410.47	165361.20	0.96	ppb
Sulfur	34-1	3440.35	3374.24	3850.87	3555.15	7.26	ppb
Terbium	159-1				105		%
Terbium	159-2				97		%
Thallium	203-1	0.15	0.15	0.15	0.15	1.80	ppb
Thallium	205-1	0.15	0.15	0.15	0.15	0.98	ppb
Tin	118-1	0.41	0.41	0.43	0.42	2.39	ppb
Titanium	47-1	32.06	31.52	32.69	32.09	1.82	ppb
Uranium	238-1	0.57	0.57	0.56	0.57	0.75	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-07 Instrumnet Name : P8
Client Sample ID : ME28M6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:53:39 DataFile Name : 033AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	10.02	10.29	11.57	10.63	7.83	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				102		%
Zinc	66-2	12.30	12.56	14.80	13.22	10.42	ppb
Zirconium	90-1	1.60	1.59	1.60	1.60	0.31	ppb
Zirconium	91-1	1.59	1.57	1.56	1.58	0.92	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-08 Instrumnet Name : P8
Client Sample ID : ME28M7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:56:52 DataFile Name : 034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6929.88	6940.19	6911.67	6927.25	0.21	ppb
Antimony	121-1	0.61	0.61	0.58	0.60	3.07	ppb
Arsenic	75-2	13.71	13.52	13.23	13.49	1.79	ppb
Barium	135-1	286.02	283.23	283.39	284.21	0.55	ppb
Barium	137-1	286.49	286.64	284.69	285.94	0.38	ppb
Beryllium	9-1	0.45	0.46	0.46	0.46	1.16	ppb
Bismuth	209-1				99		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	1.86	1.90	1.67	1.81	6.61	ppb
Cadmium	106-1	1.97	2.19	2.08	2.08	5.28	ppb
Cadmium	111-1	0.69	0.73	0.73	0.72	3.19	ppb
Calcium	43-1	240541.64	239091.25	246091.13	241908.00	1.53	ppb
Calcium	44-1	241892.67	237696.42	245353.52	241647.54	1.59	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	16.43	16.35	16.43	16.40	0.28	ppb
Cobalt	59-2	11.12	11.27	11.27	11.22	0.79	ppb
Copper	63-2	52.19	52.56	52.31	52.35	0.36	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				102		%
Indium	115-1				103		%
Indium	115-2				99		%
Iron	54-2	24675.08	25340.04	25051.19	25022.10	1.33	ppb
Iron	56-2	24950.40	25432.90	25443.61	25275.64	1.11	ppb
Iron	57-2	25406.65	25445.16	25415.07	25422.29	0.08	ppb
Krypton	83-1						cps
Lead	206-1	13.38	13.41	13.58	13.46	0.80	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-08 Instrumnet Name : P8
Client Sample ID : ME28M7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:56:52 DataFile Name : 034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	11.98	12.08	12.22	12.10	1.01	ppb
Lead	208-1	12.42	12.44	12.62	12.49	0.86	ppb
Lithium	6-1				107		%
Magnesium	24-2	85888.44	86793.28	86280.94	86320.89	0.53	ppb
Manganese	55-2	642.76	651.00	659.65	651.14	1.30	ppb
Molybdenum	94-1	22.35	22.12	22.10	22.19	0.61	ppb
Molybdenum	95-1	7.72	7.66	7.61	7.66	0.68	ppb
Molybdenum	96-1	9.12	9.13	9.04	9.10	0.58	ppb
Molybdenum	97-1	7.80	7.67	7.58	7.68	1.49	ppb
Molybdenum	98-1	7.51	7.49	7.54	7.51	0.29	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	59.56	60.23	59.07	59.62	0.98	ppb
Phosphorus	31-2	546.55	490.20	587.18	541.31	9.00	ppb
Potassium	39-2	1305.59	1322.23	1324.89	1317.57	0.79	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				110		%
Scandium	45-2				106		%
Selenium	82-1	0.64	0.27	0.35	0.42	46.03	ppb
Selenium	77-2	24.20	22.90	23.51	23.53	2.76	ppb
Selenium	78-2	4.05	5.40	5.00	4.82	14.33	ppb
Silicon	28-1	355.91	354.03	358.23	356.05	0.59	ppb
Silver	107-1	0.09	0.12	0.13	0.11	16.33	ppb
Silver	109-1	0.09	0.11	0.12	0.11	11.00	ppb
Sodium	23-2	405.76	413.17	413.05	410.66	1.03	ppb
Strontium	86-1	10551.08	10669.64	10461.37	10560.70	0.99	ppb
Strontium	88-1	10493.85	10595.60	10438.95	10509.47	0.76	ppb
Sulfur	34-1	7906.78	8122.86	8186.70	8072.11	1.82	ppb
Terbium	159-1				105		%
Terbium	159-2				101		%
Thallium	203-1	0.23	0.23	0.24	0.23	3.04	ppb
Thallium	205-1	0.24	0.24	0.24	0.24	0.34	ppb
Tin	118-1	0.45	0.48	0.47	0.46	3.12	ppb
Titanium	47-1	141.67	143.15	145.05	143.29	1.18	ppb
Uranium	238-1	3.43	3.49	3.52	3.48	1.34	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-08 Instrumnet Name : P8
Client Sample ID : ME28M7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:56:52 DataFile Name : 034AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	23.89	24.24	24.26	24.13	0.86	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				107		%
Zinc	66-2	86.87	88.21	88.27	87.78	0.90	ppb
Zirconium	90-1	8.81	8.73	8.77	8.77	0.46	ppb
Zirconium	91-1	8.79	8.69	8.61	8.70	1.07	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-09 Instrumnet Name : P8
Client Sample ID : ME28M8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:59:59 DataFile Name : 035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4051.85	3426.63	4439.96	3972.81	12.87	ppb
Antimony	121-1	0.36	0.35	0.34	0.35	2.53	ppb
Arsenic	75-2	5.91	4.86	6.27	5.68	12.88	ppb
Barium	135-1	214.63	217.75	208.90	213.76	2.10	ppb
Barium	137-1	232.06	228.85	222.55	227.82	2.12	ppb
Beryllium	9-1	0.27	0.25	0.25	0.26	3.93	ppb
Bismuth	209-1				100		%
Bismuth	209-2				90		%
Bromine	81-1						cps
Cadmium	108-1	0.40	0.44	0.49	0.44	9.87	ppb
Cadmium	106-1	0.07	-0.47	-0.21	-0.20		ppb
Cadmium	111-1	0.10	0.10	0.10	0.10	1.76	ppb
Calcium	43-1	140388.64	142765.97	141156.11	141436.90	0.86	ppb
Calcium	44-1	141103.99	143389.39	142807.70	142433.69	0.83	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21.54	18.30	23.04	20.96	11.54	ppb
Cobalt	59-2	6.05	5.28	6.68	6.00	11.71	ppb
Copper	63-2	32.82	27.90	36.09	32.27	12.76	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				97		%
Indium	115-1				106		%
Indium	115-2				94		%
Iron	54-2	13421.27	11105.58	14275.45	12934.10	12.68	ppb
Iron	56-2	13147.51	11089.02	14369.94	12868.82	12.88	ppb
Iron	57-2	12549.32	10691.23	14493.12	12577.89	15.11	ppb
Krypton	83-1						cps
Lead	206-1	8.46	8.28	8.19	8.31	1.70	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-09 Instrumnet Name : P8
Client Sample ID : ME28M8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:59:59 DataFile Name : 035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	7.54	7.58	7.28	7.47	2.19	ppb
Lead	208-1	7.83	7.82	7.67	7.78	1.16	ppb
Lithium	6-1				108		%
Magnesium	24-2	83938.37	70858.14	91104.13	81966.88	12.52	ppb
Manganese	55-2	304.62	256.89	331.97	297.83	12.76	ppb
Molybdenum	94-1	6.05	5.90	6.00	5.98	1.27	ppb
Molybdenum	95-1	2.73	2.74	2.75	2.74	0.41	ppb
Molybdenum	96-1	3.08	3.03	3.01	3.04	1.09	ppb
Molybdenum	97-1	2.69	2.77	2.72	2.73	1.42	ppb
Molybdenum	98-1	2.71	2.67	2.72	2.70	1.09	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	36.50	31.39	40.84	36.24	13.05	ppb
Phosphorus	31-2	312.99	245.80	339.06	299.29	16.08	ppb
Potassium	39-2	800.57	676.20	872.05	782.94	12.66	ppb
Rhodium	103-1				103		%
Rhodium	103-2				95		%
Scandium	45-1				114		%
Scandium	45-2				100		%
Selenium	82-1	0.07	-0.03	0.19	0.08	148.91	ppb
Selenium	77-2	16.12	14.12	13.42	14.55	9.64	ppb
Selenium	78-2	3.01	2.73	2.71	2.82	6.01	ppb
Silicon	28-1	209.55	207.79	209.16	208.84	0.44	ppb
Silver	107-1	0.06	0.07	0.07	0.07	8.71	ppb
Silver	109-1	0.06	0.07	0.07	0.06	11.37	ppb
Sodium	23-2	313.21	263.05	352.84	309.70	14.53	ppb
Strontium	86-1	129991.64	130627.22	129449.62	130022.83	0.45	ppb
Strontium	88-1	128893.50	129957.01	127858.80	128903.10	0.81	ppb
Sulfur	34-1	2623.75	2555.33	2441.45	2540.17	3.63	ppb
Terbium	159-1				107		%
Terbium	159-2				95		%
Thallium	203-1	0.19	0.18	0.19	0.19	2.94	ppb
Thallium	205-1	0.19	0.19	0.19	0.19	1.04	ppb
Tin	118-1	0.58	0.56	0.54	0.56	3.22	ppb
Titanium	47-1	75.14	75.98	75.13	75.42	0.64	ppb
Uranium	238-1	1.00	0.99	0.97	0.99	1.44	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-09 Instrumnet Name : P8
Client Sample ID : ME28M8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:59:59 DataFile Name : 035AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	16.43	14.08	17.64	16.05	11.28	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				112		%
Yttrium	89-2				100		%
Zinc	66-2	32.77	28.59	36.74	32.70	12.47	ppb
Zirconium	90-1	2.09	2.06	2.09	2.08	0.92	ppb
Zirconium	91-1	2.14	2.06	2.06	2.09	2.11	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-10 Instrumnet Name : P8
Client Sample ID : ME28M9 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:03:12 DataFile Name : 036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13325.69	13544.41	13339.47	13403.19	0.91	ppb
Antimony	121-1	0.45	0.46	0.45	0.45	1.25	ppb
Arsenic	75-2	15.35	14.80	15.92	15.36	3.63	ppb
Barium	135-1	126.55	132.70	131.55	130.27	2.51	ppb
Barium	137-1	134.07	132.95	131.69	132.90	0.90	ppb
Beryllium	9-1	1.21	1.30	1.21	1.24	4.00	ppb
Bismuth	209-1				107		%
Bismuth	209-2				101		%
Bromine	81-1						cps
Cadmium	108-1	0.92	1.11	1.16	1.07	11.82	ppb
Cadmium	106-1	-0.49	-0.03	0.51	0.00		ppb
Cadmium	111-1	0.70	0.73	0.80	0.74	7.31	ppb
Calcium	43-1	7912.53	8185.34	7920.21	8006.03	1.94	ppb
Calcium	44-1	8196.01	8391.83	8262.51	8283.45	1.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	24.64	24.98	24.61	24.74	0.84	ppb
Cobalt	59-2	20.81	21.19	20.79	20.93	1.07	ppb
Copper	63-2	94.92	95.70	95.58	95.40	0.44	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				107		%
Holmium	165-2				104		%
Indium	115-1				109		%
Indium	115-2				104		%
Iron	54-2	34505.23	34993.50	34677.07	34725.27	0.71	ppb
Iron	56-2	34174.17	34821.63	34932.47	34642.76	1.18	ppb
Iron	57-2	34443.58	34891.49	34637.42	34657.50	0.65	ppb
Krypton	83-1						cps
Lead	206-1	42.39	44.08	42.35	42.94	2.31	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-10 Instrumnet Name : P8
Client Sample ID : ME28M9 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:03:12 DataFile Name : 036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	40.52	40.75	39.59	40.29	1.53	ppb
Lead	208-1	42.15	42.78	41.82	42.25	1.15	ppb
Lithium	6-1				110		%
Magnesium	24-2	5171.07	5349.98	5265.93	5262.33	1.70	ppb
Manganese	55-2	1636.67	1652.38	1624.30	1637.78	0.86	ppb
Molybdenum	94-1	8.99	9.10	9.29	9.13	1.66	ppb
Molybdenum	95-1	7.60	7.88	7.73	7.74	1.80	ppb
Molybdenum	96-1	7.75	7.80	7.78	7.78	0.35	ppb
Molybdenum	97-1	7.61	7.76	7.77	7.71	1.19	ppb
Molybdenum	98-1	7.50	7.67	7.73	7.63	1.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	114.01	116.17	113.95	114.71	1.11	ppb
Phosphorus	31-2	598.93	582.47	577.71	586.37	1.90	ppb
Potassium	39-2	1962.88	1993.11	1963.23	1973.07	0.88	ppb
Rhodium	103-1				108		%
Rhodium	103-2				107		%
Scandium	45-1				115		%
Scandium	45-2				109		%
Selenium	82-1	0.75	0.58	0.95	0.76	24.71	ppb
Selenium	77-2	33.70	35.60	34.84	34.71	2.75	ppb
Selenium	78-2	8.35	5.89	6.76	7.00	17.84	ppb
Silicon	28-1	433.23	447.70	425.58	435.51	2.58	ppb
Silver	107-1	0.11	0.12	0.12	0.12	3.62	ppb
Silver	109-1	0.14	0.15	0.14	0.15	3.28	ppb
Sodium	23-2	229.52	238.79	234.72	234.35	1.98	ppb
Strontium	86-1	2033.73	2078.19	2049.39	2053.77	1.10	ppb
Strontium	88-1	2136.02	2151.42	2141.88	2143.11	0.36	ppb
Sulfur	34-1	-70.60	39.57	-273.53	-101.52		ppb
Terbium	159-1				108		%
Terbium	159-2				103		%
Thallium	203-1	0.35	0.36	0.35	0.35	2.49	ppb
Thallium	205-1	0.34	0.36	0.35	0.35	1.63	ppb
Tin	118-1	1.11	1.19	1.18	1.16	3.67	ppb
Titanium	47-1	111.54	116.06	111.13	112.91	2.42	ppb
Uranium	238-1	2.28	2.32	2.26	2.29	1.36	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-10 Instrumnet Name : P8
Client Sample ID : ME28M9 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:03:12 DataFile Name : 036AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	35.81	36.72	36.03	36.19	1.31	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				117		%
Yttrium	89-2				111		%
Zinc	66-2	105.07	106.54	105.25	105.62	0.76	ppb
Zirconium	90-1	1.55	1.58	1.57	1.57	0.95	ppb
Zirconium	91-1	1.50	1.57	1.55	1.54	2.08	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-11 Instrumnet Name : P8
Client Sample ID : ME28N0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:06:21 DataFile Name : 037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	17337.47	17582.31	17460.79	17460.19	0.70	ppb
Antimony	121-1	0.35	0.36	0.36	0.36	1.78	ppb
Arsenic	75-2	20.39	21.07	21.24	20.90	2.15	ppb
Barium	135-1	119.50	124.97	121.49	121.98	2.27	ppb
Barium	137-1	122.99	126.12	124.19	124.43	1.27	ppb
Beryllium	9-1	1.41	1.45	1.38	1.42	2.50	ppb
Bismuth	209-1				96		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	0.82	0.89	0.79	0.83	5.99	ppb
Cadmium	106-1	-1.59	-0.98	-1.96	-1.51		ppb
Cadmium	111-1	0.40	0.44	0.33	0.39	13.82	ppb
Calcium	43-1	5135.07	5110.32	5085.49	5110.29	0.49	ppb
Calcium	44-1	5390.38	5383.55	5259.47	5344.46	1.38	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	31.38	31.04	31.48	31.30	0.75	ppb
Cobalt	59-2	23.70	23.86	24.20	23.92	1.06	ppb
Copper	63-2	47.44	46.74	46.76	46.98	0.85	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				98		%
Indium	115-1				100		%
Indium	115-2				97		%
Iron	54-2	49682.91	49980.23	49983.61	49882.25	0.35	ppb
Iron	56-2	50114.22	50014.32	49764.78	49964.44	0.36	ppb
Iron	57-2	49667.38	49592.17	49161.07	49473.54	0.55	ppb
Krypton	83-1						cps
Lead	206-1	34.23	34.61	33.86	34.23	1.09	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-11 Instrumnet Name : P8
Client Sample ID : ME28N0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:06:21 DataFile Name : 037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	31.41	31.66	31.23	31.44	0.69	ppb
Lead	208-1	32.39	32.51	31.99	32.30	0.85	ppb
Lithium	6-1				100		%
Magnesium	24-2	6007.57	6144.70	6193.36	6115.21	1.58	ppb
Manganese	55-2	962.75	959.64	957.91	960.10	0.26	ppb
Molybdenum	94-1	12.38	12.83	12.50	12.57	1.84	ppb
Molybdenum	95-1	9.76	10.02	9.89	9.89	1.31	ppb
Molybdenum	96-1	10.13	10.23	10.20	10.19	0.50	ppb
Molybdenum	97-1	9.87	10.14	9.91	9.97	1.49	ppb
Molybdenum	98-1	9.71	9.89	9.78	9.79	0.93	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	54.68	55.01	55.77	55.15	1.02	ppb
Phosphorus	31-2	316.83	349.55	346.65	337.68	5.36	ppb
Potassium	39-2	2029.52	2028.00	2011.60	2023.04	0.49	ppb
Rhodium	103-1				98		%
Rhodium	103-2				99		%
Scandium	45-1				107		%
Scandium	45-2				103		%
Selenium	82-1	0.81	0.85	0.73	0.80	7.77	ppb
Selenium	77-2	53.72	62.80	55.57	57.36	8.36	ppb
Selenium	78-2	9.11	11.01	10.57	10.23	9.72	ppb
Silicon	28-1	492.59	476.76	469.83	479.72	2.43	ppb
Silver	107-1	0.05	0.05	0.05	0.05	6.59	ppb
Silver	109-1	0.08	0.07	0.08	0.08	2.53	ppb
Sodium	23-2	254.46	248.42	248.00	250.30	1.44	ppb
Strontium	86-1	1376.32	1420.38	1400.76	1399.15	1.58	ppb
Strontium	88-1	1444.75	1489.40	1451.33	1461.83	1.65	ppb
Sulfur	34-1	-916.19	-1100.33	-1149.72	-1055.41		ppb
Terbium	159-1				100		%
Terbium	159-2				98		%
Thallium	203-1	0.47	0.49	0.47	0.48	2.62	ppb
Thallium	205-1	0.48	0.49	0.48	0.48	1.00	ppb
Tin	118-1	0.60	0.63	0.60	0.61	3.07	ppb
Titanium	47-1	101.29	100.40	99.20	100.30	1.05	ppb
Uranium	238-1	2.36	2.36	2.32	2.35	1.07	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-11 Instrumnet Name : P8
Client Sample ID : ME28N0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:06:21 DataFile Name : 037AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	47.27	47.50	47.10	47.29	0.42	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				106		%
Zinc	66-2	117.55	119.14	118.72	118.47	0.70	ppb
Zirconium	90-1	2.35	2.42	2.37	2.38	1.53	ppb
Zirconium	91-1	2.36	2.38	2.37	2.37	0.54	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-12 Instrumnet Name : P8
Client Sample ID : ME28N1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:09:35 DataFile Name : 038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10922.25	10029.54	9552.65	10168.14	6.84	ppb
Antimony	121-1	0.83	0.81	0.83	0.82	1.44	ppb
Arsenic	75-2	28.15	25.44	24.59	26.06	7.14	ppb
Barium	135-1	50.97	50.32	50.89	50.73	0.70	ppb
Barium	137-1	51.74	51.80	52.08	51.87	0.35	ppb
Beryllium	9-1	0.73	0.71	0.70	0.71	2.16	ppb
Bismuth	209-1				97		%
Bismuth	209-2				90		%
Bromine	81-1						cps
Cadmium	108-1	1.48	1.48	1.56	1.51	3.03	ppb
Cadmium	106-1	-0.03	-0.31	-0.45	-0.26		ppb
Cadmium	111-1	0.42	0.39	0.35	0.39	8.22	ppb
Calcium	43-1	167794.82	162873.03	164380.13	165015.99	1.53	ppb
Calcium	44-1	166419.09	162473.96	165562.63	164818.56	1.26	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	24.66	22.86	22.24	23.26	5.39	ppb
Cobalt	59-2	16.26	14.84	14.38	15.16	6.46	ppb
Copper	63-2	38.03	35.21	34.55	35.93	5.14	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				94		%
Indium	115-1				101		%
Indium	115-2				94		%
Iron	54-2	44400.91	40822.67	39411.44	41545.01	6.19	ppb
Iron	56-2	44515.98	40663.44	39750.11	41643.18	6.07	ppb
Iron	57-2	44327.00	41272.51	39554.02	41717.84	5.79	ppb
Krypton	83-1						cps
Lead	206-1	20.53	20.68	20.78	20.66	0.63	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-12 Instrumnet Name : P8
Client Sample ID : ME28N1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:09:35 DataFile Name : 038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	18.73	18.95	18.91	18.86	0.62	ppb
Lead	208-1	19.22	19.46	19.53	19.40	0.85	ppb
Lithium	6-1				100		%
Magnesium	24-2	38241.72	35171.33	34134.68	35849.24	5.96	ppb
Manganese	55-2	816.89	762.67	731.35	770.30	5.62	ppb
Molybdenum	94-1	22.42	22.03	21.96	22.13	1.11	ppb
Molybdenum	95-1	10.85	10.68	10.76	10.76	0.80	ppb
Molybdenum	96-1	12.02	11.82	11.76	11.87	1.16	ppb
Molybdenum	97-1	10.75	10.53	10.57	10.62	1.09	ppb
Molybdenum	98-1	10.48	10.51	10.45	10.48	0.31	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	46.12	42.53	41.49	43.38	5.60	ppb
Phosphorus	31-2	768.31	757.61	735.48	753.80	2.22	ppb
Potassium	39-2	1881.72	1713.84	1671.10	1755.55	6.34	ppb
Rhodium	103-1				97		%
Rhodium	103-2				95		%
Scandium	45-1				107		%
Scandium	45-2				100		%
Selenium	82-1	0.75	0.64	0.25	0.55	47.35	ppb
Selenium	77-2	31.44	28.92	29.82	30.06	4.25	ppb
Selenium	78-2	5.16	6.99	6.87	6.34	16.13	ppb
Silicon	28-1	406.05	408.18	404.33	406.19	0.47	ppb
Silver	107-1	0.08	0.09	0.10	0.09	7.53	ppb
Silver	109-1	0.10	0.09	0.10	0.10	4.55	ppb
Sodium	23-2	421.18	383.92	378.91	394.67	5.85	ppb
Strontium	86-1	7589.44	7540.80	7599.66	7576.63	0.42	ppb
Strontium	88-1	7598.34	7459.75	7387.23	7481.77	1.43	ppb
Sulfur	34-1	5666.94	5561.28	5886.43	5704.88	2.91	ppb
Terbium	159-1				102		%
Terbium	159-2				94		%
Thallium	203-1	0.23	0.25	0.25	0.25	3.91	ppb
Thallium	205-1	0.24	0.25	0.25	0.24	2.82	ppb
Tin	118-1	0.46	0.45	0.46	0.46	1.35	ppb
Titanium	47-1	120.87	119.04	121.17	120.36	0.96	ppb
Uranium	238-1	2.82	2.87	2.82	2.84	0.98	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-12 Instrumnet Name : P8
Client Sample ID : ME28N1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:09:35 DataFile Name : 038AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	32.76	30.33	29.49	30.86	5.50	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				107		%
Yttrium	89-2				101		%
Zinc	66-2	101.05	93.69	91.84	95.53	5.10	ppb
Zirconium	90-1	7.22	7.31	7.22	7.25	0.71	ppb
Zirconium	91-1	7.28	7.28	7.19	7.25	0.71	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-13 Instrumnet Name : P8
Client Sample ID : ME28N2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:12:46 DataFile Name : 039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	21099.39	21196.61	21157.55	21151.18	0.23	ppb
Antimony	121-1	0.41	0.41	0.41	0.41	0.55	ppb
Arsenic	75-2	20.39	21.17	20.15	20.57	2.60	ppb
Barium	135-1	191.85	194.71	194.49	193.68	0.82	ppb
Barium	137-1	202.68	202.32	202.76	202.59	0.11	ppb
Beryllium	9-1	1.44	1.39	1.46	1.43	2.47	ppb
Bismuth	209-1				101		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	0.87	0.96	0.63	0.82	20.94	ppb
Cadmium	106-1	-0.99	-0.13	-0.63	-0.58		ppb
Cadmium	111-1	0.30	0.39	0.34	0.34	13.05	ppb
Calcium	43-1	32644.21	33847.13	33772.20	33421.18	2.02	ppb
Calcium	44-1	32463.21	33424.36	33295.61	33061.06	1.58	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	39.81	39.48	39.34	39.54	0.61	ppb
Cobalt	59-2	23.82	23.68	23.81	23.77	0.32	ppb
Copper	63-2	48.69	48.55	48.69	48.64	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				105		%
Holmium	165-2				101		%
Indium	115-1				104		%
Indium	115-2				101		%
Iron	54-2	52604.71	52006.86	52368.20	52326.59	0.58	ppb
Iron	56-2	53655.65	52691.72	52605.81	52984.40	1.10	ppb
Iron	57-2	52915.30	52386.04	52647.79	52649.71	0.50	ppb
Krypton	83-1						cps
Lead	206-1	27.07	26.81	28.05	27.31	2.39	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-13 Instrumnet Name : P8
Client Sample ID : ME28N2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:12:46 DataFile Name : 039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	24.66	24.40	25.23	24.76	1.71	ppb
Lead	208-1	25.41	25.23	26.12	25.59	1.83	ppb
Lithium	6-1				103		%
Magnesium	24-2	17485.46	17858.63	17726.95	17690.35	1.07	ppb
Manganese	55-2	852.66	838.25	840.21	843.71	0.93	ppb
Molybdenum	94-1	8.52	8.52	8.46	8.50	0.43	ppb
Molybdenum	95-1	3.94	3.88	3.93	3.92	0.81	ppb
Molybdenum	96-1	4.39	4.44	4.44	4.42	0.68	ppb
Molybdenum	97-1	3.91	3.88	3.94	3.91	0.85	ppb
Molybdenum	98-1	3.83	3.82	3.83	3.83	0.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	66.42	66.16	66.75	66.44	0.44	ppb
Phosphorus	31-2	669.64	646.23	668.96	661.61	2.01	ppb
Potassium	39-2	1551.91	1538.32	1548.99	1546.41	0.46	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				112		%
Scandium	45-2				107		%
Selenium	82-1	0.46	0.63	0.47	0.52	18.35	ppb
Selenium	77-2	44.94	38.90	41.01	41.62	7.36	ppb
Selenium	78-2	9.01	8.66	6.45	8.04	17.27	ppb
Silicon	28-1	480.10	496.91	505.25	494.09	2.59	ppb
Silver	107-1	0.07	0.08	0.08	0.07	10.23	ppb
Silver	109-1	0.11	0.11	0.11	0.11	0.90	ppb
Sodium	23-2	299.24	299.21	299.92	299.46	0.13	ppb
Strontium	86-1	5051.67	5079.79	5024.21	5051.89	0.55	ppb
Strontium	88-1	4881.58	4871.27	4960.58	4904.48	1.00	ppb
Sulfur	34-1	825.35	1000.89	1023.48	949.91	11.42	ppb
Terbium	159-1				105		%
Terbium	159-2				99		%
Thallium	203-1	0.40	0.39	0.40	0.40	2.00	ppb
Thallium	205-1	0.40	0.41	0.41	0.41	1.13	ppb
Tin	118-1	0.77	0.79	0.78	0.78	1.24	ppb
Titanium	47-1	78.63	81.49	81.15	80.42	1.94	ppb
Uranium	238-1	2.13	2.12	2.19	2.15	1.76	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-13 Instrumnet Name : P8
Client Sample ID : ME28N2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:12:46 DataFile Name : 039AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	55.22	54.65	55.40	55.09	0.71	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				113		%
Yttrium	89-2				109		%
Zinc	66-2	115.46	116.31	116.16	115.98	0.39	ppb
Zirconium	90-1	2.97	2.87	2.90	2.91	1.78	ppb
Zirconium	91-1	2.95	2.86	2.89	2.90	1.49	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-14 Instrumnet Name : P8
Client Sample ID : ME28N3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:15:56 DataFile Name : 040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8968.45	9741.33	9202.81	9304.20	4.26	ppb
Antimony	121-1	0.41	0.40	0.38	0.40	4.21	ppb
Arsenic	75-2	12.03	12.98	13.08	12.69	4.57	ppb
Barium	135-1	80.18	79.00	79.73	79.64	0.75	ppb
Barium	137-1	81.67	80.67	81.27	81.21	0.62	ppb
Beryllium	9-1	0.70	0.69	0.69	0.69	0.70	ppb
Bismuth	209-1				99		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.88	0.91	1.03	0.94	8.53	ppb
Cadmium	106-1	-1.10	-0.20	-0.47	-0.59		ppb
Cadmium	111-1	0.25	0.32	0.29	0.29	11.99	ppb
Calcium	43-1	117259.56	117206.87	119196.76	117887.73	0.96	ppb
Calcium	44-1	117794.56	116888.16	118140.53	117607.75	0.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	18.84	19.75	19.53	19.37	2.47	ppb
Cobalt	59-2	13.64	14.58	14.59	14.27	3.83	ppb
Copper	63-2	35.33	36.93	37.17	36.48	2.75	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				102		%
Indium	115-2				102		%
Iron	54-2	29175.56	30961.19	30648.78	30261.84	3.15	ppb
Iron	56-2	29711.84	31043.18	30669.38	30474.80	2.25	ppb
Iron	57-2	29220.62	31069.78	30981.82	30424.07	3.43	ppb
Krypton	83-1						cps
Lead	206-1	20.34	20.67	20.93	20.65	1.42	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-14 Instrumnet Name : P8
Client Sample ID : ME28N3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:15:56 DataFile Name : 040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	18.92	19.19	19.46	19.19	1.41	ppb
Lead	208-1	19.39	19.49	19.88	19.58	1.33	ppb
Lithium	6-1				101		%
Magnesium	24-2	20404.05	21824.02	21580.14	21269.40	3.57	ppb
Manganese	55-2	970.70	1002.10	986.33	986.38	1.59	ppb
Molybdenum	94-1	10.80	11.00	11.24	11.01	2.03	ppb
Molybdenum	95-1	5.41	5.40	5.52	5.44	1.26	ppb
Molybdenum	96-1	5.91	5.94	6.06	5.97	1.39	ppb
Molybdenum	97-1	5.29	5.43	5.46	5.39	1.67	ppb
Molybdenum	98-1	5.29	5.28	5.39	5.32	1.19	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	34.07	36.36	35.90	35.44	3.42	ppb
Phosphorus	31-2	670.10	703.39	735.30	702.93	4.64	ppb
Potassium	39-2	1213.83	1294.54	1271.15	1259.84	3.30	ppb
Rhodium	103-1				100		%
Rhodium	103-2				102		%
Scandium	45-1				110		%
Scandium	45-2				107		%
Selenium	82-1	0.64	0.21	0.34	0.40	55.69	ppb
Selenium	77-2	29.85	31.65	23.29	28.26	15.57	ppb
Selenium	78-2	5.95	5.78	6.58	6.10	6.90	ppb
Silicon	28-1	385.88	391.29	390.51	389.23	0.75	ppb
Silver	107-1	0.07	0.06	0.07	0.07	5.66	ppb
Silver	109-1	0.08	0.08	0.07	0.07	1.35	ppb
Sodium	23-2	559.98	593.51	594.23	582.57	3.36	ppb
Strontium	86-1	4559.67	4636.70	4540.91	4579.09	1.11	ppb
Strontium	88-1	4494.66	4404.43	4545.55	4481.55	1.59	ppb
Sulfur	34-1	347.01	303.67	394.11	348.27	12.99	ppb
Terbium	159-1				103		%
Terbium	159-2				101		%
Thallium	203-1	0.36	0.36	0.37	0.36	1.04	ppb
Thallium	205-1	0.36	0.37	0.37	0.37	1.49	ppb
Tin	118-1	2.87	2.85	2.87	2.86	0.28	ppb
Titanium	47-1	159.17	158.17	163.89	160.41	1.90	ppb
Uranium	238-1	1.78	1.82	1.87	1.82	2.60	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-14 Instrumnet Name : P8
Client Sample ID : ME28N3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:15:56 DataFile Name : 040AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	23.77	25.05	24.89	24.57	2.83	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				109		%
Yttrium	89-2				108		%
Zinc	66-2	81.90	86.61	85.52	84.67	2.91	ppb
Zirconium	90-1	3.53	3.59	3.64	3.59	1.49	ppb
Zirconium	91-1	3.53	3.58	3.62	3.58	1.24	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-15 Instrumnet Name : P8
Client Sample ID : ME28N4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:19:07 DataFile Name : 041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	12080.54	11871.59	11908.59	11953.57	0.93	ppb
Antimony	121-1	0.63	0.60	0.60	0.61	2.69	ppb
Arsenic	75-2	17.61	17.35	16.84	17.27	2.28	ppb
Barium	135-1	160.54	161.72	161.17	161.14	0.37	ppb
Barium	137-1	164.07	174.02	169.57	169.22	2.95	ppb
Beryllium	9-1	0.95	0.97	0.95	0.96	1.66	ppb
Bismuth	209-1				102		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	1.71	1.77	1.61	1.70	4.82	ppb
Cadmium	106-1	0.61	0.25	0.17	0.34	69.35	ppb
Cadmium	111-1	1.55	1.46	1.51	1.51	2.92	ppb
Calcium	43-1	110734.44	106072.89	105291.04	107366.12	2.74	ppb
Calcium	44-1	109501.55	106453.87	107094.56	107683.33	1.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	25.81	25.53	25.68	25.67	0.54	ppb
Cobalt	59-2	12.09	12.01	11.92	12.01	0.71	ppb
Copper	63-2	44.17	43.48	43.64	43.76	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				107		%
Holmium	165-2				102		%
Indium	115-1				107		%
Indium	115-2				100		%
Iron	54-2	33045.40	32288.77	33381.90	32905.36	1.70	ppb
Iron	56-2	33160.05	32944.03	32018.82	32707.63	1.85	ppb
Iron	57-2	32980.00	32580.67	32394.02	32651.56	0.92	ppb
Krypton	83-1						cps
Lead	206-1	130.30	127.53	126.34	128.06	1.59	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-15 Instrumnet Name : P8
Client Sample ID : ME28N4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:19:07 DataFile Name : 041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	123.57	123.13	121.58	122.76	0.85	ppb
Lead	208-1	124.30	124.31	122.63	123.75	0.78	ppb
Lithium	6-1				103		%
Magnesium	24-2	41806.63	41552.29	40841.48	41400.13	1.21	ppb
Manganese	55-2	583.86	572.46	567.31	574.54	1.47	ppb
Molybdenum	94-1	7.61	7.67	7.84	7.70	1.59	ppb
Molybdenum	95-1	4.29	4.35	4.54	4.39	2.97	ppb
Molybdenum	96-1	4.71	4.70	4.79	4.73	1.02	ppb
Molybdenum	97-1	4.35	4.39	4.45	4.40	1.14	ppb
Molybdenum	98-1	4.26	4.26	4.32	4.28	0.83	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	37.34	37.40	36.99	37.24	0.60	ppb
Phosphorus	31-2	754.90	789.13	714.54	752.86	4.96	ppb
Potassium	39-2	1395.03	1385.60	1380.47	1387.03	0.53	ppb
Rhodium	103-1				103		%
Rhodium	103-2				101		%
Scandium	45-1				113		%
Scandium	45-2				105		%
Selenium	82-1	0.97	1.10	1.07	1.04	6.45	ppb
Selenium	77-2	23.56	22.09	21.94	22.53	3.98	ppb
Selenium	78-2	5.31	5.56	6.18	5.68	7.87	ppb
Silicon	28-1	471.31	450.69	454.87	458.95	2.38	ppb
Silver	107-1	0.20	0.22	0.21	0.21	4.40	ppb
Silver	109-1	0.23	0.24	0.24	0.24	2.62	ppb
Sodium	23-2	829.77	825.46	811.70	822.31	1.15	ppb
Strontium	86-1	21414.42	21786.27	21482.21	21560.97	0.92	ppb
Strontium	88-1	21111.64	21296.57	21506.45	21304.89	0.93	ppb
Sulfur	34-1	18431.08	17285.70	17647.04	17787.94	3.29	ppb
Terbium	159-1				108		%
Terbium	159-2				101		%
Thallium	203-1	0.49	0.49	0.49	0.49	0.76	ppb
Thallium	205-1	0.50	0.49	0.49	0.49	1.56	ppb
Tin	118-1	2.41	2.44	2.47	2.44	1.07	ppb
Titanium	47-1	114.63	112.40	112.99	113.34	1.02	ppb
Uranium	238-1	1.59	1.60	1.58	1.59	0.72	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-15 Instrumnet Name : P8
Client Sample ID : ME28N4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:19:07 DataFile Name : 041AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	42.17	42.09	41.94	42.07	0.28	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				114		%
Yttrium	89-2				107		%
Zinc	66-2	266.82	265.89	259.90	264.20	1.42	ppb
Zirconium	90-1	2.23	2.24	2.24	2.24	0.30	ppb
Zirconium	91-1	2.18	2.21	2.19	2.19	0.79	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-16 Instrumnet Name : P8
Client Sample ID : ME28N5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:22:16 DataFile Name : 042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	18114.41	18392.71	17829.63	18112.25	1.55	ppb
Antimony	121-1	0.37	0.37	0.38	0.37	1.48	ppb
Arsenic	75-2	16.04	16.32	16.39	16.25	1.17	ppb
Barium	135-1	136.52	135.78	137.21	136.50	0.53	ppb
Barium	137-1	144.41	144.13	143.08	143.87	0.49	ppb
Beryllium	9-1	1.34	1.34	1.41	1.37	3.01	ppb
Bismuth	209-1				104		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Cadmium	108-1	1.01	0.89	1.32	1.07	20.75	ppb
Cadmium	106-1	0.18	-0.37	0.17	-0.01		ppb
Cadmium	111-1	0.61	0.63	0.64	0.63	2.73	ppb
Calcium	43-1	38177.58	36366.00	38418.11	37653.90	2.98	ppb
Calcium	44-1	37686.53	37246.31	38453.75	37795.53	1.62	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	37.27	37.30	37.10	37.22	0.30	ppb
Cobalt	59-2	22.32	22.51	22.14	22.32	0.82	ppb
Copper	63-2	47.34	46.95	46.73	47.00	0.67	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				108		%
Holmium	165-2				102		%
Indium	115-1				109		%
Indium	115-2				103		%
Iron	54-2	46659.69	46665.84	46555.65	46627.06	0.13	ppb
Iron	56-2	46838.81	46108.98	46143.01	46363.60	0.89	ppb
Iron	57-2	46024.54	45940.72	45477.49	45814.25	0.64	ppb
Krypton	83-1						cps
Lead	206-1	40.93	40.67	41.79	41.13	1.43	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-16 Instrumnet Name : P8
Client Sample ID : ME28N5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:22:16 DataFile Name : 042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	38.35	38.10	39.01	38.49	1.21	ppb
Lead	208-1	40.35	40.40	40.74	40.50	0.53	ppb
Lithium	6-1				105		%
Magnesium	24-2	12502.56	12508.62	12153.18	12388.12	1.64	ppb
Manganese	55-2	1122.45	1131.96	1125.11	1126.51	0.44	ppb
Molybdenum	94-1	8.14	8.16	8.19	8.16	0.32	ppb
Molybdenum	95-1	5.41	5.53	5.49	5.48	1.09	ppb
Molybdenum	96-1	5.81	5.74	5.82	5.79	0.73	ppb
Molybdenum	97-1	5.42	5.54	5.34	5.44	1.87	ppb
Molybdenum	98-1	5.26	5.38	5.37	5.34	1.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	50.68	51.39	50.42	50.83	0.99	ppb
Phosphorus	31-2	966.44	967.32	892.62	942.13	4.55	ppb
Potassium	39-2	1891.84	1885.18	1877.00	1884.67	0.39	ppb
Rhodium	103-1				106		%
Rhodium	103-2				105		%
Scandium	45-1				115		%
Scandium	45-2				108		%
Selenium	82-1	0.62	0.91	0.75	0.76	18.96	ppb
Selenium	77-2	42.82	39.25	45.46	42.51	7.33	ppb
Selenium	78-2	6.45	9.71	8.46	8.21	20.08	ppb
Silicon	28-1	490.68	478.63	510.78	493.36	3.29	ppb
Silver	107-1	0.12	0.11	0.13	0.12	7.48	ppb
Silver	109-1	0.14	0.15	0.15	0.14	5.77	ppb
Sodium	23-2	351.11	351.49	349.13	350.58	0.36	ppb
Strontium	86-1	2649.44	2649.74	2671.31	2656.83	0.47	ppb
Strontium	88-1	2727.25	2747.45	2742.14	2738.95	0.38	ppb
Sulfur	34-1	164.98	54.70	258.70	159.46	64.04	ppb
Terbium	159-1				107		%
Terbium	159-2				101		%
Thallium	203-1	0.39	0.39	0.42	0.40	4.52	ppb
Thallium	205-1	0.40	0.39	0.40	0.40	0.36	ppb
Tin	118-1	0.85	0.84	0.88	0.86	2.55	ppb
Titanium	47-1	106.19	104.33	107.58	106.03	1.54	ppb
Uranium	238-1	1.83	1.86	1.88	1.86	1.53	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-16 Instrumnet Name : P8
Client Sample ID : ME28N5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:22:16 DataFile Name : 042AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	47.97	47.49	47.12	47.53	0.90	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				116		%
Yttrium	89-2				111		%
Zinc	66-2	149.07	150.62	147.81	149.17	0.94	ppb
Zirconium	90-1	2.02	2.00	2.03	2.02	0.62	ppb
Zirconium	91-1	1.96	2.04	2.02	2.00	2.11	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-17 Instrumnet Name : P8
Client Sample ID : ME28N6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:25:26 DataFile Name : 043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20344.63	19987.52	20039.77	20123.97	0.96	ppb
Antimony	121-1	0.37	0.38	0.32	0.36	10.18	ppb
Arsenic	75-2	17.92	18.42	18.05	18.13	1.44	ppb
Barium	135-1	145.91	148.80	126.69	140.47	8.55	ppb
Barium	137-1	157.29	156.39	132.94	148.88	9.27	ppb
Beryllium	9-1	1.57	1.55	1.41	1.51	5.96	ppb
Bismuth	209-1				107		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.90	0.90	0.81	0.87	5.82	ppb
Cadmium	106-1	-0.43	0.34	-0.70	-0.26		ppb
Cadmium	111-1	0.54	0.65	0.46	0.55	17.49	ppb
Calcium	43-1	17737.47	17839.04	15241.26	16939.26	8.69	ppb
Calcium	44-1	17578.14	17833.44	15248.13	16886.57	8.44	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	36.99	37.20	36.62	36.94	0.79	ppb
Cobalt	59-2	23.92	23.91	23.91	23.91	0.04	ppb
Copper	63-2	51.04	51.65	50.77	51.15	0.88	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				103		%
Indium	115-1				112		%
Indium	115-2				102		%
Iron	54-2	52468.11	52323.02	51035.54	51942.23	1.52	ppb
Iron	56-2	52582.54	52079.61	51563.25	52075.13	0.98	ppb
Iron	57-2	52846.44	52175.64	52238.01	52420.03	0.71	ppb
Krypton	83-1						cps
Lead	206-1	33.86	34.93	29.78	32.86	8.26	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-17 Instrumnet Name : P8
Client Sample ID : ME28N6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:25:26 DataFile Name : 043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	31.88	32.51	27.98	30.79	7.97	ppb
Lead	208-1	32.37	33.31	28.47	31.38	8.18	ppb
Lithium	6-1				107		%
Magnesium	24-2	9579.89	9594.73	9413.87	9529.50	1.05	ppb
Manganese	55-2	1260.35	1259.69	1202.84	1240.96	2.66	ppb
Molybdenum	94-1	9.03	9.04	7.95	8.67	7.18	ppb
Molybdenum	95-1	6.58	6.66	5.90	6.38	6.54	ppb
Molybdenum	96-1	6.93	6.92	6.15	6.66	6.68	ppb
Molybdenum	97-1	6.66	6.75	5.84	6.42	7.78	ppb
Molybdenum	98-1	6.51	6.53	5.77	6.27	6.96	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	61.82	61.30	60.52	61.21	1.07	ppb
Phosphorus	31-2	771.35	776.15	829.67	792.39	4.09	ppb
Potassium	39-2	1750.12	1763.05	1732.72	1748.63	0.87	ppb
Rhodium	103-1				110		%
Rhodium	103-2				105		%
Scandium	45-1				120		%
Scandium	45-2				109		%
Selenium	82-1	0.78	1.07	0.50	0.78	36.83	ppb
Selenium	77-2	55.46	62.28	57.55	58.43	5.98	ppb
Selenium	78-2	9.25	11.85	9.31	10.13	14.63	ppb
Silicon	28-1	418.33	428.04	353.16	399.84	10.18	ppb
Silver	107-1	0.07	0.07	0.06	0.07	5.23	ppb
Silver	109-1	0.11	0.11	0.08	0.10	13.63	ppb
Sodium	23-2	305.38	310.73	308.47	308.19	0.87	ppb
Strontium	86-1	1947.35	1935.70	1699.29	1860.78	7.52	ppb
Strontium	88-1	2038.84	2028.67	1735.04	1934.18	8.92	ppb
Sulfur	34-1	-402.28	-466.15	-1296.37	-721.60		ppb
Terbium	159-1				111		%
Terbium	159-2				101		%
Thallium	203-1	0.45	0.45	0.39	0.43	8.71	ppb
Thallium	205-1	0.45	0.46	0.40	0.44	8.07	ppb
Tin	118-1	0.79	0.81	0.69	0.76	8.98	ppb
Titanium	47-1	101.86	103.54	89.61	98.34	7.74	ppb
Uranium	238-1	1.69	1.75	1.49	1.64	8.24	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-17 Instrumnet Name : P8
Client Sample ID : ME28N6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:25:26 DataFile Name : 043AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	50.28	49.98	50.27	50.18	0.34	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				121		%
Yttrium	89-2				113		%
Zinc	66-2	142.76	140.59	138.61	140.66	1.48	ppb
Zirconium	90-1	1.93	1.97	1.68	1.86	8.40	ppb
Zirconium	91-1	1.95	2.00	1.75	1.90	7.03	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-18 Instrumnet Name : P8
Client Sample ID : ME28N7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:28:38 DataFile Name : 044AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	8788.17	8933.55	8894.43	8872.05	0.85	ppb
Antimony	121-1	0.50	0.52	0.52	0.51	1.39	ppb
Arsenic	75-2	12.09	12.37	12.58	12.35	2.02	ppb
Barium	135-1	140.00	145.51	147.19	144.23	2.61	ppb
Barium	137-1	147.77	155.69	152.29	151.91	2.62	ppb
Beryllium	9-1	0.57	0.55	0.54	0.55	2.66	ppb
Bismuth	209-1				99		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	1.71	1.83	1.68	1.74	4.37	ppb
Cadmium	106-1	0.74	0.81	1.06	0.87	19.58	ppb
Cadmium	111-1	0.56	0.54	0.60	0.57	4.66	ppb
Calcium	43-1	275893.79	276475.13	268825.50	273731.47	1.56	ppb
Calcium	44-1	276138.15	278204.64	275806.61	276716.47	0.47	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	22.19	22.43	22.34	22.32	0.53	ppb
Cobalt	59-2	13.71	14.00	14.20	13.97	1.75	ppb
Copper	63-2	26.39	26.71	27.13	26.74	1.38	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				104		%
Holmium	165-2				100		%
Indium	115-1				104		%
Indium	115-2				97		%
Iron	54-2	28113.33	28015.43	28645.70	28258.15	1.20	ppb
Iron	56-2	27937.42	28445.43	28109.72	28164.19	0.92	ppb
Iron	57-2	28168.29	28518.03	28732.53	28472.95	1.00	ppb
Krypton	83-1						cps
Lead	206-1	14.21	14.56	14.54	14.44	1.34	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-18 Instrumnet Name : P8
Client Sample ID : ME28N7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:28:38 DataFile Name : 044AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	12.91	13.13	13.02	13.02	0.83	ppb
Lead	208-1	13.23	13.66	13.45	13.45	1.61	ppb
Lithium	6-1				102		%
Magnesium	24-2	73516.84	74996.10	74979.60	74497.51	1.14	ppb
Manganese	55-2	648.82	644.43	665.64	652.96	1.71	ppb
Molybdenum	94-1	20.73	21.59	21.30	21.21	2.07	ppb
Molybdenum	95-1	6.47	6.81	6.68	6.65	2.63	ppb
Molybdenum	96-1	7.98	8.22	8.27	8.15	1.89	ppb
Molybdenum	97-1	6.50	6.81	6.76	6.69	2.50	ppb
Molybdenum	98-1	6.34	6.62	6.56	6.51	2.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	36.93	36.90	37.08	36.97	0.27	ppb
Phosphorus	31-2	615.58	661.15	626.65	634.46	3.75	ppb
Potassium	39-2	1734.08	1733.89	1724.84	1730.94	0.31	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				111		%
Scandium	45-2				105		%
Selenium	82-1	0.54	0.03	-0.01	0.19	163.73	ppb
Selenium	77-2	22.69	30.61	23.90	25.73	16.57	ppb
Selenium	78-2	3.57	5.30	6.49	5.12	28.60	ppb
Silicon	28-1	381.53	384.45	382.35	382.78	0.39	ppb
Silver	107-1	0.09	0.10	0.10	0.10	7.97	ppb
Silver	109-1	0.09	0.10	0.11	0.10	6.82	ppb
Sodium	23-2	422.14	427.31	433.28	427.58	1.30	ppb
Strontium	86-1	10446.05	10714.45	10571.75	10577.42	1.27	ppb
Strontium	88-1	10330.07	10606.70	10373.72	10436.83	1.42	ppb
Sulfur	34-1	7478.40	7772.28	7469.36	7573.35	2.28	ppb
Terbium	159-1				105		%
Terbium	159-2				98		%
Thallium	203-1	0.22	0.23	0.24	0.23	3.22	ppb
Thallium	205-1	0.23	0.23	0.24	0.23	1.22	ppb
Tin	118-1	0.38	0.44	0.42	0.42	7.75	ppb
Titanium	47-1	186.14	190.85	188.33	188.44	1.25	ppb
Uranium	238-1	3.21	3.28	3.28	3.26	1.24	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-18 Instrumnet Name : P8
Client Sample ID : ME28N7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:28:38 DataFile Name : 044AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	29.81	30.38	30.68	30.29	1.47	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				111		%
Yttrium	89-2				105		%
Zinc	66-2	78.49	78.82	79.89	79.07	0.93	ppb
Zirconium	90-1	8.36	8.58	8.56	8.50	1.41	ppb
Zirconium	91-1	8.25	8.49	8.51	8.42	1.68	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19 Instrumnet Name : P8
Client Sample ID : ME28N8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:31:47 DataFile Name : 045AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10429.53	10389.97	10482.27	10433.92	0.44	ppb
Antimony	121-1	4.21	4.17	4.14	4.17	0.76	ppb
Arsenic	75-2	9.01	9.50	8.88	9.13	3.57	ppb
Barium	135-1	112.71	113.13	116.03	113.96	1.59	ppb
Barium	137-1	114.18	114.25	115.25	114.56	0.52	ppb
Beryllium	9-1	1.18	1.09	1.21	1.16	5.12	ppb
Bismuth	209-1				103		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	1.05	1.05	1.12	1.08	3.70	ppb
Cadmium	106-1	-0.70	-1.06	-0.95	-0.91		ppb
Cadmium	111-1	0.18	0.16	0.13	0.15	17.83	ppb
Calcium	43-1	113137.46	108052.59	107888.25	109692.77	2.72	ppb
Calcium	44-1	113061.64	109036.63	108191.53	110096.60	2.36	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	27.55	27.42	27.68	27.55	0.47	ppb
Cobalt	59-2	9.45	9.49	9.34	9.43	0.78	ppb
Copper	63-2	33.61	33.77	33.49	33.62	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				107		%
Holmium	165-2				103		%
Indium	115-1				106		%
Indium	115-2				102		%
Iron	54-2	25373.74	25425.30	24886.62	25228.56	1.18	ppb
Iron	56-2	25184.76	25200.78	24888.57	25091.37	0.70	ppb
Iron	57-2	25590.12	25333.41	25058.93	25327.49	1.05	ppb
Krypton	83-1						cps
Lead	206-1	49.72	51.61	51.69	51.01	2.18	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19 Instrumnet Name : P8
Client Sample ID : ME28N8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:31:47 DataFile Name : 045AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	48.21	49.65	49.66	49.17	1.69	ppb
Lead	208-1	50.21	50.91	51.79	50.97	1.56	ppb
Lithium	6-1				104		%
Magnesium	24-2	18511.68	18965.30	18812.73	18763.24	1.23	ppb
Manganese	55-2	906.12	922.44	907.58	912.04	0.99	ppb
Molybdenum	94-1	11.96	12.15	12.03	12.05	0.81	ppb
Molybdenum	95-1	3.84	3.87	3.89	3.87	0.66	ppb
Molybdenum	96-1	4.63	4.75	4.68	4.68	1.34	ppb
Molybdenum	97-1	3.75	3.88	3.77	3.80	1.76	ppb
Molybdenum	98-1	3.67	3.70	3.73	3.70	0.85	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	28.44	28.97	28.78	28.73	0.94	ppb
Phosphorus	31-2	555.84	572.51	556.48	561.61	1.68	ppb
Potassium	39-2	1877.55	1864.10	1861.11	1867.59	0.47	ppb
Rhodium	103-1				103		%
Rhodium	103-2				104		%
Scandium	45-1				114		%
Scandium	45-2				107		%
Selenium	82-1	0.46	0.00	0.32	0.26	91.28	ppb
Selenium	77-2	22.52	26.34	28.93	25.93	12.42	ppb
Selenium	78-2	3.08	3.77	5.07	3.97	25.53	ppb
Silicon	28-1	1782.19	1707.82	1693.79	1727.93	2.75	ppb
Silver	107-1	0.05	0.06	0.06	0.06	8.76	ppb
Silver	109-1	0.08	0.08	0.08	0.08	5.78	ppb
Sodium	23-2	836.55	837.30	834.66	836.17	0.16	ppb
Strontium	86-1	16204.52	16450.13	16027.66	16227.44	1.31	ppb
Strontium	88-1	16178.43	16575.64	15898.89	16217.65	2.10	ppb
Sulfur	34-1	1492.00	1220.55	1273.90	1328.82	10.82	ppb
Terbium	159-1				108		%
Terbium	159-2				102		%
Thallium	203-1	0.20	0.20	0.20	0.20	1.30	ppb
Thallium	205-1	0.20	0.20	0.20	0.20	1.78	ppb
Tin	118-1	3.98	3.98	4.03	3.99	0.66	ppb
Titanium	47-1	219.91	216.16	218.66	218.24	0.87	ppb
Uranium	238-1	1.36	1.39	1.37	1.37	0.98	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19 Instrumnet Name : P8
Client Sample ID : ME28N8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:31:47 DataFile Name : 045AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	19.67	19.45	19.47	19.53	0.63	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				112		%
Yttrium	89-2				109		%
Zinc	66-2	74.02	74.28	73.41	73.90	0.60	ppb
Zirconium	90-1	4.74	4.83	4.90	4.82	1.67	ppb
Zirconium	91-1	4.83	4.84	4.88	4.85	0.61	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-20 Instrumnet Name : P8
Client Sample ID : ME28N8D Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:34:58 DataFile Name : 046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10554.43	11594.38	11450.68	11199.83	5.03	ppb
Antimony	121-1	4.02	4.06	3.99	4.02	0.85	ppb
Arsenic	75-2	8.41	9.97	9.87	9.41	9.30	ppb
Barium	135-1	117.48	116.13	114.58	116.06	1.25	ppb
Barium	137-1	118.30	118.46	117.49	118.08	0.44	ppb
Beryllium	9-1	1.18	1.17	1.16	1.17	0.58	ppb
Bismuth	209-1				103		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	1.01	0.98	0.88	0.95	7.17	ppb
Cadmium	106-1	-0.48	-0.19	-0.38	-0.35		ppb
Cadmium	111-1	0.22	0.22	0.22	0.22	0.67	ppb
Calcium	43-1	111839.79	110765.51	110931.33	111178.88	0.52	ppb
Calcium	44-1	110271.65	113723.45	112086.27	112027.12	1.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	28.36	30.92	30.28	29.85	4.46	ppb
Cobalt	59-2	9.45	10.50	10.19	10.05	5.39	ppb
Copper	63-2	60.02	66.30	65.25	63.86	5.27	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				97		%
Indium	115-1				108		%
Indium	115-2				96		%
Iron	54-2	25144.35	28168.89	26663.90	26659.04	5.67	ppb
Iron	56-2	25148.61	27795.77	27280.81	26741.73	5.25	ppb
Iron	57-2	25630.94	28472.43	27857.28	27320.21	5.47	ppb
Krypton	83-1						cps
Lead	206-1	49.01	49.34	49.90	49.42	0.91	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-20 Instrumnet Name : P8
Client Sample ID : ME28N8D Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:34:58 DataFile Name : 046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	47.40	48.14	48.07	47.87	0.85	ppb
Lead	208-1	49.66	50.60	49.69	49.98	1.07	ppb
Lithium	6-1				101		%
Magnesium	24-2	18864.69	20673.78	20290.34	19942.94	4.78	ppb
Manganese	55-2	929.35	1019.86	988.10	979.10	4.69	ppb
Molybdenum	94-1	12.15	12.12	12.01	12.09	0.61	ppb
Molybdenum	95-1	3.87	3.90	3.75	3.84	2.07	ppb
Molybdenum	96-1	4.59	4.72	4.62	4.64	1.47	ppb
Molybdenum	97-1	3.81	3.91	3.84	3.85	1.26	ppb
Molybdenum	98-1	3.71	3.82	3.72	3.75	1.66	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	34.38	38.44	37.44	36.75	5.76	ppb
Phosphorus	31-2	565.62	582.62	624.06	590.77	5.09	ppb
Potassium	39-2	1849.50	2067.27	2032.24	1983.00	5.90	ppb
Rhodium	103-1				105		%
Rhodium	103-2				97		%
Scandium	45-1				114		%
Scandium	45-2				101		%
Selenium	82-1	0.16	0.19	-0.07	0.09	154.21	ppb
Selenium	77-2	28.94	21.86	21.80	24.20	16.96	ppb
Selenium	78-2	3.10	5.72	5.13	4.65	29.56	ppb
Silicon	28-1	1794.96	1795.46	1779.81	1790.07	0.50	ppb
Silver	107-1	0.06	0.06	0.06	0.06	3.76	ppb
Silver	109-1	0.07	0.07	0.07	0.07	1.58	ppb
Sodium	23-2	832.13	921.90	910.23	888.09	5.50	ppb
Strontium	86-1	16374.66	16584.31	16187.04	16382.00	1.21	ppb
Strontium	88-1	16213.26	16342.12	16109.61	16221.66	0.72	ppb
Sulfur	34-1	1326.16	1299.89	1250.08	1292.05	2.99	ppb
Terbium	159-1				108		%
Terbium	159-2				96		%
Thallium	203-1	0.20	0.21	0.20	0.20	3.79	ppb
Thallium	205-1	0.20	0.21	0.20	0.20	2.45	ppb
Tin	118-1	4.11	4.05	4.09	4.08	0.72	ppb
Titanium	47-1	220.01	222.68	221.96	221.55	0.62	ppb
Uranium	238-1	1.37	1.39	1.37	1.38	0.73	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-20 Instrumnet Name : P8
Client Sample ID : ME28N8D Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:34:58 DataFile Name : 046AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	19.44	21.50	21.20	20.71	5.36	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				114		%
Yttrium	89-2				102		%
Zinc	66-2	73.71	79.06	79.09	77.29	4.00	ppb
Zirconium	90-1	4.93	4.96	4.84	4.91	1.27	ppb
Zirconium	91-1	4.95	4.89	4.78	4.87	1.73	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19LX5 Instrumnet Name : P8
Client Sample ID : ME28N8L Dilution Factor : 5
Date & Time Acquired : 2024-12-10 15:38:05 DataFile Name : 047AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2267.36	1952.08	1796.96	2005.47	11.95	ppb
Antimony	121-1	0.80	0.76	0.79	0.78	2.60	ppb
Arsenic	75-2	2.30	1.75	1.59	1.88	19.68	ppb
Barium	135-1	20.99	20.79	21.38	21.06	1.42	ppb
Barium	137-1	21.69	21.34	21.48	21.50	0.82	ppb
Beryllium	9-1	0.23	0.23	0.24	0.23	3.47	ppb
Bismuth	209-1				105		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Cadmium	108-1	0.14	0.13	0.15	0.14	8.46	ppb
Cadmium	106-1	-1.45	-2.46	-1.88	-1.93		ppb
Cadmium	111-1	-0.05	-0.14	-0.10	-0.10		ppb
Calcium	43-1	20498.12	21444.42	21113.17	21018.57	2.28	ppb
Calcium	44-1	20816.49	21121.34	20843.61	20927.15	0.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	6.24	5.38	5.05	5.56	11.09	ppb
Cobalt	59-2	2.16	1.85	1.77	1.93	10.57	ppb
Copper	63-2	10.29	8.94	8.11	9.11	12.05	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				106		%
Holmium	165-2				100		%
Indium	115-1				108		%
Indium	115-2				100		%
Iron	54-2	5487.88	4765.22	4420.32	4891.14	11.14	ppb
Iron	56-2	5636.53	4943.91	4560.44	5046.96	10.81	ppb
Iron	57-2	5442.49	4792.18	4379.07	4871.24	11.01	ppb
Krypton	83-1						cps
Lead	206-1	9.43	9.52	9.42	9.46	0.56	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19LX5 Instrumnet Name : P8
Client Sample ID : ME28N8L Dilution Factor : 5
Date & Time Acquired : 2024-12-10 15:38:05 DataFile Name : 047AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	9.18	9.22	9.10	9.17	0.65	ppb
Lead	208-1	9.18	9.25	9.17	9.20	0.53	ppb
Lithium	6-1				102		%
Magnesium	24-2	4247.28	3743.50	3419.82	3803.54	10.96	ppb
Manganese	55-2	195.04	168.19	155.51	172.91	11.67	ppb
Molybdenum	94-1	2.24	2.22	2.32	2.26	2.42	ppb
Molybdenum	95-1	0.71	0.72	0.76	0.73	3.35	ppb
Molybdenum	96-1	0.86	0.90	0.90	0.89	2.18	ppb
Molybdenum	97-1	0.72	0.72	0.75	0.73	1.80	ppb
Molybdenum	98-1	0.69	0.70	0.73	0.71	2.51	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.84	7.69	6.91	7.81	12.43	ppb
Phosphorus	31-2	125.79	102.79	77.70	102.09	23.56	ppb
Potassium	39-2	450.22	383.05	349.68	394.32	12.99	ppb
Rhodium	103-1				106		%
Rhodium	103-2				102		%
Scandium	45-1				112		%
Scandium	45-2				102		%
Selenium	82-1	0.05	-0.09	0.17	0.04	293.60	ppb
Selenium	77-2	6.65	4.99	5.09	5.58	16.62	ppb
Selenium	78-2	1.37	0.91	1.48	1.25	23.86	ppb
Silicon	28-1	329.69	340.20	338.59	336.16	1.68	ppb
Silver	107-1	0.01	0.01	0.01	0.01	2.86	ppb
Silver	109-1	0.02	0.01	0.02	0.02	11.32	ppb
Sodium	23-2	265.53	221.47	198.70	228.57	14.87	ppb
Strontium	86-1	2943.58	2959.24	3023.11	2975.31	1.42	ppb
Strontium	88-1	3069.16	3088.85	3128.98	3095.66	0.98	ppb
Sulfur	34-1	-102.01	90.69	19.46	2.71	3594.05	ppb
Terbium	159-1				108		%
Terbium	159-2				99		%
Thallium	203-1	0.05	0.04	0.05	0.05	7.70	ppb
Thallium	205-1	0.05	0.04	0.05	0.05	4.07	ppb
Tin	118-1	0.83	0.82	0.85	0.83	2.07	ppb
Titanium	47-1	40.76	41.60	41.02	41.12	1.04	ppb
Uranium	238-1	0.25	0.24	0.25	0.25	1.86	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19LX5 Instrumnet Name : P8
Client Sample ID : ME28N8L Dilution Factor : 5
Date & Time Acquired : 2024-12-10 15:38:05 DataFile Name : 047AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	4.43	3.86	3.43	3.91	12.73	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				111		%
Yttrium	89-2				102		%
Zinc	66-2	17.42	14.68	13.83	15.31	12.24	ppb
Zirconium	90-1	0.91	0.92	0.93	0.92	1.28	ppb
Zirconium	91-1	0.92	0.91	0.97	0.93	3.47	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-21 Instrumnet Name : P8
Client Sample ID : ME28N8S Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:41:20 DataFile Name : 048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10479.78	10626.05	10917.45	10674.43	2.09	ppb
Antimony	121-1	23.72	23.81	24.49	24.01	1.77	ppb
Arsenic	75-2	17.35	17.43	17.03	17.27	1.22	ppb
Barium	135-1	528.77	530.74	535.42	531.64	0.64	ppb
Barium	137-1	520.43	527.94	535.94	528.10	1.47	ppb
Beryllium	9-1	10.70	11.12	10.96	10.93	1.93	ppb
Bismuth	209-1				103		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	8.77	9.18	9.42	9.13	3.64	ppb
Cadmium	106-1	7.29	6.99	7.25	7.18	2.26	ppb
Cadmium	111-1	10.04	9.93	10.29	10.08	1.83	ppb
Calcium	43-1	109741.69	112284.68	109542.19	110522.85	1.38	ppb
Calcium	44-1	109040.30	112131.62	110177.05	110449.66	1.42	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	65.87	65.98	66.61	66.15	0.61	ppb
Cobalt	59-2	106.23	107.00	108.05	107.09	0.86	ppb
Copper	63-2	78.81	79.33	79.61	79.25	0.51	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				102		%
Indium	115-1				108		%
Indium	115-2				99		%
Iron	54-2	25489.45	25386.12	25341.24	25405.60	0.30	ppb
Iron	56-2	25100.56	24878.72	25104.47	25027.92	0.52	ppb
Iron	57-2	25790.91	25534.95	25965.02	25763.63	0.84	ppb
Krypton	83-1						cps
Lead	206-1	52.59	54.09	53.23	53.30	1.41	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-21 Instrumnet Name : P8
Client Sample ID : ME28N8S Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:41:20 DataFile Name : 048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	50.49	52.65	51.48	51.54	2.10	ppb
Lead	208-1	53.17	55.07	54.18	54.14	1.75	ppb
Lithium	6-1				101		%
Magnesium	24-2	18555.15	18804.51	18865.32	18741.66	0.88	ppb
Manganese	55-2	998.69	1007.90	1002.41	1003.00	0.46	ppb
Molybdenum	94-1	11.79	12.02	12.10	11.97	1.32	ppb
Molybdenum	95-1	3.70	3.80	3.74	3.75	1.31	ppb
Molybdenum	96-1	4.57	4.55	4.68	4.60	1.50	ppb
Molybdenum	97-1	3.72	3.84	3.76	3.77	1.59	ppb
Molybdenum	98-1	3.65	3.77	3.69	3.70	1.58	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	124.45	125.04	125.45	124.98	0.40	ppb
Phosphorus	31-2	566.51	581.88	535.38	561.25	4.22	ppb
Potassium	39-2	1842.98	1859.91	1865.29	1856.06	0.63	ppb
Rhodium	103-1				104		%
Rhodium	103-2				101		%
Scandium	45-1				113		%
Scandium	45-2				106		%
Selenium	82-1	17.88	18.41	19.05	18.44	3.19	ppb
Selenium	77-2	48.16	50.42	47.28	48.62	3.33	ppb
Selenium	78-2	23.48	26.38	21.92	23.93	9.46	ppb
Silicon	28-1	1752.40	1823.91	1749.38	1775.23	2.38	ppb
Silver	107-1	9.74	9.86	10.11	9.90	1.85	ppb
Silver	109-1	9.88	10.09	10.31	10.09	2.11	ppb
Sodium	23-2	809.14	816.23	824.35	816.57	0.93	ppb
Strontium	86-1	15811.46	16496.21	16316.51	16208.06	2.19	ppb
Strontium	88-1	15594.54	16167.37	16101.46	15954.46	1.96	ppb
Sulfur	34-1	1351.40	1471.49	1268.16	1363.68	7.50	ppb
Terbium	159-1				108		%
Terbium	159-2				101		%
Thallium	203-1	9.48	9.76	9.61	9.61	1.46	ppb
Thallium	205-1	9.53	9.83	9.76	9.71	1.62	ppb
Tin	118-1	4.02	4.03	4.18	4.07	2.22	ppb
Titanium	47-1	216.66	223.04	221.61	220.44	1.52	ppb
Uranium	238-1	1.35	1.39	1.39	1.38	1.68	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-21 Instrumnet Name : P8
Client Sample ID : ME28N8S Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:41:20 DataFile Name : 048AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	115.98	116.26	116.92	116.39	0.42	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				113		%
Yttrium	89-2				106		%
Zinc	66-2	164.33	167.77	167.45	166.52	1.14	ppb
Zirconium	90-1	4.72	5.10	4.84	4.88	3.97	ppb
Zirconium	91-1	4.74	4.92	4.80	4.82	1.86	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DLX2 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 2
Date & Time Acquired : 2024-12-10 16:09:12 DataFile Name : 049AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	13054.91	13037.73	13045.60	13046.08	0.07	ppb
Antimony	121-1	0.34	0.34	0.35	0.34	1.59	ppb
Arsenic	75-2	3.43	3.16	3.39	3.33	4.46	ppb
Barium	135-1	87.92	91.11	92.37	90.47	2.54	ppb
Barium	137-1	89.65	93.38	92.27	91.77	2.09	ppb
Beryllium	9-1	1.21	1.19	1.20	1.20	0.81	ppb
Bismuth	209-1				98		%
Bismuth	209-2				92		%
Bromine	81-1						cps
Cadmium	108-1	3.05	3.05	3.41	3.17	6.62	ppb
Cadmium	106-1	2.35	2.99	3.37	2.90	17.78	ppb
Cadmium	111-1	0.20	0.27	0.27	0.25	16.75	ppb
Calcium	43-1	212024.30	211401.81	212043.23	211823.11	0.17	ppb
Calcium	44-1	210211.46	215065.32	210583.32	211953.37	1.27	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	943.90	928.48	925.72	932.70	1.05	ppb
Cobalt	59-2	3.29	3.31	3.32	3.31	0.34	ppb
Copper	63-2	24.75	24.69	24.47	24.63	0.61	ppb
Dysprosium	156-1						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				97		%
Indium	115-1				101		%
Indium	115-2				94		%
Iron	54-2	169965.33	165060.35	165179.71	166735.13	1.68	ppb
Iron	56-2	164655.10	169037.80	167684.46	167125.79	1.34	ppb
Iron	57-2	167911.10	167676.65	168603.30	168063.69	0.29	ppb
Krypton	83-1						cps
Lead	206-1	14.81	15.23	15.32	15.12	1.79	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DLX2 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 2
Date & Time Acquired : 2024-12-10 16:09:12 DataFile Name : 049AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	14.00	14.58	14.71	14.43	2.59	ppb
Lead	208-1	14.40	14.69	14.96	14.68	1.90	ppb
Lithium	6-1				102		%
Magnesium	24-2	42986.00	42169.41	42560.06	42571.82	0.96	ppb
Manganese	55-2	22590.55	22740.17	22410.17	22580.30	0.73	ppb
Molybdenum	94-1	43.88	44.32	45.18	44.46	1.48	ppb
Molybdenum	95-1	5.77	5.98	5.73	5.83	2.31	ppb
Molybdenum	96-1	10.05	10.28	10.10	10.15	1.17	ppb
Molybdenum	97-1	5.80	5.72	5.83	5.79	0.97	ppb
Molybdenum	98-1	5.57	5.72	5.69	5.66	1.38	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	27.02	27.35	27.24	27.20	0.61	ppb
Phosphorus	31-2	2783.35	2739.88	2806.01	2776.41	1.21	ppb
Potassium	39-2	531.31	533.20	532.60	532.37	0.18	ppb
Rhodium	103-1				97		%
Rhodium	103-2				95		%
Scandium	45-1				107		%
Scandium	45-2				100		%
Selenium	82-1	0.63	0.70	0.17	0.50	58.09	ppb
Selenium	77-2	11.68	10.06	12.54	11.43	11.03	ppb
Selenium	78-2	1.62	2.97	2.41	2.33	28.98	ppb
Silicon	28-1	3098.70	3173.98	3131.18	3134.62	1.20	ppb
Silver	107-1	0.09	0.09	0.09	0.09	2.10	ppb
Silver	109-1	0.27	0.27	0.27	0.27	0.81	ppb
Sodium	23-2	507.79	513.88	511.62	511.10	0.60	ppb
Strontium	86-1	6405.09	6403.48	6298.63	6369.07	0.96	ppb
Strontium	88-1	6148.72	6299.78	6240.86	6229.78	1.22	ppb
Sulfur	34-1	6020.08	5693.77	6093.38	5935.75	3.58	ppb
Terbium	159-1				102		%
Terbium	159-2				96		%
Thallium	203-1	0.07	0.06	0.06	0.07	12.39	ppb
Thallium	205-1	0.08	0.07	0.06	0.07	14.02	ppb
Tin	118-1	1.41	1.48	1.42	1.44	2.41	ppb
Titanium	47-1	2128.60	2108.39	2113.55	2116.85	0.50	ppb
Uranium	238-1	1.57	1.63	1.64	1.62	2.28	ppb

LB Number :

LB133874

Operator :

Jaswal

Lab Sample ID :

P5067-01DLX2

Instrumnet Name :

P8

Client Sample ID :

ME28M0

Dilution Factor :

2

Date & Time Acquired :

2024-12-10 16:09:12

DataFile Name :

049AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	527.90	515.77	519.57	521.08	1.19	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				101		%
Zinc	66-2	87.75	88.49	88.93	88.39	0.67	ppb
Zirconium	90-1	21.51	22.15	21.76	21.81	1.47	ppb
Zirconium	91-1	21.77	22.12	21.85	21.92	0.85	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DL2X5 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:12:22 DataFile Name : 050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	5112.26	5047.85	5047.61	5069.24	0.73	ppb
Antimony	121-1	0.12	0.14	0.13	0.13	5.73	ppb
Arsenic	75-2	1.45	1.31	1.20	1.32	9.36	ppb
Barium	135-1	35.90	36.29	36.12	36.10	0.54	ppb
Barium	137-1	35.87	36.81	36.55	36.41	1.34	ppb
Beryllium	9-1	0.46	0.47	0.45	0.46	1.98	ppb
Bismuth	209-1				102		%
Bismuth	209-2				95		%
Bromine	81-1						cps
Cadmium	108-1	1.18	1.29	1.05	1.17	9.87	ppb
Cadmium	106-1	0.08	0.30	0.21	0.20	55.10	ppb
Cadmium	111-1	0.01	0.03	0.03	0.02	37.70	ppb
Calcium	43-1	85844.52	84803.84	83098.26	84582.20	1.64	ppb
Calcium	44-1	84463.42	86682.86	85460.65	85535.64	1.30	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	383.75	378.00	380.48	380.74	0.76	ppb
Cobalt	59-2	1.37	1.38	1.33	1.36	1.94	ppb
Copper	63-2	10.14	9.96	9.84	9.98	1.52	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				104		%
Holmium	165-2				98		%
Indium	115-1				103		%
Indium	115-2				95		%
Iron	54-2	69218.22	67727.48	67122.12	68022.61	1.59	ppb
Iron	56-2	69042.19	67706.04	66962.15	67903.46	1.55	ppb
Iron	57-2	68579.01	67523.73	66261.26	67454.66	1.72	ppb
Krypton	83-1						cps
Lead	206-1	6.09	6.04	5.93	6.02	1.37	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DL2X5 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:12:22 DataFile Name : 050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	5.84	5.78	5.64	5.76	1.82	ppb
Lead	208-1	5.89	5.85	5.75	5.83	1.20	ppb
Lithium	6-1				100		%
Magnesium	24-2	17024.58	17013.82	16918.06	16985.49	0.35	ppb
Manganese	55-2	9312.11	9184.33	9037.74	9178.06	1.50	ppb
Molybdenum	94-1	17.81	18.29	18.06	18.05	1.34	ppb
Molybdenum	95-1	2.34	2.34	2.32	2.33	0.55	ppb
Molybdenum	96-1	4.01	4.10	4.01	4.04	1.27	ppb
Molybdenum	97-1	2.27	2.33	2.30	2.30	1.31	ppb
Molybdenum	98-1	2.22	2.19	2.21	2.21	0.63	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	11.31	11.20	11.06	11.19	1.12	ppb
Phosphorus	31-2	1107.17	1110.92	1099.17	1105.75	0.54	ppb
Potassium	39-2	223.26	220.44	223.30	222.33	0.74	ppb
Rhodium	103-1				100		%
Rhodium	103-2				97		%
Scandium	45-1				106		%
Scandium	45-2				98		%
Selenium	82-1	0.10	0.33	0.29	0.24	52.49	ppb
Selenium	77-2	3.27	3.74	4.73	3.91	19.08	ppb
Selenium	78-2	1.55	1.25	1.83	1.55	18.79	ppb
Silicon	28-1	1204.28	1214.82	1195.77	1204.96	0.79	ppb
Silver	107-1	0.04	0.04	0.04	0.04	7.79	ppb
Silver	109-1	0.10	0.11	0.11	0.10	6.93	ppb
Sodium	23-2	252.38	251.08	249.82	251.09	0.51	ppb
Strontium	86-1	2329.84	2375.74	2372.38	2359.32	1.08	ppb
Strontium	88-1	2454.74	2473.35	2454.15	2460.75	0.44	ppb
Sulfur	34-1	2316.14	2361.69	2342.02	2339.95	0.98	ppb
Terbium	159-1				104		%
Terbium	159-2				96		%
Thallium	203-1	0.03	0.02	0.02	0.02	9.43	ppb
Thallium	205-1	0.03	0.02	0.02	0.03	10.77	ppb
Tin	118-1	0.59	0.58	0.56	0.58	2.82	ppb
Titanium	47-1	838.06	852.22	841.28	843.86	0.88	ppb
Uranium	238-1	0.63	0.61	0.61	0.62	1.88	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DL2X5 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:12:22 DataFile Name : 050AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	201.16	199.40	197.21	199.26	0.99	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				106		%
Yttrium	89-2				99		%
Zinc	66-2	36.41	36.36	35.68	36.15	1.13	ppb
Zirconium	90-1	8.77	8.84	8.70	8.77	0.81	ppb
Zirconium	91-1	8.81	8.96	8.66	8.81	1.69	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02DLX5 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:15:35 DataFile Name : 051AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	6475.95	6618.03	6360.73	6484.91	1.99	ppb
Antimony	121-1	0.11	0.09	0.10	0.10	6.14	ppb
Arsenic	75-2	1.22	1.27	1.17	1.22	4.07	ppb
Barium	135-1	56.40	50.92	49.95	52.42	6.63	ppb
Barium	137-1	58.15	51.30	50.96	53.47	7.59	ppb
Beryllium	9-1	0.85	0.78	0.77	0.80	5.09	ppb
Bismuth	209-1				99		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Cadmium	108-1	1.25	1.09	1.13	1.16	7.09	ppb
Cadmium	106-1	1.02	-0.69	-0.57	-0.08		ppb
Cadmium	111-1	0.19	0.04	0.08	0.10	75.66	ppb
Calcium	43-1	94907.18	89005.03	86761.79	90224.66	4.66	ppb
Calcium	44-1	96123.62	88981.37	88219.01	91108.00	4.79	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	555.67	564.30	556.70	558.89	0.84	ppb
Cobalt	59-2	1.97	1.97	1.93	1.96	1.05	ppb
Copper	63-2	11.71	12.22	11.71	11.88	2.48	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				101		%
Indium	115-2				98		%
Iron	54-2	62049.82	62783.52	61240.09	62024.48	1.24	ppb
Iron	56-2	61290.69	64001.31	60197.05	61829.68	3.17	ppb
Iron	57-2	61381.03	62902.41	60056.46	61446.63	2.32	ppb
Krypton	83-1						cps
Lead	206-1	15.82	14.49	14.56	14.96	5.03	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02DLX5 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:15:35 DataFile Name : 051AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	15.10	13.91	14.11	14.37	4.42	ppb
Lead	208-1	15.27	14.23	14.24	14.58	4.11	ppb
Lithium	6-1				96		%
Magnesium	24-2	17230.48	17056.23	16922.22	17069.64	0.91	ppb
Manganese	55-2	8223.25	8517.74	8239.97	8326.99	1.99	ppb
Molybdenum	94-1	19.55	17.92	17.49	18.32	5.93	ppb
Molybdenum	95-1	5.44	5.05	4.94	5.14	5.18	ppb
Molybdenum	96-1	6.94	6.38	6.24	6.52	5.63	ppb
Molybdenum	97-1	5.39	4.90	4.90	5.06	5.61	ppb
Molybdenum	98-1	5.29	4.91	4.84	5.01	4.92	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	80.21	81.51	77.80	79.84	2.36	ppb
Phosphorus	31-2	718.44	725.53	695.19	713.05	2.23	ppb
Potassium	39-2	313.84	327.40	310.96	317.40	2.77	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				104		%
Scandium	45-2				100		%
Selenium	82-1	0.64	0.51	0.67	0.61	14.46	ppb
Selenium	77-2	4.57	4.25	6.92	5.24	27.76	ppb
Selenium	78-2	0.79	2.56	1.90	1.75	51.39	ppb
Silicon	28-1	1324.95	1255.22	1224.75	1268.31	4.05	ppb
Silver	107-1	0.10	0.09	0.09	0.09	6.09	ppb
Silver	109-1	0.13	0.12	0.12	0.13	6.68	ppb
Sodium	23-2	253.71	259.85	249.45	254.34	2.05	ppb
Strontium	86-1	1746.80	1614.58	1605.96	1655.78	4.77	ppb
Strontium	88-1	1827.57	1698.83	1667.54	1731.31	4.90	ppb
Sulfur	34-1	4738.38	4029.83	4025.72	4264.64	9.62	ppb
Terbium	159-1				100		%
Terbium	159-2				99		%
Thallium	203-1	0.03	0.02	0.02	0.02	22.20	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	9.44	ppb
Tin	118-1	0.64	0.55	0.55	0.58	9.02	ppb
Titanium	47-1	691.84	643.64	636.71	657.40	4.57	ppb
Uranium	238-1	0.80	0.73	0.73	0.76	5.26	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02DLX5 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:15:35 DataFile Name : 051AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	84.48	86.41	83.09	84.66	1.97	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				103		%
Yttrium	89-2				101		%
Zinc	66-2	40.96	42.43	41.38	41.59	1.83	ppb
Zirconium	90-1	8.20	7.64	7.47	7.77	4.85	ppb
Zirconium	91-1	8.10	7.53	7.47	7.70	4.48	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03DLX5 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:18:46 DataFile Name : 052AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3273.31	3275.03	3267.98	3272.11	0.11	ppb
Antimony	121-1	0.07	0.08	0.07	0.07	5.33	ppb
Arsenic	75-2	1.68	1.55	1.72	1.65	5.51	ppb
Barium	135-1	27.09	28.82	27.46	27.79	3.28	ppb
Barium	137-1	27.87	28.69	27.74	28.10	1.82	ppb
Beryllium	9-1	0.33	0.31	0.33	0.32	2.96	ppb
Bismuth	209-1				106		%
Bismuth	209-2				99		%
Bromine	81-1						cps
Cadmium	108-1	0.49	0.63	0.53	0.55	12.98	ppb
Cadmium	106-1	-1.68	-0.23	-2.39	-1.43		ppb
Cadmium	111-1	-0.08	0.04	-0.13	-0.06		ppb
Calcium	43-1	41959.96	42719.23	42945.63	42541.61	1.21	ppb
Calcium	44-1	41991.86	43381.43	42309.92	42561.07	1.71	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	108.68	109.80	109.89	109.46	0.62	ppb
Cobalt	59-2	1.89	1.85	1.86	1.86	1.20	ppb
Copper	63-2	9.83	9.71	9.90	9.81	0.97	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				101		%
Indium	115-1				107		%
Indium	115-2				99		%
Iron	54-2	18065.89	18466.87	18524.40	18352.39	1.36	ppb
Iron	56-2	18224.64	18235.87	18309.45	18256.65	0.25	ppb
Iron	57-2	18361.11	18576.86	18868.39	18602.12	1.37	ppb
Krypton	83-1						cps
Lead	206-1	5.61	5.81	5.75	5.72	1.84	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03DLX5 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:18:46 DataFile Name : 052AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	5.32	5.38	5.45	5.38	1.20	ppb
Lead	208-1	5.42	5.50	5.50	5.47	0.89	ppb
Lithium	6-1				103		%
Magnesium	24-2	7712.32	7527.07	7808.31	7682.57	1.86	ppb
Manganese	55-2	2824.89	2834.99	2789.64	2816.51	0.85	ppb
Molybdenum	94-1	6.66	6.93	6.96	6.85	2.45	ppb
Molybdenum	95-1	1.29	1.34	1.33	1.32	1.73	ppb
Molybdenum	96-1	1.90	1.90	1.92	1.91	0.58	ppb
Molybdenum	97-1	1.26	1.31	1.32	1.30	2.62	ppb
Molybdenum	98-1	1.29	1.31	1.27	1.29	1.48	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	15.18	15.33	15.42	15.31	0.79	ppb
Phosphorus	31-2	293.73	304.84	294.94	297.84	2.05	ppb
Potassium	39-2	249.70	250.28	248.52	249.50	0.36	ppb
Rhodium	103-1				103		%
Rhodium	103-2				102		%
Scandium	45-1				108		%
Scandium	45-2				100		%
Selenium	82-1	0.18	0.11	0.00	0.09	98.84	ppb
Selenium	77-2	6.60	4.12	5.17	5.30	23.45	ppb
Selenium	78-2	1.38	1.36	1.53	1.42	6.60	ppb
Silicon	28-1	400.25	416.67	419.12	412.01	2.49	ppb
Silver	107-1	0.02	0.03	0.02	0.02	13.42	ppb
Silver	109-1	0.04	0.04	0.03	0.04	4.57	ppb
Sodium	23-2	179.58	177.05	177.85	178.16	0.73	ppb
Strontium	86-1	1216.09	1254.67	1249.16	1239.98	1.68	ppb
Strontium	88-1	1268.93	1293.66	1297.35	1286.65	1.20	ppb
Sulfur	34-1	664.85	841.59	854.62	787.02	13.47	ppb
Terbium	159-1				107		%
Terbium	159-2				99		%
Thallium	203-1	0.05	0.04	0.05	0.05	3.60	ppb
Thallium	205-1	0.05	0.05	0.04	0.05	4.79	ppb
Tin	118-1	0.30	0.31	0.28	0.30	5.33	ppb
Titanium	47-1	194.93	199.46	201.33	198.57	1.66	ppb
Uranium	238-1	0.36	0.37	0.38	0.37	1.98	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03DLX5 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:18:46 DataFile Name : 052AREF.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	48.65	48.33	48.82	48.60	0.51	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				108		%
Yttrium	89-2				101		%
Zinc	66-2	20.00	20.47	20.40	20.29	1.26	ppb
Zirconium	90-1	3.12	3.17	3.15	3.14	0.84	ppb
Zirconium	91-1	3.08	3.12	3.14	3.11	0.90	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV003 Instrumnet Name : P8
Client Sample ID : CCV003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:26:43 DataFile Name : 054CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48597.67	49422.15	48700.32	48906.72	0.92	ppb
Antimony	121-1	480.46	500.48	491.68	490.87	2.04	ppb
Arsenic	75-2	493.72	491.12	497.07	493.97	0.60	ppb
Barium	135-1	2444.06	2509.48	2472.69	2475.41	1.32	ppb
Barium	137-1	2420.07	2522.82	2498.64	2480.51	2.17	ppb
Beryllium	9-1	496.04	508.30	511.31	505.22	1.60	ppb
Bismuth	209-1				88		%
Bismuth	209-2				84		%
Bromine	81-1						cps
Cadmium	108-1	478.35	485.82	484.75	482.97	0.84	ppb
Cadmium	106-1	472.34	490.13	488.26	483.58	2.02	ppb
Cadmium	111-1	478.58	488.19	488.21	484.99	1.15	ppb
Calcium	43-1	228242.45	240182.88	238507.89	235644.41	2.74	ppb
Calcium	44-1	231142.85	236054.01	238192.18	235129.68	1.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	505.37	510.89	498.91	505.06	1.19	ppb
Cobalt	59-2	490.09	500.27	487.21	492.52	1.39	ppb
Copper	63-2	4753.46	4788.06	4677.23	4739.59	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				95		%
Holmium	165-2				93		%
Indium	115-1				91		%
Indium	115-2				87		%
Iron	54-2	123289.77	127388.54	122170.48	124282.93	2.21	ppb
Iron	56-2	123984.00	125575.66	122777.52	124112.39	1.13	ppb
Iron	57-2	123629.28	125421.37	125492.49	124847.71	0.85	ppb
Krypton	83-1						cps
Lead	206-1	2503.90	2551.37	2515.70	2523.66	0.98	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV003 Instrumnet Name : P8
Client Sample ID : CCV003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:26:43 DataFile Name : 054CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	2461.30	2520.13	2493.58	2491.67	1.18	ppb
Lead	208-1	2456.40	2532.63	2506.81	2498.62	1.55	ppb
Lithium	6-1				90		%
Magnesium	24-2	254530.47	257019.13	253534.01	255027.87	0.70	ppb
Manganese	55-2	4884.16	4987.56	4877.80	4916.51	1.25	ppb
Molybdenum	94-1	4962.03	4990.19	4985.53	4979.25	0.30	ppb
Molybdenum	95-1	4863.73	5013.63	4958.67	4945.34	1.53	ppb
Molybdenum	96-1	4809.10	4968.64	4945.91	4907.88	1.76	ppb
Molybdenum	97-1	4858.26	4975.39	4985.28	4939.64	1.43	ppb
Molybdenum	98-1	4814.44	4892.41	4967.64	4891.50	1.57	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	451.37	457.32	448.64	452.44	0.98	ppb
Phosphorus	31-2	9814.14	10056.31	10077.43	9982.62	1.47	ppb
Potassium	39-2	123667.75	123587.87	122803.91	123353.18	0.39	ppb
Rhodium	103-1				85		%
Rhodium	103-2				84		%
Scandium	45-1				95		%
Scandium	45-2				90		%
Selenium	82-1	466.64	478.68	479.59	474.97	1.52	ppb
Selenium	77-2	505.18	483.10	487.49	491.92	2.38	ppb
Selenium	78-2	473.64	489.32	480.51	481.16	1.63	ppb
Silicon	28-1	1006.46	1024.16	1024.76	1018.46	1.02	ppb
Silver	107-1	472.11	479.69	480.22	477.34	0.95	ppb
Silver	109-1	472.28	480.60	477.45	476.78	0.88	ppb
Sodium	23-2	252953.08	257668.26	252930.86	254517.40	1.07	ppb
Strontium	86-1	12091.08	12920.37	12987.52	12666.32	3.94	ppb
Strontium	88-1	12324.93	12758.59	12691.88	12591.80	1.85	ppb
Sulfur	34-1	9742.10	9851.02	9693.40	9762.17	0.83	ppb
Terbium	159-1				96		%
Terbium	159-2				92		%
Thallium	203-1	494.81	511.52	504.33	503.55	1.66	ppb
Thallium	205-1	496.90	514.59	506.77	506.09	1.75	ppb
Tin	118-1	481.30	503.96	496.78	494.01	2.34	ppb
Titanium	47-1	4903.33	4980.02	4976.31	4953.22	0.87	ppb
Uranium	238-1	500.01	511.47	508.75	506.75	1.18	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV003 Instrumnet Name : P8
Client Sample ID : CCV003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:26:43 DataFile Name : 054CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	504.67	525.78	502.70	511.05	2.50	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				97		%
Yttrium	89-2				92		%
Zinc	66-2	4760.64	4837.28	4686.45	4761.46	1.58	ppb
Zirconium	90-1	494.23	504.44	505.88	501.52	1.27	ppb
Zirconium	91-1	491.56	501.99	502.74	498.76	1.25	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB003 Instrumnet Name : P8
Client Sample ID : CCB003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:30:00 DataFile Name : 055CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-4.53	-5.25	-5.40	-5.06		ppb
Antimony	121-1	0.10	0.09	0.08	0.09	9.76	ppb
Arsenic	75-2	0.01	0.02	0.01	0.01	59.07	ppb
Barium	135-1	0.08	0.05	0.04	0.06	40.92	ppb
Barium	137-1	0.08	0.05	0.06	0.06	25.42	ppb
Beryllium	9-1	0.13	0.11	0.09	0.11	16.08	ppb
Bismuth	209-1				97		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Cadmium	108-1	0.04	-0.03	-0.02	0.00		ppb
Cadmium	106-1	-3.72	-3.58	-3.47	-3.59		ppb
Cadmium	111-1	-0.25	-0.24	-0.24	-0.24		ppb
Calcium	43-1	2.46	-2.60	-0.31	-0.15		ppb
Calcium	44-1	-0.25	-4.07	-4.10	-2.81		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.08	0.06	0.04	0.06	29.19	ppb
Cobalt	59-2	0.01	0.01	0.01	0.01	39.46	ppb
Copper	63-2	-0.12	-0.09	-0.14	-0.12		ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				96		%
Holmium	165-2				98		%
Indium	115-1				97		%
Indium	115-2				98		%
Iron	54-2	4.35	3.63	2.75	3.57	22.40	ppb
Iron	56-2	3.82	3.24	3.26	3.44	9.56	ppb
Iron	57-2	3.32	3.31	3.38	3.34	1.06	ppb
Krypton	83-1						cps
Lead	206-1	0.17	0.15	0.14	0.15	11.00	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB003 Instrumnet Name : P8
Client Sample ID : CCB003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:30:00 DataFile Name : 055CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	207-1	0.18	0.14	0.15	0.16	11.18	ppb
Lead	208-1	0.17	0.14	0.14	0.15	11.62	ppb
Lithium	6-1				94		%
Magnesium	24-2	5.08	4.65	4.34	4.69	7.91	ppb
Manganese	55-2	0.02	0.06	0.01	0.03	78.61	ppb
Molybdenum	94-1	0.53	0.30	0.30	0.38	35.40	ppb
Molybdenum	95-1	0.59	0.35	0.31	0.42	36.59	ppb
Molybdenum	96-1	0.57	0.33	0.30	0.40	36.52	ppb
Molybdenum	97-1	0.58	0.33	0.29	0.40	38.58	ppb
Molybdenum	98-1	0.57	0.34	0.29	0.40	37.69	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.06	0.03	0.06	0.05	32.76	ppb
Phosphorus	31-2	-20.01	-32.31	-41.62	-31.32		ppb
Potassium	39-2	33.42	29.50	22.91	28.61	18.56	ppb
Rhodium	103-1				95		%
Rhodium	103-2				100		%
Scandium	45-1				98		%
Scandium	45-2				97		%
Selenium	82-1	0.13	0.07	0.17	0.12	43.13	ppb
Selenium	77-2	-0.17	-0.17	-0.17	-0.17		ppb
Selenium	78-2	0.74	0.25	-0.06	0.31	129.40	ppb
Silicon	28-1	4.03	0.16	-0.03	1.38	165.41	ppb
Silver	107-1	0.07	0.06	0.05	0.06	11.44	ppb
Silver	109-1	0.07	0.05	0.05	0.06	18.42	ppb
Sodium	23-2	106.42	98.35	84.56	96.45	11.46	ppb
Strontium	86-1	0.41	0.17	0.08	0.22	77.40	ppb
Strontium	88-1	0.39	0.18	0.18	0.25	48.36	ppb
Sulfur	34-1	-196.56	-482.93	-461.59	-380.36		ppb
Terbium	159-1				97		%
Terbium	159-2				97		%
Thallium	203-1	0.07	0.06	0.06	0.06	11.23	ppb
Thallium	205-1	0.07	0.06	0.06	0.06	8.29	ppb
Tin	118-1	0.14	0.03	0.02	0.06	103.57	ppb
Titanium	47-1	0.26	0.18	0.18	0.21	20.78	ppb
Uranium	238-1	0.01	0.01	0.01	0.01	24.71	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB003 Instrumnet Name : P8
Client Sample ID : CCB003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:30:00 DataFile Name : 055CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Vanadium	51-2	0.01	0.01	0.01	0.01	30.80	ppb
Ytterbium	172-1						cps
Ytterbium	172-2						cps
Ytterbium	176-1						cps
Ytterbium	176-2						cps
Yttrium	89-1				98		%
Yttrium	89-2				99		%
Zinc	66-2	-0.03	-0.12	-0.04	-0.06		ppb
Zirconium	90-1	0.02	0.01	0.01	0.02	21.37	ppb
Zirconium	91-1	0.02	0.02	0.01	0.02	36.21	ppb

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P8
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:14:39 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	813	807	850	823	2.83	cps
Antimony	121-1	27	43	67	46	44.10	cps
Arsenic	75-2	7	10	0	6	91.64	cps
Barium	135-1	123	137	93	118	18.85	cps
Barium	137-1	193	213	187	198	7.02	cps
Beryllium	9-1	235	232	217	228	4.14	cps
Bismuth	209-1	20953015	21400410	23395680	21916368	5.93	cps
Bismuth	209-2	8160337	8416270	9663015	8746540	9.19	cps
Bromine	81-1	12299	12386	12429	12371	0.54	cps
Cadmium	108-1	50	40	47	46	11.18	cps
Cadmium	106-1	15556	15649	17959	16388	8.31	cps
Cadmium	111-1	10871	10946	12568	11462	8.37	cps
Calcium	43-1	1990	2034	1977	2000	1.48	cps
Calcium	44-1	45080	45405	45615	45367	0.59	cps
Carbon	12-1	5619991	5534134	5631802	5595309	0.95	cps
Carbon	12-2	38992	38641	38687	38773	0.49	cps
Chlorine	35-1	107039	108049	106965	107351	0.56	cps
Chlorine	35-2	457	523	457	479	8.04	cps
Chromium	52-2	1417	1397	1280	1365	5.41	cps
Cobalt	59-2	130	100	137	122	15.98	cps
Copper	63-2	5578	5808	5791	5726	2.24	cps
Dysprosium	156-1	37	27	30	31	16.37	cps
Dysprosium	156-2	10	13	3	9	57.30	cps
Erbium	164-1	157	143	220	173	23.63	cps
Erbium	164-2	57	40	57	51	18.83	cps
Gadolinium	160-1	337	317	430	361	16.75	cps
Gadolinium	160-2	63	40	57	53	22.53	cps
Holmium	165-1	33565178	34579610	39449873	35864887	8.77	cps
Holmium	165-2	11349159	11477870	13213351	12013460	8.67	cps
Indium	115-1	26871568	27366356	30328532	28188819	6.63	cps
Indium	115-2	2829197	2982863	3354994	3055685	8.85	cps
Iron	54-2	523	727	607	619	16.52	cps
Iron	56-2	7032	6341	6592	6655	5.25	cps
Iron	57-2	183	163	147	164	11.16	cps
Krypton	83-1	363	383	310	352	10.76	cps
Lead	206-1	1240	1130	1057	1142	8.08	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P8
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:14:39 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	950	940	937	942	0.74	cps
Lead	208-1	4700	4364	4284	4449	4.97	cps
Lithium	6-1	11706962	11604673	12475198	11928945	3.99	cps
Magnesium	24-2	673	540	597	603	11.09	cps
Manganese	55-2	540	533	417	497	13.97	cps
Molybdenum	94-1	697	620	723	680	7.89	cps
Molybdenum	95-1	243	213	283	247	14.24	cps
Molybdenum	96-1	280	363	307	317	13.44	cps
Molybdenum	97-1	150	137	157	148	6.89	cps
Molybdenum	98-1	350	350	270	323	14.28	cps
Neodymium	150-1	27	23	23	24	7.89	cps
Neodymium	150-2	7	10	3	7	50.03	cps
Nickel	60-2	593	623	660	626	5.34	cps
Phosphorus	31-2	363	457	383	401	12.25	cps
Potassium	39-2	16122	16583	16129	16278	1.62	cps
Rhodium	103-1	25606183	25611883	28860810	26692958	7.03	cps
Rhodium	103-2	9323919	9980590	11101172	10135227	8.87	cps
Scandium	45-1	18380124	18537944	20802753	19240274	7.04	cps
Scandium	45-2	399984	413301	465993	426426	8.19	cps
Selenium	82-1	29	-48	2	-5	-708.07	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	0	17	7	8	107.84	cps
Silicon	28-1	1002372	983143	973140	986218	1.51	cps
Silver	107-1	270	237	275	261	7.95	cps
Silver	109-1	77	113	97	96	19.21	cps
Sodium	23-2	47721	47183	47828	47577	0.73	cps
Strontium	86-1	660	693	673	676	2.48	cps
Strontium	88-1	1083	1120	1003	1069	5.58	cps
Sulfur	34-1	704033	712202	701069	705768	0.82	cps
Terbium	159-1	34368458	35411797	39464570	36414942	7.39	cps
Terbium	159-2	11146532	11635503	13384682	12055572	9.76	cps
Thallium	203-1	140	190	197	176	17.64	cps
Thallium	205-1	387	387	363	379	3.56	cps
Tin	118-1	3807	3761	3694	3754	1.52	cps
Titanium	47-1	293	247	397	312	24.59	cps
Uranium	238-1	120	137	147	134	10.02	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P8
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:14:39 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	23	13	23	20	28.87	cps
Ytterbium	172-1	220	200	187	202	8.30	cps
Ytterbium	172-2	90	77	70	79	12.91	cps
Ytterbium	176-1	5231	5341	6212	5595	9.60	cps
Ytterbium	176-2	1223	1223	1527	1325	13.22	cps
Yttrium	89-1	41971735	42009891	46191428	43391018	5.59	cps
Yttrium	89-2	3178107	3339444	3713188	3410246	8.05	cps
Zinc	66-2	807	750	870	809	7.42	cps
Zirconium	90-1	1803	2027	2017	1949	6.47	cps
Zirconium	91-1	367	263	407	346	21.40	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P8
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:21:17 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2410	2314	2307	2344	2.47	cps
Antimony	121-1	46465	47880	47281	47209	1.50	cps
Arsenic	75-2	493	500	440	478	6.88	cps
Barium	135-1	62165	61194	61673	61678	0.79	cps
Barium	137-1	105447	105209	104726	105127	0.35	cps
Beryllium	9-1	7914	7829	7990	7911	1.02	cps
Bismuth	209-1	23046985	22300851	22429610	22592482	1.77	cps
Bismuth	209-2	8784991	8826858	8709319	8773723	0.68	cps
Bromine	81-1	11612	11525	11211	11449	1.84	cps
Cadmium	108-1	567	490	540	532	7.31	cps
Cadmium	106-1	17464	17474	17117	17352	1.17	cps
Cadmium	111-1	18160	18064	17932	18052	0.63	cps
Calcium	43-1	45973	45264	45040	45426	1.07	cps
Calcium	44-1	752274	752687	746362	750441	0.47	cps
Carbon	12-1	6074309	6181830	6207145	6154428	1.15	cps
Carbon	12-2	42765	42501	41716	42327	1.29	cps
Chlorine	35-1	107513	108247	107811	107857	0.34	cps
Chlorine	35-2	450	417	377	414	8.86	cps
Chromium	52-2	13280	13166	13263	13236	0.46	cps
Cobalt	59-2	11968	11595	11868	11811	1.64	cps
Copper	63-2	25463	25483	25944	25630	1.06	cps
Dysprosium	156-1	47	20	10	26	74.17	cps
Dysprosium	156-2	13	20	7	13	49.99	cps
Erbium	164-1	163	193	150	169	13.14	cps
Erbium	164-2	67	67	53	62	12.38	cps
Gadolinium	160-1	367	277	340	328	14.10	cps
Gadolinium	160-2	70	63	77	70	9.53	cps
Holmium	165-1	37048931	36757384	36162784	36656366	1.23	cps
Holmium	165-2	12011237	11948692	11817840	11925923	0.83	cps
Indium	115-1	29839399	28872282	28736691	29149457	2.06	cps
Indium	115-2	3029545	3051116	3008703	3029788	0.70	cps
Iron	54-2	13890	13240	12943	13357	3.63	cps
Iron	56-2	239563	240816	239985	240121	0.27	cps
Iron	57-2	5918	5708	5865	5830	1.87	cps
Krypton	83-1	360	323	330	338	5.78	cps
Lead	206-1	20833	20727	21027	20862	0.73	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P8
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:21:17 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	18477	18590	18500	18522	0.32	cps
Lead	208-1	84365	83652	84629	84215	0.60	cps
Lithium	6-1	12654090	12228249	12133659	12338666	2.25	cps
Magnesium	24-2	201056	199225	197688	199323	0.85	cps
Manganese	55-2	3067	2914	2870	2950	3.50	cps
Molybdenum	94-1	53352	52612	54228	53397	1.52	cps
Molybdenum	95-1	65289	64944	64278	64837	0.79	cps
Molybdenum	96-1	71580	71268	70672	71173	0.65	cps
Molybdenum	97-1	39971	40653	39322	39982	1.66	cps
Molybdenum	98-1	102851	103946	103630	103476	0.54	cps
Neodymium	150-1	37	30	50	39	26.18	cps
Neodymium	150-2	0	7	10	6	91.64	cps
Nickel	60-2	3494	3594	3647	3578	2.18	cps
Phosphorus	31-2	553	550	520	541	3.39	cps
Potassium	39-2	140459	138392	137968	138940	0.96	cps
Rhodium	103-1	27698115	27285346	26773638	27252367	1.70	cps
Rhodium	103-2	10169217	10190518	10062835	10140857	0.67	cps
Scandium	45-1	20627376	19812184	19519307	19986289	2.87	cps
Scandium	45-2	425961	422648	418949	422519	0.83	cps
Selenium	82-1	1916	2025	1910	1950	3.32	cps
Selenium	77-2	63	43	37	48	29.04	cps
Selenium	78-2	137	130	173	147	15.91	cps
Silicon	28-1	1069249	1057702	1069821	1065591	0.64	cps
Silver	107-1	30815	31241	31709	31255	1.43	cps
Silver	109-1	30283	30016	30811	30370	1.33	cps
Sodium	23-2	433551	431690	432962	432734	0.22	cps
Strontium	86-1	9320	9106	9143	9190	1.24	cps
Strontium	88-1	75312	75808	75543	75554	0.33	cps
Sulfur	34-1	705966	709768	708656	708130	0.28	cps
Terbium	159-1	37580861	37007982	37341166	37310003	0.77	cps
Terbium	159-2	12136261	12085567	11957408	12059745	0.76	cps
Thallium	203-1	25191	24944	25348	25161	0.81	cps
Thallium	205-1	60229	59804	60316	60116	0.46	cps
Tin	118-1	106154	107182	106296	106544	0.52	cps
Titanium	47-1	20822	20565	20525	20637	0.78	cps
Uranium	238-1	80526	80905	81358	80930	0.51	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P8
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:21:17 DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	22822	22812	22618	22750	0.50	cps
Ytterbium	172-1	200	170	227	199	14.25	cps
Ytterbium	172-2	73	60	77	70	12.60	cps
Ytterbium	176-1	5941	5885	5615	5814	3.00	cps
Ytterbium	176-2	1180	1233	1227	1213	2.40	cps
Yttrium	89-1	45292928	44575328	43967251	44611835	1.49	cps
Yttrium	89-2	3370106	3354059	3419962	3381376	1.02	cps
Zinc	66-2	5128	5668	5341	5379	5.06	cps
Zirconium	90-1	45674	45678	46159	45837	0.61	cps
Zirconium	91-1	10234	10227	9977	10146	1.44	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P8
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:24:34 DataFile Name : 007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	109673	112624	110597	110965	1.36	cps
Antimony	121-1	1115929	1136245	1129179	1127118	0.92	cps
Arsenic	75-2	23583	23750	22769	23367	2.25	cps
Barium	135-1	1484526	1506336	1480623	1490495	0.93	cps
Barium	137-1	2645962	2692624	2592016	2643534	1.90	cps
Beryllium	9-1	357282	357317	353336	355978	0.64	cps
Bismuth	209-1	23099834	22405863	23017903	22841200	1.66	cps
Bismuth	209-2	8769734	8383785	8243401	8465640	3.22	cps
Bromine	81-1	10931	10968	11255	11051	1.60	cps
Cadmium	108-1	24161	24322	24585	24356	0.88	cps
Cadmium	106-1	49967	50462	51251	50560	1.28	cps
Cadmium	111-1	308124	307843	311448	309138	0.65	cps
Calcium	43-1	416130	418974	414788	416630	0.51	cps
Calcium	44-1	6850594	6839564	6919958	6870039	0.63	cps
Carbon	12-1	6019136	6134677	6056609	6070140	0.97	cps
Carbon	12-2	41933	41341	41759	41678	0.73	cps
Chlorine	35-1	107405	106612	107280	107099	0.40	cps
Chlorine	35-2	447	453	413	438	4.90	cps
Chromium	52-2	281326	281925	280644	281298	0.23	cps
Cobalt	59-2	529120	525282	524422	526274	0.48	cps
Copper	63-2	4449727	4537283	4477494	4488168	1.00	cps
Dysprosium	156-1	67	47	47	53	21.65	cps
Dysprosium	156-2	3	17	7	9	78.08	cps
Erbium	164-1	203	180	207	197	7.39	cps
Erbium	164-2	50	67	80	66	22.93	cps
Gadolinium	160-1	357	390	353	367	5.53	cps
Gadolinium	160-2	80	93	63	79	19.05	cps
Holmium	165-1	36877775	36671087	38806841	37451901	3.15	cps
Holmium	165-2	11848909	11666945	11221853	11579236	2.79	cps
Indium	115-1	29100130	28152918	29609601	28954216	2.55	cps
Indium	115-2	3040182	2891944	2806613	2912913	4.06	cps
Iron	54-2	606820	604871	602115	604602	0.39	cps
Iron	56-2	11297960	11297339	11110007	11235102	0.96	cps
Iron	57-2	273879	274210	270633	272908	0.72	cps
Krypton	83-1	340	300	310	317	6.57	cps
Lead	206-1	5202085	5024853	5096678	5107872	1.75	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P8
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:24:34 DataFile Name : 007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	4463298	4341103	4432039	4412147	1.44	cps
Lead	208-1	20341472	20073743	19966487	20127234	0.96	cps
Lithium	6-1	12418190	12059634	12589393	12355739	2.19	cps
Magnesium	24-2	1943091	1948253	1924179	1938508	0.65	cps
Manganese	55-2	1225414	1227081	1214944	1222480	0.54	cps
Molybdenum	94-1	4600485	4506263	4461085	4522611	1.57	cps
Molybdenum	95-1	6608474	6564126	6532734	6568445	0.58	cps
Molybdenum	96-1	7036793	7139207	7069577	7081859	0.74	cps
Molybdenum	97-1	4048224	4041983	3978795	4023001	0.95	cps
Molybdenum	98-1	10615742	10349776	10340721	10435413	1.50	cps
Neodymium	150-1	197	123	223	181	28.59	cps
Neodymium	150-2	7	20	0	9	114.55	cps
Nickel	60-2	146340	147866	144954	146387	1.00	cps
Phosphorus	31-2	5821	5881	5708	5803	1.52	cps
Potassium	39-2	608459	611664	611905	610676	0.32	cps
Rhodium	103-1	27183817	26573710	28204335	27320620	3.02	cps
Rhodium	103-2	10096336	9688153	9382921	9722470	3.68	cps
Scandium	45-1	19494255	19355719	20410890	19753621	2.90	cps
Scandium	45-2	418231	402951	383550	401577	4.33	cps
Selenium	82-1	22456	22079	21816	22117	1.45	cps
Selenium	77-2	320	370	340	343	7.33	cps
Selenium	78-2	1153	1107	1270	1177	7.15	cps
Silicon	28-1	7725238	7855360	7646960	7742519	1.36	cps
Silver	107-1	1503251	1618802	1597021	1573025	3.90	cps
Silver	109-1	1493525	1506427	1497623	1499191	0.44	cps
Sodium	23-2	3934342	3891625	3842282	3889416	1.18	cps
Strontium	86-1	413032	413094	413918	413348	0.12	cps
Strontium	88-1	3618681	3740100	3638572	3665784	1.78	cps
Sulfur	34-1	830733	832201	830482	831138	0.11	cps
Terbium	159-1	37528565	37382164	38614809	37841846	1.78	cps
Terbium	159-2	11845708	11551139	11263506	11553451	2.52	cps
Thallium	203-1	1197742	1221600	1215656	1211666	1.02	cps
Thallium	205-1	3049668	3037996	2983973	3023879	1.16	cps
Tin	118-1	1006669	1020079	1004562	1010437	0.83	cps
Titanium	47-1	1976369	1997002	1977682	1983684	0.58	cps
Uranium	238-1	4244597	4150382	4156043	4183674	1.26	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P8
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:24:34 DataFile Name : 007CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	217301	216777	213681	215920	0.91	cps
Ytterbium	172-1	190	207	213	203	5.91	cps
Ytterbium	172-2	67	60	60	62	6.19	cps
Ytterbium	176-1	11455	11378	11482	11438	0.47	cps
Ytterbium	176-2	2984	2880	3007	2957	2.28	cps
Yttrium	89-1	45016124	43765068	45961233	44914142	2.45	cps
Yttrium	89-2	3389050	3225632	3178423	3264369	3.39	cps
Zinc	66-2	406505	407673	406661	406946	0.16	cps
Zirconium	90-1	2320863	2316907	2279534	2305768	0.99	cps
Zirconium	91-1	483766	485984	485339	485029	0.24	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P8
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:27:36 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	277664	277276	275897	276946	0.34	cps
Antimony	121-1	3009948	2976505	2979508	2988653	0.62	cps
Arsenic	75-2	58210	57500	57861	57857	0.61	cps
Barium	135-1	3923137	3960730	3920663	3934844	0.57	cps
Barium	137-1	6651282	6679454	6630056	6653597	0.37	cps
Beryllium	9-1	877846	887462	877661	880990	0.64	cps
Bismuth	209-1	22137086	22235181	22129522	22167263	0.27	cps
Bismuth	209-2	8509938	8348600	8013053	8290531	3.06	cps
Bromine	81-1	11298	10738	11108	11048	2.58	cps
Cadmium	108-1	59846	62025	61001	60957	1.79	cps
Cadmium	106-1	102064	101201	102124	101797	0.51	cps
Cadmium	111-1	754236	755386	765988	758537	0.85	cps
Calcium	43-1	1047940	1050307	1031589	1043279	0.98	cps
Calcium	44-1	17111732	17168500	16950198	17076810	0.66	cps
Carbon	12-1	6126161	6142523	6194343	6154342	0.58	cps
Carbon	12-2	43484	43307	43661	43484	0.41	cps
Chlorine	35-1	112976	112842	114377	113398	0.75	cps
Chlorine	35-2	567	483	513	521	8.10	cps
Chromium	52-2	692528	693942	692838	693103	0.11	cps
Cobalt	59-2	1307356	1297316	1301620	1302097	0.39	cps
Copper	63-2	11253393	10886629	11125683	11088568	1.68	cps
Dysprosium	156-1	123	127	93	114	16.05	cps
Dysprosium	156-2	13	30	13	19	50.96	cps
Erbium	164-1	247	167	223	212	19.39	cps
Erbium	164-2	80	93	47	73	32.77	cps
Gadolinium	160-1	420	447	330	399	15.33	cps
Gadolinium	160-2	83	63	80	76	14.18	cps
Holmium	165-1	36480040	37174038	36845306	36833128	0.94	cps
Holmium	165-2	12120534	11360741	11289016	11590097	3.98	cps
Indium	115-1	28177531	28486593	28528702	28397609	0.68	cps
Indium	115-2	2950293	2893667	2782543	2875501	2.97	cps
Iron	54-2	1550486	1525852	1565643	1547327	1.30	cps
Iron	56-2	27974131	28101161	27406817	27827370	1.33	cps
Iron	57-2	671806	675635	668466	671969	0.53	cps
Krypton	83-1	353	413	343	370	10.23	cps
Lead	206-1	12588887	13014015	12679342	12760748	1.75	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P8
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:27:36 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	10827995	11149745	11016773	10998171	1.47	cps
Lead	208-1	49916433	50871185	50538000	50441873	0.96	cps
Lithium	6-1	12185524	12314586	12047333	12182481	1.10	cps
Magnesium	24-2	4790476	4744431	4738810	4757906	0.60	cps
Manganese	55-2	3198459	3128186	3122514	3149720	1.34	cps
Molybdenum	94-1	11372667	11478405	11190774	11347282	1.28	cps
Molybdenum	95-1	16263482	16396574	16476567	16378874	0.66	cps
Molybdenum	96-1	17650904	18038486	17924590	17871327	1.11	cps
Molybdenum	97-1	10160060	10016717	10106900	10094559	0.72	cps
Molybdenum	98-1	26532955	26490945	26338045	26453982	0.39	cps
Neodymium	150-1	307	350	383	347	11.09	cps
Neodymium	150-2	33	20	23	26	27.15	cps
Nickel	60-2	363296	358677	358352	360108	0.77	cps
Phosphorus	31-2	13543	13743	13310	13532	1.60	cps
Potassium	39-2	1531528	1522116	1512074	1521906	0.64	cps
Rhodium	103-1	26808170	26384121	26556225	26582839	0.80	cps
Rhodium	103-2	10059142	9539747	9196131	9598340	4.53	cps
Scandium	45-1	19629634	19376827	19238880	19415114	1.02	cps
Scandium	45-2	409088	391836	384674	395199	3.18	cps
Selenium	82-1	54825	55530	55124	55160	0.64	cps
Selenium	77-2	820	937	857	871	6.85	cps
Selenium	78-2	2927	2977	2970	2958	0.92	cps
Silicon	28-1	18050835	17830693	17635538	17839022	1.16	cps
Silver	107-1	4036637	4016155	3983668	4012153	0.67	cps
Silver	109-1	3909772	3883188	3823754	3872238	1.14	cps
Sodium	23-2	9733480	9577109	9612306	9640965	0.85	cps
Strontium	86-1	1037143	1041909	1028600	1035884	0.65	cps
Strontium	88-1	9356692	9268564	9305561	9310272	0.48	cps
Sulfur	34-1	1008316	1014998	991797	1005037	1.19	cps
Terbium	159-1	37260476	38167611	37041802	37489963	1.59	cps
Terbium	159-2	11833809	11379895	11558366	11590690	1.97	cps
Thallium	203-1	3148712	3255648	3174044	3192802	1.75	cps
Thallium	205-1	7519237	7571101	7447996	7512778	0.82	cps
Tin	118-1	2644676	2628437	2605756	2626290	0.74	cps
Titanium	47-1	4966805	4969444	4858965	4931738	1.28	cps
Uranium	238-1	10495414	10562674	10500770	10519619	0.36	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P8
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:27:36 DataFile Name : 008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	540592	541155	537309	539685	0.38	cps
Ytterbium	172-1	220	220	253	231	8.33	cps
Ytterbium	172-2	87	80	103	90	13.35	cps
Ytterbium	176-1	19822	19438	19865	19708	1.19	cps
Ytterbium	176-2	5981	5991	6245	6073	2.46	cps
Yttrium	89-1	44364048	44708024	44067393	44379822	0.72	cps
Yttrium	89-2	3337879	3159297	3087351	3194842	4.04	cps
Zinc	66-2	1005043	1009239	1002611	1005631	0.33	cps
Zirconium	90-1	5680230	5760008	5654066	5698101	0.97	cps
Zirconium	91-1	1215519	1219941	1222213	1219224	0.28	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P8
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:30:28 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	536044	533351	530087	533161	0.56	cps
Antimony	121-1	5807008	5929215	5822007	5852743	1.14	cps
Arsenic	75-2	113082	114286	111896	113088	1.06	cps
Barium	135-1	7651840	7856493	7789805	7766046	1.34	cps
Barium	137-1	12990634	12795298	13132291	12972741	1.30	cps
Beryllium	9-1	1769565	1791553	1809701	1790273	1.12	cps
Bismuth	209-1	22672393	22735464	22802659	22736839	0.29	cps
Bismuth	209-2	8429023	8358574	8572877	8453491	1.29	cps
Bromine	81-1	10831	11064	11331	11076	2.26	cps
Cadmium	108-1	119970	119099	119224	119431	0.39	cps
Cadmium	106-1	181552	183227	183973	182917	0.68	cps
Cadmium	111-1	1461683	1475836	1480796	1472772	0.67	cps
Calcium	43-1	2085222	2087611	2131862	2101565	1.25	cps
Calcium	44-1	33571433	33921421	33710569	33734474	0.52	cps
Carbon	12-1	6087301	6101152	6127111	6105188	0.33	cps
Carbon	12-2	43735	44143	43865	43914	0.47	cps
Chlorine	35-1	116040	116326	117002	116456	0.42	cps
Chlorine	35-2	520	513	520	518	0.74	cps
Chromium	52-2	1443089	1385291	1415465	1414615	2.04	cps
Cobalt	59-2	2613816	2617500	2600800	2610705	0.34	cps
Copper	63-2	21376054	20974835	20975078	21108655	1.10	cps
Dysprosium	156-1	200	167	203	190	10.67	cps
Dysprosium	156-2	33	23	37	31	22.31	cps
Erbium	164-1	237	370	273	293	23.48	cps
Erbium	164-2	80	113	113	102	18.83	cps
Gadolinium	160-1	377	390	357	374	4.48	cps
Gadolinium	160-2	83	107	100	97	12.44	cps
Holmium	165-1	37566414	37950135	36935463	37484004	1.37	cps
Holmium	165-2	11958390	11873291	12152102	11994594	1.19	cps
Indium	115-1	28736237	28694186	28570464	28666962	0.30	cps
Indium	115-2	2975295	2913520	2875456	2921424	1.72	cps
Iron	54-2	3009670	3006072	2968038	2994594	0.77	cps
Iron	56-2	53854861	53978388	54073901	53969050	0.20	cps
Iron	57-2	1309842	1303949	1301285	1305026	0.34	cps
Krypton	83-1	327	293	357	326	9.73	cps
Lead	206-1	25524447	25277534	25541975	25447985	0.58	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P8
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:30:28 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	22074122	22129073	22095306	22099500	0.13	cps
Lead	208-1	101134727	101897409	101782303	101604813	0.40	cps
Lithium	6-1	12151292	12351218	12101148	12201219	1.08	cps
Magnesium	24-2	9317704	9283816	9178764	9260095	0.78	cps
Manganese	55-2	6004002	6044921	6065538	6038154	0.52	cps
Molybdenum	94-1	22397319	22806185	22194754	22466086	1.39	cps
Molybdenum	95-1	32736692	32624036	32296703	32552477	0.70	cps
Molybdenum	96-1	36405898	35076878	35359778	35614184	1.97	cps
Molybdenum	97-1	19869143	19880260	19867746	19872383	0.03	cps
Molybdenum	98-1	51965396	52267356	51958289	52063680	0.34	cps
Neodymium	150-1	717	627	693	679	6.88	cps
Neodymium	150-2	33	37	60	43	33.53	cps
Nickel	60-2	692623	687808	690925	690452	0.35	cps
Phosphorus	31-2	25633	25098	25933	25555	1.65	cps
Potassium	39-2	2978369	2971813	2932837	2961007	0.83	cps
Rhodium	103-1	26284138	26696683	26177084	26385968	1.04	cps
Rhodium	103-2	9842755	9623025	9678281	9714687	1.18	cps
Scandium	45-1	19595642	19738881	19559826	19631449	0.48	cps
Scandium	45-2	403666	403674	402191	403177	0.21	cps
Selenium	82-1	108231	108336	108844	108470	0.30	cps
Selenium	77-2	1767	1690	1687	1715	2.64	cps
Selenium	78-2	5655	5915	5701	5757	2.41	cps
Silicon	28-1	33897191	34019051	33257535	33724592	1.21	cps
Silver	107-1	7643671	7729279	7689282	7687411	0.56	cps
Silver	109-1	7526528	7563929	7524197	7538218	0.30	cps
Sodium	23-2	18830229	18898183	18411355	18713256	1.41	cps
Strontium	86-1	2179491	2117599	2148969	2148686	1.44	cps
Strontium	88-1	18407482	17998635	18179912	18195343	1.13	cps
Sulfur	34-1	1253966	1239154	1226154	1239758	1.12	cps
Terbium	159-1	37768516	38563673	38031414	38121201	1.06	cps
Terbium	159-2	11787294	11929962	11813791	11843682	0.64	cps
Thallium	203-1	6283058	6314879	6316033	6304657	0.30	cps
Thallium	205-1	15213577	15072401	15037228	15107735	0.62	cps
Tin	118-1	5171688	5175717	5131526	5159644	0.47	cps
Titanium	47-1	9704290	9665844	9698134	9689423	0.21	cps
Uranium	238-1	21301261	21357182	21565233	21407892	0.65	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P8
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:30:28 DataFile Name : 009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1052679	1046597	1046274	1048517	0.34	cps
Ytterbium	172-1	320	310	240	290	15.03	cps
Ytterbium	172-2	117	140	133	130	9.24	cps
Ytterbium	176-1	34314	34682	34191	34396	0.74	cps
Ytterbium	176-2	10798	11148	10901	10949	1.64	cps
Yttrium	89-1	44716083	44712811	44478041	44635645	0.31	cps
Yttrium	89-2	3336863	3209519	3258576	3268319	1.97	cps
Zinc	66-2	2005682	2016932	1982977	2001864	0.86	cps
Zirconium	90-1	11169046	11343301	11209586	11240644	0.81	cps
Zirconium	91-1	2556101	2526792	2525273	2536056	0.69	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P8
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:33:15 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1044647	1040061	1041810	1042173	0.22	cps
Antimony	121-1	11662850	11689381	11551146	11634459	0.63	cps
Arsenic	75-2	223684	223926	221898	223169	0.50	cps
Barium	135-1	15524557	15663257	15457134	15548316	0.68	cps
Barium	137-1	26114346	26694120	26304105	26370857	1.12	cps
Beryllium	9-1	3467120	3472445	3444284	3461283	0.43	cps
Bismuth	209-1	22146350	22184951	22379477	22236926	0.56	cps
Bismuth	209-2	8440574	8411677	8639403	8497218	1.46	cps
Bromine	81-1	11281	11425	10754	11153	3.17	cps
Cadmium	108-1	237822	237941	237554	237772	0.08	cps
Cadmium	106-1	350384	351644	348668	350232	0.43	cps
Cadmium	111-1	2951363	3016445	3031606	2999805	1.42	cps
Calcium	43-1	4126653	4055177	4184315	4122049	1.57	cps
Calcium	44-1	66260447	65709191	66285906	66085181	0.49	cps
Carbon	12-1	6536531	6444620	6464137	6481762	0.75	cps
Carbon	12-2	46329	46470	46456	46418	0.17	cps
Chlorine	35-1	138710	140295	142274	140427	1.27	cps
Chlorine	35-2	617	533	687	612	12.54	cps
Chromium	52-2	2748502	2772264	2746808	2755858	0.52	cps
Cobalt	59-2	5115787	5108106	5025663	5083185	0.98	cps
Copper	63-2	41161254	41967898	40934263	41354471	1.31	cps
Dysprosium	156-1	393	373	367	378	3.67	cps
Dysprosium	156-2	63	87	30	60	47.47	cps
Erbium	164-1	327	370	380	359	7.90	cps
Erbium	164-2	137	167	120	141	16.76	cps
Gadolinium	160-1	400	510	440	450	12.37	cps
Gadolinium	160-2	100	177	123	133	29.47	cps
Holmium	165-1	36465293	37115619	36716559	36765823	0.89	cps
Holmium	165-2	12180918	12196951	12295091	12224320	0.51	cps
Indium	115-1	27222005	27571934	27514019	27435986	0.68	cps
Indium	115-2	2915610	2878651	2913546	2902602	0.72	cps
Iron	54-2	5818710	5730883	5788251	5779281	0.77	cps
Iron	56-2	105983855	105710092	104762778	105485575	0.61	cps
Iron	57-2	2718408	2633134	2621564	2657702	1.99	cps
Krypton	83-1	310	303	330	314	4.41	cps
Lead	206-1	49778688	50158739	50121718	50019715	0.42	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P8
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:33:15 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	43292453	44036491	43267024	43531989	1.00	cps
Lead	208-1	199969272	201536339	200196214	200567275	0.42	cps
Lithium	6-1	11777461	12082254	11896319	11918678	1.29	cps
Magnesium	24-2	18320697	18222641	18011900	18185079	0.87	cps
Manganese	55-2	11710719	11989062	11847758	11849180	1.17	cps
Molybdenum	94-1	44583159	44218969	44301529	44367886	0.43	cps
Molybdenum	95-1	64497954	64168781	64665254	64443996	0.39	cps
Molybdenum	96-1	69630917	69985744	69719921	69778861	0.26	cps
Molybdenum	97-1	39207284	39485909	39147514	39280236	0.46	cps
Molybdenum	98-1	103414032	103465032	101747082	102875382	0.95	cps
Neodymium	150-1	1347	1403	1230	1327	6.66	cps
Neodymium	150-2	90	60	67	72	21.81	cps
Nickel	60-2	1337614	1334010	1331527	1334384	0.23	cps
Phosphorus	31-2	49671	50280	50307	50086	0.72	cps
Potassium	39-2	5691443	5824508	5767738	5761230	1.16	cps
Rhodium	103-1	24981544	25420573	25254499	25218872	0.88	cps
Rhodium	103-2	9475354	9670282	9555674	9567103	1.02	cps
Scandium	45-1	18936951	18965441	19045692	18982695	0.30	cps
Scandium	45-2	400782	400688	408491	403320	1.11	cps
Selenium	82-1	215019	216112	214338	215157	0.42	cps
Selenium	77-2	3237	3434	3567	3413	4.87	cps
Selenium	78-2	11418	11752	11441	11537	1.61	cps
Silicon	28-1	65393877	66411889	64737864	65514543	1.29	cps
Silver	107-1	15115090	15444621	15194196	15251302	1.13	cps
Silver	109-1	14570830	14611800	14592863	14591831	0.14	cps
Sodium	23-2	36863591	37106972	36968070	36979544	0.33	cps
Strontium	86-1	4205636	4264295	4295401	4255111	1.07	cps
Strontium	88-1	36647051	36444049	36691075	36594058	0.36	cps
Sulfur	34-1	1776618	1796682	1769192	1780831	0.80	cps
Terbium	159-1	37110396	37858574	37574277	37514416	1.01	cps
Terbium	159-2	12006861	11909888	12216427	12044392	1.30	cps
Thallium	203-1	12396674	12132021	12436430	12321709	1.34	cps
Thallium	205-1	29580209	29448565	29811654	29613476	0.62	cps
Tin	118-1	10148424	10270542	10220176	10213047	0.60	cps
Titanium	47-1	19084765	19239902	19098013	19140893	0.45	cps
Uranium	238-1	42926613	42737731	43437044	43033796	0.84	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P8
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:33:15 DataFile Name : 010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2143901	2118528	2141141	2134523	0.65	cps
Ytterbium	172-1	370	370	367	369	0.52	cps
Ytterbium	172-2	100	160	147	136	23.24	cps
Ytterbium	176-1	63157	62483	62886	62842	0.54	cps
Ytterbium	176-2	20880	20536	20857	20757	0.93	cps
Yttrium	89-1	43887366	44205568	43735843	43942925	0.55	cps
Yttrium	89-2	3334183	3307000	3349015	3330066	0.64	cps
Zinc	66-2	3922306	3974224	3909438	3935323	0.87	cps
Zirconium	90-1	22616585	22733896	22247828	22532770	1.13	cps
Zirconium	91-1	5030382	5096417	5054925	5060575	0.66	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P8
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:36:01 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2108513	2057992	2051321	2072609	1.51	cps
Antimony	121-1	22697964	23034107	22386949	22706340	1.43	cps
Arsenic	75-2	434090	434121	437779	435330	0.49	cps
Barium	135-1	30488345	30804914	30451269	30581509	0.64	cps
Barium	137-1	52088623	51443706	51812976	51781768	0.62	cps
Beryllium	9-1	6600968	6585710	6504928	6563869	0.79	cps
Bismuth	209-1	21194684	21562865	21162356	21306635	1.04	cps
Bismuth	209-2	8029020	8171178	8088883	8096360	0.88	cps
Bromine	81-1	11415	11038	11118	11190	1.77	cps
Cadmium	108-1	461410	454419	456429	457419	0.79	cps
Cadmium	106-1	657291	661273	654225	657596	0.54	cps
Cadmium	111-1	5773142	5775040	5814913	5787699	0.41	cps
Calcium	43-1	8052624	8103692	7954719	8037012	0.94	cps
Calcium	44-1	131349525	130616718	129715848	130560697	0.63	cps
Carbon	12-1	6644258	6760567	6954994	6786606	2.31	cps
Carbon	12-2	52369	52186	51968	52174	0.38	cps
Chlorine	35-1	179023	184233	189912	184389	2.95	cps
Chlorine	35-2	787	827	850	821	3.90	cps
Chromium	52-2	5362034	5308683	5289008	5319908	0.71	cps
Cobalt	59-2	9748577	9586829	9589405	9641604	0.96	cps
Copper	63-2	79088565	78665034	77864887	78539495	0.79	cps
Dysprosium	156-1	820	687	733	747	9.06	cps
Dysprosium	156-2	97	153	147	132	23.42	cps
Erbium	164-1	473	560	590	541	11.20	cps
Erbium	164-2	143	143	177	154	12.46	cps
Gadolinium	160-1	613	613	587	604	2.55	cps
Gadolinium	160-2	117	167	203	162	26.82	cps
Holmium	165-1	36315056	36597034	36914047	36608712	0.82	cps
Holmium	165-2	11812926	11811024	11905580	11843176	0.46	cps
Indium	115-1	26870921	26784230	26843922	26833024	0.17	cps
Indium	115-2	2766943	2750829	2753987	2757253	0.31	cps
Iron	54-2	11286650	11349327	11348567	11328181	0.32	cps
Iron	56-2	209861950	203289584	201950957	205034164	2.07	cps
Iron	57-2	5098295	5086789	5092292	5092458	0.11	cps
Krypton	83-1	377	410	427	404	6.29	cps
Lead	206-1	98187615	98061705	97961969	98070430	0.12	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P8
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:36:01 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	86196254	84410364	85626949	85411189	1.07	cps
Lead	208-1	393557306	390328473	391116101	391667293	0.43	cps
Lithium	6-1	11504344	11455631	11529458	11496478	0.33	cps
Magnesium	24-2	35785647	34881389	34958184	35208407	1.42	cps
Manganese	55-2	23401390	23029503	23083219	23171371	0.87	cps
Molybdenum	94-1	86855412	88188972	86795442	87279942	0.90	cps
Molybdenum	95-1	126385161	129010375	126809691	127401743	1.11	cps
Molybdenum	96-1	138217428	140393758	137364311	138658499	1.13	cps
Molybdenum	97-1	77613626	78442007	77579951	77878528	0.63	cps
Molybdenum	98-1	205955810	206176044	202821210	204984355	0.92	cps
Neodymium	150-1	2760	2494	2634	2629	5.07	cps
Neodymium	150-2	170	110	123	134	23.43	cps
Nickel	60-2	2715957	2698933	2679884	2698258	0.67	cps
Phosphorus	31-2	96786	95293	96756	96279	0.89	cps
Potassium	39-2	11328305	11107417	11150182	11195301	1.05	cps
Rhodium	103-1	23839653	24315943	24499310	24218302	1.41	cps
Rhodium	103-2	9165449	9208891	9175846	9183395	0.25	cps
Scandium	45-1	18478184	18539165	18916628	18644659	1.27	cps
Scandium	45-2	391893	390801	388034	390243	0.51	cps
Selenium	82-1	413266	415299	413253	413940	0.28	cps
Selenium	77-2	6395	6415	6655	6488	2.23	cps
Selenium	78-2	21847	22087	22291	22075	1.01	cps
Silicon	28-1	123587588	121449095	120123528	121720070	1.44	cps
Silver	107-1	28908415	28888759	28784465	28860547	0.23	cps
Silver	109-1	28314157	28086347	28147767	28182757	0.42	cps
Sodium	23-2	71920716	70850069	70761646	71177477	0.91	cps
Strontium	86-1	8250278	8223307	8241725	8238436	0.17	cps
Strontium	88-1	71589396	71641369	71035356	71422040	0.47	cps
Sulfur	34-1	2791587	2805043	2732841	2776490	1.38	cps
Terbium	159-1	37255764	36792006	37514424	37187398	0.98	cps
Terbium	159-2	11729921	11782258	11606615	11706265	0.77	cps
Thallium	203-1	24414625	24506413	24202982	24374674	0.64	cps
Thallium	205-1	58332131	58915731	57641637	58296500	1.09	cps
Tin	118-1	20340844	19982423	19427240	19916835	2.31	cps
Titanium	47-1	37650260	37933601	37350200	37644687	0.77	cps
Uranium	238-1	83889570	84853567	82918970	83887369	1.15	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P8
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:36:01 DataFile Name : 011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	4110654	4135002	4152630	4132762	0.51	cps
Ytterbium	172-1	520	610	537	556	8.62	cps
Ytterbium	172-2	230	277	200	236	16.40	cps
Ytterbium	176-1	118913	118560	119081	118851	0.22	cps
Ytterbium	176-2	39773	39121	38844	39246	1.22	cps
Yttrium	89-1	42973307	42994869	43073710	43013962	0.12	cps
Yttrium	89-2	3276004	3227297	3260756	3254686	0.77	cps
Zinc	66-2	7558026	7536223	7452844	7515698	0.74	cps
Zirconium	90-1	44336893	44394778	43938653	44223441	0.56	cps
Zirconium	91-1	9817726	9854872	9806125	9826241	0.26	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P8
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:38:48 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	9683300	9708964	9689931	9694065	0.14	cps
Antimony	121-1	8573	8369	8816	8586	2.61	cps
Arsenic	75-2	230	227	250	236	5.36	cps
Barium	135-1	9403	9026	9500	9310	2.69	cps
Barium	137-1	16126	16096	15903	16042	0.76	cps
Beryllium	9-1	1560	1295	1272	1376	11.62	cps
Bismuth	209-1	17475638	17666510	17692563	17611570	0.67	cps
Bismuth	209-2	6991866	6992201	6858380	6947482	1.11	cps
Bromine	81-1	11238	11368	11405	11337	0.77	cps
Cadmium	108-1	203	210	233	216	7.31	cps
Cadmium	106-1	14221	14174	14071	14155	0.54	cps
Cadmium	111-1	10536	10548	10403	10496	0.77	cps
Calcium	43-1	36727018	35741331	35905025	36124458	1.46	cps
Calcium	44-1	591480845	578034698	573094111	580869885	1.64	cps
Carbon	12-1	5011453	4876189	4823155	4903599	1.98	cps
Carbon	12-2	47857	47991	47807	47885	0.20	cps
Chlorine	35-1	96026	92694	91634	93451	2.45	cps
Chlorine	35-2	390	463	457	437	9.29	cps
Chromium	52-2	7329	9408	7265	8001	15.24	cps
Cobalt	59-2	18369	18505	18482	18452	0.40	cps
Copper	63-2	15539	15669	15172	15460	1.67	cps
Dysprosium	156-1	1007	1000	1153	1053	8.23	cps
Dysprosium	156-2	307	340	260	302	13.30	cps
Erbium	164-1	1010	1097	1030	1046	4.34	cps
Erbium	164-2	363	340	357	353	3.40	cps
Gadolinium	160-1	1107	1163	1120	1130	2.62	cps
Gadolinium	160-2	357	343	387	362	6.13	cps
Holmium	165-1	31466613	32336451	31776504	31859856	1.38	cps
Holmium	165-2	10929725	10995817	10771127	10898889	1.06	cps
Indium	115-1	23106163	22743431	23271247	23040280	1.17	cps
Indium	115-2	2555953	2553423	2531692	2547023	0.52	cps
Iron	54-2	49026998	49015331	49054114	49032148	0.04	cps
Iron	56-2	907981773	889492893	905347160	900940609	1.11	cps
Iron	57-2	22173378	22481614	22628941	22427978	1.04	cps
Krypton	83-1	430	477	467	458	5.37	cps
Lead	206-1	13464	13694	13811	13656	1.29	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P8
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:38:48 DataFile Name : 012CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	11899	11952	11922	11924	0.22	cps
Lead	208-1	53801	54502	55350	54551	1.42	cps
Lithium	6-1	9706879	9706723	9612979	9675527	0.56	cps
Magnesium	24-2	147596701	147434508	145973164	147001458	0.61	cps
Manganese	55-2	7392	6982	7135	7170	2.89	cps
Molybdenum	94-1	14161	12666	12292	13040	7.58	cps
Molybdenum	95-1	13757	11612	11949	12439	9.27	cps
Molybdenum	96-1	21280	18392	18005	19226	9.31	cps
Molybdenum	97-1	8086	6312	6281	6893	14.99	cps
Molybdenum	98-1	18816	15812	14875	16501	12.48	cps
Neodymium	150-1	437	493	480	470	6.30	cps
Neodymium	150-2	93	110	100	101	8.30	cps
Nickel	60-2	6361	6678	6618	6553	2.57	cps
Phosphorus	31-2	323	333	337	331	2.10	cps
Potassium	39-2	51986244	52019551	51606033	51870609	0.44	cps
Rhodium	103-1	20100896	20163253	20062575	20108908	0.25	cps
Rhodium	103-2	7677466	7679741	7587518	7648241	0.69	cps
Scandium	45-1	15865777	15896738	15976357	15912957	0.36	cps
Scandium	45-2	353941	353118	345613	350891	1.31	cps
Selenium	82-1	106	93	6	68	79.46	cps
Selenium	77-2	3	10	13	9	57.30	cps
Selenium	78-2	23	23	17	21	18.21	cps
Silicon	28-1	1078912	1031469	997193	1035858	3.96	cps
Silver	107-1	3821	3471	3313	3535	7.36	cps
Silver	109-1	3404	3234	3054	3230	5.42	cps
Sodium	23-2	319435415	314479055	317746875	317220449	0.79	cps
Strontium	86-1	21527	20836	20762	21041	2.00	cps
Strontium	88-1	180949	179377	179153	179826	0.54	cps
Sulfur	34-1	560526	532715	517375	536872	4.07	cps
Terbium	159-1	32611370	32331311	32414975	32452552	0.44	cps
Terbium	159-2	10806324	10752674	10559075	10706024	1.21	cps
Thallium	203-1	1577	1147	1140	1288	19.43	cps
Thallium	205-1	3447	2877	2734	3019	12.50	cps
Tin	118-1	6198	6181	6231	6204	0.41	cps
Titanium	47-1	3594	3354	3934	3627	8.04	cps
Uranium	238-1	1397	1343	1453	1398	3.94	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P8
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 11:38:48 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	520	547	517	528	3.12	cps
Ytterbium	172-1	1107	1333	1117	1186	10.80	cps
Ytterbium	172-2	493	507	483	494	2.37	cps
Ytterbium	176-1	5535	5858	5741	5711	2.87	cps
Ytterbium	176-2	1247	1327	1247	1273	3.63	cps
Yttrium	89-1	37567847	37024386	37164285	37252173	0.76	cps
Yttrium	89-2	2995513	2913613	2896884	2935337	1.80	cps
Zinc	66-2	3714	3697	3567	3659	2.19	cps
Zirconium	90-1	19410	19524	19010	19315	1.40	cps
Zirconium	91-1	4304	4588	4207	4366	4.52	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P8
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:26:58 DataFile Name : 013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	59079	57898	58564	58514	1.01	cps
Antimony	121-1	4804196	4806008	4729205	4779803	0.92	cps
Arsenic	75-2	99891	99891	98797	99526	0.63	cps
Barium	135-1	610339	615000	622071	615803	0.96	cps
Barium	137-1	1053032	1051723	1053111	1052622	0.07	cps
Beryllium	9-1	782373	783319	785859	783850	0.23	cps
Bismuth	209-1	21957589	22266256	21521470	21915105	1.71	cps
Bismuth	209-2	8658917	8574493	8793881	8675763	1.28	cps
Bromine	81-1	11461	11048	11892	11467	3.68	cps
Cadmium	108-1	40362	40091	39590	40015	0.98	cps
Cadmium	106-1	70546	69890	70067	70167	0.48	cps
Cadmium	111-1	620729	621540	616367	619545	0.45	cps
Calcium	43-1	171190	168883	170120	170064	0.68	cps
Calcium	44-1	2804662	2828611	2817708	2816994	0.43	cps
Carbon	12-1	6113202	6050241	6284354	6149266	1.97	cps
Carbon	12-2	43641	42896	43213	43250	0.87	cps
Chlorine	35-1	88123	87831	88123	88025	0.19	cps
Chlorine	35-2	383	320	370	358	9.33	cps
Chromium	52-2	606685	602578	606343	605202	0.38	cps
Cobalt	59-2	1133185	1140489	1132178	1135284	0.40	cps
Copper	63-2	874262	871916	878129	874769	0.36	cps
Dysprosium	156-1	27	23	23	24	7.89	cps
Dysprosium	156-2	10	10	7	9	21.63	cps
Erbium	164-1	163	190	103	152	29.16	cps
Erbium	164-2	50	80	57	62	25.32	cps
Gadolinium	160-1	280	320	260	287	10.66	cps
Gadolinium	160-2	67	53	60	60	11.12	cps
Holmium	165-1	35232248	35605778	35210943	35349656	0.63	cps
Holmium	165-2	11922444	11864222	11774505	11853724	0.63	cps
Indium	115-1	28796467	28433167	27721406	28317013	1.93	cps
Indium	115-2	3142337	3004009	3044431	3063592	2.32	cps
Iron	54-2	517616	515157	516011	516261	0.24	cps
Iron	56-2	9184948	9206313	9267381	9219547	0.46	cps
Iron	57-2	226160	227748	224799	226236	0.65	cps
Krypton	83-1	287	350	300	312	10.69	cps
Lead	206-1	4141094	4293754	4228264	4221037	1.81	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P8
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:26:58 DataFile Name : 013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3491455	3579123	3518026	3529534	1.27	cps
Lead	208-1	16380346	16434090	16404146	16406194	0.16	cps
Lithium	6-1	12496024	12992187	12649646	12712619	2.00	cps
Magnesium	24-2	465926	464950	462347	464407	0.40	cps
Manganese	55-2	256917	257205	259031	257718	0.44	cps
Molybdenum	94-1	1627	1750	1517	1631	7.16	cps
Molybdenum	95-1	1590	1470	1313	1458	9.52	cps
Molybdenum	96-1	1857	2034	1857	1916	5.33	cps
Molybdenum	97-1	947	750	813	837	12.00	cps
Molybdenum	98-1	2090	2070	2014	2058	1.93	cps
Neodymium	150-1	53	103	87	81	31.39	cps
Neodymium	150-2	7	3	3	4	43.40	cps
Nickel	60-2	312338	316303	313978	314206	0.63	cps
Phosphorus	31-2	387	350	397	378	6.50	cps
Potassium	39-2	519975	514153	516835	516987	0.56	cps
Rhodium	103-1	26548196	27203370	26179482	26643683	1.95	cps
Rhodium	103-2	10086412	9929376	10135262	10050350	1.07	cps
Scandium	45-1	19767624	19890189	19285082	19647632	1.63	cps
Scandium	45-2	436002	431833	435240	434358	0.51	cps
Selenium	82-1	87218	87402	86888	87169	0.30	cps
Selenium	77-2	1533	1510	1617	1553	3.61	cps
Selenium	78-2	5228	5411	5134	5258	2.68	cps
Silicon	28-1	964688	957220	944495	955468	1.07	cps
Silver	107-1	1545634	1582326	1530614	1552858	1.71	cps
Silver	109-1	1477987	1498782	1489048	1488606	0.70	cps
Sodium	23-2	1684201	1672493	1674787	1677160	0.37	cps
Strontium	86-1	2644	2810	2817	2757	3.56	cps
Strontium	88-1	19207	19834	19654	19565	1.65	cps
Sulfur	34-1	711296	708066	707645	709002	0.28	cps
Terbium	159-1	36111844	36572584	36060561	36248330	0.78	cps
Terbium	159-2	11702128	11646634	11633550	11660771	0.31	cps
Thallium	203-1	5064077	5135107	5114623	5104602	0.72	cps
Thallium	205-1	12152412	12055104	12070161	12092559	0.43	cps
Tin	118-1	2850	2610	2901	2787	5.57	cps
Titanium	47-1	790	677	737	734	7.72	cps
Uranium	238-1	507	497	560	521	6.53	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICV001 Instrumnet Name : P8
Client Sample ID : ICV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:26:58 DataFile Name : 013ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	455211	456498	451980	454563	0.51	cps
Ytterbium	172-1	183	160	193	179	9.56	cps
Ytterbium	172-2	83	70	60	71	16.46	cps
Ytterbium	176-1	4868	5004	4878	4917	1.55	cps
Ytterbium	176-2	1707	1707	1954	1789	7.96	cps
Yttrium	89-1	43845148	44351931	42498759	43565279	2.20	cps
Yttrium	89-2	3375283	3397822	3422725	3398610	0.70	cps
Zinc	66-2	167108	167173	166904	167062	0.08	cps
Zirconium	90-1	2310	2390	2310	2337	1.98	cps
Zirconium	91-1	1243	1217	1113	1191	5.77	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P8
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:30:08 DataFile Name : 014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	170	167	157	164	4.22	cps
Antimony	121-1	730	630	610	657	9.79	cps
Arsenic	75-2	7	13	10	10	33.30	cps
Barium	135-1	230	230	190	217	10.66	cps
Barium	137-1	313	353	320	329	6.52	cps
Beryllium	9-1	404	327	362	365	10.47	cps
Bismuth	209-1	22057402	21897488	21667468	21874119	0.90	cps
Bismuth	209-2	8906098	8949877	8799814	8885263	0.87	cps
Bromine	81-1	11095	11672	12022	11596	4.04	cps
Cadmium	108-1	23	27	33	28	18.33	cps
Cadmium	106-1	15292	15018	14544	14952	2.53	cps
Cadmium	111-1	10765	10554	10198	10506	2.73	cps
Calcium	43-1	3200	3107	2827	3045	6.38	cps
Calcium	44-1	59569	59763	59747	59693	0.18	cps
Carbon	12-1	6058467	6224969	6256173	6179869	1.72	cps
Carbon	12-2	44180	43969	44099	44083	0.24	cps
Chlorine	35-1	89850	89538	90219	89869	0.38	cps
Chlorine	35-2	377	407	443	409	8.16	cps
Chromium	52-2	1333	1347	1397	1359	2.46	cps
Cobalt	59-2	127	183	147	152	18.88	cps
Copper	63-2	4864	4814	5271	4983	5.03	cps
Dysprosium	156-1	13	20	10	14	35.26	cps
Dysprosium	156-2	0	0	13	4	173.21	cps
Erbium	164-1	163	217	163	181	17.00	cps
Erbium	164-2	53	60	50	54	9.35	cps
Gadolinium	160-1	297	260	240	266	10.82	cps
Gadolinium	160-2	57	50	77	61	22.71	cps
Holmium	165-1	36187654	36454700	36050697	36231017	0.57	cps
Holmium	165-2	12003294	12037929	12103577	12048267	0.42	cps
Indium	115-1	28399071	28683405	28391643	28491373	0.58	cps
Indium	115-2	3078494	3102223	3085004	3088574	0.40	cps
Iron	54-2	677	627	617	640	5.02	cps
Iron	56-2	7852	7359	7449	7553	3.48	cps
Iron	57-2	200	173	213	196	10.41	cps
Krypton	83-1	300	257	293	283	8.24	cps
Lead	206-1	1677	1767	1677	1707	3.04	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P8
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:30:08 DataFile Name : 014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1450	1453	1407	1437	1.81	cps
Lead	208-1	6971	6801	6707	6826	1.96	cps
Lithium	6-1	12479643	12479841	12619983	12526489	0.65	cps
Magnesium	24-2	727	733	780	747	3.89	cps
Manganese	55-2	503	497	463	488	4.39	cps
Molybdenum	94-1	957	807	810	858	9.99	cps
Molybdenum	95-1	530	530	433	498	11.21	cps
Molybdenum	96-1	523	547	470	513	7.66	cps
Molybdenum	97-1	300	230	230	253	15.96	cps
Molybdenum	98-1	723	613	563	633	12.92	cps
Neodymium	150-1	10	33	20	21	55.45	cps
Neodymium	150-2	0	0	3	1	173.21	cps
Nickel	60-2	783	807	817	802	2.13	cps
Phosphorus	31-2	377	410	367	384	5.90	cps
Potassium	39-2	19183	19026	18916	19042	0.70	cps
Rhodium	103-1	26956864	26871691	27032429	26953661	0.30	cps
Rhodium	103-2	10328983	10226802	10354799	10303528	0.66	cps
Scandium	45-1	19751245	19882751	20135207	19923067	0.98	cps
Scandium	45-2	439545	436343	441848	439245	0.63	cps
Selenium	82-1	21	37	4	20	81.23	cps
Selenium	77-2	0	3	3	2	86.60	cps
Selenium	78-2	17	23	13	18	28.64	cps
Silicon	28-1	963380	977201	961010	967197	0.90	cps
Silver	107-1	1336	1147	960	1148	16.37	cps
Silver	109-1	1157	957	807	973	18.04	cps
Sodium	23-2	60150	58697	59069	59305	1.27	cps
Strontium	86-1	637	677	673	662	3.35	cps
Strontium	88-1	2210	2000	2020	2077	5.58	cps
Sulfur	34-1	695751	696174	695157	695694	0.07	cps
Terbium	159-1	36151207	36585386	36365310	36367301	0.60	cps
Terbium	159-2	12135367	12087081	11690924	11971124	2.04	cps
Thallium	203-1	547	427	400	458	17.07	cps
Thallium	205-1	1340	1257	1043	1213	12.61	cps
Tin	118-1	3130	2967	3830	3309	13.85	cps
Titanium	47-1	510	530	450	497	8.38	cps
Uranium	238-1	120	103	113	112	7.47	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICB001 Instrumnet Name : P8
Client Sample ID : ICB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:30:08 DataFile Name : 014CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	33	23	33	30	19.25	cps
Ytterbium	172-1	200	183	177	187	6.44	cps
Ytterbium	172-2	67	103	87	86	21.46	cps
Ytterbium	176-1	4714	4944	4991	4883	3.03	cps
Ytterbium	176-2	1630	1713	1483	1609	7.24	cps
Yttrium	89-1	44467288	44192871	43528809	44062989	1.10	cps
Yttrium	89-2	3485233	3480488	3495603	3487108	0.22	cps
Zinc	66-2	1637	1553	1417	1536	7.23	cps
Zirconium	90-1	1773	1867	1760	1800	3.23	cps
Zirconium	91-1	363	270	410	348	20.50	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P8
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:33:29 DataFile Name : 015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10312343	10163809	10236980	10237711	0.73	cps
Antimony	121-1	24963	25277	25257	25165	0.70	cps
Arsenic	75-2	147	150	133	143	6.15	cps
Barium	135-1	8463	8636	8650	8583	1.21	cps
Barium	137-1	14354	14755	15005	14705	2.23	cps
Beryllium	9-1	2142	2016	2149	2102	3.56	cps
Bismuth	209-1	20333098	20645481	20233753	20404111	1.05	cps
Bismuth	209-2	7985832	7847636	7876434	7903301	0.92	cps
Bromine	81-1	15859	16780	16293	16311	2.82	cps
Cadmium	108-1	8216	8022	7686	7975	3.37	cps
Cadmium	106-1	14281	13467	13864	13870	2.93	cps
Cadmium	111-1	13846	13104	13264	13405	2.91	cps
Calcium	43-1	8096177	8121474	8168673	8128774	0.45	cps
Calcium	44-1	130130108	129831508	131934461	130632026	0.87	cps
Carbon	12-1	61345529	60075642	60171396	60530856	1.17	cps
Carbon	12-2	418461	414899	412833	415398	0.69	cps
Chlorine	35-1	115761402	120393672	122154085	119436386	2.76	cps
Chlorine	35-2	569984	576620	576254	574286	0.65	cps
Chromium	52-2	110197	110885	110482	110521	0.31	cps
Cobalt	59-2	11718	12099	11551	11789	2.38	cps
Copper	63-2	64891	64971	65075	64979	0.14	cps
Dysprosium	156-1	103	107	120	110	8.02	cps
Dysprosium	156-2	33	30	20	28	24.98	cps
Erbium	164-1	240	293	233	256	12.87	cps
Erbium	164-2	80	80	60	73	15.75	cps
Gadolinium	160-1	337	387	343	356	7.64	cps
Gadolinium	160-2	93	87	67	82	16.87	cps
Holmium	165-1	35518560	35805819	36004856	35776412	0.68	cps
Holmium	165-2	11799461	11588182	11683052	11690232	0.91	cps
Indium	115-1	26572854	27085165	26636713	26764911	1.04	cps
Indium	115-2	2816321	2785515	2815870	2805902	0.63	cps
Iron	54-2	23130294	23016018	23002293	23049535	0.30	cps
Iron	56-2	428223367	425811020	420384100	424806163	0.95	cps
Iron	57-2	10595522	10534065	10751233	10626940	1.05	cps
Krypton	83-1	357	453	420	410	11.98	cps
Lead	206-1	89627	88587	89301	89172	0.60	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P8
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:33:29 DataFile Name : 015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	70674	70239	69522	70145	0.83	cps
Lead	208-1	335808	331852	333096	333585	0.61	cps
Lithium	6-1	11612070	11510000	11362126	11494732	1.09	cps
Magnesium	24-2	35271851	35233874	35067304	35191010	0.31	cps
Manganese	55-2	19964	19567	19113	19548	2.18	cps
Molybdenum	94-1	14197753	13988572	14099131	14095152	0.74	cps
Molybdenum	95-1	24987072	25126429	24768948	24960816	0.72	cps
Molybdenum	96-1	26460575	26603289	26672457	26578773	0.41	cps
Molybdenum	97-1	15248736	15089011	15392582	15243443	1.00	cps
Molybdenum	98-1	39768110	39581696	39861538	39737115	0.36	cps
Neodymium	150-1	107	103	87	99	10.83	cps
Neodymium	150-2	30	33	20	28	24.98	cps
Nickel	60-2	15125	15018	15195	15113	0.59	cps
Phosphorus	31-2	528205	526997	530795	528666	0.37	cps
Potassium	39-2	23431747	23346132	23685763	23487881	0.75	cps
Rhodium	103-1	24152337	24020308	23948376	24040340	0.43	cps
Rhodium	103-2	9277064	9146213	9099288	9174189	1.00	cps
Scandium	45-1	18895506	18865585	18504345	18755145	1.16	cps
Scandium	45-2	409624	406411	408079	408038	0.39	cps
Selenium	82-1	15	-60	41	-1	-4376.78	cps
Selenium	77-2	0	0	13	4	173.21	cps
Selenium	78-2	7	20	17	14	48.02	cps
Silicon	28-1	1311168	1287845	1268162	1289058	1.67	cps
Silver	107-1	2636	2269	2442	2449	7.51	cps
Silver	109-1	2504	2234	2257	2331	6.42	cps
Sodium	23-2	74935817	74920316	75556772	75137635	0.48	cps
Strontium	86-1	278418	278743	278907	278689	0.09	cps
Strontium	88-1	2448877	2530363	2527743	2502328	1.85	cps
Sulfur	34-1	11347591	11324889	11234474	11302318	0.53	cps
Terbium	159-1	36417209	35972836	36858083	36416043	1.22	cps
Terbium	159-2	11670084	11532763	11504734	11569193	0.76	cps
Thallium	203-1	1977	1723	1707	1802	8.40	cps
Thallium	205-1	4681	4464	4117	4421	6.43	cps
Tin	118-1	6198	5885	5818	5967	3.40	cps
Titanium	47-1	7943672	7804477	7779810	7842653	1.13	cps
Uranium	238-1	1667	1670	1650	1662	0.65	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSA001 Instrumnet Name : P8
Client Sample ID : ICSA001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:33:29 DataFile Name : 015ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	687	707	690	694	1.54	cps
Ytterbium	172-1	210	227	203	213	5.63	cps
Ytterbium	172-2	83	103	90	92	11.05	cps
Ytterbium	176-1	4568	4621	4558	4582	0.74	cps
Ytterbium	176-2	1233	1293	1137	1221	6.47	cps
Yttrium	89-1	43307821	43722731	42998553	43343035	0.84	cps
Yttrium	89-2	3356073	3292934	3285476	3311494	1.17	cps
Zinc	66-2	8956	9300	9200	9152	1.93	cps
Zirconium	90-1	2307	2357	2324	2329	1.09	cps
Zirconium	91-1	403	430	490	441	10.06	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P8
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:36:33 DataFile Name : 016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	10527943	10483340	10501459	10504247	0.21	cps
Antimony	121-1	474549	474778	477140	475489	0.30	cps
Arsenic	75-2	9683	9997	9577	9752	2.24	cps
Barium	135-1	129927	130878	129432	130079	0.57	cps
Barium	137-1	223579	223067	223843	223496	0.18	cps
Beryllium	9-1	137503	137500	137463	137488	0.02	cps
Bismuth	209-1	20839363	20674523	20588762	20700883	0.62	cps
Bismuth	209-2	8079422	8017094	8092471	8062996	0.50	cps
Bromine	81-1	19123	19767	19293	19395	1.72	cps
Cadmium	108-1	14965	15219	15395	15193	1.42	cps
Cadmium	106-1	24382	24115	24358	24285	0.61	cps
Cadmium	111-1	125776	123990	125381	125049	0.75	cps
Calcium	43-1	8301470	8264970	8339729	8302056	0.45	cps
Calcium	44-1	133712918	135746905	135630331	135030051	0.85	cps
Carbon	12-1	63352872	63759534	63817669	63643358	0.40	cps
Carbon	12-2	442614	445940	443562	444039	0.39	cps
Chlorine	35-1	121692428	126933031	128557748	125727736	2.85	cps
Chlorine	35-2	602822	603960	606415	604399	0.30	cps
Chromium	52-2	225879	225605	226370	225951	0.17	cps
Cobalt	59-2	218518	220172	219699	219463	0.39	cps
Copper	63-2	226451	226440	224665	225852	0.46	cps
Dysprosium	156-1	127	143	103	124	16.14	cps
Dysprosium	156-2	20	37	57	38	48.60	cps
Erbium	164-1	237	223	293	251	14.80	cps
Erbium	164-2	117	80	70	89	27.64	cps
Gadolinium	160-1	393	353	353	367	6.30	cps
Gadolinium	160-2	67	100	70	79	23.27	cps
Holmium	165-1	36689835	36146145	36595584	36477188	0.80	cps
Holmium	165-2	12068333	11972890	12045631	12028952	0.41	cps
Indium	115-1	28202831	27474592	28054613	27910678	1.38	cps
Indium	115-2	2937826	2883483	2915918	2912409	0.94	cps
Iron	54-2	23761423	23489764	23620030	23623739	0.58	cps
Iron	56-2	439890327	438506580	433378940	437258616	0.78	cps
Iron	57-2	11034139	10877720	10840417	10917426	0.94	cps
Krypton	83-1	497	450	420	456	8.48	cps
Lead	206-1	474075	472780	472078	472978	0.21	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P8
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:36:33 DataFile Name : 016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	395394	396718	395618	395910	0.18	cps
Lead	208-1	1827605	1835412	1826732	1829916	0.26	cps
Lithium	6-1	11378246	11349293	11504554	11410697	0.72	cps
Magnesium	24-2	36114768	35810049	36072853	35999223	0.46	cps
Manganese	55-2	67545	66755	66849	67050	0.64	cps
Molybdenum	94-1	14388833	14395271	14591026	14458377	0.79	cps
Molybdenum	95-1	25546760	25539923	25934619	25673767	0.88	cps
Molybdenum	96-1	26779626	27244110	27189991	27071242	0.94	cps
Molybdenum	97-1	15450927	15823601	15416115	15563548	1.45	cps
Molybdenum	98-1	40933429	41176204	41488221	41199285	0.68	cps
Neodymium	150-1	160	117	133	137	15.99	cps
Neodymium	150-2	17	50	33	33	50.00	cps
Nickel	60-2	71143	71445	71857	71482	0.50	cps
Phosphorus	31-2	542488	541938	538862	541096	0.36	cps
Potassium	39-2	24375084	24299509	24716254	24463615	0.91	cps
Rhodium	103-1	25072906	24945256	25163815	25060659	0.44	cps
Rhodium	103-2	9460319	9330430	9413919	9401556	0.70	cps
Scandium	45-1	19873094	19813546	19853249	19846630	0.15	cps
Scandium	45-2	425797	425871	424513	425393	0.18	cps
Selenium	82-1	8557	8667	9047	8757	2.93	cps
Selenium	77-2	130	170	130	143	16.11	cps
Selenium	78-2	500	527	517	514	2.62	cps
Silicon	28-1	1346371	1355680	1352171	1351408	0.35	cps
Silver	107-1	538331	546617	546117	543688	0.85	cps
Silver	109-1	530346	534316	540801	535154	0.99	cps
Sodium	23-2	78130352	77759991	77446849	77779064	0.44	cps
Strontium	86-1	285860	283947	283695	284501	0.42	cps
Strontium	88-1	2583664	2585099	2594260	2587674	0.22	cps
Sulfur	34-1	11515803	11662233	11567505	11581847	0.64	cps
Terbium	159-1	37108220	36813785	37329909	37083972	0.70	cps
Terbium	159-2	12113268	11960893	11950966	12008376	0.76	cps
Thallium	203-1	468256	471468	471477	470400	0.39	cps
Thallium	205-1	1132514	1137966	1148324	1139602	0.70	cps
Tin	118-1	6265	6308	6285	6286	0.35	cps
Titanium	47-1	8000768	8088200	8009452	8032807	0.60	cps
Uranium	238-1	1287	1350	1250	1296	3.90	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : ICSAB001 Instrumnet Name : P8
Client Sample ID : ICSAB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:36:33 DataFile Name : 016ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	88834	87026	88706	88188	1.14	cps
Ytterbium	172-1	253	230	200	228	11.74	cps
Ytterbium	172-2	80	87	83	83	4.00	cps
Ytterbium	176-1	4864	4988	4694	4849	3.04	cps
Ytterbium	176-2	1020	1087	1217	1108	9.03	cps
Yttrium	89-1	45283109	44309971	45214449	44935843	1.21	cps
Yttrium	89-2	3427986	3419296	3405929	3417737	0.33	cps
Zinc	66-2	25366	25263	24745	25125	1.32	cps
Zirconium	90-1	2297	2360	2344	2334	1.41	cps
Zirconium	91-1	563	490	557	537	7.56	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P8
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:39:41 DataFile Name : 017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5654529	5701942	5701297	5685923	0.48	cps
Antimony	121-1	11109039	10992217	11013684	11038313	0.56	cps
Arsenic	75-2	222119	223405	225349	223624	0.73	cps
Barium	135-1	14805420	14928488	15028663	14920857	0.75	cps
Barium	137-1	25023400	25330160	25161593	25171718	0.61	cps
Beryllium	9-1	3197551	3264177	3253885	3238538	1.11	cps
Bismuth	209-1	19832776	19666510	19704974	19734753	0.44	cps
Bismuth	209-2	7691482	6814857	7085988	7197442	6.24	cps
Bromine	81-1	15545	15485	15502	15511	0.20	cps
Cadmium	108-1	218509	221754	219624	219962	0.75	cps
Cadmium	106-1	324134	325014	318888	322679	1.03	cps
Cadmium	111-1	2749688	2796726	2774261	2773559	0.85	cps
Calcium	43-1	20060803	20193097	20307274	20187058	0.61	cps
Calcium	44-1	323185135	330973862	326886268	327015088	1.19	cps
Carbon	12-1	6244089	6349636	6385441	6326389	1.16	cps
Carbon	12-2	53357	52751	53517	53208	0.76	cps
Chlorine	35-1	5880593	5477269	5177215	5511692	6.40	cps
Chlorine	35-2	20641	19250	18402	19431	5.82	cps
Chromium	52-2	2783624	2800470	2811426	2798507	0.50	cps
Cobalt	59-2	4961125	4928287	5036746	4975386	1.12	cps
Copper	63-2	39407415	38690741	38955737	39017964	0.93	cps
Dysprosium	156-1	780	707	743	743	4.93	cps
Dysprosium	156-2	183	170	173	176	3.95	cps
Erbium	164-1	803	750	747	767	4.15	cps
Erbium	164-2	227	213	243	228	6.60	cps
Gadolinium	160-1	817	760	820	799	4.22	cps
Gadolinium	160-2	220	237	210	222	6.06	cps
Holmium	165-1	35552625	34450109	35678489	35227074	1.92	cps
Holmium	165-2	11821276	10439562	10873812	11044883	6.40	cps
Indium	115-1	26592196	25922637	26483489	26332774	1.36	cps
Indium	115-2	2787594	2477623	2597553	2620923	5.96	cps
Iron	54-2	28642385	28787600	28766742	28732242	0.27	cps
Iron	56-2	534109819	523581126	529712205	529134383	1.00	cps
Iron	57-2	13069920	12997794	13041452	13036389	0.28	cps
Krypton	83-1	487	467	513	489	4.79	cps
Lead	206-1	45769103	45765973	45844131	45793069	0.10	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P8
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:39:41 DataFile Name : 017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	39698912	39272125	39826708	39599248	0.73	cps
Lead	208-1	182887703	183567003	182250697	182901801	0.36	cps
Lithium	6-1	11024834	10549464	10889751	10821350	2.26	cps
Magnesium	24-2	87614985	86650655	87791239	87352293	0.70	cps
Manganese	55-2	12088515	12062937	12115452	12088968	0.22	cps
Molybdenum	94-1	43437549	44449243	43343038	43743276	1.40	cps
Molybdenum	95-1	62994451	64418946	63863872	63759090	1.13	cps
Molybdenum	96-1	68868639	68928569	68340694	68712634	0.47	cps
Molybdenum	97-1	39270099	38836186	38251149	38785811	1.32	cps
Molybdenum	98-1	101977108	102008932	100238079	101408040	1.00	cps
Neodymium	150-1	1470	1477	1607	1518	5.08	cps
Neodymium	150-2	153	110	77	113	33.92	cps
Nickel	60-2	1273581	1277540	1268967	1273363	0.34	cps
Phosphorus	31-2	51344	51748	50815	51303	0.91	cps
Potassium	39-2	30449396	30360164	30777904	30529155	0.72	cps
Rhodium	103-1	23637378	23165675	23071272	23291442	1.30	cps
Rhodium	103-2	8802406	7841204	8184574	8276061	5.89	cps
Scandium	45-1	18875002	18734725	18810765	18806831	0.37	cps
Scandium	45-2	407873	363111	388383	386456	5.81	cps
Selenium	82-1	201985	203711	201891	202529	0.51	cps
Selenium	77-2	3327	3277	3237	3280	1.37	cps
Selenium	78-2	11528	11578	11341	11483	1.09	cps
Silicon	28-1	65164942	64822946	65813574	65267154	0.77	cps
Silver	107-1	13777945	13812663	13415946	13668851	1.61	cps
Silver	109-1	13146914	13281442	13276598	13234985	0.58	cps
Sodium	23-2	188234011	187671057	191937217	189280762	1.22	cps
Strontium	86-1	4232175	4209871	4188298	4210115	0.52	cps
Strontium	88-1	36021348	35873148	36023569	35972688	0.24	cps
Sulfur	34-1	1726332	1687651	1723540	1712507	1.26	cps
Terbium	159-1	36123640	35284201	36255212	35887684	1.47	cps
Terbium	159-2	11702676	10385239	10875487	10987800	6.06	cps
Thallium	203-1	11458860	11375223	11537904	11457329	0.71	cps
Thallium	205-1	27412659	27575780	27684644	27557694	0.50	cps
Tin	118-1	9888589	9765477	9790234	9814767	0.66	cps
Titanium	47-1	19058408	19336100	18930801	19108436	1.08	cps
Uranium	238-1	40420768	40645705	39835369	40300614	1.04	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV001 Instrumnet Name : P8
Client Sample ID : CCV001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 13:39:41 DataFile Name : 017CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2196990	2214365	2235998	2215784	0.88	cps
Ytterbium	172-1	847	863	783	831	5.08	cps
Ytterbium	172-2	290	390	323	334	15.22	cps
Ytterbium	176-1	61077	60491	61834	61134	1.10	cps
Ytterbium	176-2	20319	20720	20880	20640	1.40	cps
Yttrium	89-1	43434414	42496869	42860216	42930500	1.10	cps
Yttrium	89-2	3298011	2944442	3060284	3100912	5.81	cps
Zinc	66-2	3700488	3730691	3742989	3724723	0.59	cps
Zirconium	90-1	22203074	22761540	22182507	22382374	1.47	cps
Zirconium	91-1	4891155	5061970	4975560	4976228	1.72	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P8
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:04:34 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	137	93	103	111	20.42	cps
Antimony	121-1	107	113	120	113	5.88	cps
Arsenic	75-2	0	0	10	3	173.21	cps
Barium	135-1	107	90	117	104	12.90	cps
Barium	137-1	233	193	207	211	9.65	cps
Beryllium	9-1	291	301	306	300	2.55	cps
Bismuth	209-1	22736988	22471748	22674759	22627832	0.61	cps
Bismuth	209-2	8855144	8918555	8905526	8893075	0.38	cps
Bromine	81-1	13563	13293	13567	13474	1.17	cps
Cadmium	108-1	50	60	37	49	23.94	cps
Cadmium	106-1	15168	14958	15289	15138	1.10	cps
Cadmium	111-1	10613	10442	10706	10587	1.27	cps
Calcium	43-1	2254	2177	2240	2224	1.84	cps
Calcium	44-1	48097	47853	48331	48093	0.50	cps
Carbon	12-1	6445875	6644176	6740844	6610298	2.27	cps
Carbon	12-2	47292	47430	47386	47369	0.15	cps
Chlorine	35-1	324936	323276	316624	321612	1.37	cps
Chlorine	35-2	1447	1423	1347	1406	3.72	cps
Chromium	52-2	1350	1460	1447	1419	4.23	cps
Cobalt	59-2	113	100	133	116	14.52	cps
Copper	63-2	5675	5811	5348	5611	4.24	cps
Dysprosium	156-1	37	27	17	27	37.50	cps
Dysprosium	156-2	13	3	0	6	124.93	cps
Erbium	164-1	130	193	180	168	19.90	cps
Erbium	164-2	47	40	60	49	20.83	cps
Gadolinium	160-1	243	290	253	262	9.37	cps
Gadolinium	160-2	73	63	63	67	8.66	cps
Holmium	165-1	37118625	36875114	36492548	36828763	0.86	cps
Holmium	165-2	12295977	12290436	12223162	12269859	0.33	cps
Indium	115-1	29661702	29469996	29425460	29519053	0.43	cps
Indium	115-2	3176920	3175426	3196166	3182837	0.36	cps
Iron	54-2	703	653	657	671	4.17	cps
Iron	56-2	7335	7275	7602	7404	2.35	cps
Iron	57-2	237	190	170	199	17.20	cps
Krypton	83-1	347	317	320	328	5.02	cps
Lead	206-1	1510	1573	1533	1539	2.08	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P8
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:04:34 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1380	1393	1347	1373	1.75	cps
Lead	208-1	6174	6221	6154	6183	0.55	cps
Lithium	6-1	12445557	12312218	12698798	12485524	1.57	cps
Magnesium	24-2	580	537	573	563	4.14	cps
Manganese	55-2	360	340	373	358	4.69	cps
Molybdenum	94-1	913	923	770	869	9.87	cps
Molybdenum	95-1	773	513	447	578	29.87	cps
Molybdenum	96-1	583	517	327	476	28.01	cps
Molybdenum	97-1	287	217	210	238	17.86	cps
Molybdenum	98-1	737	557	477	590	22.57	cps
Neodymium	150-1	13	37	27	26	45.82	cps
Neodymium	150-2	3	3	3	3	0.00	cps
Nickel	60-2	600	577	523	567	6.94	cps
Phosphorus	31-2	420	413	313	382	15.63	cps
Potassium	39-2	23967	24407	23499	23958	1.90	cps
Rhodium	103-1	28588846	28002198	28255655	28282233	1.04	cps
Rhodium	103-2	10580480	10713835	10632009	10642108	0.63	cps
Scandium	45-1	20841503	20865040	21215375	20973973	1.00	cps
Scandium	45-2	461851	453061	455022	456645	1.01	cps
Selenium	82-1	-17	-10	10	-6	-236.43	cps
Selenium	77-2	3	3	0	2	86.60	cps
Selenium	78-2	27	20	23	23	14.29	cps
Silicon	28-1	1015071	991991	991643	999568	1.34	cps
Silver	107-1	421	423	366	403	8.02	cps
Silver	109-1	257	217	247	240	8.67	cps
Sodium	23-2	81462	82434	81083	81660	0.85	cps
Strontium	86-1	697	637	667	667	4.50	cps
Strontium	88-1	1270	1240	1253	1255	1.20	cps
Sulfur	34-1	731873	731049	725243	729389	0.50	cps
Terbium	159-1	37482510	37530959	37622041	37545170	0.19	cps
Terbium	159-2	12064052	12374076	11900855	12112994	1.98	cps
Thallium	203-1	353	400	453	402	12.44	cps
Thallium	205-1	950	933	983	956	2.66	cps
Tin	118-1	3227	2894	3117	3079	5.52	cps
Titanium	47-1	620	547	573	580	6.40	cps
Uranium	238-1	40	13	57	37	59.62	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB001 Instrumnet Name : P8
Client Sample ID : CCB001 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:04:34 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10	10	17	12	31.50	cps
Ytterbium	172-1	153	233	200	196	20.55	cps
Ytterbium	172-2	87	63	47	66	30.65	cps
Ytterbium	176-1	4738	4988	4851	4859	2.58	cps
Ytterbium	176-2	1177	1293	1253	1241	4.78	cps
Yttrium	89-1	47619026	46239649	46551568	46803414	1.55	cps
Yttrium	89-2	3623730	3590804	3594050	3602861	0.50	cps
Zinc	66-2	720	640	770	710	9.24	cps
Zirconium	90-1	1970	1977	1790	1912	5.54	cps
Zirconium	91-1	407	333	347	362	10.79	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BL Instrumnet Name : P8
Client Sample ID : PBS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:13:00 DataFile Name : 021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	153	110	163	142	19.94	cps
Antimony	121-1	70	90	113	91	23.80	cps
Arsenic	75-2	0	7	3	3	100.05	cps
Barium	135-1	107	113	113	111	3.47	cps
Barium	137-1	207	207	127	180	25.66	cps
Beryllium	9-1	272	301	250	275	9.36	cps
Bismuth	209-1	20877162	20943653	19054803	20291873	5.28	cps
Bismuth	209-2	7867781	8105756	8253887	8075808	2.41	cps
Bromine	81-1	13076	13116	12639	12944	2.04	cps
Cadmium	108-1	43	27	37	36	23.58	cps
Cadmium	106-1	13764	13880	12279	13308	6.71	cps
Cadmium	111-1	9641	9724	8596	9320	6.74	cps
Calcium	43-1	1640	1700	1427	1589	9.04	cps
Calcium	44-1	38194	37335	36703	37411	2.00	cps
Carbon	12-1	4790448	4684595	4620915	4698652	1.82	cps
Carbon	12-2	31544	31995	31397	31645	0.98	cps
Chlorine	35-1	226599	225216	217558	223124	2.18	cps
Chlorine	35-2	1163	1097	1030	1097	6.08	cps
Chromium	52-2	1383	1377	1263	1341	5.03	cps
Cobalt	59-2	130	90	97	106	20.30	cps
Copper	63-2	5594	5791	6045	5810	3.88	cps
Dysprosium	156-1	30	10	33	24	51.62	cps
Dysprosium	156-2	0	7	7	4	86.60	cps
Erbium	164-1	137	133	117	129	8.31	cps
Erbium	164-2	60	33	40	44	31.23	cps
Gadolinium	160-1	210	280	283	258	16.07	cps
Gadolinium	160-2	30	47	53	43	27.73	cps
Holmium	165-1	33994540	34055573	31392928	33147680	4.59	cps
Holmium	165-2	10945444	11261217	11145898	11117519	1.44	cps
Indium	115-1	27583330	26914259	25640694	26712761	3.69	cps
Indium	115-2	2745860	2973132	2888656	2869216	4.00	cps
Iron	54-2	627	657	623	636	2.89	cps
Iron	56-2	6618	7365	7068	7017	5.36	cps
Iron	57-2	163	187	187	179	7.53	cps
Krypton	83-1	323	310	360	331	7.82	cps
Lead	206-1	1503	1577	1627	1569	3.95	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BL Instrumnet Name : P8
Client Sample ID : PBS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:13:00 DataFile Name : 021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1317	1303	1250	1290	2.73	cps
Lead	208-1	6064	6087	6111	6087	0.38	cps
Lithium	6-1	11676747	11785098	10690389	11384078	5.30	cps
Magnesium	24-2	467	473	533	491	7.48	cps
Manganese	55-2	687	790	693	723	8.00	cps
Molybdenum	94-1	683	757	623	688	9.71	cps
Molybdenum	95-1	373	430	430	411	7.96	cps
Molybdenum	96-1	390	337	370	366	7.37	cps
Molybdenum	97-1	207	140	173	173	19.23	cps
Molybdenum	98-1	440	373	290	368	20.43	cps
Neodymium	150-1	20	23	7	17	52.90	cps
Neodymium	150-2	3	3	0	2	86.60	cps
Nickel	60-2	580	457	493	510	12.42	cps
Phosphorus	31-2	287	350	363	333	12.29	cps
Potassium	39-2	22928	23099	23082	23036	0.41	cps
Rhodium	103-1	26126529	25885029	24175000	25395519	4.19	cps
Rhodium	103-2	9257181	9805386	9647406	9569991	2.95	cps
Scandium	45-1	19454467	19653255	17771522	18959748	5.45	cps
Scandium	45-2	402319	425796	415346	414487	2.84	cps
Selenium	82-1	76	73	-28	41	145.42	cps
Selenium	77-2	0	3	3	2	86.60	cps
Selenium	78-2	30	17	13	20	44.10	cps
Silicon	28-1	967473	992525	964789	974929	1.57	cps
Silver	107-1	513	517	372	467	17.68	cps
Silver	109-1	413	323	297	344	17.75	cps
Sodium	23-2	78848	78708	79287	78947	0.38	cps
Strontium	86-1	623	620	597	613	2.37	cps
Strontium	88-1	940	860	887	896	4.55	cps
Sulfur	34-1	716554	717248	699992	711265	1.37	cps
Terbium	159-1	34570469	35028084	32114085	33904213	4.62	cps
Terbium	159-2	10741159	11139707	11199162	11026676	2.26	cps
Thallium	203-1	320	260	217	266	19.54	cps
Thallium	205-1	677	667	723	689	4.39	cps
Tin	118-1	5108	4901	4654	4888	4.65	cps
Titanium	47-1	507	457	443	469	7.12	cps
Uranium	238-1	27	23	30	27	12.51	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BL Instrumnet Name : P8
Client Sample ID : PBS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:13:00 DataFile Name : 021CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	10	17	13	13	25.01	cps
Ytterbium	172-1	140	187	187	171	15.75	cps
Ytterbium	172-2	70	70	47	62	21.65	cps
Ytterbium	176-1	4547	4534	4021	4367	6.88	cps
Ytterbium	176-2	887	1007	1063	986	9.15	cps
Yttrium	89-1	42736651	43225978	39498037	41820222	4.84	cps
Yttrium	89-2	3193339	3294981	3257544	3248621	1.58	cps
Zinc	66-2	997	897	1107	1000	10.50	cps
Zirconium	90-1	1677	1663	1577	1639	3.31	cps
Zirconium	91-1	367	333	290	330	11.65	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BS Instrumnet Name : P8
Client Sample ID : LCS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:25:06 DataFile Name : 024LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	4958	4707	4671	4779	3.27	cps
Antimony	121-1	85740	86816	88584	87047	1.65	cps
Arsenic	75-2	1003	1033	1067	1034	3.06	cps
Barium	135-1	111618	113824	115974	113806	1.91	cps
Barium	137-1	193744	195089	196807	195213	0.79	cps
Beryllium	9-1	14669	14594	14718	14660	0.43	cps
Bismuth	209-1	22573459	22563941	22319398	22485599	0.64	cps
Bismuth	209-2	8294729	8835412	8622017	8584053	3.17	cps
Bromine	81-1	12426	12582	12729	12579	1.21	cps
Cadmium	108-1	943	943	937	941	0.41	cps
Cadmium	106-1	16443	16724	16166	16444	1.69	cps
Cadmium	111-1	22435	22478	22216	22376	0.63	cps
Calcium	43-1	83900	83621	83353	83625	0.33	cps
Calcium	44-1	1421984	1434441	1426980	1427802	0.44	cps
Carbon	12-1	4985535	4909268	4938366	4944390	0.78	cps
Carbon	12-2	33712	33391	32683	33262	1.58	cps
Chlorine	35-1	2665711	2912613	2985093	2854473	5.87	cps
Chlorine	35-2	14184	14054	14277	14171	0.79	cps
Chromium	52-2	24040	23943	23867	23950	0.36	cps
Cobalt	59-2	21216	21663	21887	21589	1.58	cps
Copper	63-2	41474	41437	41133	41348	0.45	cps
Dysprosium	156-1	37	30	20	29	29.04	cps
Dysprosium	156-2	0	0	3	1	173.21	cps
Erbium	164-1	140	180	173	164	13.03	cps
Erbium	164-2	30	83	47	53	51.15	cps
Gadolinium	160-1	237	250	243	243	2.74	cps
Gadolinium	160-2	57	33	57	49	27.56	cps
Holmium	165-1	36734518	36236159	35630553	36200410	1.53	cps
Holmium	165-2	11347700	12243776	11900980	11830819	3.82	cps
Indium	115-1	28565843	28782149	28800647	28716213	0.45	cps
Indium	115-2	2946910	3118746	2977185	3014280	3.04	cps
Iron	54-2	97664	98312	97073	97683	0.63	cps
Iron	56-2	1877760	1852048	1885526	1871778	0.94	cps
Iron	57-2	44840	43356	44095	44097	1.68	cps
Krypton	83-1	297	333	323	318	5.97	cps
Lead	206-1	39156	39333	39634	39374	0.61	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BS Instrumnet Name : P8
Client Sample ID : LCS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:25:06 DataFile Name : 024LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	33610	34429	34232	34090	1.25	cps
Lead	208-1	156742	157682	156138	156854	0.50	cps
Lithium	6-1	12577957	13157004	13038647	12924536	2.37	cps
Magnesium	24-2	378067	376214	376146	376809	0.29	cps
Manganese	55-2	5895	5798	5785	5826	1.03	cps
Molybdenum	94-1	100184	100131	99771	100029	0.22	cps
Molybdenum	95-1	122494	121264	122958	122239	0.72	cps
Molybdenum	96-1	133246	133989	134783	134006	0.57	cps
Molybdenum	97-1	73490	75306	74180	74325	1.23	cps
Molybdenum	98-1	193075	193890	193757	193574	0.23	cps
Neodymium	150-1	20	53	50	41	44.65	cps
Neodymium	150-2	7	0	3	3	100.05	cps
Nickel	60-2	6452	6358	6562	6457	1.58	cps
Phosphorus	31-2	710	603	663	659	8.12	cps
Potassium	39-2	267862	265269	264794	265975	0.62	cps
Rhodium	103-1	27344175	27754024	27311275	27469824	0.90	cps
Rhodium	103-2	9804389	10199847	9934802	9979679	2.02	cps
Scandium	45-1	20658800	20127066	20197478	20327782	1.42	cps
Scandium	45-2	422336	446600	427607	432181	2.95	cps
Selenium	82-1	3804	3920	3998	3907	2.50	cps
Selenium	77-2	63	83	87	78	16.23	cps
Selenium	78-2	247	290	230	256	12.12	cps
Silicon	28-1	1407858	1388806	1385227	1393964	0.87	cps
Silver	107-1	56916	57399	58571	57629	1.48	cps
Silver	109-1	56080	56432	57664	56725	1.47	cps
Sodium	23-2	854973	853545	850857	853125	0.25	cps
Strontium	86-1	16443	16253	16877	16524	1.94	cps
Strontium	88-1	138974	137927	138852	138584	0.41	cps
Sulfur	34-1	739673	735864	734507	736681	0.36	cps
Terbium	159-1	37885180	37611271	37154623	37550358	0.98	cps
Terbium	159-2	11346026	12135020	11651142	11710729	3.40	cps
Thallium	203-1	45831	46864	46533	46409	1.14	cps
Thallium	205-1	111111	111878	112136	111708	0.48	cps
Tin	118-1	200006	197703	200046	199252	0.67	cps
Titanium	47-1	9560	10184	9837	9860	3.17	cps
Uranium	238-1	152308	149592	148847	150249	1.21	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : PB165414BS Instrumnet Name : P8
Client Sample ID : LCS414 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:25:06 DataFile Name : 024LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	45760	45081	45632	45491	0.79	cps
Ytterbium	172-1	210	220	170	200	13.23	cps
Ytterbium	172-2	90	100	57	82	27.59	cps
Ytterbium	176-1	5074	5288	5138	5167	2.12	cps
Ytterbium	176-2	1040	1097	1080	1072	2.72	cps
Yttrium	89-1	45841996	44787724	44584376	45071365	1.50	cps
Yttrium	89-2	3355657	3499532	3413487	3422892	2.12	cps
Zinc	66-2	8789	9150	9340	9093	3.07	cps
Zirconium	90-1	85849	86426	84618	85631	1.08	cps
Zirconium	91-1	18689	19147	18749	18862	1.32	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:28:22 DataFile Name : 025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3030953	3014302	3032783	3026013	0.34	cps
Antimony	121-1	14848	15132	14955	14978	0.96	cps
Arsenic	75-2	2847	2970	2954	2924	2.29	cps
Barium	135-1	1078628	1082550	1077425	1079535	0.25	cps
Barium	137-1	1949732	1924227	1885994	1919984	1.67	cps
Beryllium	9-1	16191	16033	15789	16004	1.26	cps
Bismuth	209-1	20613388	20479781	20646164	20579778	0.43	cps
Bismuth	209-2	7812786	7765262	7842294	7806780	0.50	cps
Bromine	81-1	17234	16867	16346	16816	2.65	cps
Cadmium	108-1	2730	2824	2784	2779	1.69	cps
Cadmium	106-1	22141	21841	22248	22077	0.96	cps
Cadmium	111-1	15768	15595	15829	15731	0.77	cps
Calcium	43-1	37509089	37232912	36934896	37225633	0.77	cps
Calcium	44-1	601129084	598335324	587506911	595657107	1.21	cps
Carbon	12-1	7849002	7967756	8248486	8021748	2.56	cps
Carbon	12-2	58673	58171	57043	57963	1.44	cps
Chlorine	35-1	232097817	235942430	241702516	236580921	2.04	cps
Chlorine	35-2	1112691	1119714	1139860	1124088	1.25	cps
Chromium	52-2	10439005	10327812	10426977	10397931	0.59	cps
Cobalt	59-2	67586	66163	66816	66855	1.07	cps
Copper	63-2	411360	409840	411113	410771	0.20	cps
Dysprosium	156-1	73906	73460	74419	73928	0.65	cps
Dysprosium	156-2	22312	22399	21871	22194	1.27	cps
Erbium	164-1	75687	75131	74963	75260	0.50	cps
Erbium	164-2	23908	23751	23932	23864	0.41	cps
Gadolinium	160-1	67547	67252	68903	67901	1.30	cps
Gadolinium	160-2	26059	26293	26570	26307	0.97	cps
Holmium	165-1	36290612	36209525	36053834	36184657	0.33	cps
Holmium	165-2	11717779	11628155	11685251	11677061	0.39	cps
Indium	115-1	27613893	26773410	27154596	27180633	1.55	cps
Indium	115-2	2821648	2839369	2834518	2831845	0.32	cps
Iron	54-2	77024907	76644229	77974782	77214639	0.89	cps
Iron	56-2	1395762059	1407760299	1428598912	1410707090	1.18	cps
Iron	57-2	35498023	34908124	35264848	35223665	0.84	cps
Krypton	83-1	787	707	847	780	9.01	cps
Lead	206-1	570063	580393	585382	578613	1.35	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:28:22 DataFile Name : 025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	476249	480147	483501	479966	0.76	cps
Lead	208-1	2219180	2222531	2243786	2228499	0.60	cps
Lithium	6-1	12030295	11852686	11954778	11945920	0.75	cps
Magnesium	24-2	29900320	29900182	29752330	29850944	0.29	cps
Manganese	55-2	110475142	111454765	112837035	111588981	1.06	cps
Molybdenum	94-1	810402	815751	803649	809934	0.75	cps
Molybdenum	95-1	154386	153405	152274	153355	0.69	cps
Molybdenum	96-1	286716	286673	289624	287671	0.59	cps
Molybdenum	97-1	90543	91009	90519	90690	0.30	cps
Molybdenum	98-1	232799	232231	231785	232272	0.22	cps
Neodymium	150-1	95080	95409	95003	95164	0.23	cps
Neodymium	150-2	22900	22803	23027	22910	0.49	cps
Nickel	60-2	148297	148593	148647	148513	0.13	cps
Phosphorus	31-2	29610	29209	29650	29490	0.83	cps
Potassium	39-2	282879	284344	284636	283953	0.33	cps
Rhodium	103-1	24584884	24444948	24029954	24353262	1.19	cps
Rhodium	103-2	9218447	9050543	9238226	9169072	1.12	cps
Scandium	45-1	20077580	20232074	19898259	20069304	0.83	cps
Scandium	45-2	422034	417204	423768	421002	0.81	cps
Selenium	82-1	455	450	511	472	7.16	cps
Selenium	77-2	107	133	113	118	11.79	cps
Selenium	78-2	120	127	120	122	3.15	cps
Silicon	28-1	795279268	785139508	791251428	790556735	0.65	cps
Silver	107-1	8058	6883	6424	7121	11.84	cps
Silver	109-1	16857	16230	15592	16226	3.90	cps
Sodium	23-2	775691	773242	778619	775851	0.35	cps
Strontium	86-1	4275538	4205387	4308787	4263237	1.24	cps
Strontium	88-1	36527699	35999589	36061284	36196191	0.80	cps
Sulfur	34-1	2053064	2022006	2047614	2040895	0.81	cps
Terbium	159-1	37237759	36935946	36717360	36963689	0.71	cps
Terbium	159-2	11663788	11735414	11540993	11646732	0.84	cps
Thallium	203-1	3767	3317	3470	3518	6.50	cps
Thallium	205-1	8756	8039	7946	8247	5.38	cps
Tin	118-1	58645	57376	58441	58154	1.17	cps
Titanium	47-1	16699340	16907651	16617325	16741439	0.89	cps
Uranium	238-1	262991	266109	265301	264800	0.61	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:28:22 DataFile Name : 025AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	4524299	4523884	4520219	4522801	0.05	cps
Ytterbium	172-1	29326	29727	29637	29563	0.71	cps
Ytterbium	172-2	11775	11475	11338	11530	1.94	cps
Ytterbium	176-1	26580	26503	26887	26657	0.76	cps
Ytterbium	176-2	9313	9677	9500	9497	1.91	cps
Yttrium	89-1	45847174	45126571	45119921	45364555	0.92	cps
Yttrium	89-2	3477259	3405763	3505441	3462821	1.48	cps
Zinc	66-2	137475	136655	139054	137728	0.89	cps
Zirconium	90-1	2093958	2127535	2083923	2101805	1.09	cps
Zirconium	91-1	445674	444991	443191	444619	0.29	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:31:31 DataFile Name : 026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3933245	3955963	3873134	3920781	1.09	cps
Antimony	121-1	11085	10774	11131	10997	1.76	cps
Arsenic	75-2	2694	2624	2330	2549	7.56	cps
Barium	135-1	1587256	1598044	1592680	1592660	0.34	cps
Barium	137-1	2768187	2690972	2747440	2735533	1.46	cps
Beryllium	9-1	25521	25760	25009	25430	1.51	cps
Bismuth	209-1	20357158	20445226	20831017	20544467	1.23	cps
Bismuth	209-2	7849824	7804389	7800644	7818285	0.35	cps
Bromine	81-1	15132	15822	15996	15650	2.92	cps
Cadmium	108-1	2687	2664	2727	2693	1.19	cps
Cadmium	106-1	21991	22408	22268	22222	0.96	cps
Cadmium	111-1	18264	18292	18333	18296	0.19	cps
Calcium	43-1	39551684	39715226	39009726	39425546	0.94	cps
Calcium	44-1	634741097	634900497	630333591	633325062	0.41	cps
Carbon	12-1	6739035	7220609	7324232	7094625	4.40	cps
Carbon	12-2	50597	50487	50132	50405	0.48	cps
Chlorine	35-1	253110903	263739603	262820849	259890452	2.27	cps
Chlorine	35-2	1278769	1281497	1273073	1277780	0.34	cps
Chromium	52-2	16009113	15929109	15857809	15932010	0.48	cps
Cobalt	59-2	99813	98846	99162	99274	0.50	cps
Copper	63-2	471600	469049	467887	469512	0.40	cps
Dysprosium	156-1	112205	111715	113742	112554	0.94	cps
Dysprosium	156-2	34966	34601	35347	34971	1.07	cps
Erbium	164-1	120920	121821	120712	121151	0.49	cps
Erbium	164-2	38807	38255	38171	38411	0.90	cps
Gadolinium	160-1	105795	104871	105231	105299	0.44	cps
Gadolinium	160-2	40578	40097	40782	40486	0.87	cps
Holmium	165-1	36480773	37147118	36505843	36711244	1.03	cps
Holmium	165-2	11823972	11788137	11802046	11804719	0.15	cps
Indium	115-1	26954409	27347064	27769595	27357023	1.49	cps
Indium	115-2	2906778	2863710	2854656	2875048	0.97	cps
Iron	54-2	72446171	72772626	72829749	72682848	0.28	cps
Iron	56-2	1313293900	1332196060	1296244781	1313911580	1.37	cps
Iron	57-2	33286275	33011591	32844618	33047495	0.67	cps
Krypton	83-1	870	833	977	893	8.34	cps
Lead	206-1	1384834	1412144	1390960	1395980	1.03	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:31:31 DataFile Name : 026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	1175782	1174599	1181587	1177323	0.32	cps
Lead	208-1	5616185	5607436	5593887	5605836	0.20	cps
Lithium	6-1	11699398	12014874	11791943	11835405	1.37	cps
Magnesium	24-2	30300302	30417551	30207996	30308616	0.35	cps
Manganese	55-2	104281138	104452122	102178955	103637405	1.22	cps
Molybdenum	94-1	803023	815169	821230	813141	1.14	cps
Molybdenum	95-1	324429	328526	328747	327234	0.74	cps
Molybdenum	96-1	453022	460357	456612	456664	0.80	cps
Molybdenum	97-1	194841	199895	196156	196964	1.33	cps
Molybdenum	98-1	508419	513062	511961	511147	0.47	cps
Neodymium	150-1	143329	142551	144222	143367	0.58	cps
Neodymium	150-2	34915	34030	34197	34381	1.37	cps
Nickel	60-2	1091523	1101412	1096469	1096468	0.45	cps
Phosphorus	31-2	19276	19383	20047	19569	2.13	cps
Potassium	39-2	408598	406811	409024	408144	0.29	cps
Rhodium	103-1	25119150	24890216	24734327	24914565	0.78	cps
Rhodium	103-2	9312718	9380051	9324602	9339123	0.38	cps
Scandium	45-1	20161143	20516867	20412813	20363608	0.90	cps
Scandium	45-2	429529	429698	429631	429619	0.02	cps
Selenium	82-1	1155	1121	997	1091	7.64	cps
Selenium	77-2	210	173	190	191	9.60	cps
Selenium	78-2	180	173	210	188	10.40	cps
Silicon	28-1	798946655	815932335	793365748	802748246	1.46	cps
Silver	107-1	12623	13263	13125	13004	2.59	cps
Silver	109-1	16407	16613	17024	16681	1.88	cps
Sodium	23-2	811612	811086	806897	809865	0.32	cps
Strontium	86-1	2908060	2991829	2914254	2938048	1.59	cps
Strontium	88-1	24479463	25010730	24852665	24780953	1.10	cps
Sulfur	34-1	2883284	2948287	2899667	2910413	1.16	cps
Terbium	159-1	37399316	37343324	37411901	37384847	0.10	cps
Terbium	159-2	11801966	11410097	11651196	11621086	1.70	cps
Thallium	203-1	2760	3070	3420	3084	10.71	cps
Thallium	205-1	6755	7359	7462	7192	5.31	cps
Tin	118-1	54692	55462	57373	55842	2.47	cps
Titanium	47-1	12616131	12614735	12641385	12624084	0.12	cps
Uranium	238-1	311429	312015	308131	310525	0.67	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:31:31 DataFile Name : 026AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1983496	1991326	2006949	1993924	0.60	cps
Ytterbium	172-1	48187	47331	47756	47758	0.90	cps
Ytterbium	172-2	17999	18617	18339	18318	1.69	cps
Ytterbium	176-1	37453	38600	37717	37923	1.58	cps
Ytterbium	176-2	13727	13974	13891	13864	0.91	cps
Yttrium	89-1	47139868	47778828	47291603	47403433	0.70	cps
Yttrium	89-2	3637447	3519075	3556512	3571011	1.69	cps
Zinc	66-2	161221	161478	160618	161106	0.27	cps
Zirconium	90-1	1850379	1860698	1874750	1861942	0.66	cps
Zirconium	91-1	389395	390403	386703	388834	0.49	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:34:36 DataFile Name : 027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1888502	1996227	1989623	1958117	3.08	cps
Antimony	121-1	9500	9200	8613	9104	4.96	cps
Arsenic	75-2	3397	3661	3731	3596	4.89	cps
Barium	135-1	900269	856041	801560	852624	5.80	cps
Barium	137-1	1571870	1470483	1379408	1473920	6.53	cps
Beryllium	9-1	11534	11432	10755	11240	3.77	cps
Bismuth	209-1	22725926	21468798	20122799	21439174	6.07	cps
Bismuth	209-2	7614509	8091367	8115218	7940365	3.56	cps
Bromine	81-1	16163	15182	15612	15652	3.14	cps
Cadmium	108-1	1060	1133	1187	1127	5.64	cps
Cadmium	106-1	19057	18296	17631	18328	3.89	cps
Cadmium	111-1	15068	14620	13758	14482	4.60	cps
Calcium	43-1	19647284	19130455	17938788	18905509	4.63	cps
Calcium	44-1	320185609	309577555	288924422	306229195	5.19	cps
Carbon	12-1	7138642	7243537	7287659	7223279	1.06	cps
Carbon	12-2	49413	49861	49847	49707	0.51	cps
Chlorine	35-1	251199290	251732770	243679930	248870663	1.81	cps
Chlorine	35-2	1105471	1212353	1247693	1188506	6.23	cps
Chromium	52-2	3139318	3312332	3364129	3271926	3.60	cps
Cobalt	59-2	90197	96021	97010	94409	3.90	cps
Copper	63-2	277624	294981	298215	290273	3.81	cps
Dysprosium	156-1	95166	91863	86514	91181	4.79	cps
Dysprosium	156-2	26874	28126	28687	27896	3.33	cps
Erbium	164-1	87284	84077	79053	83471	4.97	cps
Erbium	164-2	25461	27131	26673	26422	3.27	cps
Gadolinium	160-1	89327	84690	80481	84832	5.22	cps
Gadolinium	160-2	31434	33225	33709	32789	3.66	cps
Holmium	165-1	37605422	36396239	33807960	35936541	5.40	cps
Holmium	165-2	11208830	12082316	11849574	11713573	3.86	cps
Indium	115-1	29726284	28182741	26402447	28103824	5.92	cps
Indium	115-2	2740276	2873121	2868509	2827302	2.67	cps
Iron	54-2	20479682	21569201	21925183	21324688	3.53	cps
Iron	56-2	375896101	399048114	401189834	392044683	3.58	cps
Iron	57-2	9334499	9956538	10023354	9771463	3.89	cps
Krypton	83-1	693	680	697	690	1.28	cps
Lead	206-1	587246	564754	535448	562482	4.62	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:34:36 DataFile Name : 027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	486279	476758	441602	468213	5.03	cps
Lead	208-1	2283605	2215566	2070368	2189846	4.97	cps
Lithium	6-1	12608100	12385846	11619478	12204475	4.25	cps
Magnesium	24-2	12705057	13683944	13379951	13256317	3.78	cps
Manganese	55-2	33494555	35567775	35916774	34993034	3.74	cps
Molybdenum	94-1	325457	313646	299324	312809	4.18	cps
Molybdenum	95-1	91029	88979	82101	87370	5.35	cps
Molybdenum	96-1	142172	138318	128858	136449	5.02	cps
Molybdenum	97-1	54767	53958	50555	53093	4.21	cps
Molybdenum	98-1	142031	138097	130252	136793	4.38	cps
Neodymium	150-1	125907	122500	115901	121436	4.19	cps
Neodymium	150-2	28136	29563	29472	29057	2.75	cps
Nickel	60-2	181641	191112	194038	188930	3.43	cps
Phosphorus	31-2	8973	9103	9303	9126	1.82	cps
Potassium	39-2	309914	327519	327446	321626	3.15	cps
Rhodium	103-1	26936532	25554965	23736699	25409399	6.32	cps
Rhodium	103-2	9221510	9563743	9666922	9484058	2.46	cps
Scandium	45-1	21166169	20505021	18797263	20156151	6.06	cps
Scandium	45-2	400429	427173	426419	418007	3.64	cps
Selenium	82-1	372	354	361	362	2.47	cps
Selenium	77-2	153	120	143	139	12.32	cps
Selenium	78-2	160	133	147	147	9.09	cps
Silicon	28-1	283447136	276457689	258820289	272908371	4.65	cps
Silver	107-1	4531	4751	4522	4602	2.82	cps
Silver	109-1	5708	5748	5498	5651	2.38	cps
Sodium	23-2	507827	532207	536620	525551	2.95	cps
Strontium	86-1	2399698	2348347	2142743	2296929	5.92	cps
Strontium	88-1	20409414	19882085	18368900	19553466	5.42	cps
Sulfur	34-1	1290311	1234564	1213630	1246168	3.18	cps
Terbium	159-1	39010154	36824593	35162042	36998930	5.22	cps
Terbium	159-2	11138740	11759684	11889048	11595824	3.46	cps
Thallium	203-1	6615	6111	6605	6444	4.47	cps
Thallium	205-1	15516	15666	15122	15435	1.82	cps
Tin	118-1	29338	28476	27077	28297	4.03	cps
Titanium	47-1	4363916	4233837	3967243	4188332	4.83	cps
Uranium	238-1	167241	163760	153488	161496	4.43	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:34:36 DataFile Name : 027AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	1042438	1108799	1126729	1092655	4.06	cps
Ytterbium	172-1	28370	27165	25538	27024	5.26	cps
Ytterbium	172-2	10184	10654	10574	10471	2.40	cps
Ytterbium	176-1	24613	23184	21811	23203	6.04	cps
Ytterbium	176-2	7896	8119	8530	8182	3.93	cps
Yttrium	89-1	47527486	46909636	43384941	45940688	4.86	cps
Yttrium	89-2	3356040	3489710	3485815	3443855	2.21	cps
Zinc	66-2	77701	81456	81348	80168	2.67	cps
Zirconium	90-1	768762	749583	698564	738970	4.91	cps
Zirconium	91-1	167756	165618	155614	162996	3.98	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-04 Instrumnet Name : P8
Client Sample ID : ME28M3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:38:03 DataFile Name : 028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	748981	742931	742100	744671	0.50	cps
Antimony	121-1	14114	14628	14171	14304	1.97	cps
Arsenic	75-2	5641	5921	5951	5838	2.93	cps
Barium	135-1	1303573	1391576	1397851	1364333	3.86	cps
Barium	137-1	2375383	2483189	2479604	2446059	2.50	cps
Beryllium	9-1	2784	2966	3036	2929	4.45	cps
Bismuth	209-1	18266998	21406430	21521118	20398182	9.05	cps
Bismuth	209-2	8282390	8135796	8217697	8211961	0.89	cps
Bromine	81-1	15769	16049	17114	16311	4.35	cps
Cadmium	108-1	877	880	847	868	2.12	cps
Cadmium	106-1	15582	17491	18646	17240	8.97	cps
Cadmium	111-1	13101	14668	15497	14422	8.44	cps
Calcium	43-1	23197605	24586042	24757670	24180439	3.54	cps
Calcium	44-1	380153074	405120687	402368021	395880594	3.46	cps
Carbon	12-1	5295412	5366567	5447286	5369755	1.42	cps
Carbon	12-2	40024	40028	39446	39833	0.84	cps
Chlorine	35-1	216035303	243037083	245191816	234754734	6.92	cps
Chlorine	35-2	1142305	1181566	1142361	1155411	1.96	cps
Chromium	52-2	83193	83277	83683	83384	0.31	cps
Cobalt	59-2	104399	102969	103872	103746	0.70	cps
Copper	63-2	190904	190959	191161	191008	0.07	cps
Dysprosium	156-1	65905	70980	72981	69955	5.21	cps
Dysprosium	156-2	22516	22863	22239	22539	1.39	cps
Erbium	164-1	56750	60269	61210	59410	3.96	cps
Erbium	164-2	19164	19361	19808	19444	1.70	cps
Gadolinium	160-1	62984	66893	67228	65702	3.59	cps
Gadolinium	160-2	26002	25889	25668	25853	0.66	cps
Holmium	165-1	32156609	36351734	38069920	35526088	8.56	cps
Holmium	165-2	12218175	12297289	12322244	12279236	0.44	cps
Indium	115-1	24750339	27909076	28796408	27151941	7.83	cps
Indium	115-2	2989427	3006685	2951626	2982580	0.94	cps
Iron	54-2	6215548	6175501	6267813	6219621	0.74	cps
Iron	56-2	113340798	114929002	111818408	113362736	1.37	cps
Iron	57-2	2903375	2853859	2844509	2867248	1.10	cps
Krypton	83-1	717	730	667	704	4.74	cps
Lead	206-1	211550	225587	224677	220605	3.56	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-04 Instrumnet Name : P8
Client Sample ID : ME28M3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:38:03 DataFile Name : 028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	164219	174726	176329	171758	3.83	cps
Lead	208-1	782865	833305	833175	816448	3.56	cps
Lithium	6-1	10697765	12433298	12710807	11947290	9.13	cps
Magnesium	24-2	39557688	39012595	39131234	39233839	0.73	cps
Manganese	55-2	1252118	1254625	1259860	1255535	0.31	cps
Molybdenum	94-1	204445	217091	213850	211796	3.10	cps
Molybdenum	95-1	85078	91821	91442	89447	4.23	cps
Molybdenum	96-1	116986	122639	124347	121324	3.18	cps
Molybdenum	97-1	51800	54888	56561	54416	4.44	cps
Molybdenum	98-1	134842	142635	144561	140679	3.66	cps
Neodymium	150-1	93634	100849	99512	97998	3.92	cps
Neodymium	150-2	23698	23784	23618	23700	0.35	cps
Nickel	60-2	87302	87205	88178	87562	0.61	cps
Phosphorus	31-2	2890	2837	3054	2927	3.86	cps
Potassium	39-2	337090	340064	340710	339288	0.57	cps
Rhodium	103-1	22837315	25423805	26348267	24869796	7.32	cps
Rhodium	103-2	9868116	10005198	9815363	9896226	0.99	cps
Scandium	45-1	17745544	20650056	20957093	19784231	8.96	cps
Scandium	45-2	445006	442382	444464	443951	0.31	cps
Selenium	82-1	115	116	174	135	24.96	cps
Selenium	77-2	120	150	107	126	17.68	cps
Selenium	78-2	113	90	150	118	25.68	cps
Silicon	28-1	47725903	46778376	44724631	46409637	3.31	cps
Silver	107-1	3375	3947	4651	3991	16.00	cps
Silver	109-1	2957	3507	4127	3530	16.58	cps
Sodium	23-2	411371	406969	410614	409651	0.57	cps
Strontium	86-1	19865776	21558184	21094563	20839507	4.20	cps
Strontium	88-1	169281801	184625597	181816191	178574530	4.57	cps
Sulfur	34-1	2216674	2384162	2326367	2309068	3.68	cps
Terbium	159-1	32926347	37221802	37877379	36008509	7.47	cps
Terbium	159-2	12380007	12213051	12058814	12217291	1.31	cps
Thallium	203-1	6665	6839	6992	6832	2.39	cps
Thallium	205-1	15806	16934	17512	16751	5.18	cps
Tin	118-1	15349	14378	14665	14797	3.37	cps
Titanium	47-1	564116	617470	611063	597549	4.88	cps
Uranium	238-1	263489	280246	283453	275730	3.89	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-04 Instrumnet Name : P8
Client Sample ID : ME28M3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:38:03 DataFile Name : 028AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	97707	98797	99341	98615	0.84	cps
Ytterbium	172-1	15776	16861	16868	16501	3.81	cps
Ytterbium	172-2	6555	6475	6728	6586	1.97	cps
Ytterbium	176-1	15115	16894	17131	16380	6.73	cps
Ytterbium	176-2	5598	5798	5438	5611	3.22	cps
Yttrium	89-1	39801072	46031728	46760939	44197913	8.65	cps
Yttrium	89-2	3555181	3565718	3616789	3579229	0.92	cps
Zinc	66-2	128645	130403	128486	129178	0.82	cps
Zirconium	90-1	425975	454295	454303	444858	3.68	cps
Zirconium	91-1	94256	100563	100160	98326	3.59	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-05 Instrumnet Name : P8
Client Sample ID : ME28M4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:41:14 DataFile Name : 029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	124162	127528	126518	126069	1.37	cps
Antimony	121-1	10808	10911	10671	10797	1.12	cps
Arsenic	75-2	3224	3237	2970	3144	4.78	cps
Barium	135-1	526692	531599	525985	528092	0.58	cps
Barium	137-1	901313	905513	896905	901244	0.48	cps
Beryllium	9-1	1386	1341	1365	1364	1.65	cps
Bismuth	209-1	21095788	20999433	20967302	21020841	0.32	cps
Bismuth	209-2	8123319	8175889	8158504	8152571	0.33	cps
Bromine	81-1	19147	20208	19881	19745	2.75	cps
Cadmium	108-1	277	257	310	281	9.59	cps
Cadmium	106-1	16830	16950	16694	16825	0.76	cps
Cadmium	111-1	12328	12479	12192	12333	1.16	cps
Calcium	43-1	31526855	31772234	31881870	31726986	0.57	cps
Calcium	44-1	508384752	507254459	521186672	512275295	1.51	cps
Carbon	12-1	6046359	6047722	6111253	6068444	0.61	cps
Carbon	12-2	49781	48964	48393	49046	1.42	cps
Chlorine	35-1	249320923	259111516	266151009	258194483	3.27	cps
Chlorine	35-2	1317961	1330149	1335674	1327928	0.68	cps
Chromium	52-2	55042	55166	56310	55506	1.26	cps
Cobalt	59-2	48817	49004	48676	48832	0.34	cps
Copper	63-2	123551	126204	125324	125026	1.08	cps
Dysprosium	156-1	27358	27064	27739	27387	1.24	cps
Dysprosium	156-2	8159	8486	8169	8272	2.25	cps
Erbium	164-1	23140	23414	23103	23219	0.73	cps
Erbium	164-2	7609	7596	8009	7738	3.04	cps
Gadolinium	160-1	24399	25221	24646	24755	1.70	cps
Gadolinium	160-2	9680	9684	10151	9838	2.75	cps
Holmium	165-1	36663963	36819865	36282884	36588904	0.76	cps
Holmium	165-2	12115140	12272333	12404609	12264027	1.18	cps
Indium	115-1	28737615	28543403	28133524	28471514	1.08	cps
Indium	115-2	3041124	3090986	3022988	3051699	1.15	cps
Iron	54-2	2476194	2466606	2523673	2488825	1.23	cps
Iron	56-2	45258416	45313959	45202408	45258261	0.12	cps
Iron	57-2	1079471	1094983	1090930	1088461	0.74	cps
Krypton	83-1	727	683	707	706	3.07	cps
Lead	206-1	449931	448815	453584	450777	0.55	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-05 Instrumnet Name : P8
Client Sample ID : ME28M4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:41:14 DataFile Name : 029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	363522	365697	363548	364256	0.34	cps
Lead	208-1	1707984	1710924	1712168	1710359	0.13	cps
Lithium	6-1	12504850	12362653	12528388	12465297	0.72	cps
Magnesium	24-2	78197291	77248842	77701332	77715822	0.61	cps
Manganese	55-2	503543	500568	503109	502407	0.32	cps
Molybdenum	94-1	73088	73999	73392	73493	0.63	cps
Molybdenum	95-1	49715	49799	50806	50107	1.21	cps
Molybdenum	96-1	59996	60052	59982	60010	0.06	cps
Molybdenum	97-1	29679	30908	30634	30407	2.12	cps
Molybdenum	98-1	78993	78956	79684	79211	0.52	cps
Neodymium	150-1	40407	41079	40287	40591	1.05	cps
Neodymium	150-2	9807	9960	9563	9777	2.05	cps
Nickel	60-2	51289	51784	51627	51566	0.49	cps
Phosphorus	31-2	1580	1480	1700	1587	6.94	cps
Potassium	39-2	151522	153136	151041	151900	0.72	cps
Rhodium	103-1	26162190	26178596	25740226	26027004	0.95	cps
Rhodium	103-2	9801571	9879388	9846098	9842352	0.40	cps
Scandium	45-1	20988882	20867468	20573076	20809808	1.03	cps
Scandium	45-2	451338	452936	455271	453182	0.44	cps
Selenium	82-1	-113	-67	-60	-80	-36.24	cps
Selenium	77-2	63	60	40	54	23.18	cps
Selenium	78-2	43	60	57	53	16.54	cps
Silicon	28-1	21448961	21811760	21553907	21604876	0.86	cps
Silver	107-1	4389	5517	6392	5433	18.48	cps
Silver	109-1	3941	5021	5835	4932	19.26	cps
Sodium	23-2	464936	465843	460152	463644	0.66	cps
Strontium	86-1	5615316	5591799	5521432	5576182	0.88	cps
Strontium	88-1	48625023	48388558	47937223	48316934	0.72	cps
Sulfur	34-1	1052771	1081247	1088256	1074091	1.75	cps
Terbium	159-1	37525846	37107148	37737963	37456986	0.86	cps
Terbium	159-2	12029544	11921567	12155550	12035554	0.97	cps
Thallium	203-1	6235	6175	6242	6217	0.59	cps
Thallium	205-1	14638	14705	15226	14856	2.16	cps
Tin	118-1	16016	16236	15863	16038	1.17	cps
Titanium	47-1	95156	95288	95771	95405	0.34	cps
Uranium	238-1	262331	263895	262031	262752	0.38	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-05 Instrumnet Name : P8
Client Sample ID : ME28M4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:41:14 DataFile Name : 029AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	41731	41935	42102	41922	0.44	cps
Ytterbium	172-1	7339	7205	7712	7419	3.54	cps
Ytterbium	172-2	2954	2854	2854	2887	2.00	cps
Ytterbium	176-1	9807	10017	9517	9780	2.57	cps
Ytterbium	176-2	2787	2787	2784	2786	0.07	cps
Yttrium	89-1	46856961	46492559	46220468	46523329	0.69	cps
Yttrium	89-2	3560957	3653294	3628192	3614148	1.32	cps
Zinc	66-2	13717	14107	14377	14067	2.36	cps
Zirconium	90-1	127860	128197	126242	127433	0.82	cps
Zirconium	91-1	28439	28082	27835	28118	1.08	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P8
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:44:27 DataFile Name : 030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5715272	5777885	5706220	5733125	0.68	cps
Antimony	121-1	11211467	11055586	10983705	11083586	1.05	cps
Arsenic	75-2	227409	221803	221860	223691	1.44	cps
Barium	135-1	15052453	14915706	15073750	15013970	0.57	cps
Barium	137-1	25094183	25214401	25344584	25217723	0.50	cps
Beryllium	9-1	3377739	3471448	3252655	3367281	3.26	cps
Bismuth	209-1	19842196	20035024	19570702	19815974	1.18	cps
Bismuth	209-2	7549856	7602623	7534717	7562399	0.47	cps
Bromine	81-1	13236	13176	13340	13251	0.62	cps
Cadmium	108-1	220342	222121	219395	220619	0.63	cps
Cadmium	106-1	329317	325579	322084	325660	1.11	cps
Cadmium	111-1	2756452	2829986	2766403	2784280	1.43	cps
Calcium	43-1	20671135	20800440	19996241	20489272	2.11	cps
Calcium	44-1	332874448	332399468	328556208	331276708	0.71	cps
Carbon	12-1	6151352	6330904	6398284	6293514	2.03	cps
Carbon	12-2	53152	52624	52457	52744	0.69	cps
Chlorine	35-1	13314946	12295455	11435864	12348755	7.62	cps
Chlorine	35-2	43689	41539	39825	41684	4.65	cps
Chromium	52-2	2835297	2868554	2786375	2830075	1.46	cps
Cobalt	59-2	5085558	5001529	5011258	5032782	0.91	cps
Copper	63-2	39959854	39555122	39057713	39524229	1.14	cps
Dysprosium	156-1	833	827	767	809	4.54	cps
Dysprosium	156-2	240	177	160	192	21.96	cps
Erbium	164-1	673	843	727	748	11.63	cps
Erbium	164-2	267	230	207	234	12.90	cps
Gadolinium	160-1	860	857	767	828	6.40	cps
Gadolinium	160-2	240	203	230	224	8.44	cps
Holmium	165-1	35796546	35146574	35134380	35359167	1.07	cps
Holmium	165-2	11732482	11845954	11919341	11832592	0.80	cps
Indium	115-1	26694504	26597623	25957827	26416652	1.52	cps
Indium	115-2	2809440	2776973	2749287	2778567	1.08	cps
Iron	54-2	28917928	29087086	28595574	28866863	0.87	cps
Iron	56-2	539114152	527916165	529205272	532078530	1.15	cps
Iron	57-2	13272122	13322991	13236541	13277218	0.33	cps
Krypton	83-1	560	530	530	540	3.21	cps
Lead	206-1	46886611	46590283	45899496	46458797	1.09	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P8
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:44:27 DataFile Name : 030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	40674978	39968415	40040660	40228018	0.97	cps
Lead	208-1	185439081	184526780	184284681	184750181	0.33	cps
Lithium	6-1	11389076	11346560	11029372	11255002	1.75	cps
Magnesium	24-2	88322749	88803135	87914372	88346752	0.50	cps
Manganese	55-2	12135643	12133937	12093650	12121077	0.20	cps
Molybdenum	94-1	44089713	44228836	44963429	44427326	1.06	cps
Molybdenum	95-1	65207111	64139962	64878239	64741771	0.84	cps
Molybdenum	96-1	71234861	70070966	69302031	70202619	1.39	cps
Molybdenum	97-1	39679306	39318759	39705896	39567987	0.55	cps
Molybdenum	98-1	103013588	103716138	104081255	103603661	0.52	cps
Neodymium	150-1	1517	1630	1587	1578	3.62	cps
Neodymium	150-2	110	117	140	122	12.89	cps
Nickel	60-2	1275567	1275306	1263224	1271366	0.55	cps
Phosphorus	31-2	51758	51769	51394	51640	0.41	cps
Potassium	39-2	30883275	30337195	30583760	30601410	0.89	cps
Rhodium	103-1	24098810	23584128	23650655	23777864	1.18	cps
Rhodium	103-2	8901559	8876775	8712441	8830258	1.16	cps
Scandium	45-1	19557454	19362918	19150840	19357071	1.05	cps
Scandium	45-2	413497	410572	404658	409576	1.10	cps
Selenium	82-1	203393	204839	201464	203232	0.83	cps
Selenium	77-2	3160	3594	3327	3360	6.51	cps
Selenium	78-2	11041	10637	10958	10879	1.96	cps
Silicon	28-1	66850891	66493656	65636952	66327166	0.94	cps
Silver	107-1	13874145	13861027	13700675	13811949	0.70	cps
Silver	109-1	13239689	13439732	13437164	13372195	0.86	cps
Sodium	23-2	191832664	190492517	189824997	190716726	0.54	cps
Strontium	86-1	4227309	4248600	4227409	4234440	0.29	cps
Strontium	88-1	36148811	36056941	36309994	36171916	0.35	cps
Sulfur	34-1	1816188	1795027	1746686	1785967	1.99	cps
Terbium	159-1	36809899	36097101	35962846	36289949	1.25	cps
Terbium	159-2	11673715	11648696	11704555	11675656	0.24	cps
Thallium	203-1	11608992	11499399	11475024	11527805	0.62	cps
Thallium	205-1	27568991	27853835	27998999	27807275	0.79	cps
Tin	118-1	9885802	9989180	9645755	9840246	1.79	cps
Titanium	47-1	19746007	19521084	19569120	19612070	0.60	cps
Uranium	238-1	39806660	40141182	40490859	40146234	0.85	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV002 Instrumnet Name : P8
Client Sample ID : CCV002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:44:27 DataFile Name : 030CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2232140	2206085	2203340	2213855	0.72	cps
Ytterbium	172-1	873	830	903	869	4.24	cps
Ytterbium	172-2	390	273	303	322	18.80	cps
Ytterbium	176-1	60106	60468	60555	60376	0.39	cps
Ytterbium	176-2	20095	19945	20953	20331	2.68	cps
Yttrium	89-1	43843538	42748063	43042073	43211224	1.31	cps
Yttrium	89-2	3358820	3322631	3297562	3326337	0.93	cps
Zinc	66-2	3766620	3774399	3683481	3741500	1.35	cps
Zirconium	90-1	22409137	22355121	22821008	22528422	1.13	cps
Zirconium	91-1	5010121	4966593	5109036	5028583	1.45	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P8
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:47:08 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	193	187	190	190	1.76	cps
Antimony	121-1	2294	1947	1643	1961	16.59	cps
Arsenic	75-2	7	13	7	9	43.25	cps
Barium	135-1	467	410	413	430	7.39	cps
Barium	137-1	740	713	730	728	1.85	cps
Beryllium	9-1	805	700	680	728	9.22	cps
Bismuth	209-1	22902745	22744474	22654881	22767367	0.55	cps
Bismuth	209-2	9024228	8939114	8861648	8941664	0.91	cps
Bromine	81-1	12529	13013	12145	12562	3.46	cps
Cadmium	108-1	63	43	60	56	19.29	cps
Cadmium	106-1	15629	15098	14675	15134	3.16	cps
Cadmium	111-1	11036	10705	10380	10707	3.06	cps
Calcium	43-1	2790	2817	2547	2718	5.48	cps
Calcium	44-1	57927	56689	55073	56563	2.53	cps
Carbon	12-1	6069419	6283173	6460593	6271062	3.12	cps
Carbon	12-2	44440	44253	44805	44499	0.63	cps
Chlorine	35-1	6173327	5674978	5337883	5728729	7.34	cps
Chlorine	35-2	21947	20845	19887	20893	4.93	cps
Chromium	52-2	1317	1430	1350	1366	4.27	cps
Cobalt	59-2	177	163	110	150	23.52	cps
Copper	63-2	4931	4424	4571	4642	5.62	cps
Dysprosium	156-1	20	30	33	28	24.98	cps
Dysprosium	156-2	7	0	7	4	86.60	cps
Erbium	164-1	180	157	153	163	8.89	cps
Erbium	164-2	60	53	53	56	6.93	cps
Gadolinium	160-1	277	270	247	264	5.96	cps
Gadolinium	160-2	33	27	67	42	50.76	cps
Holmium	165-1	37421207	37028637	37430451	37293432	0.62	cps
Holmium	165-2	12556039	12494842	12192518	12414466	1.57	cps
Indium	115-1	29364557	29264269	29268560	29299129	0.19	cps
Indium	115-2	3077813	3171267	3096422	3115167	1.59	cps
Iron	54-2	1303	1110	1090	1168	10.09	cps
Iron	56-2	16157	15973	15266	15799	2.98	cps
Iron	57-2	403	403	447	418	5.99	cps
Krypton	83-1	347	330	317	331	4.54	cps
Lead	206-1	3754	4087	3767	3870	4.88	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P8
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:47:08 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3504	3404	3224	3377	4.20	cps
Lead	208-1	15881	15531	14694	15368	3.97	cps
Lithium	6-1	12364739	12124050	12048303	12179031	1.36	cps
Magnesium	24-2	2297	1930	1503	1910	20.79	cps
Manganese	55-2	690	570	657	639	9.70	cps
Molybdenum	94-1	4191	3687	2850	3576	18.93	cps
Molybdenum	95-1	6328	4838	3824	4997	25.21	cps
Molybdenum	96-1	6465	4838	4248	5183	22.16	cps
Molybdenum	97-1	3857	2884	2250	2997	27.01	cps
Molybdenum	98-1	9767	7459	5825	7684	25.78	cps
Neodymium	150-1	20	43	7	23	79.53	cps
Neodymium	150-2	3	10	3	6	69.34	cps
Nickel	60-2	587	483	557	542	9.80	cps
Phosphorus	31-2	250	367	330	316	18.91	cps
Potassium	39-2	24164	24558	24067	24263	1.07	cps
Rhodium	103-1	27106880	27559275	27669162	27445106	1.09	cps
Rhodium	103-2	10669412	10652294	10353872	10558526	1.68	cps
Scandium	45-1	19879676	19812240	19976095	19889337	0.41	cps
Scandium	45-2	425223	424996	425124	425114	0.03	cps
Selenium	82-1	55	10	20	28	82.11	cps
Selenium	77-2	0	3	3	2	86.60	cps
Selenium	78-2	10	20	13	14	35.26	cps
Silicon	28-1	1021077	982992	1016239	1006769	2.06	cps
Silver	107-1	2620	2454	2026	2366	12.96	cps
Silver	109-1	2430	2357	1843	2210	14.46	cps
Sodium	23-2	115668	112261	112261	113396	1.73	cps
Strontium	86-1	700	873	643	739	16.22	cps
Strontium	88-1	2350	2360	2300	2337	1.38	cps
Sulfur	34-1	636186	637930	645600	639905	0.78	cps
Terbium	159-1	37988405	38062278	38466834	38172506	0.67	cps
Terbium	159-2	12434169	12372489	12166061	12324240	1.14	cps
Thallium	203-1	2047	1980	1743	1924	8.29	cps
Thallium	205-1	4908	4471	4127	4502	8.69	cps
Tin	118-1	3987	3617	3561	3722	6.23	cps
Titanium	47-1	1170	1037	997	1068	8.50	cps
Uranium	238-1	1070	907	893	957	10.28	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB002 Instrumnet Name : P8
Client Sample ID : CCB002 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:47:08 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	47	23	43	38	33.41	cps
Ytterbium	172-1	207	167	167	180	12.83	cps
Ytterbium	172-2	63	80	67	70	12.60	cps
Ytterbium	176-1	4868	4924	4838	4877	0.90	cps
Ytterbium	176-2	813	900	1050	921	13.00	cps
Yttrium	89-1	45712443	45430441	44766938	45303274	1.07	cps
Yttrium	89-2	3551335	3535571	3414436	3500447	2.14	cps
Zinc	66-2	833	870	873	859	2.58	cps
Zirconium	90-1	2814	2964	2610	2796	6.34	cps
Zirconium	91-1	570	563	490	541	8.20	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-06 Instrumnet Name : P8
Client Sample ID : ME28M5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:50:29 DataFile Name : 032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	107735	108782	108551	108356	0.51	cps
Antimony	121-1	16897	17548	16824	17090	2.33	cps
Arsenic	75-2	720	740	750	737	2.07	cps
Barium	135-1	912127	924528	923683	920113	0.75	cps
Barium	137-1	1676900	1625877	1641606	1648127	1.59	cps
Beryllium	9-1	1031	981	981	998	2.89	cps
Bismuth	209-1	22310896	22074778	22256113	22213929	0.56	cps
Bismuth	209-2	8818284	8555531	8554821	8642878	1.76	cps
Bromine	81-1	14778	15068	15305	15050	1.75	cps
Cadmium	108-1	130	117	160	136	16.37	cps
Cadmium	106-1	15616	15525	15485	15542	0.43	cps
Cadmium	111-1	11553	11533	11521	11536	0.14	cps
Calcium	43-1	4922234	4928297	4894465	4914999	0.37	cps
Calcium	44-1	78521102	78267536	78132056	78306898	0.25	cps
Carbon	12-1	5541303	5597756	5621114	5586725	0.73	cps
Carbon	12-2	37581	37705	38146	37811	0.79	cps
Chlorine	35-1	260579223	270387709	272116203	267694378	2.32	cps
Chlorine	35-2	1300728	1309823	1296124	1302225	0.54	cps
Chromium	52-2	35778	35233	35601	35537	0.78	cps
Cobalt	59-2	13593	13797	13423	13604	1.38	cps
Copper	63-2	120634	120956	120936	120842	0.15	cps
Dysprosium	156-1	13300	13484	13720	13501	1.56	cps
Dysprosium	156-2	4354	4271	4237	4287	1.40	cps
Erbium	164-1	12553	12856	12629	12679	1.25	cps
Erbium	164-2	4061	4164	4107	4111	1.26	cps
Gadolinium	160-1	13040	13370	13150	13187	1.28	cps
Gadolinium	160-2	5208	4998	5161	5122	2.15	cps
Holmium	165-1	37941062	37988099	37548749	37825970	0.64	cps
Holmium	165-2	12600371	12401746	12667090	12556402	1.10	cps
Indium	115-1	29412922	29197472	29791169	29467188	1.02	cps
Indium	115-2	3136719	3108239	3104942	3116633	0.56	cps
Iron	54-2	987117	980269	988211	985199	0.44	cps
Iron	56-2	18785042	18897333	19106491	18929622	0.86	cps
Iron	57-2	449177	453935	452230	451780	0.53	cps
Krypton	83-1	497	487	563	516	8.08	cps
Lead	206-1	242181	242291	240594	241689	0.39	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-06 Instrumnet Name : P8
Client Sample ID : ME28M5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:50:29 DataFile Name : 032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	199972	200143	198988	199701	0.31	cps
Lead	208-1	927885	928454	930648	928996	0.16	cps
Lithium	6-1	12738101	12629635	12858388	12742041	0.90	cps
Magnesium	24-2	10972682	10930383	10955286	10952784	0.19	cps
Manganese	55-2	172474	173343	173743	173187	0.37	cps
Molybdenum	94-1	15772	15579	15326	15559	1.44	cps
Molybdenum	95-1	11024	10397	10504	10642	3.15	cps
Molybdenum	96-1	12773	12663	12379	12605	1.61	cps
Molybdenum	97-1	6485	6685	6332	6500	2.73	cps
Molybdenum	98-1	16386	15776	15702	15955	2.35	cps
Neodymium	150-1	18099	18303	18206	18202	0.56	cps
Neodymium	150-2	4324	4381	4591	4432	3.17	cps
Nickel	60-2	26605	27139	26107	26617	1.94	cps
Phosphorus	31-2	750	663	677	697	6.70	cps
Potassium	39-2	90504	91914	91777	91398	0.85	cps
Rhodium	103-1	27678791	27171548	27448030	27432790	0.93	cps
Rhodium	103-2	10545633	10454968	10347238	10449280	0.95	cps
Scandium	45-1	21087743	21079279	20932883	21033301	0.41	cps
Scandium	45-2	447931	446967	440327	445075	0.93	cps
Selenium	82-1	-40	-87	-107	-78	-44.33	cps
Selenium	77-2	17	20	50	29	63.54	cps
Selenium	78-2	27	20	20	22	17.33	cps
Silicon	28-1	16596751	16954660	20139997	17897136	10.90	cps
Silver	107-1	5355	3859	3236	4150	26.24	cps
Silver	109-1	4824	3390	3110	3775	24.35	cps
Sodium	23-2	207930	207842	208061	207944	0.05	cps
Strontium	86-1	29376530	29608949	29142843	29376107	0.79	cps
Strontium	88-1	252807983	254618590	251478516	252968363	0.62	cps
Sulfur	34-1	946163	954261	954177	951533	0.49	cps
Terbium	159-1	38810497	38556550	37831726	38399591	1.32	cps
Terbium	159-2	12543040	12372361	12259458	12391620	1.15	cps
Thallium	203-1	4017	3754	3627	3799	5.24	cps
Thallium	205-1	9420	8980	8886	9095	3.13	cps
Tin	118-1	32201	31052	31095	31449	2.07	cps
Titanium	47-1	87730	86978	90969	88559	2.39	cps
Uranium	238-1	24150	25048	24758	24652	1.86	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-06 Instrumnet Name : P8
Client Sample ID : ME28M5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:50:29 DataFile Name : 032AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	20959	21232	21196	21129	0.70	cps
Ytterbium	172-1	3971	3907	3874	3917	1.25	cps
Ytterbium	172-2	1507	1577	1500	1528	2.78	cps
Ytterbium	176-1	7539	7169	7479	7395	2.69	cps
Ytterbium	176-2	1897	1843	1990	1910	3.89	cps
Yttrium	89-1	47897429	47251471	47085126	47411342	0.91	cps
Yttrium	89-2	3661351	3546108	3506423	3571294	2.25	cps
Zinc	66-2	20441	20218	20452	20370	0.65	cps
Zirconium	90-1	26472	26238	26505	26405	0.55	cps
Zirconium	91-1	5738	5855	5584	5726	2.37	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-07 Instrumnet Name : P8
Client Sample ID : ME28M6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:53:39 DataFile Name : 033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	178710	174988	179169	177622	1.29	cps
Antimony	121-1	5028	5304	5144	5159	2.69	cps
Arsenic	75-2	1120	1270	1250	1213	6.71	cps
Barium	135-1	1749488	1712544	1695422	1719151	1.61	cps
Barium	137-1	2922100	2868404	2905474	2898659	0.95	cps
Beryllium	9-1	1271	1240	1205	1239	2.68	cps
Bismuth	209-1	21775081	22049136	21864223	21896146	0.64	cps
Bismuth	209-2	8483131	8174155	7440891	8032726	6.66	cps
Bromine	81-1	15328	16053	15846	15742	2.37	cps
Cadmium	108-1	163	163	213	180	16.04	cps
Cadmium	106-1	16643	16537	16740	16640	0.61	cps
Cadmium	111-1	12069	12141	12042	12084	0.42	cps
Calcium	43-1	15426093	15548231	15543496	15505940	0.45	cps
Calcium	44-1	247081903	249256310	244794543	247044252	0.90	cps
Carbon	12-1	5653318	5659322	5643340	5651993	0.14	cps
Carbon	12-2	42113	41933	41278	41775	1.05	cps
Chlorine	35-1	280119262	286696796	289871282	285562447	1.74	cps
Chlorine	35-2	1389517	1394069	1417602	1400396	1.08	cps
Chromium	52-2	101175	100171	102641	101329	1.23	cps
Cobalt	59-2	22274	22207	22374	22285	0.38	cps
Copper	63-2	75482	74949	76900	75777	1.33	cps
Dysprosium	156-1	29365	29242	29065	29224	0.52	cps
Dysprosium	156-2	9810	9780	9594	9728	1.21	cps
Erbium	164-1	29376	29105	29700	29394	1.01	cps
Erbium	164-2	9737	9680	9320	9579	2.36	cps
Gadolinium	160-1	29172	28998	28544	28905	1.12	cps
Gadolinium	160-2	11195	11355	11322	11290	0.75	cps
Holmium	165-1	37002042	38002460	37512139	37505547	1.33	cps
Holmium	165-2	12249724	11802656	10859145	11637175	6.10	cps
Indium	115-1	29263234	29353290	28703998	29106841	1.21	cps
Indium	115-2	3111985	2931685	2738538	2927403	6.38	cps
Iron	54-2	1176139	1162345	1176516	1171667	0.69	cps
Iron	56-2	22286006	22163296	21930241	22126514	0.82	cps
Iron	57-2	527021	536159	526991	530057	1.00	cps
Krypton	83-1	557	583	627	589	6.00	cps
Lead	206-1	98729	98642	97875	98415	0.48	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-07 Instrumnet Name : P8
Client Sample ID : ME28M6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:53:39 DataFile Name : 033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	75840	75632	75602	75691	0.17	cps
Lead	208-1	361687	360933	361500	361373	0.11	cps
Lithium	6-1	12495293	12962169	12948241	12801901	2.07	cps
Magnesium	24-2	36303562	36081531	36766035	36383709	0.96	cps
Manganese	55-2	271575	271693	272761	272009	0.24	cps
Molybdenum	94-1	38386	37798	37420	37868	1.29	cps
Molybdenum	95-1	17605	17047	17458	17370	1.66	cps
Molybdenum	96-1	22659	22218	22822	22566	1.39	cps
Molybdenum	97-1	10487	10217	10704	10470	2.33	cps
Molybdenum	98-1	25904	26509	26569	26327	1.40	cps
Neodymium	150-1	39037	39695	39465	39399	0.85	cps
Neodymium	150-2	9820	9630	9997	9816	1.87	cps
Nickel	60-2	24608	24591	25022	24740	0.99	cps
Phosphorus	31-2	1110	930	1047	1029	8.87	cps
Potassium	39-2	120289	119933	121126	120449	0.51	cps
Rhodium	103-1	26850296	26664515	26582137	26698983	0.51	cps
Rhodium	103-2	10199199	9845205	8994342	9679582	6.40	cps
Scandium	45-1	21178744	21539730	20797140	21171871	1.75	cps
Scandium	45-2	449706	447675	399378	432253	6.59	cps
Selenium	82-1	-21	-51	-18	-30	-61.39	cps
Selenium	77-2	60	67	67	64	5.98	cps
Selenium	78-2	37	77	70	61	35.07	cps
Silicon	28-1	22487191	21905733	22186916	22193280	1.31	cps
Silver	107-1	2230	3013	3290	2844	19.33	cps
Silver	109-1	2064	2464	3080	2536	20.20	cps
Sodium	23-2	274391	274277	274415	274361	0.03	cps
Strontium	86-1	61657224	59760391	59984597	60467404	1.71	cps
Strontium	88-1	522492739	518356766	514688366	518512623	0.75	cps
Sulfur	34-1	1177701	1189714	1204819	1190745	1.14	cps
Terbium	159-1	38169405	38577349	37826028	38190927	0.98	cps
Terbium	159-2	12074764	11962499	10944922	11660728	5.34	cps
Thallium	203-1	3914	3831	3847	3864	1.14	cps
Thallium	205-1	9267	9353	9440	9353	0.93	cps
Tin	118-1	12376	12599	12653	12542	1.17	cps
Titanium	47-1	137273	137279	137443	137332	0.07	cps
Uranium	238-1	48917	48907	48475	48766	0.52	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-07 Instrumnet Name : P8
Client Sample ID : ME28M6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:53:39 DataFile Name : 033AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	47703	48773	48950	48475	1.39	cps
Ytterbium	172-1	9547	9477	9420	9481	0.67	cps
Ytterbium	172-2	3701	3661	3767	3709	1.45	cps
Ytterbium	176-1	10831	11191	11385	11136	2.52	cps
Ytterbium	176-2	3330	3357	3260	3316	1.51	cps
Yttrium	89-1	47037001	47436108	47119471	47197527	0.45	cps
Yttrium	89-2	3632886	3517343	3240714	3463648	5.82	cps
Zinc	66-2	11555	11732	12199	11828	2.81	cps
Zirconium	90-1	79505	79777	79666	79649	0.17	cps
Zirconium	91-1	17488	17438	17211	17379	0.85	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-08 Instrumnet Name : P8
Client Sample ID : ME28M7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:56:52 DataFile Name : 034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	866089	859501	858524	861371	0.48	cps
Antimony	121-1	14288	14254	13617	14053	2.69	cps
Arsenic	75-2	6765	6655	6345	6588	3.31	cps
Barium	135-1	1789525	1782785	1789261	1787190	0.21	cps
Barium	137-1	3034147	3054183	3042584	3043638	0.33	cps
Beryllium	9-1	3546	3633	3579	3586	1.21	cps
Bismuth	209-1	21848256	21816026	21410476	21691586	1.12	cps
Bismuth	209-2	8301293	8288796	8331412	8307167	0.26	cps
Bromine	81-1	16026	16730	17164	16640	3.45	cps
Cadmium	108-1	923	947	843	904	5.99	cps
Cadmium	106-1	18386	18643	18626	18551	0.78	cps
Cadmium	111-1	16044	16348	16448	16280	1.29	cps
Calcium	43-1	23287378	23013963	23428457	23243266	0.91	cps
Calcium	44-1	376699434	368038355	375735368	373491052	1.27	cps
Carbon	12-1	6124319	6201314	6257197	6194277	1.08	cps
Carbon	12-2	44310	43494	44310	44038	1.07	cps
Chlorine	35-1	266250056	274228963	281451882	273976967	2.78	cps
Chlorine	35-2	1372332	1357443	1367350	1365708	0.55	cps
Chromium	52-2	103122	101678	102446	102415	0.71	cps
Cobalt	59-2	125430	126015	126388	125944	0.38	cps
Copper	63-2	485095	484105	483294	484165	0.19	cps
Dysprosium	156-1	84092	83750	83757	83866	0.23	cps
Dysprosium	156-2	26854	26777	27007	26879	0.44	cps
Erbium	164-1	70646	69785	71923	70785	1.52	cps
Erbium	164-2	22636	22068	22920	22541	1.92	cps
Gadolinium	160-1	79364	78140	79790	79098	1.08	cps
Gadolinium	160-2	31247	31400	31053	31233	0.56	cps
Holmium	165-1	37962055	37051756	37763204	37592338	1.27	cps
Holmium	165-2	12514127	12127738	12188140	12276668	1.69	cps
Indium	115-1	29319142	28841759	29162167	29107689	0.84	cps
Indium	115-2	3009209	3036280	3034036	3026508	0.50	cps
Iron	54-2	6259826	6370141	6316307	6315425	0.87	cps
Iron	56-2	116219428	117391335	117790795	117133853	0.70	cps
Iron	57-2	2946004	2923684	2928930	2932873	0.40	cps
Krypton	83-1	627	703	770	700	10.25	cps
Lead	206-1	268790	268957	267303	268350	0.34	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-08 Instrumnet Name : P8
Client Sample ID : ME28M7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:56:52 DataFile Name : 034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	209563	211025	209530	210039	0.41	cps
Lead	208-1	997370	997039	992572	995660	0.27	cps
Lithium	6-1	12721720	12811093	12583310	12705374	0.90	cps
Magnesium	24-2	32724460	32768989	32672654	32722034	0.15	cps
Manganese	55-2	1727952	1734201	1762482	1741545	1.06	cps
Molybdenum	94-1	213765	214837	214666	214423	0.27	cps
Molybdenum	95-1	107501	108264	107680	107815	0.37	cps
Molybdenum	96-1	138142	140492	138978	139204	0.86	cps
Molybdenum	97-1	66401	66233	65454	66029	0.77	cps
Molybdenum	98-1	167859	170147	171095	169700	0.98	cps
Neodymium	150-1	115455	114120	116248	115274	0.93	cps
Neodymium	150-2	28053	27993	27605	27883	0.87	cps
Nickel	60-2	185684	186046	183023	184918	0.89	cps
Phosphorus	31-2	3550	3207	3754	3504	7.89	cps
Potassium	39-2	366412	367495	369296	367734	0.40	cps
Rhodium	103-1	26499622	26534744	26456574	26496980	0.15	cps
Rhodium	103-2	9931389	10148004	10061593	10046995	1.09	cps
Scandium	45-1	21375173	21252342	21019772	21215762	0.85	cps
Scandium	45-2	452901	448790	450127	450606	0.47	cps
Selenium	82-1	285	120	156	187	46.63	cps
Selenium	77-2	180	170	170	173	3.33	cps
Selenium	78-2	110	143	130	128	13.13	cps
Silicon	28-1	50952743	50398469	50425291	50592168	0.62	cps
Silver	107-1	3093	3797	4236	3709	15.56	cps
Silver	109-1	2817	3244	3520	3194	11.10	cps
Sodium	23-2	383194	385730	386779	385234	0.48	cps
Strontium	86-1	3811735	3913158	3836929	3853940	1.37	cps
Strontium	88-1	32792809	33614143	33118420	33175124	1.25	cps
Sulfur	34-1	1729145	1745207	1733706	1736020	0.48	cps
Terbium	159-1	37987484	38217784	38334483	38179917	0.46	cps
Terbium	159-2	12341722	12095859	12092501	12176694	1.17	cps
Thallium	203-1	5808	5788	5981	5859	1.82	cps
Thallium	205-1	14725	14802	14475	14667	1.17	cps
Tin	118-1	13110	13777	13610	13499	2.57	cps
Titanium	47-1	611109	613910	615272	613430	0.35	cps
Uranium	238-1	293723	298439	295551	295904	0.80	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-08 Instrumnet Name : P8
Client Sample ID : ME28M7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:56:52 DataFile Name : 034AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	114540	115155	115599	115098	0.46	cps
Ytterbium	172-1	19591	19608	19107	19435	1.46	cps
Ytterbium	172-2	7586	7489	7442	7506	0.97	cps
Ytterbium	176-1	18216	18460	18827	18501	1.66	cps
Ytterbium	176-2	6178	6218	6111	6169	0.87	cps
Yttrium	89-1	47034323	47749376	47751148	47511615	0.87	cps
Yttrium	89-2	3672904	3664081	3569530	3635505	1.58	cps
Zinc	66-2	76981	77450	77728	77386	0.49	cps
Zirconium	90-1	427614	430160	432220	429998	0.54	cps
Zirconium	91-1	94930	95236	94356	94841	0.47	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-09 Instrumnet Name : P8
Client Sample ID : ME28M8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:59:59 DataFile Name : 035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	462777	454482	466202	461153	1.31	cps
Antimony	121-1	8629	8496	8353	8493	1.63	cps
Arsenic	75-2	2670	2504	2570	2581	3.25	cps
Barium	135-1	1368808	1392552	1355491	1372284	1.37	cps
Barium	137-1	2505175	2477465	2444373	2475671	1.23	cps
Beryllium	9-1	2189	2144	2119	2150	1.65	cps
Bismuth	209-1	21724265	21932611	22144376	21933750	0.96	cps
Bismuth	209-2	7797076	8763584	7090501	7883721	10.65	cps
Bromine	81-1	16493	16550	17264	16769	2.56	cps
Cadmium	108-1	240	260	287	262	8.93	cps
Cadmium	106-1	17468	17151	17578	17399	1.27	cps
Cadmium	111-1	12813	12827	13024	12888	0.92	cps
Calcium	43-1	14000735	14153563	14017930	14057409	0.60	cps
Calcium	44-1	226366443	228671257	228133417	227723705	0.53	cps
Carbon	12-1	5731518	5964888	5840823	5845743	2.00	cps
Carbon	12-2	41385	41465	41629	41493	0.30	cps
Chlorine	35-1	271820596	285399796	291318916	282846436	3.53	cps
Chlorine	35-2	1390960	1375166	1411491	1392539	1.31	cps
Chromium	52-2	123040	121591	120895	121842	0.90	cps
Cobalt	59-2	62326	63159	63300	62928	0.84	cps
Copper	63-2	280634	277997	283258	280630	0.94	cps
Dysprosium	156-1	49137	49053	48394	48861	0.83	cps
Dysprosium	156-2	15319	15596	15783	15566	1.50	cps
Erbium	164-1	44534	45176	44197	44636	1.12	cps
Erbium	164-2	14481	14335	14768	14528	1.52	cps
Gadolinium	160-1	45782	46190	47307	46426	1.70	cps
Gadolinium	160-2	18343	18026	18056	18141	0.96	cps
Holmium	165-1	38667644	38558771	37788364	38338260	1.25	cps
Holmium	165-2	11402284	13051411	10354260	11602652	11.72	cps
Indium	115-1	29987925	30299963	29588500	29958796	1.19	cps
Indium	115-2	2812316	3269727	2574772	2885605	12.24	cps
Iron	54-2	3109605	2987198	3041159	3045987	2.01	cps
Iron	56-2	55929146	54763419	56206688	55633084	1.38	cps
Iron	57-2	1328930	1314354	1411171	1351485	3.86	cps
Krypton	83-1	610	713	650	658	7.92	cps
Lead	206-1	169480	167315	167146	167980	0.77	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-09 Instrumnet Name : P8
Client Sample ID : ME28M8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:59:59 DataFile Name : 035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	131519	133459	129440	131473	1.53	cps
Lead	208-1	626781	632263	626024	628356	0.54	cps
Lithium	6-1	12683617	12999553	13141583	12941584	1.81	cps
Magnesium	24-2	29205725	28621493	29146579	28991265	1.11	cps
Manganese	55-2	748102	732481	749589	743391	1.27	cps
Molybdenum	94-1	59912	59061	59681	59551	0.74	cps
Molybdenum	95-1	39222	39810	39703	39578	0.79	cps
Molybdenum	96-1	48056	47889	47240	47728	0.90	cps
Molybdenum	97-1	23610	24518	23914	24014	1.93	cps
Molybdenum	98-1	62490	62048	62912	62483	0.69	cps
Neodymium	150-1	67489	68158	66674	67440	1.10	cps
Neodymium	150-2	16410	15993	16317	16240	1.35	cps
Nickel	60-2	104151	104070	107069	105097	1.63	cps
Phosphorus	31-2	2054	1987	2010	2017	1.68	cps
Potassium	39-2	211315	210063	210344	210574	0.31	cps
Rhodium	103-1	27312735	27485518	27419252	27405835	0.32	cps
Rhodium	103-2	9419187	10932287	8602296	9651257	12.25	cps
Scandium	45-1	22017526	21887286	21924730	21943181	0.31	cps
Scandium	45-2	413593	480139	380291	424674	11.97	cps
Selenium	82-1	25	-22	85	29	182.12	cps
Selenium	77-2	110	110	83	101	15.23	cps
Selenium	78-2	77	80	63	73	12.03	cps
Silicon	28-1	31367912	30930059	31179800	31159257	0.70	cps
Silver	107-1	2175	2459	2565	2400	8.41	cps
Silver	109-1	1747	2110	2170	2009	11.40	cps
Sodium	23-2	280688	282278	285350	282772	0.84	cps
Strontium	86-1	48169029	48905711	48164313	48413018	0.88	cps
Strontium	88-1	413203781	420926674	411562687	415231047	1.20	cps
Sulfur	34-1	1122551	1107433	1095191	1108391	1.24	cps
Terbium	159-1	38720560	38829009	39395814	38981794	0.93	cps
Terbium	159-2	11308872	12785308	10247225	11447135	11.14	cps
Thallium	203-1	4954	4738	4851	4848	2.24	cps
Thallium	205-1	11769	11789	11759	11772	0.13	cps
Tin	118-1	16060	15609	15592	15754	1.68	cps
Titanium	47-1	334036	335752	332577	334122	0.48	cps
Uranium	238-1	85314	85079	84511	84968	0.49	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-09 Instrumnet Name : P8
Client Sample ID : ME28M8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 14:59:59 DataFile Name : 035AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	71943	71578	71028	71516	0.64	cps
Ytterbium	172-1	13250	12706	13067	13008	2.13	cps
Ytterbium	172-2	5151	5241	5091	5161	1.46	cps
Ytterbium	176-1	13494	13333	13077	13301	1.58	cps
Ytterbium	176-2	4231	4564	4137	4311	5.20	cps
Yttrium	89-1	48252356	48751949	48449648	48484651	0.52	cps
Yttrium	89-2	3357602	3827498	3049264	3411455	11.49	cps
Zinc	66-2	27012	27470	27757	27413	1.37	cps
Zirconium	90-1	105555	105156	106264	105659	0.53	cps
Zirconium	91-1	23994	23396	23243	23544	1.69	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-10 Instrumnet Name : P8
Client Sample ID : ME28M9 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:03:12 DataFile Name : 036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1727337	1720417	1715433	1721062	0.35	cps
Antimony	121-1	11155	11001	10784	10980	1.69	cps
Arsenic	75-2	7769	7645	8096	7837	2.97	cps
Barium	135-1	838314	850914	846608	845279	0.76	cps
Barium	137-1	1503439	1443033	1434546	1460339	2.57	cps
Beryllium	9-1	9544	9664	9456	9555	1.10	cps
Bismuth	209-1	23703176	23028535	23814326	23515346	1.81	cps
Bismuth	209-2	8880000	8793763	8809492	8827752	0.52	cps
Bromine	81-1	29501	30604	30857	30321	2.38	cps
Cadmium	108-1	510	587	610	569	9.20	cps
Cadmium	106-1	17748	17495	17925	17723	1.22	cps
Cadmium	111-1	17031	16680	17192	16967	1.54	cps
Calcium	43-1	799138	803577	807739	803485	0.54	cps
Calcium	44-1	13328714	13265654	13567918	13387429	1.19	cps
Carbon	12-1	16249899	16586964	16764669	16533844	1.58	cps
Carbon	12-2	112537	112667	110914	112039	0.87	cps
Chlorine	35-1	293416729	298734496	302772742	298307989	1.57	cps
Chlorine	35-2	1442860	1453852	1435594	1444102	0.64	cps
Chromium	52-2	159697	158642	158201	158847	0.48	cps
Cobalt	59-2	243435	242889	241336	242553	0.45	cps
Copper	63-2	910367	899344	909409	906373	0.67	cps
Dysprosium	156-1	141786	143062	142153	142334	0.46	cps
Dysprosium	156-2	44160	44618	43889	44222	0.83	cps
Erbium	164-1	123954	124422	124365	124247	0.21	cps
Erbium	164-2	39472	39064	39034	39190	0.62	cps
Gadolinium	160-1	133881	132312	132578	132923	0.63	cps
Gadolinium	160-2	51529	50244	51399	51057	1.39	cps
Holmium	165-1	38877970	37993594	38747426	38539664	1.24	cps
Holmium	165-2	12645183	12464087	12419921	12509731	0.95	cps
Indium	115-1	30935042	30075605	30871045	30627231	1.56	cps
Indium	115-2	3182479	3184800	3209705	3192328	0.47	cps
Iron	54-2	9083177	9026712	9056140	9055343	0.31	cps
Iron	56-2	165178761	164928168	167507101	165871343	0.86	cps
Iron	57-2	4144283	4113869	4134612	4130921	0.38	cps
Krypton	83-1	707	773	710	730	5.15	cps
Lead	206-1	921032	930582	924565	925393	0.52	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-10 Instrumnet Name : P8
Client Sample ID : ME28M9 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:03:12 DataFile Name : 036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	766543	748922	752405	755957	1.23	cps
Lead	208-1	3659586	3608455	3648564	3638868	0.74	cps
Lithium	6-1	13405320	12663929	13204372	13091207	2.93	cps
Magnesium	24-2	2045098	2073340	2066113	2061517	0.71	cps
Manganese	55-2	4564814	4516060	4494431	4525102	0.80	cps
Molybdenum	94-1	93847	93491	96029	94456	1.45	cps
Molybdenum	95-1	114991	117320	115851	116054	1.01	cps
Molybdenum	96-1	127499	126373	126776	126883	0.45	cps
Molybdenum	97-1	70313	70625	71117	70685	0.57	cps
Molybdenum	98-1	182112	183285	186006	183801	1.09	cps
Neodymium	150-1	192791	194801	195800	194464	0.79	cps
Neodymium	150-2	47009	47584	46818	47137	0.85	cps
Nickel	60-2	368174	367621	365064	366953	0.45	cps
Phosphorus	31-2	3987	3814	3834	3878	2.45	cps
Potassium	39-2	562561	559483	558204	560083	0.40	cps
Rhodium	103-1	29187973	28283268	28958586	28809942	1.63	cps
Rhodium	103-2	10942351	10829703	10843758	10871937	0.56	cps
Scandium	45-1	22236397	21616781	22454008	22102396	1.97	cps
Scandium	45-2	469965	460528	466245	465579	1.02	cps
Selenium	82-1	362	273	458	364	25.33	cps
Selenium	77-2	257	277	267	267	3.75	cps
Selenium	78-2	223	163	183	190	16.08	cps
Silicon	28-1	64273974	64532672	63776656	64194434	0.60	cps
Silver	107-1	3850	3884	3999	3911	1.99	cps
Silver	109-1	4541	4577	4314	4477	3.19	cps
Sodium	23-2	247792	250540	250217	249516	0.60	cps
Strontium	86-1	798415	803080	796891	799462	0.40	cps
Strontium	88-1	7248826	7186831	7199497	7211718	0.45	cps
Sulfur	34-1	794507	785851	776484	785614	1.15	cps
Terbium	159-1	40217774	38929393	39070950	39406039	1.79	cps
Terbium	159-2	12530649	12526051	12328054	12461585	0.93	cps
Thallium	203-1	9670	9710	9577	9653	0.71	cps
Thallium	205-1	22606	22636	22850	22698	0.59	cps
Tin	118-1	28192	28931	28820	28648	1.39	cps
Titanium	47-1	500588	506341	503617	503516	0.57	cps
Uranium	238-1	211464	209447	210986	210632	0.50	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-10 Instrumnet Name : P8
Client Sample ID : ME28M9 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:03:12 DataFile Name : 036AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	178174	179027	177823	178341	0.35	cps
Ytterbium	172-1	32821	34091	33282	33398	1.92	cps
Ytterbium	172-2	12896	13053	12389	12780	2.72	cps
Ytterbium	176-1	26804	25495	26146	26148	2.50	cps
Ytterbium	176-2	8883	8980	9173	9012	1.64	cps
Yttrium	89-1	51070929	50271593	50584544	50642355	0.80	cps
Yttrium	89-2	3767821	3846109	3787747	3800559	1.07	cps
Zinc	66-2	96432	95804	95828	96021	0.37	cps
Zirconium	90-1	83760	83968	83575	83768	0.23	cps
Zirconium	91-1	17975	18402	18335	18238	1.26	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-11 Instrumnet Name : P8
Client Sample ID : ME28N0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:06:21 DataFile Name : 037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2047958	2155280	2133706	2112315	2.69	cps
Antimony	121-1	7969	8156	8006	8044	1.23	cps
Arsenic	75-2	9770	10351	10347	10156	3.29	cps
Barium	135-1	726782	751371	724915	734356	2.01	cps
Barium	137-1	1266248	1283523	1254377	1268049	1.16	cps
Beryllium	9-1	9825	10280	9651	9918	3.28	cps
Bismuth	209-1	21046223	21297898	20955829	21099984	0.84	cps
Bismuth	209-2	8231239	8356209	8481574	8356341	1.50	cps
Bromine	81-1	18759	19711	19390	19287	2.51	cps
Cadmium	108-1	420	447	400	422	5.55	cps
Cadmium	106-1	15592	15799	15065	15485	2.44	cps
Cadmium	111-1	13908	13970	13266	13715	2.84	cps
Calcium	43-1	477121	484597	471300	477672	1.40	cps
Calcium	44-1	8068451	8224004	7853096	8048517	2.31	cps
Carbon	12-1	8518891	8449157	8380884	8449644	0.82	cps
Carbon	12-2	56371	57435	57110	56972	0.96	cps
Chlorine	35-1	199753057	206614397	201871150	202746201	1.73	cps
Chlorine	35-2	921561	961064	955413	946013	2.26	cps
Chromium	52-2	184954	189853	191956	188921	1.90	cps
Cobalt	59-2	252689	263957	266892	261179	2.87	cps
Copper	63-2	417561	427016	425886	423488	1.22	cps
Dysprosium	156-1	210188	213866	207956	210670	1.42	cps
Dysprosium	156-2	66655	68983	69345	68328	2.14	cps
Erbium	164-1	184941	187801	181305	184682	1.76	cps
Erbium	164-2	58418	60878	60728	60008	2.30	cps
Gadolinium	160-1	201070	206627	195745	201147	2.71	cps
Gadolinium	160-2	77956	80243	81337	79845	2.16	cps
Holmium	165-1	36431666	35723577	34984617	35713287	2.03	cps
Holmium	165-2	11616425	11765584	11857960	11746656	1.04	cps
Indium	115-1	28569926	28715464	27231224	28172205	2.90	cps
Indium	115-2	2912599	2987126	3022446	2974057	1.89	cps
Iron	54-2	11919300	12443330	12405312	12255981	2.38	cps
Iron	56-2	220755730	228633657	226782590	225390659	1.83	cps
Iron	57-2	5446375	5643444	5576918	5555579	1.80	cps
Krypton	83-1	727	713	707	716	1.42	cps
Lead	206-1	660531	675887	650665	662361	1.92	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-11 Instrumnet Name : P8
Client Sample ID : ME28N0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:06:21 DataFile Name : 037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	527829	538384	522543	529585	1.52	cps
Lead	208-1	2498375	2537138	2456445	2497319	1.62	cps
Lithium	6-1	11851132	12057892	11884008	11931011	0.93	cps
Magnesium	24-2	2165278	2298304	2309264	2257615	3.55	cps
Manganese	55-2	2447433	2531641	2519191	2499422	1.82	cps
Molybdenum	94-1	120174	123866	118066	120702	2.43	cps
Molybdenum	95-1	137566	140512	135620	137900	1.79	cps
Molybdenum	96-1	155294	156079	152109	154494	1.36	cps
Molybdenum	97-1	84931	86880	83033	84948	2.26	cps
Molybdenum	98-1	219558	222542	215291	219130	1.66	cps
Neodymium	150-1	291702	296636	287558	291965	1.56	cps
Neodymium	150-2	69924	72447	71939	71437	1.87	cps
Nickel	60-2	161262	168353	170151	166589	2.82	cps
Phosphorus	31-2	2147	2407	2384	2312	6.22	cps
Potassium	39-2	529559	549153	543149	540620	1.86	cps
Rhodium	103-1	26643417	26616653	25399075	26219715	2.71	cps
Rhodium	103-2	9864388	10199357	10179667	10081137	1.86	cps
Scandium	45-1	20424855	20844886	20371467	20547069	1.26	cps
Scandium	45-2	428318	444489	443101	438636	2.04	cps
Selenium	82-1	365	383	320	356	9.12	cps
Selenium	77-2	387	463	407	419	9.49	cps
Selenium	78-2	230	283	270	261	10.63	cps
Silicon	28-1	66981686	66197311	63768314	65649103	2.55	cps
Silver	107-1	1644	1606	1762	1671	4.87	cps
Silver	109-1	2234	2157	2247	2212	2.20	cps
Sodium	23-2	245159	249555	248443	247719	0.92	cps
Strontium	86-1	503788	517369	498988	506715	1.88	cps
Strontium	88-1	4569626	4687958	4467447	4575010	2.41	cps
Sulfur	34-1	631998	623263	603412	619558	2.36	cps
Terbium	159-1	36924104	36500820	36226455	36550460	0.96	cps
Terbium	159-2	11618769	11877934	11875289	11790664	1.26	cps
Thallium	203-1	11422	12039	11298	11586	3.42	cps
Thallium	205-1	27649	28538	27786	27991	1.71	cps
Tin	118-1	15789	16166	15355	15770	2.57	cps
Titanium	47-1	417576	422449	407901	415975	1.78	cps
Uranium	238-1	194780	196919	190298	193999	1.74	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-11 Instrumnet Name : P8
Client Sample ID : ME28N0 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:06:21 DataFile Name : 037AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	214318	223484	220919	219574	2.15	cps
Ytterbium	172-1	50529	50981	49322	50277	1.71	cps
Ytterbium	172-2	19184	19705	20396	19762	3.08	cps
Ytterbium	176-1	35852	36423	35712	35996	1.05	cps
Ytterbium	176-2	13344	13794	13811	13649	1.94	cps
Yttrium	89-1	47595081	47364101	46319981	47093054	1.44	cps
Yttrium	89-2	3568015	3658971	3627842	3618276	1.28	cps
Zinc	66-2	98231	103306	102625	101387	2.72	cps
Zirconium	90-1	116741	119672	114871	117095	2.07	cps
Zirconium	91-1	26018	26161	25497	25892	1.35	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-12 Instrumnet Name : P8
Client Sample ID : ME28N1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:09:35 DataFile Name : 038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1211769	1202846	1170344	1194986	1.82	cps
Antimony	121-1	18743	19130	18509	18794	1.67	cps
Arsenic	75-2	12085	12062	11858	12002	1.04	cps
Barium	135-1	309394	319145	304201	310913	2.44	cps
Barium	137-1	531563	556106	526990	538220	2.91	cps
Beryllium	9-1	5140	5278	4973	5130	2.98	cps
Bismuth	209-1	21302550	21656269	20825232	21261350	1.96	cps
Bismuth	209-2	7370324	7967165	8168281	7835257	5.30	cps
Bromine	81-1	14855	16239	16423	15839	5.41	cps
Cadmium	108-1	723	753	747	741	2.13	cps
Cadmium	106-1	16553	17114	16036	16568	3.25	cps
Cadmium	111-1	13985	14476	13416	13959	3.80	cps
Calcium	43-1	15468878	15783123	15002293	15418098	2.55	cps
Calcium	44-1	246793510	253266723	243063743	247707992	2.08	cps
Carbon	12-1	5861984	5891247	5908327	5887186	0.40	cps
Carbon	12-2	41198	41579	39520	40765	2.69	cps
Chlorine	35-1	248771163	265367943	257121003	257086703	3.23	cps
Chlorine	35-2	1280796	1235141	1257527	1257822	1.81	cps
Chromium	52-2	136759	137154	136362	136758	0.29	cps
Cobalt	59-2	162839	160629	159057	160842	1.18	cps
Copper	63-2	315365	316092	316925	316127	0.25	cps
Dysprosium	156-1	114485	119044	112666	115399	2.85	cps
Dysprosium	156-2	37506	37506	37175	37396	0.51	cps
Erbium	164-1	96547	100271	94815	97211	2.87	cps
Erbium	164-2	30949	30264	30331	30515	1.24	cps
Gadolinium	160-1	110571	114978	110684	112078	2.24	cps
Gadolinium	160-2	43852	43962	43126	43647	1.04	cps
Holmium	165-1	36013139	37590123	35433248	36345503	3.07	cps
Holmium	165-2	10668130	11580794	11787232	11345385	5.25	cps
Indium	115-1	28459090	29132913	27793296	28461766	2.35	cps
Indium	115-2	2719949	2924613	2955966	2866843	4.47	cps
Iron	54-2	10002477	9940671	9803542	9915563	1.03	cps
Iron	56-2	184135631	181812517	181553204	182500451	0.78	cps
Iron	57-2	4564314	4593731	4497192	4551745	1.09	cps
Krypton	83-1	620	683	833	712	15.38	cps
Lead	206-1	401396	411160	397322	403293	1.76	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-12 Instrumnet Name : P8
Client Sample ID : ME28N1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:09:35 DataFile Name : 038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	318980	328083	314705	320589	2.13	cps
Lead	208-1	1501968	1546436	1491984	1513462	1.92	cps
Lithium	6-1	11710958	12455782	11740642	11969127	3.52	cps
Magnesium	24-2	12939516	12863751	12753244	12852170	0.73	cps
Manganese	55-2	1950054	1967988	1927820	1948621	1.03	cps
Molybdenum	94-1	209035	214877	204401	209437	2.51	cps
Molybdenum	95-1	147231	151536	145745	148171	2.03	cps
Molybdenum	96-1	177434	182399	173274	177702	2.57	cps
Molybdenum	97-1	89127	91325	87521	89324	2.14	cps
Molybdenum	98-1	228360	239575	227286	231741	2.94	cps
Neodymium	150-1	156821	160386	155843	157683	1.52	cps
Neodymium	150-2	38278	36570	38535	37794	2.83	cps
Nickel	60-2	127825	127452	127031	127436	0.31	cps
Phosphorus	31-2	4251	4537	4514	4434	3.59	cps
Potassium	39-2	462169	456488	455107	457921	0.82	cps
Rhodium	103-1	26213353	26628245	24917311	25919636	3.44	cps
Rhodium	103-2	9027282	9769768	9995292	9597447	5.28	cps
Scandium	45-1	20353615	21394555	20149691	20632620	3.24	cps
Scandium	45-2	402194	434743	444097	427011	5.15	cps
Selenium	82-1	325	289	106	240	48.80	cps
Selenium	77-2	203	207	217	209	3.32	cps
Selenium	78-2	120	177	177	158	20.74	cps
Silicon	28-1	55206489	58328456	54426084	55987010	3.69	cps
Silver	107-1	2716	2926	3043	2895	5.72	cps
Silver	109-1	2897	2787	2817	2834	2.01	cps
Sodium	23-2	351511	350651	354171	352111	0.52	cps
Strontium	86-1	2673210	2777706	2672031	2707649	2.24	cps
Strontium	88-1	23149073	23767518	22465765	23127452	2.82	cps
Sulfur	34-1	1388399	1446607	1399527	1411511	2.19	cps
Terbium	159-1	36842034	38496824	36282939	37207266	3.09	cps
Terbium	159-2	10597908	11701599	11710212	11336573	5.64	cps
Thallium	203-1	5851	6342	6128	6107	4.03	cps
Thallium	205-1	13984	14989	14238	14404	3.63	cps
Tin	118-1	12876	13260	12723	12953	2.14	cps
Titanium	47-1	496500	514007	492741	501083	2.26	cps
Uranium	238-1	235591	243527	230232	236450	2.83	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-12 Instrumnet Name : P8
Client Sample ID : ME28N1 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:09:35 DataFile Name : 038AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	139469	139574	138637	139226	0.37	cps
Ytterbium	172-1	24703	25879	24673	25085	2.74	cps
Ytterbium	172-2	9427	9504	9534	9488	0.58	cps
Ytterbium	176-1	20763	21915	20376	21018	3.81	cps
Ytterbium	176-2	7159	7149	7379	7229	1.80	cps
Yttrium	89-1	45854293	47953979	45772424	46526899	2.66	cps
Yttrium	89-2	3198100	3531959	3592335	3440798	6.17	cps
Zinc	66-2	79398	79632	79753	79594	0.23	cps
Zirconium	90-1	341777	361875	341269	348307	3.37	cps
Zirconium	91-1	76713	80202	75637	77517	3.08	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-13 Instrumnet Name : P8
Client Sample ID : ME28N2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:12:46 DataFile Name : 039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2650154	2680337	2676490	2668994	0.62	cps
Antimony	121-1	9527	9824	9393	9581	2.30	cps
Arsenic	75-2	10160	10491	10127	10259	1.96	cps
Barium	135-1	1206021	1248846	1196594	1217154	2.29	cps
Barium	137-1	2156705	2196613	2111551	2154956	1.97	cps
Beryllium	9-1	10452	10331	10135	10306	1.56	cps
Bismuth	209-1	22117151	22961203	21448490	22175614	3.42	cps
Bismuth	209-2	8498111	8488453	8552042	8512869	0.40	cps
Bromine	81-1	20425	21103	21370	20966	2.32	cps
Cadmium	108-1	460	510	337	436	20.48	cps
Cadmium	106-1	16513	17431	16397	16780	3.38	cps
Cadmium	111-1	13771	14592	13752	14038	3.41	cps
Calcium	43-1	3203500	3340501	3212942	3252314	2.35	cps
Calcium	44-1	51258156	53076736	50966263	51767051	2.21	cps
Carbon	12-1	7820705	8092391	8029190	7980762	1.78	cps
Carbon	12-2	53005	53664	54591	53753	1.48	cps
Chlorine	35-1	292438422	310123975	305793762	302785387	3.04	cps
Chlorine	35-2	1471528	1470429	1505885	1482614	1.36	cps
Chromium	52-2	249150	248716	247983	248616	0.24	cps
Cobalt	59-2	270001	270329	271922	270750	0.38	cps
Copper	63-2	455549	457357	458867	457258	0.36	cps
Dysprosium	156-1	158103	161918	158130	159383	1.38	cps
Dysprosium	156-2	50886	50458	51097	50814	0.64	cps
Erbium	164-1	128834	134862	129045	130914	2.61	cps
Erbium	164-2	41311	41344	41541	41399	0.30	cps
Gadolinium	160-1	149090	156528	147974	151197	3.08	cps
Gadolinium	160-2	58973	59298	58668	58980	0.53	cps
Holmium	165-1	37103366	38106632	37435057	37548352	1.36	cps
Holmium	165-2	12191336	11941045	12228242	12120208	1.29	cps
Indium	115-1	29126441	29893561	28673994	29231332	2.11	cps
Indium	115-2	3054523	3118724	3048691	3073980	1.26	cps
Iron	54-2	13420363	13357433	13455719	13411172	0.37	cps
Iron	56-2	251340683	248492010	248187983	249340225	0.70	cps
Iron	57-2	6170409	6149939	6183186	6167845	0.27	cps
Krypton	83-1	790	700	750	747	6.04	cps
Lead	206-1	549269	564664	551842	555258	1.49	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-13 Instrumnet Name : P8
Client Sample ID : ME28N2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:12:46 DataFile Name : 039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	435657	447577	432236	438490	1.84	cps
Lead	208-1	2060139	2124197	2053631	2079322	1.88	cps
Lithium	6-1	12350195	12650908	11847730	12282945	3.30	cps
Magnesium	24-2	6700521	6889713	6841704	6810646	1.44	cps
Manganese	55-2	2305071	2281420	2287676	2291389	0.53	cps
Molybdenum	94-1	83294	88264	83063	84874	3.46	cps
Molybdenum	95-1	55966	58352	55985	56768	2.42	cps
Molybdenum	96-1	67801	72585	68937	69774	3.58	cps
Molybdenum	97-1	33955	35596	34329	34627	2.48	cps
Molybdenum	98-1	87377	92177	87632	89062	3.03	cps
Neodymium	150-1	224301	232297	223565	226721	2.14	cps
Neodymium	150-2	54022	53945	54276	54081	0.32	cps
Nickel	60-2	208174	208759	210673	209202	0.62	cps
Phosphorus	31-2	4261	4157	4287	4235	1.62	cps
Potassium	39-2	434719	433978	437044	435247	0.37	cps
Rhodium	103-1	26856293	27987875	27170001	27338057	2.14	cps
Rhodium	103-2	10436695	10446042	10379303	10420680	0.35	cps
Scandium	45-1	21653748	21777857	20992699	21474768	1.97	cps
Scandium	45-2	455474	458550	458737	457587	0.40	cps
Selenium	82-1	205	300	211	239	22.31	cps
Selenium	77-2	337	290	310	312	7.50	cps
Selenium	78-2	237	227	173	212	16.04	cps
Silicon	28-1	69239621	72036086	70585409	70620372	1.98	cps
Silver	107-1	2245	2744	2497	2495	10.00	cps
Silver	109-1	3194	3300	3114	3203	2.92	cps
Sodium	23-2	297596	299582	300295	299158	0.47	cps
Strontium	86-1	1856125	1976334	1853761	1895407	3.70	cps
Strontium	88-1	15512377	16390898	15829292	15910856	2.80	cps
Sulfur	34-1	883529	910237	880105	891290	1.85	cps
Terbium	159-1	38166159	38941466	37353408	38153677	2.08	cps
Terbium	159-2	11836565	12083523	11941367	11953819	1.04	cps
Thallium	203-1	10264	10331	10011	10202	1.66	cps
Thallium	205-1	24517	25796	24306	24873	3.24	cps
Tin	118-1	19704	20509	19461	19891	2.76	cps
Titanium	47-1	343765	358267	343928	348653	2.39	cps
Uranium	238-1	184712	190378	183863	186318	1.90	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-13 Instrumnet Name : P8
Client Sample ID : ME28N2 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:12:46 DataFile Name : 039AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	266231	265267	269023	266840	0.73	cps
Ytterbium	172-1	34091	35213	33994	34433	1.97	cps
Ytterbium	172-2	13424	13297	13510	13410	0.80	cps
Ytterbium	176-1	26520	27592	26563	26892	2.26	cps
Ytterbium	176-2	9220	9557	9550	9442	2.04	cps
Yttrium	89-1	47826756	50642323	48026764	48831948	3.22	cps
Yttrium	89-2	3711041	3690515	3743434	3714997	0.72	cps
Zinc	66-2	102618	104065	103967	103550	0.78	cps
Zirconium	90-1	147842	151308	144928	148026	2.16	cps
Zirconium	91-1	32581	33504	32154	32746	2.11	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-14 Instrumnet Name : P8
Client Sample ID : ME28N3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:15:56 DataFile Name : 040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1172136	1203164	1142749	1172683	2.58	cps
Antimony	121-1	9223	9413	8756	9131	3.70	cps
Arsenic	75-2	6155	6265	6328	6249	1.40	cps
Barium	135-1	486061	494146	496203	492137	1.09	cps
Barium	137-1	838079	854202	856224	849502	1.17	cps
Beryllium	9-1	4974	5042	4974	4996	0.78	cps
Bismuth	209-1	21720649	21815030	21524030	21686569	0.68	cps
Bismuth	209-2	8876491	8364961	8349625	8530359	3.52	cps
Bromine	81-1	15872	16239	16303	16138	1.44	cps
Cadmium	108-1	447	477	530	484	8.71	cps
Cadmium	106-1	15853	16947	16687	16496	3.47	cps
Cadmium	111-1	13004	13820	13600	13475	3.13	cps
Calcium	43-1	11153093	11361877	11447378	11320783	1.34	cps
Calcium	44-1	180231997	182275391	182516071	181674486	0.69	cps
Carbon	12-1	6874919	7188529	7093348	7052265	2.28	cps
Carbon	12-2	47222	47105	47353	47227	0.26	cps
Chlorine	35-1	270704676	283830349	291129949	281888325	3.67	cps
Chlorine	35-2	1405376	1382467	1390122	1392655	0.84	cps
Chromium	52-2	123407	122243	121521	122390	0.78	cps
Cobalt	59-2	160888	162579	163507	162324	0.82	cps
Copper	63-2	345548	341081	345149	343926	0.72	cps
Dysprosium	156-1	105737	106272	107222	106410	0.71	cps
Dysprosium	156-2	34501	34544	34080	34375	0.75	cps
Erbium	164-1	88216	89650	89699	89188	0.94	cps
Erbium	164-2	28738	28698	28140	28525	1.17	cps
Gadolinium	160-1	99397	100092	101113	100201	0.86	cps
Gadolinium	160-2	40271	40026	39365	39887	1.18	cps
Holmium	165-1	35794304	37363487	36843084	36666958	2.18	cps
Holmium	165-2	12787950	12079546	12077052	12314849	3.33	cps
Indium	115-1	28407247	29398043	28841466	28882252	1.72	cps
Indium	115-2	3257319	3063539	3050184	3123681	3.71	cps
Iron	54-2	7741762	7764424	7726991	7744392	0.24	cps
Iron	56-2	144760651	142941861	141972365	143224959	0.99	cps
Iron	57-2	3544017	3561365	3570184	3558522	0.37	cps
Krypton	83-1	610	807	707	708	13.89	cps
Lead	206-1	405653	413923	413476	411017	1.13	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-14 Instrumnet Name : P8
Client Sample ID : ME28N3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:15:56 DataFile Name : 040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	328477	334657	334761	332632	1.08	cps
Lead	208-1	1544807	1559787	1569751	1558115	0.81	cps
Lithium	6-1	11851131	12168757	11958774	11992887	1.35	cps
Magnesium	24-2	8132154	8220434	8171840	8174809	0.54	cps
Manganese	55-2	2729267	2662802	2634870	2675646	1.81	cps
Molybdenum	94-1	103273	107162	107142	105859	2.12	cps
Molybdenum	95-1	75159	76419	76465	76014	0.98	cps
Molybdenum	96-1	89285	91426	91335	90682	1.34	cps
Molybdenum	97-1	44906	46922	46180	46003	2.22	cps
Molybdenum	98-1	118041	119893	119886	119273	0.89	cps
Neodymium	150-1	141948	147865	146049	145287	2.09	cps
Neodymium	150-2	36209	36015	36068	36097	0.28	cps
Nickel	60-2	111382	112302	111473	111719	0.45	cps
Phosphorus	31-2	4434	4374	4574	4461	2.30	cps
Potassium	39-2	357601	359296	354994	357297	0.61	cps
Rhodium	103-1	26446425	27056465	26813105	26771998	1.15	cps
Rhodium	103-2	10849551	10155092	10125075	10376573	3.95	cps
Scandium	45-1	20998229	21400927	21202083	21200413	0.95	cps
Scandium	45-2	473726	447714	450097	457179	3.15	cps
Selenium	82-1	283	90	146	173	57.19	cps
Selenium	77-2	230	230	170	210	16.50	cps
Selenium	78-2	163	150	170	161	6.32	cps
Silicon	28-1	54178751	55977226	55348023	55168000	1.65	cps
Silver	107-1	2183	2183	2393	2253	5.38	cps
Silver	109-1	2220	2277	2224	2240	1.42	cps
Sodium	23-2	532977	530871	534279	532709	0.32	cps
Strontium	86-1	1641491	1700276	1629207	1656991	2.29	cps
Strontium	88-1	13993652	13967969	14104157	14021926	0.52	cps
Sulfur	34-1	799914	810004	813334	807751	0.87	cps
Terbium	159-1	36799351	37971923	37780825	37517366	1.68	cps
Terbium	159-2	12673992	11940108	12012646	12208915	3.31	cps
Thallium	203-1	9093	9197	9193	9161	0.64	cps
Thallium	205-1	21738	22176	22182	22032	1.16	cps
Tin	118-1	60573	62210	62177	61653	1.52	cps
Titanium	47-1	674446	683063	701170	686226	1.99	cps
Uranium	238-1	151265	155434	157867	154855	2.16	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-14 Instrumnet Name : P8
Client Sample ID : ME28N3 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:15:56 DataFile Name : 040AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	119232	118730	118619	118860	0.27	cps
Ytterbium	172-1	24019	24222	24272	24171	0.56	cps
Ytterbium	172-2	9340	9280	9363	9328	0.46	cps
Ytterbium	176-1	19705	19291	19925	19640	1.64	cps
Ytterbium	176-2	7205	7209	7075	7163	1.06	cps
Yttrium	89-1	46858106	47730211	46699478	47095932	1.18	cps
Yttrium	89-2	3809554	3593867	3602723	3668714	3.33	cps
Zinc	66-2	75962	75871	75332	75722	0.45	cps
Zirconium	90-1	171940	178272	176442	175551	1.86	cps
Zirconium	91-1	38192	39419	39011	38874	1.61	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-15 Instrumnet Name : P8
Client Sample ID : ME28N4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:19:07 DataFile Name : 041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1491745	1470443	1486765	1482984	0.75	cps
Antimony	121-1	15392	14444	14588	14808	3.45	cps
Arsenic	75-2	8589	8499	8306	8465	1.71	cps
Barium	135-1	1047326	1036726	1043712	1042588	0.52	cps
Barium	137-1	1811765	1888422	1858762	1852983	2.09	cps
Beryllium	9-1	6932	7036	7036	7001	0.86	cps
Bismuth	209-1	22277788	22382606	22575178	22411857	0.67	cps
Bismuth	209-2	8462532	8466100	8471678	8466770	0.05	cps
Bromine	81-1	25704	27143	26679	26508	2.77	cps
Cadmium	108-1	887	903	833	874	4.18	cps
Cadmium	106-1	18239	17675	17802	17905	1.65	cps
Cadmium	111-1	22027	21113	21645	21595	2.12	cps
Calcium	43-1	10754129	10543822	10429225	10575725	1.56	cps
Calcium	44-1	171071017	170223084	170643571	170645891	0.25	cps
Carbon	12-1	13211852	13418329	13199596	13276592	0.93	cps
Carbon	12-2	89708	88427	89785	89307	0.85	cps
Chlorine	35-1	297576276	304897915	310738749	304404313	2.17	cps
Chlorine	35-2	1461338	1471460	1480659	1471152	0.66	cps
Chromium	52-2	159249	158029	160200	159159	0.68	cps
Cobalt	59-2	134795	134273	134370	134479	0.21	cps
Copper	63-2	406787	401694	406396	404959	0.70	cps
Dysprosium	156-1	94713	93510	94081	94101	0.64	cps
Dysprosium	156-2	29406	29396	29700	29500	0.59	cps
Erbium	164-1	82450	82353	84194	82999	1.25	cps
Erbium	164-2	25989	25625	25952	25855	0.77	cps
Gadolinium	160-1	88894	90454	89615	89654	0.87	cps
Gadolinium	160-2	33940	34799	34160	34300	1.30	cps
Holmium	165-1	38308146	38544539	38281149	38377944	0.38	cps
Holmium	165-2	12294426	12081245	12449901	12275191	1.51	cps
Indium	115-1	30398004	30160511	29828249	30128921	0.95	cps
Indium	115-2	3020006	3073330	3043717	3045684	0.88	cps
Iron	54-2	8286330	8121389	8463157	8290292	2.06	cps
Iron	56-2	152675371	152144914	149049434	151289907	1.29	cps
Iron	57-2	3779982	3745640	3753831	3759818	0.48	cps
Krypton	83-1	730	783	780	764	3.91	cps
Lead	206-1	2658595	2614410	2612325	2628443	0.99	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-15 Instrumnet Name : P8
Client Sample ID : ME28N4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:19:07 DataFile Name : 041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	2195048	2197546	2188461	2193685	0.21	cps
Lead	208-1	10134887	10183414	10132195	10150165	0.28	cps
Lithium	6-1	12346356	12166003	12477056	12329805	1.27	cps
Magnesium	24-2	15745304	15697397	15551716	15664806	0.64	cps
Manganese	55-2	1551534	1525907	1524225	1533889	1.00	cps
Molybdenum	94-1	77072	77598	78500	77723	0.93	cps
Molybdenum	95-1	63059	63759	65892	64237	2.30	cps
Molybdenum	96-1	75246	74961	75558	75255	0.40	cps
Molybdenum	97-1	39061	39356	39473	39297	0.54	cps
Molybdenum	98-1	100370	100423	100689	100494	0.17	cps
Neodymium	150-1	129662	128623	127213	128499	0.96	cps
Neodymium	150-2	31206	29983	30147	30446	2.18	cps
Nickel	60-2	115300	115843	115487	115543	0.24	cps
Phosphorus	31-2	4657	4861	4484	4667	4.04	cps
Potassium	39-2	385820	384498	386190	385503	0.23	cps
Rhodium	103-1	27761915	27700185	27381748	27614616	0.74	cps
Rhodium	103-2	10183394	10273884	10281848	10246375	0.53	cps
Scandium	45-1	21439916	21944225	21866866	21750336	1.25	cps
Scandium	45-2	447675	449045	452619	449780	0.57	cps
Selenium	82-1	456	517	497	490	6.35	cps
Selenium	77-2	173	163	163	167	3.46	cps
Selenium	78-2	140	147	163	150	8.01	cps
Silicon	28-1	67320991	65939301	66305719	66522003	1.08	cps
Silver	107-1	6535	6985	6829	6783	3.37	cps
Silver	109-1	7102	7342	7302	7249	1.77	cps
Sodium	23-2	722160	720869	715342	719457	0.50	cps
Strontium	86-1	8140368	8272615	8069469	8160818	1.26	cps
Strontium	88-1	69424464	69955696	69885574	69755245	0.41	cps
Sulfur	34-1	3011874	2940417	2974785	2975692	1.20	cps
Terbium	159-1	39607330	38920980	39315738	39281349	0.88	cps
Terbium	159-2	12134637	12404862	12065475	12201658	1.47	cps
Thallium	203-1	12680	12553	12730	12654	0.72	cps
Thallium	205-1	30850	30118	30523	30497	1.20	cps
Tin	118-1	55525	55087	56222	55611	1.03	cps
Titanium	47-1	496021	497814	498652	497496	0.27	cps
Uranium	238-1	138772	140500	139675	139649	0.62	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-15 Instrumnet Name : P8
Client Sample ID : ME28N4 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:19:07 DataFile Name : 041AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	199862	200096	200946	200301	0.28	cps
Ytterbium	172-1	23377	24142	24620	24046	2.61	cps
Ytterbium	172-2	8836	8923	9107	8955	1.54	cps
Ytterbium	176-1	20489	20112	20179	20260	0.99	cps
Ytterbium	176-2	6275	6815	6608	6566	4.15	cps
Yttrium	89-1	49495911	49441576	48910016	49282501	0.66	cps
Yttrium	89-2	3632020	3648767	3673470	3651419	0.57	cps
Zinc	66-2	231954	231860	228456	230757	0.86	cps
Zirconium	90-1	115521	115682	114821	115341	0.40	cps
Zirconium	91-1	25016	25380	24909	25102	0.98	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-16 Instrumnet Name : P8
Client Sample ID : ME28N5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:22:16 DataFile Name : 042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2288253	2330555	2280451	2299753	1.17	cps
Antimony	121-1	8953	8820	8990	8921	1.00	cps
Arsenic	75-2	8219	8202	8316	8246	0.74	cps
Barium	135-1	885099	875309	876045	878818	0.62	cps
Barium	137-1	1584756	1572825	1546324	1567968	1.25	cps
Beryllium	9-1	9967	10132	10146	10082	0.99	cps
Bismuth	209-1	23067135	23085410	22532396	22894980	1.37	cps
Bismuth	209-2	8724083	8617444	8774997	8705508	0.92	cps
Bromine	81-1	33072	34345	35174	34197	3.10	cps
Cadmium	108-1	543	480	683	569	18.29	cps
Cadmium	106-1	17828	17354	17551	17578	1.35	cps
Cadmium	111-1	16110	16166	16065	16114	0.31	cps
Calcium	43-1	3838305	3725664	3797028	3786999	1.50	cps
Calcium	44-1	60961339	61393161	61147406	61167302	0.35	cps
Carbon	12-1	14437006	14818012	15136264	14797094	2.37	cps
Carbon	12-2	98621	96910	96709	97413	1.08	cps
Chlorine	35-1	271385163	281509909	284030956	278975343	2.40	cps
Chlorine	35-2	1357348	1351695	1386529	1365191	1.37	cps
Chromium	52-2	234657	235556	236484	235566	0.39	cps
Cobalt	59-2	254550	257397	255573	255840	0.56	cps
Copper	63-2	445652	443322	445428	444801	0.29	cps
Dysprosium	156-1	182870	183346	182759	182992	0.17	cps
Dysprosium	156-2	56612	57747	57925	57428	1.24	cps
Erbium	164-1	159204	159419	159085	159236	0.11	cps
Erbium	164-2	49462	49609	49461	49510	0.17	cps
Gadolinium	160-1	173524	171967	176448	173980	1.31	cps
Gadolinium	160-2	66853	66961	68967	67594	1.76	cps
Holmium	165-1	39467523	38865685	37615339	38649516	2.44	cps
Holmium	165-2	12096872	12239731	12257815	12198139	0.72	cps
Indium	115-1	30785769	30976077	29995654	30585834	1.70	cps
Indium	115-2	3143648	3125589	3142935	3137391	0.33	cps
Iron	54-2	11971233	12009710	12093876	12024940	0.52	cps
Iron	56-2	220652877	217884270	220092843	219543330	0.67	cps
Iron	57-2	5397325	5404100	5399852	5400426	0.06	cps
Krypton	83-1	790	747	830	789	5.28	cps
Lead	206-1	865510	860705	863307	863174	0.28	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-16 Instrumnet Name : P8
Client Sample ID : ME28N5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:22:16 DataFile Name : 042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	705980	702088	701481	703183	0.35	cps
Lead	208-1	3409459	3416331	3363114	3396302	0.85	cps
Lithium	6-1	12617218	12834860	12215051	12555710	2.50	cps
Magnesium	24-2	4818387	4835579	4742315	4798760	1.03	cps
Manganese	55-2	3051435	3086777	3096920	3078378	0.78	cps
Molybdenum	94-1	84421	84276	84525	84407	0.15	cps
Molybdenum	95-1	81393	82748	82114	82085	0.83	cps
Molybdenum	96-1	95096	93492	94706	94432	0.89	cps
Molybdenum	97-1	49769	50659	48822	49750	1.85	cps
Molybdenum	98-1	126934	129060	128926	128307	0.93	cps
Neodymium	150-1	252657	254554	256236	254482	0.70	cps
Neodymium	150-2	60552	60211	61410	60724	1.02	cps
Nickel	60-2	159881	162615	161054	161183	0.85	cps
Phosphorus	31-2	5958	5981	5611	5850	3.54	cps
Potassium	39-2	529097	528922	531650	529890	0.29	cps
Rhodium	103-1	28891450	28235443	27946288	28357727	1.71	cps
Rhodium	103-2	10651945	10557464	10777790	10662400	1.04	cps
Scandium	45-1	22186562	22607576	21810643	22201594	1.80	cps
Scandium	45-2	458056	459468	463783	460435	0.65	cps
Selenium	82-1	296	435	358	363	19.09	cps
Selenium	77-2	330	297	347	324	7.85	cps
Selenium	78-2	177	257	227	220	18.37	cps
Silicon	28-1	72482336	72071544	74126336	72893405	1.49	cps
Silver	107-1	3848	3744	4213	3935	6.26	cps
Silver	109-1	4164	4531	4561	4419	5.00	cps
Sodium	23-2	342267	343636	344884	343596	0.38	cps
Strontium	86-1	1032425	1027450	1035685	1031853	0.40	cps
Strontium	88-1	9188447	9210858	9191951	9197085	0.13	cps
Sulfur	34-1	822318	823807	819958	822028	0.24	cps
Terbium	159-1	39360017	39138204	38761642	39086621	0.77	cps
Terbium	159-2	12167466	12192668	12317488	12225874	0.66	cps
Thallium	203-1	10428	10334	10931	10564	3.04	cps
Thallium	205-1	25308	25188	24747	25081	1.18	cps
Tin	118-1	22038	21764	22408	22070	1.47	cps
Titanium	47-1	475532	476065	473590	475062	0.27	cps
Uranium	238-1	165169	168072	166339	166527	0.88	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-16 Instrumnet Name : P8
Client Sample ID : ME28N5 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:22:16 DataFile Name : 042AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	232598	230997	231327	231641	0.36	cps
Ytterbium	172-1	43160	44100	44234	43831	1.33	cps
Ytterbium	172-2	16450	16761	16437	16549	1.11	cps
Ytterbium	176-1	32530	32333	32677	32513	0.53	cps
Ytterbium	176-2	11555	11368	11782	11569	1.79	cps
Yttrium	89-1	50704324	50454199	50448278	50535600	0.29	cps
Yttrium	89-2	3816862	3741986	3777759	3778869	0.99	cps
Zinc	66-2	132980	134767	133515	133754	0.69	cps
Zirconium	90-1	107410	106059	107322	106930	0.71	cps
Zirconium	91-1	23076	23880	23700	23552	1.79	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-17 Instrumnet Name : P8
Client Sample ID : ME28N6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:25:26 DataFile Name : 043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2611860	2548374	2583775	2581336	1.23	cps
Antimony	121-1	8906	9060	8576	8847	2.79	cps
Arsenic	75-2	9320	9520	9326	9389	1.21	cps
Barium	135-1	929927	938607	917359	928631	1.15	cps
Barium	137-1	1696945	1669937	1629401	1665428	2.04	cps
Beryllium	9-1	11147	11389	11165	11234	1.20	cps
Bismuth	209-1	22566461	22126825	25479488	23390925	7.79	cps
Bismuth	209-2	8591208	8597063	8671966	8620079	0.52	cps
Bromine	81-1	29625	30430	30697	30250	1.85	cps
Cadmium	108-1	480	473	497	483	2.49	cps
Cadmium	106-1	17121	17454	19240	17939	6.35	cps
Cadmium	111-1	15416	15944	16991	16117	4.98	cps
Calcium	43-1	1768235	1765980	1741832	1758682	0.83	cps
Calcium	44-1	28202275	28412145	28047537	28220652	0.65	cps
Carbon	12-1	11292091	11478712	11368391	11379731	0.82	cps
Carbon	12-2	75586	75905	73770	75087	1.53	cps
Chlorine	35-1	270315489	277127143	277594769	275012467	1.48	cps
Chlorine	35-2	1332514	1331277	1326250	1330014	0.25	cps
Chromium	52-2	236728	236378	235366	236157	0.30	cps
Cobalt	59-2	277225	275215	278218	276886	0.55	cps
Copper	63-2	487767	490216	487379	488454	0.31	cps
Dysprosium	156-1	230660	231254	228507	230140	0.63	cps
Dysprosium	156-2	74024	75253	73494	74257	1.22	cps
Erbium	164-1	204660	203759	199398	202606	1.39	cps
Erbium	164-2	63698	64947	63759	64135	1.10	cps
Gadolinium	160-1	222130	223289	221949	222456	0.33	cps
Gadolinium	160-2	87126	87455	86693	87091	0.44	cps
Holmium	165-1	37561379	37668751	42988101	39406077	7.87	cps
Holmium	165-2	12221888	12297788	12451582	12323753	0.95	cps
Indium	115-1	29939532	30024202	34720766	31561500	8.67	cps
Indium	115-2	3130756	3100005	3079199	3103320	0.84	cps
Iron	54-2	13681341	13549631	13364913	13531962	1.17	cps
Iron	56-2	251757636	247633996	247936890	249109507	0.92	cps
Iron	57-2	6298569	6175832	6252770	6242390	0.99	cps
Krypton	83-1	863	817	850	843	2.85	cps
Lead	206-1	700600	708685	696068	701784	0.91	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-17 Instrumnet Name : P8
Client Sample ID : ME28N6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:25:26 DataFile Name : 043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	574336	574245	569218	572600	0.51	cps
Lead	208-1	2677046	2700740	2658855	2678880	0.78	cps
Lithium	6-1	12111853	12500823	13508079	12706919	5.67	cps
Magnesium	24-2	3752494	3732447	3703300	3729414	0.66	cps
Manganese	55-2	3482236	3456468	3337630	3425445	2.25	cps
Molybdenum	94-1	93468	93424	92539	93144	0.56	cps
Molybdenum	95-1	98741	99832	99459	99344	0.56	cps
Molybdenum	96-1	113109	112740	112766	112872	0.18	cps
Molybdenum	97-1	61047	61777	60157	60993	1.33	cps
Molybdenum	98-1	156848	157122	155979	156650	0.38	cps
Neodymium	150-1	319505	322089	315363	318985	1.06	cps
Neodymium	150-2	76071	76781	75655	76169	0.75	cps
Nickel	60-2	198079	195049	194761	195963	0.94	cps
Phosphorus	31-2	4938	4931	5294	5054	4.11	cps
Potassium	39-2	498797	498893	496135	497942	0.31	cps
Rhodium	103-1	28177883	27682683	32141700	29334088	8.33	cps
Rhodium	103-2	10634337	10591630	10638398	10621455	0.24	cps
Scandium	45-1	21983942	21831050	25197075	23004022	8.26	cps
Scandium	45-2	465540	462337	467538	465138	0.56	cps
Selenium	82-1	375	517	265	386	32.79	cps
Selenium	77-2	433	483	447	454	5.70	cps
Selenium	78-2	253	320	253	276	13.97	cps
Silicon	28-1	61396676	62358434	59610046	61121719	2.28	cps
Silver	107-1	2336	2438	2554	2443	4.47	cps
Silver	109-1	3227	3204	2894	3108	5.99	cps
Sodium	23-2	309341	311689	313283	311438	0.64	cps
Strontium	86-1	758460	752424	742855	751246	1.05	cps
Strontium	88-1	6864126	6816233	6555488	6745282	2.46	cps
Sulfur	34-1	744204	731134	725429	733589	1.31	cps
Terbium	159-1	38694703	38297111	43959208	40317007	7.84	cps
Terbium	159-2	12310134	12311667	12042117	12221306	1.27	cps
Thallium	203-1	11645	11592	11382	11540	1.21	cps
Thallium	205-1	28027	28187	27887	28034	0.54	cps
Tin	118-1	20489	20742	20769	20667	0.75	cps
Titanium	47-1	452009	456257	455772	454679	0.51	cps
Uranium	238-1	149538	151382	148685	149868	0.92	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-17 Instrumnet Name : P8
Client Sample ID : ME28N6 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:25:26 DataFile Name : 043AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	247773	244634	248822	247076	0.88	cps
Ytterbium	172-1	55727	56617	56674	56339	0.94	cps
Ytterbium	172-2	21701	21464	21881	21682	0.97	cps
Ytterbium	176-1	39873	40893	40779	40515	1.38	cps
Ytterbium	176-2	14675	14982	14959	14872	1.15	cps
Yttrium	89-1	50665066	50563898	56857727	52695564	6.84	cps
Yttrium	89-2	3873576	3848523	3848140	3856746	0.38	cps
Zinc	66-2	129475	126643	126276	127465	1.37	cps
Zirconium	90-1	102574	104548	100690	102604	1.88	cps
Zirconium	91-1	22999	23557	23196	23251	1.22	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-18 Instrumnet Name : P8
Client Sample ID : ME28N7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:28:38 DataFile Name : 044AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1093075	1102407	1081783	1092422	0.95	cps
Antimony	121-1	12212	11872	11989	12024	1.44	cps
Arsenic	75-2	5885	5905	6051	5947	1.53	cps
Barium	135-1	908228	897029	914172	906476	0.96	cps
Barium	137-1	1622702	1624659	1601039	1616133	0.81	cps
Beryllium	9-1	4288	4019	4023	4110	3.75	cps
Bismuth	209-1	21971562	21222242	21619192	21604332	1.74	cps
Bismuth	209-2	8088528	8083344	8050328	8074067	0.26	cps
Bromine	81-1	16623	15906	15856	16128	2.66	cps
Cadmium	108-1	883	893	833	870	3.69	cps
Cadmium	106-1	18222	17364	17658	17748	2.46	cps
Cadmium	111-1	15818	14954	15364	15379	2.81	cps
Calcium	43-1	27073135	26509176	25947982	26510098	2.12	cps
Calcium	44-1	435876127	429085914	428229860	431063967	0.97	cps
Carbon	12-1	5672719	5709482	5690064	5690755	0.32	cps
Carbon	12-2	39650	40161	39119	39643	1.32	cps
Chlorine	35-1	261528603	260042496	267747056	263106052	1.55	cps
Chlorine	35-2	1276996	1301984	1251787	1276922	1.97	cps
Chromium	52-2	138099	138449	135932	137493	0.99	cps
Cobalt	59-2	153920	155913	155828	155220	0.73	cps
Copper	63-2	247187	248163	248308	247886	0.25	cps
Dysprosium	156-1	97838	96592	99510	97980	1.49	cps
Dysprosium	156-2	30448	30505	30832	30595	0.68	cps
Erbium	164-1	80096	80331	80280	80236	0.15	cps
Erbium	164-2	24746	24793	25167	24902	0.93	cps
Gadolinium	160-1	89981	90310	90370	90220	0.23	cps
Gadolinium	160-2	35160	35654	35022	35279	0.94	cps
Holmium	165-1	38349709	36739425	36704384	37264506	2.52	cps
Holmium	165-2	11886111	11898727	12109359	11964732	1.05	cps
Indium	115-1	29586526	28916666	29046679	29183290	1.22	cps
Indium	115-2	3011112	2953491	2925320	2963308	1.48	cps
Iron	54-2	7099350	7019003	7073581	7063978	0.58	cps
Iron	56-2	129536738	130855025	127449278	129280347	1.33	cps
Iron	57-2	3251263	3265746	3242943	3253317	0.35	cps
Krypton	83-1	730	887	850	822	9.97	cps
Lead	206-1	287059	283996	288875	286643	0.86	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-18 Instrumnet Name : P8
Client Sample ID : ME28N7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:28:38 DataFile Name : 044AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	227081	223006	225240	225109	0.91	cps
Lead	208-1	1067895	1065097	1067798	1066930	0.15	cps
Lithium	6-1	12377833	12036482	12178512	12197609	1.41	cps
Magnesium	24-2	27882660	28220030	27807671	27970120	0.79	cps
Manganese	55-2	1736251	1710953	1741793	1729666	0.95	cps
Molybdenum	94-1	208537	208061	207315	207971	0.30	cps
Molybdenum	95-1	94747	95619	94696	95021	0.55	cps
Molybdenum	96-1	127105	125380	127421	126636	0.87	cps
Molybdenum	97-1	58192	58422	58553	58389	0.31	cps
Molybdenum	98-1	149243	149082	149419	149248	0.11	cps
Neodymium	150-1	138018	138718	139136	138624	0.41	cps
Neodymium	150-2	33956	33278	32950	33395	1.54	cps
Nickel	60-2	114848	113868	112777	113831	0.91	cps
Phosphorus	31-2	3917	4137	3891	3982	3.40	cps
Potassium	39-2	478765	474952	465759	473159	1.41	cps
Rhodium	103-1	26954327	25996081	26149469	26366626	1.95	cps
Rhodium	103-2	10030490	9915444	9816851	9920928	1.08	cps
Scandium	45-1	21666127	21170196	21311638	21382654	1.19	cps
Scandium	45-2	450829	447284	440845	446319	1.13	cps
Selenium	82-1	253	7	-10	83	176.52	cps
Selenium	77-2	167	220	173	187	15.57	cps
Selenium	78-2	97	137	167	133	26.34	cps
Silicon	28-1	55285029	54423681	54495116	54734609	0.87	cps
Silver	107-1	3015	3175	3332	3174	4.99	cps
Silver	109-1	2877	3017	3130	3008	4.22	cps
Sodium	23-2	394797	395879	394940	395205	0.15	cps
Strontium	86-1	3967598	3898344	3885490	3917144	1.13	cps
Strontium	88-1	33938783	33381797	32980113	33433564	1.44	cps
Sulfur	34-1	1700134	1696442	1671227	1689268	0.93	cps
Terbium	159-1	39386490	37427497	37707262	38173750	2.78	cps
Terbium	159-2	12098633	11683131	11841310	11874358	1.77	cps
Thallium	203-1	5775	5831	6038	5881	2.36	cps
Thallium	205-1	14158	13888	14261	14102	1.37	cps
Tin	118-1	12149	12830	12429	12469	2.74	cps
Titanium	47-1	813717	815230	809827	812925	0.34	cps
Uranium	238-1	276397	272719	277917	275677	0.97	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-18 Instrumnet Name : P8
Client Sample ID : ME28N7 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:28:38 DataFile Name : 044AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	142262	143865	143202	143109	0.56	cps
Ytterbium	172-1	21918	22055	22045	22006	0.35	cps
Ytterbium	172-2	8560	8636	8266	8487	2.30	cps
Ytterbium	176-1	19795	20009	19354	19719	1.69	cps
Ytterbium	176-2	6655	6778	6645	6693	1.11	cps
Yttrium	89-1	49449714	47369706	47850716	48223379	2.26	cps
Yttrium	89-2	3624829	3553899	3580317	3586348	1.00	cps
Zinc	66-2	69322	69060	68980	69121	0.26	cps
Zirconium	90-1	426626	419234	422570	422810	0.88	cps
Zirconium	91-1	93676	92287	93424	93129	0.79	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19 Instrumnet Name : P8
Client Sample ID : ME28N8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:31:47 DataFile Name : 045AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1308413	1302304	1319776	1310164	0.68	cps
Antimony	121-1	101248	101124	98958	100443	1.28	cps
Arsenic	75-2	4511	4708	4417	4545	3.26	cps
Barium	135-1	728820	737230	744556	736869	1.07	cps
Barium	137-1	1249843	1260346	1251834	1254008	0.44	cps
Beryllium	9-1	8625	8254	8700	8526	2.80	cps
Bismuth	209-1	22821050	22422086	22492935	22578690	0.94	cps
Bismuth	209-2	8518375	8509367	8470693	8499478	0.30	cps
Bromine	81-1	15115	15973	15949	15679	3.12	cps
Cadmium	108-1	560	567	590	572	2.75	cps
Cadmium	106-1	17181	17067	16880	17043	0.89	cps
Cadmium	111-1	13461	13417	13023	13301	1.81	cps
Calcium	43-1	11101676	10870779	10763348	10911934	1.58	cps
Calcium	44-1	178467411	176465504	173631824	176188246	1.38	cps
Carbon	12-1	6946157	6875423	6965599	6929060	0.68	cps
Carbon	12-2	46717	46680	46647	46682	0.08	cps
Chlorine	35-1	301100409	309345502	318933022	309792978	2.88	cps
Chlorine	35-2	1481629	1467177	1486058	1478288	0.67	cps
Chromium	52-2	172577	171623	174018	172739	0.70	cps
Cobalt	59-2	107008	107384	106236	106876	0.55	cps
Copper	63-2	315869	317130	315937	316312	0.22	cps
Dysprosium	156-1	90668	89910	90839	90472	0.55	cps
Dysprosium	156-2	28073	28140	27902	28038	0.44	cps
Erbium	164-1	80746	80773	81246	80922	0.35	cps
Erbium	164-2	25403	24994	24907	25101	1.06	cps
Gadolinium	160-1	84664	85884	83677	84742	1.30	cps
Gadolinium	160-2	31992	31851	31858	31900	0.25	cps
Holmium	165-1	37927563	38880490	38660867	38489640	1.30	cps
Holmium	165-2	12504669	12466692	12319455	12430272	0.79	cps
Indium	115-1	29749083	29549123	30235948	29844718	1.18	cps
Indium	115-2	3084729	3148167	3079301	3104066	1.23	cps
Iron	54-2	6463657	6471074	6362487	6432406	0.94	cps
Iron	56-2	117795885	117766775	116831198	117464619	0.47	cps
Iron	57-2	2979541	2947050	2928238	2951610	0.88	cps
Krypton	83-1	640	833	753	742	13.09	cps
Lead	206-1	1039997	1060493	1065502	1055331	1.28	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19 Instrumnet Name : P8
Client Sample ID : ME28N8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:31:47 DataFile Name : 045AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	877941	888289	891186	885805	0.79	cps
Lead	208-1	4196550	4180703	4266393	4214549	1.08	cps
Lithium	6-1	12421602	12751455	12193578	12455545	2.25	cps
Magnesium	24-2	7082816	7249959	7223999	7185591	1.25	cps
Manganese	55-2	2445774	2487625	2458571	2463990	0.87	cps
Molybdenum	94-1	119572	120501	119370	119814	0.50	cps
Molybdenum	95-1	55858	55895	56123	55959	0.26	cps
Molybdenum	96-1	73245	74592	73426	73754	0.99	cps
Molybdenum	97-1	33347	34185	33290	33607	1.49	cps
Molybdenum	98-1	85720	85693	86471	85961	0.51	cps
Neodymium	150-1	125950	124262	124320	124844	0.77	cps
Neodymium	150-2	29994	29853	29152	29666	1.52	cps
Nickel	60-2	89375	90959	90754	90362	0.95	cps
Phosphorus	31-2	3617	3707	3634	3653	1.31	cps
Potassium	39-2	521470	517401	518923	519265	0.40	cps
Rhodium	103-1	27592644	27801540	27334981	27576388	0.85	cps
Rhodium	103-2	10637995	10541345	10328528	10502622	1.51	cps
Scandium	45-1	21662801	22210268	22024266	21965778	1.27	cps
Scandium	45-2	454773	454372	456416	455187	0.24	cps
Selenium	82-1	210	-7	144	115	96.55	cps
Selenium	77-2	170	197	217	194	12.04	cps
Selenium	78-2	87	103	137	109	23.38	cps
Silicon	28-1	254111463	249708943	245593576	249804661	1.71	cps
Silver	107-1	1928	2125	2227	2093	7.27	cps
Silver	109-1	2374	2594	2624	2530	5.40	cps
Sodium	23-2	739193	739151	740299	739548	0.09	cps
Strontium	86-1	6102486	6144586	5986481	6077851	1.35	cps
Strontium	88-1	52704616	53559449	51370038	52544701	2.10	cps
Sulfur	34-1	965661	955931	954578	958723	0.63	cps
Terbium	159-1	39256917	39562975	38955756	39258549	0.77	cps
Terbium	159-2	12235388	12311995	12270881	12272755	0.31	cps
Thallium	203-1	5328	5368	5328	5341	0.43	cps
Thallium	205-1	12626	12833	12740	12733	0.81	cps
Tin	118-1	88071	88758	88349	88393	0.39	cps
Titanium	47-1	961154	968652	971644	967150	0.56	cps
Uranium	238-1	121511	121716	120566	121264	0.51	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19 Instrumnet Name : P8
Client Sample ID : ME28N8 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:31:47 DataFile Name : 045AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	94700	93556	94066	94108	0.61	cps
Ytterbium	172-1	24620	25388	25247	25085	1.63	cps
Ytterbium	172-2	9283	9167	9757	9402	3.33	cps
Ytterbium	176-1	21043	20786	20780	20870	0.72	cps
Ytterbium	176-2	7015	7145	7175	7112	1.20	cps
Yttrium	89-1	49033049	48634273	48631686	48766336	0.47	cps
Yttrium	89-2	3724807	3688818	3702667	3705431	0.49	cps
Zinc	66-2	65992	66160	65691	65948	0.36	cps
Zirconium	90-1	240835	243226	246878	243647	1.25	cps
Zirconium	91-1	54493	54148	54663	54435	0.48	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-20 Instrumnet Name : P8
Client Sample ID : ME28N8D Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:34:58 DataFile Name : 046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1330780	1324476	1326834	1327363	0.24	cps
Antimony	121-1	96417	98082	96984	97161	0.87	cps
Arsenic	75-2	4181	4434	4501	4372	3.86	cps
Barium	135-1	756811	753843	748106	752920	0.59	cps
Barium	137-1	1289962	1301653	1298515	1296710	0.47	cps
Beryllium	9-1	8394	8185	8281	8287	1.26	cps
Bismuth	209-1	22606371	22433949	22538551	22526290	0.39	cps
Bismuth	209-2	8554229	7683676	7948321	8062076	5.54	cps
Bromine	81-1	15686	15752	16533	15990	2.95	cps
Cadmium	108-1	537	527	480	514	5.88	cps
Cadmium	106-1	17271	17598	17571	17480	1.04	cps
Cadmium	111-1	13677	13773	13844	13765	0.61	cps
Calcium	43-1	11133077	11014499	11067677	11071751	0.54	cps
Calcium	44-1	176581957	181915244	179893504	179463568	1.50	cps
Carbon	12-1	6802277	6844566	6985529	6877457	1.40	cps
Carbon	12-2	46038	45039	45958	45679	1.22	cps
Chlorine	35-1	293332276	300658876	306549235	300180129	2.21	cps
Chlorine	35-2	1473013	1472526	1463306	1469615	0.37	cps
Chromium	52-2	178519	176208	175079	176602	0.99	cps
Cobalt	59-2	107549	108291	106659	107500	0.76	cps
Copper	63-2	562119	562008	561164	561764	0.09	cps
Dysprosium	156-1	90765	90359	91134	90753	0.43	cps
Dysprosium	156-2	27495	27639	27632	27589	0.29	cps
Erbium	164-1	79693	79600	79465	79586	0.14	cps
Erbium	164-2	25625	25114	24850	25196	1.56	cps
Gadolinium	160-1	83751	82530	83976	83419	0.93	cps
Gadolinium	160-2	31728	32276	32530	32178	1.27	cps
Holmium	165-1	38050086	38542426	38376189	38322901	0.65	cps
Holmium	165-2	12427439	11140375	11429012	11665609	5.79	cps
Indium	115-1	30765079	30109391	30494193	30456221	1.08	cps
Indium	115-2	3112157	2777650	2899899	2929902	5.78	cps
Iron	54-2	6437683	6534385	6274026	6415364	2.05	cps
Iron	56-2	118222858	118389768	117863325	118158650	0.23	cps
Iron	57-2	2999415	3018871	2996020	3004769	0.41	cps
Krypton	83-1	777	783	797	786	1.30	cps
Lead	206-1	1015505	1014422	1030782	1020236	0.90	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-20 Instrumnet Name : P8
Client Sample ID : ME28N8D Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:34:58 DataFile Name : 046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	854987	861703	864420	860370	0.56	cps
Lead	208-1	4111226	4157142	4101966	4123444	0.72	cps
Lithium	6-1	12095212	11874440	12068367	12012673	1.00	cps
Magnesium	24-2	7254445	7203136	7170957	7209513	0.58	cps
Manganese	55-2	2521198	2506726	2463516	2497147	1.20	cps
Molybdenum	94-1	120917	120867	122612	121465	0.82	cps
Molybdenum	95-1	56066	56672	55775	56171	0.81	cps
Molybdenum	96-1	72290	74498	74703	73831	1.81	cps
Molybdenum	97-1	33754	34650	34860	34422	1.71	cps
Molybdenum	98-1	86216	89013	88728	87985	1.75	cps
Neodymium	150-1	126307	124911	125174	125464	0.59	cps
Neodymium	150-2	29676	29970	30294	29980	1.03	cps
Nickel	60-2	108439	109786	108483	108903	0.70	cps
Phosphorus	31-2	3691	3430	3694	3605	4.19	cps
Potassium	39-2	516544	521249	520040	519278	0.47	cps
Rhodium	103-1	27768033	28270950	28077328	28038770	0.90	cps
Rhodium	103-2	10532593	9377898	9533900	9814797	6.38	cps
Scandium	45-1	21976084	21952844	22025865	21984931	0.17	cps
Scandium	45-2	457078	414134	420074	430428	5.41	cps
Selenium	82-1	67	82	-41	36	184.67	cps
Selenium	77-2	217	147	150	171	23.08	cps
Selenium	78-2	87	137	127	117	22.68	cps
Silicon	28-1	259625109	259422589	258027009	259024903	0.34	cps
Silver	107-1	2138	2159	2049	2115	2.75	cps
Silver	109-1	2260	2347	2334	2314	2.02	cps
Sodium	23-2	739284	737077	738785	738382	0.16	cps
Strontium	86-1	6137844	6227891	6223207	6196314	0.82	cps
Strontium	88-1	52572211	53087814	53576409	53078811	0.95	cps
Sulfur	34-1	958991	954713	951677	955127	0.38	cps
Terbium	159-1	39109210	39409609	39638314	39385711	0.67	cps
Terbium	159-2	12255516	11004157	11331500	11530391	5.63	cps
Thallium	203-1	5261	5611	5385	5419	3.28	cps
Thallium	205-1	12556	13060	12750	12789	1.99	cps
Tin	118-1	90527	89987	91212	90575	0.68	cps
Titanium	47-1	975518	986299	986394	982737	0.64	cps
Uranium	238-1	121491	122136	121194	121607	0.40	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-20 Instrumnet Name : P8
Client Sample ID : ME28N8D Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:34:58 DataFile Name : 046AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	94093	94274	94274	94214	0.11	cps
Ytterbium	172-1	24730	24676	24964	24790	0.62	cps
Ytterbium	172-2	9584	9280	9857	9574	3.02	cps
Ytterbium	176-1	21287	20893	21030	21070	0.95	cps
Ytterbium	176-2	6668	6765	6889	6774	1.63	cps
Yttrium	89-1	48804798	48894856	50057033	49252229	1.42	cps
Yttrium	89-2	3700903	3309980	3394876	3468586	5.93	cps
Zinc	66-2	66056	64134	65075	65089	1.48	cps
Zirconium	90-1	249370	251064	250978	250470	0.38	cps
Zirconium	91-1	55584	55045	55112	55247	0.53	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19LX5 Instrumnet Name : P8
Client Sample ID : ME28N8L Dilution Factor : 5
Date & Time Acquired : 2024-12-10 15:38:05 DataFile Name : 047AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	242693	236969	237149	238937	1.36	cps
Antimony	121-1	19110	18442	19010	18854	1.91	cps
Arsenic	75-2	980	837	813	877	10.29	cps
Barium	135-1	135076	135332	137338	135915	0.91	cps
Barium	137-1	236194	235044	233530	234923	0.57	cps
Beryllium	9-1	1835	1802	1925	1854	3.42	cps
Bismuth	209-1	22891782	22879526	23041160	22937490	0.39	cps
Bismuth	209-2	7677329	8498880	9286528	8487579	9.48	cps
Bromine	81-1	14307	13974	14337	14206	1.42	cps
Cadmium	108-1	117	113	123	118	4.33	cps
Cadmium	106-1	16580	16073	16260	16304	1.57	cps
Cadmium	111-1	11948	11585	11645	11726	1.66	cps
Calcium	43-1	2041864	2074634	2069592	2062030	0.86	cps
Calcium	44-1	33368347	32883255	32879983	33043861	0.85	cps
Carbon	12-1	5544946	5576084	5548720	5556583	0.31	cps
Carbon	12-2	36756	36512	36756	36675	0.38	cps
Chlorine	35-1	69248629	69383841	68883654	69172041	0.37	cps
Chlorine	35-2	303783	302834	299506	302041	0.74	cps
Chromium	52-2	34264	33629	34452	34115	1.26	cps
Cobalt	59-2	20879	20361	21126	20789	1.88	cps
Copper	63-2	85921	85418	84828	85389	0.64	cps
Dysprosium	156-1	16387	17482	17111	16993	3.28	cps
Dysprosium	156-2	5178	4971	5164	5104	2.27	cps
Erbium	164-1	15122	14989	14872	14994	0.84	cps
Erbium	164-2	4561	4964	4938	4821	4.68	cps
Gadolinium	160-1	15749	15386	16063	15733	2.16	cps
Gadolinium	160-2	6382	6141	6091	6205	2.50	cps
Holmium	165-1	38089072	38222430	38273688	38195063	0.25	cps
Holmium	165-2	10633791	12241449	13168613	12014618	10.67	cps
Indium	115-1	30557293	30423833	30235040	30405389	0.53	cps
Indium	115-2	2741172	3058441	3372406	3057340	10.32	cps
Iron	54-2	1190323	1171694	1181295	1181104	0.79	cps
Iron	56-2	22444023	22315960	22372646	22377543	0.29	cps
Iron	57-2	539480	538477	534790	537582	0.46	cps
Krypton	83-1	393	493	413	433	12.21	cps
Lead	206-1	198856	200506	199880	199747	0.42	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19LX5 Instrumnet Name : P8
Client Sample ID : ME28N8L Dilution Factor : 5
Date & Time Acquired : 2024-12-10 15:38:05 DataFile Name : 047AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	168396	169085	168133	168538	0.29	cps
Lead	208-1	773309	779290	777240	776613	0.39	cps
Lithium	6-1	12276618	12024056	12207372	12169349	1.07	cps
Magnesium	24-2	1383598	1382421	1372582	1379534	0.44	cps
Manganese	55-2	448449	438415	440593	442486	1.19	cps
Molybdenum	94-1	22629	22442	23103	22724	1.50	cps
Molybdenum	95-1	10444	10551	10941	10645	2.46	cps
Molybdenum	96-1	13720	14277	14051	14016	2.00	cps
Molybdenum	97-1	6448	6462	6558	6489	0.93	cps
Molybdenum	98-1	16203	16507	16780	16497	1.75	cps
Neodymium	150-1	23277	23130	22883	23097	0.86	cps
Neodymium	150-2	5581	5498	5551	5543	0.76	cps
Nickel	60-2	24030	23777	23292	23700	1.58	cps
Phosphorus	31-2	1030	1043	987	1020	2.90	cps
Potassium	39-2	117716	116038	116717	116824	0.72	cps
Rhodium	103-1	28362100	28119281	28056941	28179441	0.57	cps
Rhodium	103-2	9367659	10258604	11281258	10302507	9.29	cps
Scandium	45-1	21970806	21339385	21621133	21643774	1.46	cps
Scandium	45-2	387079	438773	476864	434239	10.38	cps
Selenium	82-1	18	-49	73	14	430.82	cps
Selenium	77-2	43	37	40	40	8.32	cps
Selenium	78-2	37	30	47	38	22.21	cps
Silicon	28-1	48598341	48671589	49085591	48785174	0.54	cps
Silver	107-1	693	686	701	694	1.04	cps
Silver	109-1	597	513	600	570	8.61	cps
Sodium	23-2	229306	224954	224835	226365	1.13	cps
Strontium	86-1	1089274	1097807	1104154	1097078	0.68	cps
Strontium	88-1	9820207	9907951	9881551	9869903	0.46	cps
Sulfur	34-1	781110	781943	783547	782200	0.16	cps
Terbium	159-1	39034140	39479206	38967705	39160351	0.71	cps
Terbium	159-2	10467303	12156883	13041354	11888513	11.00	cps
Thallium	203-1	1517	1343	1373	1411	6.57	cps
Thallium	205-1	3354	3140	3357	3284	3.78	cps
Tin	118-1	21480	21400	21844	21575	1.10	cps
Titanium	47-1	180965	179366	179223	179851	0.54	cps
Uranium	238-1	22864	22033	22724	22540	1.97	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-19LX5 Instrumnet Name : P8
Client Sample ID : ME28N8L Dilution Factor : 5
Date & Time Acquired : 2024-12-10 15:38:05 DataFile Name : 047AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	18152	17931	17361	17815	2.29	cps
Ytterbium	172-1	4661	4758	4791	4736	1.43	cps
Ytterbium	172-2	2004	1780	2047	1943	7.36	cps
Ytterbium	176-1	7849	8199	7736	7928	3.05	cps
Ytterbium	176-2	1747	2050	2260	2019	12.78	cps
Yttrium	89-1	48154311	48274859	47528803	47985991	0.83	cps
Yttrium	89-2	3159930	3528680	3778525	3489045	8.92	cps
Zinc	66-2	13780	13296	13667	13581	1.86	cps
Zirconium	90-1	46929	47822	47444	47398	0.95	cps
Zirconium	91-1	10474	10474	10935	10628	2.50	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-21 Instrumnet Name : P8
Client Sample ID : ME28N8S Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:41:20 DataFile Name : 048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1311249	1318044	1351784	1327026	1.64	cps
Antimony	121-1	577384	571823	580246	576484	0.74	cps
Arsenic	75-2	8309	8513	8229	8350	1.75	cps
Barium	135-1	3458688	3424573	3407990	3430417	0.75	cps
Barium	137-1	5762314	5766329	5774411	5767684	0.11	cps
Beryllium	9-1	76366	76064	75506	75979	0.57	cps
Bismuth	209-1	22956591	21979087	22651246	22528975	2.22	cps
Bismuth	209-2	8442170	8367366	8411815	8407117	0.45	cps
Bromine	81-1	15926	15953	16580	16153	2.29	cps
Cadmium	108-1	4364	4507	4561	4477	2.27	cps
Cadmium	106-1	22889	22378	22251	22506	1.50	cps
Cadmium	111-1	74699	72999	74185	73961	1.18	cps
Calcium	43-1	10963263	10890153	10890572	10914663	0.39	cps
Calcium	44-1	175234091	174945777	176206631	175462166	0.38	cps
Carbon	12-1	6335273	6523885	6441844	6433668	1.47	cps
Carbon	12-2	43350	43738	42595	43228	1.35	cps
Chlorine	35-1	290082129	297062036	309994455	299046207	3.38	cps
Chlorine	35-2	1472206	1448669	1483697	1468191	1.22	cps
Chromium	52-2	409548	406679	409839	408689	0.43	cps
Cobalt	59-2	1198848	1197097	1206823	1200923	0.43	cps
Copper	63-2	730544	728999	730223	729922	0.11	cps
Dysprosium	156-1	90910	89982	89521	90137	0.78	cps
Dysprosium	156-2	27057	27642	27418	27372	1.08	cps
Erbium	164-1	81028	77370	79040	79146	2.31	cps
Erbium	164-2	24873	24356	25094	24774	1.53	cps
Gadolinium	160-1	82795	82457	82265	82505	0.33	cps
Gadolinium	160-2	31417	31480	32172	31690	1.32	cps
Holmium	165-1	39750819	37521819	37971034	38414557	3.07	cps
Holmium	165-2	12304862	12136660	12225249	12222257	0.69	cps
Indium	115-1	30918710	30301671	30383919	30534767	1.10	cps
Indium	115-2	3054743	3089725	2972276	3038915	1.98	cps
Iron	54-2	6476018	6394007	6371488	6413838	0.86	cps
Iron	56-2	117092738	115054545	115894462	116013915	0.88	cps
Iron	57-2	2995006	2939648	2983902	2972852	0.99	cps
Krypton	83-1	760	853	750	788	7.23	cps
Lead	206-1	1106341	1089486	1105062	1100296	0.85	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-21 Instrumnet Name : P8
Client Sample ID : ME28N8S Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:41:20 DataFile Name : 048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	924737	923235	930374	926116	0.41	cps
Lead	208-1	4470170	4432197	4494394	4465587	0.70	cps
Lithium	6-1	12397104	11884070	11972942	12084705	2.27	cps
Magnesium	24-2	7080739	7113849	7124312	7106300	0.32	cps
Manganese	55-2	2688491	2689834	2670480	2682935	0.40	cps
Molybdenum	94-1	120878	118695	120614	120062	0.99	cps
Molybdenum	95-1	55172	54557	54359	54696	0.78	cps
Molybdenum	96-1	74147	71124	73845	73038	2.28	cps
Molybdenum	97-1	33901	33691	33340	33644	0.84	cps
Molybdenum	98-1	87413	86853	85951	86739	0.85	cps
Neodymium	150-1	125877	125245	126533	125885	0.51	cps
Neodymium	150-2	29148	29362	28868	29126	0.85	cps
Nickel	60-2	387826	386283	386877	386995	0.20	cps
Phosphorus	31-2	3667	3721	3457	3615	3.85	cps
Potassium	39-2	510840	510916	511443	511066	0.06	cps
Rhodium	103-1	28445468	27046575	27699540	27730528	2.52	cps
Rhodium	103-2	10394968	10085606	10149054	10209876	1.60	cps
Scandium	45-1	22054537	21411412	21948196	21804715	1.58	cps
Scandium	45-2	453575	449654	448863	450697	0.56	cps
Selenium	82-1	8673	8603	8995	8757	2.38	cps
Selenium	77-2	347	370	343	353	4.11	cps
Selenium	78-2	580	663	547	597	10.07	cps
Silicon	28-1	254401803	257016703	252741243	254719916	0.85	cps
Silver	107-1	304300	303880	307066	305082	0.57	cps
Silver	109-1	300032	302041	304534	302202	0.75	cps
Sodium	23-2	714751	714336	719676	716254	0.41	cps
Strontium	86-1	6101207	6132479	6126417	6120035	0.27	cps
Strontium	88-1	52054379	51991718	52298203	52114766	0.31	cps
Sulfur	34-1	965567	951968	950567	956034	0.87	cps
Terbium	159-1	39715561	39177806	38647265	39180211	1.36	cps
Terbium	159-2	12154711	12145988	12110294	12136998	0.19	cps
Thallium	203-1	247297	243757	247269	246107	0.83	cps
Thallium	205-1	595070	587737	601279	594695	1.14	cps
Tin	118-1	89922	88850	90825	89866	1.10	cps
Titanium	47-1	964082	963530	981367	969660	1.05	cps
Uranium	238-1	121608	119997	123429	121678	1.41	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-21 Instrumnet Name : P8
Client Sample ID : ME28N8S Dilution Factor : 1
Date & Time Acquired : 2024-12-10 15:41:20 DataFile Name : 048AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	556832	553377	555556	555255	0.31	cps
Ytterbium	172-1	24563	24777	24957	24766	0.80	cps
Ytterbium	172-2	9667	8970	9330	9322	3.74	cps
Ytterbium	176-1	20496	20640	20686	20607	0.48	cps
Ytterbium	176-2	7069	6625	7372	7022	5.35	cps
Yttrium	89-1	50241291	48402881	48887523	49177231	1.94	cps
Yttrium	89-2	3566916	3636964	3598128	3600670	0.97	cps
Zinc	66-2	145071	146815	146279	146055	0.61	cps
Zirconium	90-1	245677	255513	244913	248701	2.38	cps
Zirconium	91-1	54817	54774	54064	54552	0.78	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DLX2 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 2
Date & Time Acquired : 2024-12-10 16:09:12 DataFile Name : 049AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1541184	1521466	1531408	1531353	0.64	cps
Antimony	121-1	7936	7636	7899	7823	2.09	cps
Arsenic	75-2	1617	1447	1547	1537	5.56	cps
Barium	135-1	546800	553898	562883	554527	1.45	cps
Barium	137-1	943841	961004	951765	952203	0.90	cps
Beryllium	9-1	8812	8424	8505	8580	2.38	cps
Bismuth	209-1	21712441	21634809	21342167	21563139	0.91	cps
Bismuth	209-2	8101814	8032548	7981673	8038678	0.75	cps
Bromine	81-1	14241	14010	13877	14043	1.31	cps
Cadmium	108-1	1473	1440	1610	1508	5.98	cps
Cadmium	106-1	18523	18519	18803	18615	0.87	cps
Cadmium	111-1	13058	13175	13212	13148	0.61	cps
Calcium	43-1	19914065	19607348	19626681	19716031	0.87	cps
Calcium	44-1	317596562	320866235	313538895	317333897	1.16	cps
Carbon	12-1	6300765	6212084	6107346	6206732	1.56	cps
Carbon	12-2	41789	42538	41592	41973	1.19	cps
Chlorine	35-1	121660925	123326192	127649195	124212104	2.49	cps
Chlorine	35-2	572694	573688	572765	573049	0.10	cps
Chromium	52-2	5519460	5366882	5382656	5423000	1.55	cps
Cobalt	59-2	35200	34943	35237	35127	0.46	cps
Copper	63-2	220438	217392	216755	218195	0.90	cps
Dysprosium	156-1	38786	38047	38920	38584	1.22	cps
Dysprosium	156-2	11745	11719	11522	11662	1.05	cps
Erbium	164-1	37787	38459	39034	38426	1.62	cps
Erbium	164-2	12209	12396	12292	12299	0.76	cps
Gadolinium	160-1	35537	34815	35892	35415	1.55	cps
Gadolinium	160-2	13560	13337	13280	13392	1.11	cps
Holmium	165-1	35906119	36199113	36097548	36067593	0.41	cps
Holmium	165-2	11697331	11687670	11560549	11648516	0.66	cps
Indium	115-1	28637724	28563734	28305732	28502397	0.61	cps
Indium	115-2	2893212	2847479	2851898	2864196	0.88	cps
Iron	54-2	40745104	39114475	39374784	39744788	2.20	cps
Iron	56-2	724777056	735516549	733952896	731415500	0.79	cps
Iron	57-2	18398981	18162116	18370739	18310612	0.71	cps
Krypton	83-1	530	550	703	594	15.95	cps
Lead	206-1	295601	302756	300524	299627	1.22	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DLX2 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 2
Date & Time Acquired : 2024-12-10 16:09:12 DataFile Name : 049AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	243274	252265	251057	248865	1.96	cps
Lead	208-1	1148319	1167191	1172299	1162603	1.09	cps
Lithium	6-1	12372867	12016418	12048992	12146092	1.62	cps
Magnesium	24-2	15478321	15009771	15238611	15242234	1.54	cps
Manganese	55-2	57375617	57091799	56596824	57021414	0.69	cps
Molybdenum	94-1	413524	412413	424183	416707	1.56	cps
Molybdenum	95-1	79419	81282	78600	79767	1.72	cps
Molybdenum	96-1	150283	151721	150465	150823	0.52	cps
Molybdenum	97-1	48752	47511	48859	48374	1.55	cps
Molybdenum	98-1	123020	124738	125122	124293	0.90	cps
Neodymium	150-1	48721	49507	48909	49046	0.84	cps
Neodymium	150-2	12202	11458	11555	11739	3.45	cps
Nickel	60-2	79953	79983	80147	80028	0.13	cps
Phosphorus	31-2	15138	14738	15171	15016	1.61	cps
Potassium	39-2	150650	149391	150125	150055	0.42	cps
Rhodium	103-1	26072583	25982735	25747247	25934188	0.65	cps
Rhodium	103-2	9714564	9686543	9504355	9635154	1.18	cps
Scandium	45-1	20737100	20477822	20436013	20550312	0.79	cps
Scandium	45-2	428010	423091	425599	425567	0.58	cps
Selenium	82-1	275	304	68	216	59.55	cps
Selenium	77-2	83	70	87	80	11.02	cps
Selenium	78-2	47	77	63	62	24.16	cps
Silicon	28-1	422157420	426981114	420376954	423171829	0.81	cps
Silver	107-1	2976	2811	2910	2899	2.86	cps
Silver	109-1	7879	7579	7652	7703	2.03	cps
Sodium	23-2	441135	440725	441596	441152	0.10	cps
Strontium	86-1	2283709	2254711	2237889	2258770	1.03	cps
Strontium	88-1	18961595	19185560	19178234	19108463	0.67	cps
Sulfur	34-1	1456018	1399982	1443359	1433120	2.05	cps
Terbium	159-1	37757020	36906277	36993929	37219075	1.26	cps
Terbium	159-2	11575721	11489259	11497106	11520695	0.42	cps
Thallium	203-1	2017	1623	1703	1781	11.67	cps
Thallium	205-1	5108	4211	3967	4429	13.56	cps
Tin	118-1	32585	33127	32121	32611	1.54	cps
Titanium	47-1	8903002	8708190	8711694	8774295	1.27	cps
Uranium	238-1	133903	138348	137342	136531	1.71	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DLX2 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 2
Date & Time Acquired : 2024-12-10 16:09:12 DataFile Name : 049AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2391661	2309845	2340693	2347400	1.76	cps
Ytterbium	172-1	15346	15439	15205	15330	0.77	cps
Ytterbium	172-2	5821	6088	5981	5964	2.25	cps
Ytterbium	176-1	15953	16140	16277	16123	1.01	cps
Ytterbium	176-2	5324	5518	5621	5488	2.75	cps
Yttrium	89-1	46414153	45836348	46251411	46167304	0.65	cps
Yttrium	89-2	3495753	3401052	3388983	3428596	1.71	cps
Zinc	66-2	73479	73244	74035	73586	0.55	cps
Zirconium	90-1	1027006	1044223	1035159	1035463	0.83	cps
Zirconium	91-1	231330	232196	231445	231657	0.20	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DL2X5 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:12:22 DataFile Name : 050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	585789	583215	587360	585454	0.36	cps
Antimony	121-1	2950	3247	3104	3100	4.79	cps
Arsenic	75-2	660	600	550	603	9.13	cps
Barium	135-1	226406	224986	224440	225277	0.45	cps
Barium	137-1	382882	386309	384389	384527	0.45	cps
Beryllium	9-1	3376	3444	3377	3399	1.14	cps
Bismuth	209-1	21988996	22258906	22523639	22257181	1.20	cps
Bismuth	209-2	8239084	8267902	8295439	8267475	0.34	cps
Bromine	81-1	12429	12529	12562	12507	0.56	cps
Cadmium	108-1	607	647	540	598	9.01	cps
Cadmium	106-1	17271	17121	17104	17165	0.54	cps
Cadmium	111-1	12128	11995	12058	12061	0.55	cps
Calcium	43-1	7990339	7795788	7726044	7837390	1.75	cps
Calcium	44-1	126472735	128188068	127820725	127493843	0.71	cps
Carbon	12-1	5291390	5242791	5129092	5221091	1.60	cps
Carbon	12-2	34427	34985	34520	34644	0.86	cps
Chlorine	35-1	50387111	52076121	52753171	51738801	2.36	cps
Chlorine	35-2	234141	232485	233740	233455	0.37	cps
Chromium	52-2	2176995	2162185	2191945	2177042	0.68	cps
Cobalt	59-2	14264	14471	14057	14264	1.45	cps
Copper	63-2	90885	90134	89724	90248	0.65	cps
Dysprosium	156-1	15456	14925	15446	15275	1.99	cps
Dysprosium	156-2	4788	4437	4654	4626	3.82	cps
Erbium	164-1	15409	15342	15729	15494	1.34	cps
Erbium	164-2	4754	4671	4794	4740	1.33	cps
Gadolinium	160-1	13744	14051	13694	13829	1.40	cps
Gadolinium	160-2	5334	5058	5458	5283	3.88	cps
Holmium	165-1	37481214	37233362	37033356	37249311	0.60	cps
Holmium	165-2	11564926	11828497	12027936	11807120	1.97	cps
Indium	115-1	29033760	29014474	29183198	29077144	0.32	cps
Indium	115-2	2917444	2891037	2918995	2909159	0.54	cps
Iron	54-2	16092734	15876732	15847414	15938960	0.84	cps
Iron	56-2	294736562	291429482	290289929	292151991	0.79	cps
Iron	57-2	7287791	7235152	7150683	7224542	0.96	cps
Krypton	83-1	457	430	407	431	5.80	cps
Lead	206-1	123757	124181	123424	123787	0.31	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DL2X5 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:12:22 DataFile Name : 050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	103382	103546	102219	103049	0.70	cps
Lead	208-1	477971	480583	478399	478984	0.29	cps
Lithium	6-1	11881462	11919074	12128901	11976479	1.11	cps
Magnesium	24-2	5945440	5990950	5999859	5978750	0.49	cps
Manganese	55-2	22937112	22809980	22606524	22784539	0.73	cps
Molybdenum	94-1	167460	170000	169841	169100	0.84	cps
Molybdenum	95-1	32174	31863	31897	31978	0.53	cps
Molybdenum	96-1	59865	60515	59919	60100	0.60	cps
Molybdenum	97-1	19093	19370	19334	19266	0.78	cps
Molybdenum	98-1	49026	47866	48732	48541	1.24	cps
Neodymium	150-1	19761	19618	19808	19729	0.50	cps
Neodymium	150-2	4664	4741	4794	4733	1.38	cps
Nickel	60-2	32794	32771	32581	32715	0.36	cps
Phosphorus	31-2	6118	6188	6171	6159	0.59	cps
Potassium	39-2	70621	70511	71727	70953	0.95	cps
Rhodium	103-1	26530192	26945048	26679322	26718187	0.79	cps
Rhodium	103-2	9852382	9758234	9833444	9814686	0.51	cps
Scandium	45-1	20547406	20293055	20524179	20454880	0.69	cps
Scandium	45-2	415087	418529	421523	418380	0.77	cps
Selenium	82-1	37	141	124	101	55.37	cps
Selenium	77-2	23	27	33	28	18.33	cps
Selenium	78-2	43	37	50	43	15.38	cps
Silicon	28-1	163212344	162594318	161883601	162563421	0.41	cps
Silver	107-1	1516	1342	1339	1399	7.23	cps
Silver	109-1	2880	3187	3197	3088	5.83	cps
Sodium	23-2	236017	236990	237726	236911	0.36	cps
Strontium	86-1	827373	833989	842317	834560	0.90	cps
Strontium	88-1	7536254	7506350	7533067	7525223	0.22	cps
Sulfur	34-1	1011814	1004522	1013677	1010004	0.48	cps
Terbium	159-1	38271145	37625341	37708841	37868442	0.93	cps
Terbium	159-2	11456119	11615612	11807970	11626567	1.52	cps
Thallium	203-1	810	750	720	760	6.03	cps
Thallium	205-1	2064	1890	1783	1912	7.39	cps
Tin	118-1	16150	15692	15269	15704	2.81	cps
Titanium	47-1	3473367	3488346	3482776	3481497	0.22	cps
Uranium	238-1	54332	53498	53713	53848	0.80	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-01DL2X5 Instrumnet Name : P8
Client Sample ID : ME28M0 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:12:22 DataFile Name : 050AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	883881	883387	879962	882410	0.24	cps
Ytterbium	172-1	6178	6061	6101	6114	0.97	cps
Ytterbium	172-2	2474	2394	2257	2375	4.61	cps
Ytterbium	176-1	9507	9183	9507	9399	1.99	cps
Ytterbium	176-2	2537	2704	2810	2684	5.13	cps
Yttrium	89-1	46202996	45673431	46194656	46023694	0.66	cps
Yttrium	89-2	3372437	3387901	3380510	3380283	0.23	cps
Zinc	66-2	30028	30236	29898	30054	0.57	cps
Zirconium	90-1	417966	416449	414489	416301	0.42	cps
Zirconium	91-1	93403	93877	91804	93028	1.17	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02DLX5 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:15:35 DataFile Name : 051AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	763704	766382	759018	763035	0.49	cps
Antimony	121-1	2240	2240	2340	2274	2.54	cps
Arsenic	75-2	580	580	557	572	2.35	cps
Barium	135-1	313062	317465	314129	314885	0.73	cps
Barium	137-1	546386	541357	542425	543389	0.49	cps
Beryllium	9-1	5505	5453	5452	5470	0.56	cps
Bismuth	209-1	20680387	22320707	22168631	21723242	4.17	cps
Bismuth	209-2	8445442	8196902	8550307	8397550	2.16	cps
Bromine	81-1	12592	12893	13106	12864	2.01	cps
Cadmium	108-1	563	560	580	568	1.89	cps
Cadmium	106-1	15753	16570	16794	16372	3.35	cps
Cadmium	111-1	11599	12154	12460	12071	3.61	cps
Calcium	43-1	8115817	8222702	8057834	8132118	1.03	cps
Calcium	44-1	132229931	132242291	131801915	132091379	0.19	cps
Carbon	12-1	5112053	5063182	4957734	5044323	1.56	cps
Carbon	12-2	34206	34417	33351	33992	1.66	cps
Chlorine	35-1	51888384	53783053	54453554	53374997	2.49	cps
Chlorine	35-2	239988	242926	243478	242131	0.77	cps
Chromium	52-2	3244622	3235623	3289161	3256469	0.88	cps
Cobalt	59-2	21029	20702	20925	20885	0.80	cps
Copper	63-2	107134	109539	108403	108358	1.11	cps
Dysprosium	156-1	23474	23370	23982	23609	1.39	cps
Dysprosium	156-2	7152	6935	7105	7064	1.62	cps
Erbium	164-1	25084	24776	24793	24884	0.69	cps
Erbium	164-2	7882	7592	7636	7703	2.03	cps
Gadolinium	160-1	21053	21367	21708	21376	1.53	cps
Gadolinium	160-2	8153	8149	8326	8209	1.23	cps
Holmium	165-1	33745405	37782544	37582280	36370076	6.26	cps
Holmium	165-2	12144935	11934968	12373503	12151135	1.81	cps
Indium	115-1	26700046	29269807	29161449	28377101	5.12	cps
Indium	115-2	2984522	2912089	3097495	2998035	3.12	cps
Iron	54-2	14851523	14756422	14831365	14813103	0.34	cps
Iron	56-2	269360789	276206156	267688583	271085176	1.66	cps
Iron	57-2	6715204	6757672	6648131	6707002	0.82	cps
Krypton	83-1	460	437	397	431	7.43	cps
Lead	206-1	300672	297161	296666	298167	0.73	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02DLX5 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:15:35 DataFile Name : 051AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	249758	248456	250328	249514	0.38	cps
Lead	208-1	1159566	1166297	1159304	1161722	0.34	cps
Lithium	6-1	10924651	11747580	11776073	11482768	4.21	cps
Magnesium	24-2	6194746	6021639	6156003	6124129	1.48	cps
Manganese	55-2	20852339	21209992	21142247	21068193	0.90	cps
Molybdenum	94-1	167557	167042	165280	166626	0.72	cps
Molybdenum	95-1	67979	68541	67982	68167	0.48	cps
Molybdenum	96-1	94180	94261	93421	93954	0.49	cps
Molybdenum	97-1	41138	40639	41231	41003	0.78	cps
Molybdenum	98-1	106112	106958	106861	106644	0.43	cps
Neodymium	150-1	29065	29282	29850	29399	1.38	cps
Neodymium	150-2	6952	7162	6512	6875	4.83	cps
Nickel	60-2	235707	235211	231345	234088	1.02	cps
Phosphorus	31-2	4254	4214	4181	4216	0.87	cps
Potassium	39-2	95553	97191	95949	96231	0.89	cps
Rhodium	103-1	24323920	26461805	26566775	25784167	4.91	cps
Rhodium	103-2	10062870	9682604	10098978	9948151	2.32	cps
Scandium	45-1	18877682	20394288	20501962	19924644	4.56	cps
Scandium	45-2	427325	419627	432387	426446	1.51	cps
Selenium	82-1	255	218	295	256	14.99	cps
Selenium	77-2	33	30	50	38	28.37	cps
Selenium	78-2	27	67	53	49	41.66	cps
Silicon	28-1	164877901	168804781	165601678	166428120	1.26	cps
Silver	107-1	2783	2889	2839	2837	1.86	cps
Silver	109-1	3554	3597	3584	3578	0.62	cps
Sodium	23-2	244011	244271	243566	243949	0.15	cps
Strontium	86-1	565596	568531	573093	569073	0.66	cps
Strontium	88-1	5114544	5169863	5142830	5142412	0.54	cps
Sulfur	34-1	1188476	1202144	1208014	1199545	0.84	cps
Terbium	159-1	33691990	37842604	38167156	36567250	6.82	cps
Terbium	159-2	11810580	11758425	12116280	11895095	1.63	cps
Thallium	203-1	770	620	640	677	12.04	cps
Thallium	205-1	1683	1570	1700	1651	4.28	cps
Tin	118-1	15072	15159	15152	15127	0.32	cps
Titanium	47-1	2634415	2647802	2633088	2638435	0.31	cps
Uranium	238-1	64992	64110	63722	64275	1.01	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-02DLX5 Instrumnet Name : P8
Client Sample ID : ME28M1 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:15:35 DataFile Name : 051AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	382164	383844	380303	382104	0.46	cps
Ytterbium	172-1	10001	10108	10107	10072	0.61	cps
Ytterbium	172-2	3807	3837	3651	3765	2.66	cps
Ytterbium	176-1	11108	12092	11582	11594	4.25	cps
Ytterbium	176-2	3614	3644	3584	3614	0.83	cps
Yttrium	89-1	42114514	45795281	46410383	44773392	5.19	cps
Yttrium	89-2	3496702	3371488	3507505	3458565	2.19	cps
Zinc	66-2	34676	35247	35438	35120	1.13	cps
Zirconium	90-1	356211	361421	358173	358601	0.73	cps
Zirconium	91-1	78312	79227	79673	79071	0.88	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03DLX5 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:18:46 DataFile Name : 052AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	388301	386886	383278	386155	0.67	cps
Antimony	121-1	1737	1840	1747	1775	3.21	cps
Arsenic	75-2	780	727	793	767	4.60	cps
Barium	135-1	175843	180898	178236	178326	1.42	cps
Barium	137-1	306273	304802	304777	305284	0.28	cps
Beryllium	9-1	2522	2452	2512	2496	1.52	cps
Bismuth	209-1	23452262	23199375	23068700	23240112	0.84	cps
Bismuth	209-2	8585866	8601202	8786371	8657813	1.29	cps
Bromine	81-1	12726	12706	13039	12824	1.46	cps
Cadmium	108-1	287	343	310	313	9.09	cps
Cadmium	106-1	16573	16981	16083	16546	2.72	cps
Cadmium	111-1	11874	12196	11584	11885	2.57	cps
Calcium	43-1	3999164	3984442	4007084	3996897	0.29	cps
Calcium	44-1	64390501	65097441	63515124	64334355	1.23	cps
Carbon	12-1	5010950	4988244	5044103	5014432	0.56	cps
Carbon	12-2	33525	33635	32910	33357	1.17	cps
Chlorine	35-1	48787356	51363491	51501891	50550913	3.02	cps
Chlorine	35-2	231639	231912	231292	231614	0.13	cps
Chromium	52-2	638783	642675	638568	640009	0.36	cps
Cobalt	59-2	20308	19754	19767	19943	1.58	cps
Copper	63-2	91298	89899	90878	90692	0.79	cps
Dysprosium	156-1	18937	18853	18913	18901	0.23	cps
Dysprosium	156-2	5708	5778	5651	5712	1.11	cps
Erbium	164-1	17638	17482	17729	17616	0.71	cps
Erbium	164-2	5458	5354	5531	5448	1.63	cps
Gadolinium	160-1	17278	17388	17585	17417	0.89	cps
Gadolinium	160-2	6942	6695	6889	6842	1.90	cps
Holmium	165-1	38444405	37000517	37736004	37726975	1.91	cps
Holmium	165-2	12161264	12048846	12116489	12108866	0.47	cps
Indium	115-1	30273921	30272605	30023484	30190003	0.48	cps
Indium	115-2	3024549	3018187	3034694	3025810	0.28	cps
Iron	54-2	4345443	4423366	4405236	4391348	0.93	cps
Iron	56-2	80486734	80200677	79945170	80210860	0.34	cps
Iron	57-2	2018594	2033800	2050859	2034418	0.79	cps
Krypton	83-1	403	373	413	397	5.25	cps
Lead	206-1	121634	124706	122631	122990	1.27	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03DLX5 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:18:46 DataFile Name : 052AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	100469	100524	101191	100728	0.40	cps
Lead	208-1	469495	471537	468953	469995	0.29	cps
Lithium	6-1	12187694	12450763	12213799	12284085	1.18	cps
Magnesium	24-2	2786530	2708279	2789245	2761352	1.67	cps
Manganese	55-2	7198341	7193965	7027999	7140102	1.36	cps
Molybdenum	94-1	64891	65872	66076	65613	0.97	cps
Molybdenum	95-1	18459	18556	18512	18509	0.26	cps
Molybdenum	96-1	29411	28680	28944	29011	1.28	cps
Molybdenum	97-1	10954	11151	11188	11098	1.13	cps
Molybdenum	98-1	29391	29204	28349	28981	1.92	cps
Neodymium	150-1	24810	24760	24990	24853	0.49	cps
Neodymium	150-2	6038	5898	5655	5864	3.31	cps
Nickel	60-2	45346	45579	45532	45486	0.27	cps
Phosphorus	31-2	2030	2080	2014	2041	1.70	cps
Potassium	39-2	79759	79571	78559	79296	0.81	cps
Rhodium	103-1	27756040	27374310	27474935	27535095	0.72	cps
Rhodium	103-2	10245809	10342110	10349216	10312378	0.56	cps
Scandium	45-1	21033751	20584050	20591953	20736585	1.24	cps
Scandium	45-2	429396	427606	424531	427178	0.58	cps
Selenium	82-1	75	41	-8	36	116.32	cps
Selenium	77-2	47	30	37	38	22.21	cps
Selenium	78-2	40	40	43	41	4.68	cps
Silicon	28-1	56250546	57263776	57615567	57043296	1.24	cps
Silver	107-1	904	1062	1009	992	8.06	cps
Silver	109-1	1163	1180	1123	1156	2.52	cps
Sodium	23-2	187609	184864	184152	185542	0.98	cps
Strontium	86-1	444822	447541	445190	445851	0.33	cps
Strontium	88-1	4010023	3986877	3994753	3997218	0.29	cps
Sulfur	34-1	839117	841775	843617	841503	0.27	cps
Terbium	159-1	39389699	38085559	39379636	38951632	1.93	cps
Terbium	159-2	11983119	12068067	11921458	11990881	0.61	cps
Thallium	203-1	1453	1353	1370	1392	3.85	cps
Thallium	205-1	3417	3290	3094	3267	4.99	cps
Tin	118-1	10347	10364	10047	10253	1.74	cps
Titanium	47-1	827264	828397	836486	830716	0.61	cps
Uranium	238-1	33427	33397	34153	33659	1.27	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : P5067-03DLX5 Instrumnet Name : P8
Client Sample ID : ME28M2 Dilution Factor : 5
Date & Time Acquired : 2024-12-10 16:18:46 DataFile Name : 052AREF.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	221135	218773	219405	219771	0.56	cps
Ytterbium	172-1	5835	5731	5828	5798	1.00	cps
Ytterbium	172-2	2214	2237	2314	2255	2.32	cps
Ytterbium	176-1	8830	8573	8650	8684	1.52	cps
Ytterbium	176-2	2354	2314	2400	2356	1.84	cps
Yttrium	89-1	47551846	46373861	46333286	46752998	1.48	cps
Yttrium	89-2	3427070	3471366	3412255	3436897	0.89	cps
Zinc	66-2	17427	17745	17564	17579	0.90	cps
Zirconium	90-1	154216	152861	151907	152995	0.76	cps
Zirconium	91-1	33905	33440	33624	33656	0.70	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV003 Instrumnet Name : P8
Client Sample ID : CCV003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:26:43 DataFile Name : 054CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5159158	5151007	5158539	5156234	0.09	cps
Antimony	121-1	10374362	10522673	10599280	10498772	1.09	cps
Arsenic	75-2	209287	208425	209052	208921	0.21	cps
Barium	135-1	14179629	14176652	14322308	14226196	0.59	cps
Barium	137-1	23766780	24124945	24498405	24130044	1.52	cps
Beryllium	9-1	3098702	3096811	3166385	3120633	1.27	cps
Bismuth	209-1	19534408	19053103	19513945	19367152	1.41	cps
Bismuth	209-2	7264967	7368235	7408170	7347124	1.01	cps
Bromine	81-1	12119	11138	12322	11860	5.34	cps
Cadmium	108-1	208828	206519	211278	208875	1.14	cps
Cadmium	106-1	304625	307217	313850	308564	1.54	cps
Cadmium	111-1	2641616	2623619	2690165	2651800	1.30	cps
Calcium	43-1	19316500	19633273	19846388	19598721	1.36	cps
Calcium	44-1	314669662	310388309	318822329	314626766	1.34	cps
Carbon	12-1	5779869	5772080	5937351	5829767	1.60	cps
Carbon	12-2	47747	48175	48436	48120	0.72	cps
Chlorine	35-1	2068833	1977416	1995090	2013780	2.41	cps
Chlorine	35-2	8556	8503	8372	8477	1.11	cps
Chromium	52-2	2659050	2639065	2619235	2639117	0.75	cps
Cobalt	59-2	4694932	4705157	4657022	4685704	0.54	cps
Copper	63-2	37097396	36686072	36421284	36734917	0.93	cps
Dysprosium	156-1	873	797	730	800	8.97	cps
Dysprosium	156-2	197	193	207	199	3.49	cps
Erbium	164-1	920	720	760	800	13.23	cps
Erbium	164-2	273	240	253	256	6.56	cps
Gadolinium	160-1	793	737	767	766	3.70	cps
Gadolinium	160-2	263	187	257	236	18.03	cps
Holmium	165-1	34474940	33471675	34702866	34216494	1.91	cps
Holmium	165-2	11302556	11071772	11215998	11196775	1.04	cps
Indium	115-1	25637108	25550293	25639917	25609106	0.20	cps
Indium	115-2	2644715	2637600	2649660	2643992	0.23	cps
Iron	54-2	26588767	26971770	26288708	26616415	1.29	cps
Iron	56-2	490964153	488199939	485103873	488089322	0.60	cps
Iron	57-2	12186828	12138052	12342942	12222607	0.88	cps
Krypton	83-1	420	427	447	431	3.22	cps
Lead	206-1	44778443	44503179	44942258	44741293	0.50	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV003 Instrumnet Name : P8
Client Sample ID : CCV003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:26:43 DataFile Name : 054CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	38321601	38270735	38783519	38458619	0.73	cps
Lead	208-1	175546359	176534087	178961162	177013869	0.99	cps
Lithium	6-1	10889032	10620047	10794661	10767913	1.27	cps
Magnesium	24-2	82447200	81735317	81941529	82041349	0.45	cps
Manganese	55-2	11159832	11188302	11120494	11156209	0.31	cps
Molybdenum	94-1	42853023	41660359	42290360	42267914	1.41	cps
Molybdenum	95-1	61226551	61010719	61311662	61182977	0.25	cps
Molybdenum	96-1	65841576	65759392	66510527	66037165	0.62	cps
Molybdenum	97-1	37365855	36991828	37661009	37339564	0.90	cps
Molybdenum	98-1	97345129	95625849	98656649	97209209	1.56	cps
Neodymium	150-1	1537	1437	1510	1495	3.47	cps
Neodymium	150-2	113	157	123	131	17.30	cps
Nickel	60-2	1192547	1186243	1182720	1187170	0.42	cps
Phosphorus	31-2	46936	47206	48076	47406	1.26	cps
Potassium	39-2	28123028	27592421	27864491	27859980	0.95	cps
Rhodium	103-1	23252588	22041511	22601273	22631791	2.68	cps
Rhodium	103-2	8473790	8505873	8546760	8508808	0.43	cps
Scandium	45-1	18685688	18048035	18372054	18368592	1.74	cps
Scandium	45-2	385042	378021	384184	382416	1.00	cps
Selenium	82-1	192157	190549	193980	192229	0.89	cps
Selenium	77-2	3210	3074	3074	3119	2.53	cps
Selenium	78-2	10224	10574	10291	10363	1.79	cps
Silicon	28-1	124201265	122056732	124320295	123526097	1.03	cps
Silver	107-1	13065100	12925920	13267853	13086291	1.31	cps
Silver	109-1	12712487	12596442	12830754	12713228	0.92	cps
Sodium	23-2	176241024	176252064	175833071	176108720	0.14	cps
Strontium	86-1	3957252	4087738	4175012	4073334	2.69	cps
Strontium	88-1	34893113	34917377	35293015	35034502	0.64	cps
Sulfur	34-1	1705740	1658661	1672044	1678815	1.45	cps
Terbium	159-1	35227518	34301969	35170093	34899860	1.49	cps
Terbium	159-2	11241005	11014267	11140711	11131994	1.02	cps
Thallium	203-1	10976720	11067726	11176069	11073505	0.90	cps
Thallium	205-1	26385747	26652051	26881763	26639854	0.93	cps
Tin	118-1	9120866	9299207	9398609	9272894	1.52	cps
Titanium	47-1	18479237	18127808	18439506	18348851	1.05	cps
Uranium	238-1	38233644	38146681	38861614	38413980	1.02	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCV003 Instrumnet Name : P8
Client Sample ID : CCV003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:26:43 DataFile Name : 054CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	2056892	2103854	2044310	2068352	1.52	cps
Ytterbium	172-1	880	857	783	840	6.01	cps
Ytterbium	172-2	287	283	333	301	9.28	cps
Ytterbium	176-1	57799	57772	58398	57990	0.61	cps
Ytterbium	176-2	19291	19448	19114	19284	0.87	cps
Yttrium	89-1	42611669	41191976	41853959	41885868	1.70	cps
Yttrium	89-2	3159080	3162743	3134277	3152033	0.49	cps
Zinc	66-2	3547286	3538662	3484242	3523397	0.97	cps
Zirconium	90-1	21621902	21333165	21737621	21564229	0.97	cps
Zirconium	91-1	4788782	4727384	4810530	4775565	0.90	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB003 Instrumnet Name : P8
Client Sample ID : CCB003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:30:00 DataFile Name : 055CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	270	203	197	223	18.16	cps
Antimony	121-1	2164	2004	1860	2009	7.55	cps
Arsenic	75-2	10	17	10	12	31.50	cps
Barium	135-1	567	393	337	432	27.72	cps
Barium	137-1	917	660	750	776	16.79	cps
Beryllium	9-1	1007	931	800	913	11.50	cps
Bismuth	209-1	20957764	21464868	21347621	21256751	1.25	cps
Bismuth	209-2	8290866	8676283	8854079	8607076	3.35	cps
Bromine	81-1	12489	12759	12726	12658	1.16	cps
Cadmium	108-1	60	30	37	42	37.31	cps
Cadmium	106-1	13190	13850	13817	13619	2.73	cps
Cadmium	111-1	9418	9911	9816	9715	2.70	cps
Calcium	43-1	2104	1777	1947	1942	8.41	cps
Calcium	44-1	42744	39698	39086	40509	4.84	cps
Carbon	12-1	4964003	4992746	5038379	4998376	0.75	cps
Carbon	12-2	33224	33254	33558	33346	0.55	cps
Chlorine	35-1	1704328	1642143	1593907	1646793	3.36	cps
Chlorine	35-2	6578	6762	6735	6692	1.48	cps
Chromium	52-2	1673	1657	1667	1666	0.50	cps
Cobalt	59-2	167	250	223	213	19.95	cps
Copper	63-2	4347	4811	4651	4603	5.11	cps
Dysprosium	156-1	7	20	13	13	49.99	cps
Dysprosium	156-2	7	3	3	4	43.40	cps
Erbium	164-1	130	157	173	153	14.26	cps
Erbium	164-2	53	30	60	48	32.97	cps
Gadolinium	160-1	243	267	200	237	14.29	cps
Gadolinium	160-2	43	33	63	47	32.74	cps
Holmium	165-1	33910499	34821049	34249514	34327021	1.34	cps
Holmium	165-2	11067375	11730266	12443603	11747081	5.86	cps
Indium	115-1	26499640	28511153	27262712	27424502	3.70	cps
Indium	115-2	2824322	3021371	3172122	3005938	5.80	cps
Iron	54-2	1527	1447	1313	1429	7.54	cps
Iron	56-2	21570	20338	21573	21160	3.37	cps
Iron	57-2	487	513	550	517	6.15	cps
Krypton	83-1	360	323	307	330	8.27	cps
Lead	206-1	4357	3991	3814	4054	6.84	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB003 Instrumnet Name : P8
Client Sample ID : CCB003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:30:00 DataFile Name : 055CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	207-1	3844	3384	3447	3558	7.01	cps
Lead	208-1	17385	15344	15424	16051	7.20	cps
Lithium	6-1	10946718	11593040	11095499	11211752	3.02	cps
Magnesium	24-2	2234	2214	2224	2224	0.45	cps
Manganese	55-2	517	633	547	566	10.71	cps
Molybdenum	94-1	5181	3327	3240	3916	27.99	cps
Molybdenum	95-1	7636	4801	4121	5519	33.78	cps
Molybdenum	96-1	8019	5018	4397	5811	33.33	cps
Molybdenum	97-1	4554	2790	2380	3242	35.63	cps
Molybdenum	98-1	11735	7345	6131	8404	35.08	cps
Neodymium	150-1	10	13	17	13	25.01	cps
Neodymium	150-2	7	0	0	2	173.21	cps
Nickel	60-2	740	697	810	749	7.64	cps
Phosphorus	31-2	340	297	263	300	12.81	cps
Potassium	39-2	22785	23129	22741	22885	0.93	cps
Rhodium	103-1	24671189	25973923	25154465	25266525	2.61	cps
Rhodium	103-2	9571059	10244549	10559198	10124935	4.99	cps
Scandium	45-1	18214066	19195625	18916278	18775323	2.69	cps
Scandium	45-2	392332	414775	438415	415174	5.55	cps
Selenium	82-1	47	23	65	45	47.20	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	23	13	7	14	58.06	cps
Silicon	28-1	1417602	1007948	968942	1131497	21.97	cps
Silver	107-1	2043	1850	1757	1883	7.74	cps
Silver	109-1	1873	1440	1483	1599	14.93	cps
Sodium	23-2	119487	120267	116188	118647	1.83	cps
Strontium	86-1	790	743	683	739	7.24	cps
Strontium	88-1	2144	1617	1553	1771	18.29	cps
Sulfur	34-1	637799	641048	634005	637618	0.55	cps
Terbium	159-1	34237505	35727774	35467721	35144333	2.27	cps
Terbium	159-2	11314000	11839339	12108889	11754076	3.44	cps
Thallium	203-1	1873	1680	1570	1708	8.99	cps
Thallium	205-1	4357	4027	3841	4075	6.42	cps
Tin	118-1	6139	4361	4014	4838	23.56	cps
Titanium	47-1	1240	1010	1010	1087	12.22	cps
Uranium	238-1	1257	910	890	1019	20.24	cps

LB Number : LB133874 Operator : Jaswal
Lab Sample ID : CCB003 Instrumnet Name : P8
Client Sample ID : CCB003 Dilution Factor : 1
Date & Time Acquired : 2024-12-10 16:30:00 DataFile Name : 055CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Vanadium	51-2	40	57	67	54	24.75	cps
Ytterbium	172-1	137	180	207	174	20.25	cps
Ytterbium	172-2	80	63	47	63	26.31	cps
Ytterbium	176-1	4257	4487	4377	4374	2.63	cps
Ytterbium	176-2	743	947	980	890	14.39	cps
Yttrium	89-1	42091484	43878169	42160376	42710010	2.37	cps
Yttrium	89-2	3201362	3382391	3541714	3375156	5.05	cps
Zinc	66-2	720	693	797	737	7.28	cps
Zirconium	90-1	2777	2630	2510	2639	5.06	cps
Zirconium	91-1	560	510	443	504	11.60	cps

Prep Standard - Chemical Standard Summary

Order ID : P5067
Test : Metals CLP MS FULL

Prepbatch ID : PB165414,
Sequence ID/Qc Batch ID: LB133874,

Standard ID :
MP82128,MP83014,MP83016,MP83032,MP83033,MP83034,MP83035,MP83036,MP83037,MP83038,MP83039,MP830
41,MP83042,MP83043,MP83044,MP83047,MP83048,MP83049,MP83050,MP83122,MP83465,

Chemical ID :
M5288,M5289,M5294,M5304,M5390,M5476,M5497,M5498,M5513,M5515,M5519,M5658,M5698,M5739,M5751,M5768
,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M5819,M5820,M5873,M5874,M596
1,M5962,M5976,M5978,M5981,M5982,M5983,M5993,M5999,M6021,M6023,M6025,M6028,M6030,M6033,M6040,M60
55,M6095,M6115,M6116,M6121,M6126,W3112,

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
641	1:4 HCL	MP82128	09/03/2024	02/08/2025	Janvi Patel	None	None	Sarabjit Jaswal
								09/03/2024

FROM 1500.00000ml of W3112 + 500.00000ml of M6040 = Final Quantity: 2000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83014	11/02/2024	12/31/2024	Sarabjit Jaswal	None	None	Mohan Bera
								11/04/2024

FROM 25.00000ml of M6095 + 4925.00000ml of W3112 + 50.00000ml of M6115 = Final Quantity: 5000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2902	S8 ICPMS	MP83016	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 1.00000ml of M6033 + 2.50000ml of M5288 + 2.50000ml of M5515 + 5.00000ml of M5498 + 5.00000ml of M5769 + 5.00000ml of M5806 + 79.00000ml of MP83014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3947	S7(SFAM,6020,200.8)	MP83032	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.40000ml of M5513 + 1.00000ml of M5799 + 1.00000ml of M5818 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M6033 + 10.00000ml of M6115 + 2.00000ml of M5815 + 2.00000ml of M5817 + 2.50000ml of M5476 + 4.00000ml of M5390 + 4.90000ml of M5515 + 4.90000ml of M5519 + 5.00000ml of M6095 + 50.00000ml of M5304 + 832.80000ml of W3112 + 9.00000ml of M5698 + 9.00000ml of M5819 + 9.00000ml of M5976 + 9.00000ml of M5978 + 9.90000ml of M5498 + 9.90000ml of M5751 + 9.90000ml of M5769 + 9.90000ml of M5806 = Final Quantity: 1000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3948	S6(SFAM,6020,200.8)	MP83033	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 48.50000ml of W3112 + 50.00000ml of MP83032 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3954	S4(SFAM,6020,200.8)	MP83034	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 86.00000ml of W3112 + 12.50000ml of MP83032 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3949	S5(SFAM,6020,200.8)	MP83035	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 73.50000ml of W3112 + 25.00000ml of MP83032 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3951	S3(SFAM, 6020,200.8)	MP83036	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 48.50000ml of W3112 + 10.00000ml of MP83033 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3955	S2CONC(SFAM,6020,200.8)	MP83037	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.05000ml of M5698 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5961 + 0.05000ml of M5981 + 0.05000ml of M5982 + 0.05000ml of M5983 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.10000ml of M6033 + 0.25000ml of M5515 + 0.25000ml of M5799 + 0.25000ml of M5819 + 0.25000ml of M5962 + 0.25000ml of M5976 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.50000ml of M5390 + 0.50000ml of M5818 + 1.25000ml of M5815 + 1.25000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5769 + 2.50000ml of M5806 + 2.50000ml of M6095 + 226.25000ml of W3112 + 5.00000ml of M6115 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3956	S2(SFAM,6020,200.8)	MP83038	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 88.50000ml of W3112 + 0.50000ml of MP83037 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3957	S1(SFAM,6020,200.8)	MP83039	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.50000ml of M6095 + 1.00000ml of M6115 + 88.50000ml of W3112 + 10.00000ml of MP83038 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3958	ICV(SFAM)	MP83041	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 2.00000ml of M5294 + 98.00000ml of MP83014 = Final Quantity: 1000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3961	CCV	MP83042	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.20000ml of M5513 + 0.50000ml of M5799 + 0.50000ml of M5818 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 1.25000ml of M5476 + 10.00000ml of M6115 + 12.45000ml of M5515 + 12.45000ml of M5519 + 2.00000ml of M5390 + 24.95000ml of M5498 + 24.95000ml of M5769 + 24.95000ml of M5806 + 25.00000ml of M5304 + 4.50000ml of M5698 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.95000ml of M6033 + 5.00000ml of M5976 + 5.00000ml of M5978 + 5.00000ml of M6095 + 823.45000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1142	ICSA ICPMS	MP83043	11/02/2024	12/13/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5873 + 90.00000ml of MP83014 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1143	ICSAB ICPMS	MP83044	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP83014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
870	ICPMS SPIKE SOL.B	MP83047	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.45000ml of M5962 + 5.00000ml of M5993 + 5.00000ml of M5999 + 39.55000ml of MP83014 = Final Quantity: 50.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3962	MG 10PPM FOR TUNE	MP83048	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 0.01000ml of M5769 + 9.99000ml of MP83014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3894	TUNE 200PPB	MP83049	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 2.00000ml of M6055 + 2.00000ml of MP83048 + 98.00000ml of MP83014 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3903	ISS 3PPM	MP83050	11/02/2024	12/14/2024	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 11/04/2024

FROM 5.00000ml of M6115 + 75.00000ml of M5739 + 30.00000ml of MP83014 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
169	1:1HNO3	MP83122	11/07/2024	01/31/2025	Janvi Patel	None	None	Sarabjit Jaswal 11/07/2024

FROM 1000.00000ml of M6116 + 1000.00000ml of W3112 = Final Quantity: 2000.000 ml

[illegible]

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	01/01/2025	12/13/2023 / bin	04/20/2021 / bin	M5294

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	6020CAL-1 / Calibration Standard Method 6020	S2-MEB711244	10/20/2026	08/07/2024 / jaswal	04/01/2022 / jaswal	M5304

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

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 /	03/16/2023 / jaswal	M5476

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	03/18/2023 / bin	03/17/2023 / bin	M5497

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	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.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

CHEMICAL RECEIPT LOG BOOK

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

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSB (ICPMS) STOCK SOLUTION	CP-MS ICSB-0803	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5874

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGT11-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5983

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / TI, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/08/2025	08/09/2024 /	08/01/2024 / Janvi	M6040

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	U2-MEB734294	06/21/2028	08/21/2024 / Jaswal	08/19/2024 / Jaswal	M6055

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		03/17/2029	10/26/2024 / Janvi	10/21/2024 / Janvi	M6095

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/04/2025	11/02/2024 / Janvi	09/29/2024 / Eman	M6115

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/03/2025	11/04/2024 / Janvi	09/29/2024 / Eman	M6116

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	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 / lwona	07/03/2024 / lwona	W3112



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

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: CLPP-SPK-4
Lot Number: V2-MEB742036
Matrix: 3% (v/v) HNO₃
Value / Analyte(s):
100 µg/mL ea:
Antimony,
50 µg/mL ea:
Cadmium, Thallium,
40 µg/mL ea:
Arsenic,
20 µg/mL ea:
Lead,
10 µg/mL ea:
Selenium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

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

Density: 1.016 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

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

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

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

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; 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





CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57048
070124
Cadmium (Cd)

Solvent: 24002546 Nitric Acid

Lot #

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Expiration Date: 070127

2% 40.0 Nitric Acid (mL)

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

SE-05 Balance Uncertainty

Pedro L. Rentas
Reviewed By: Pedro L. Rentas 070124

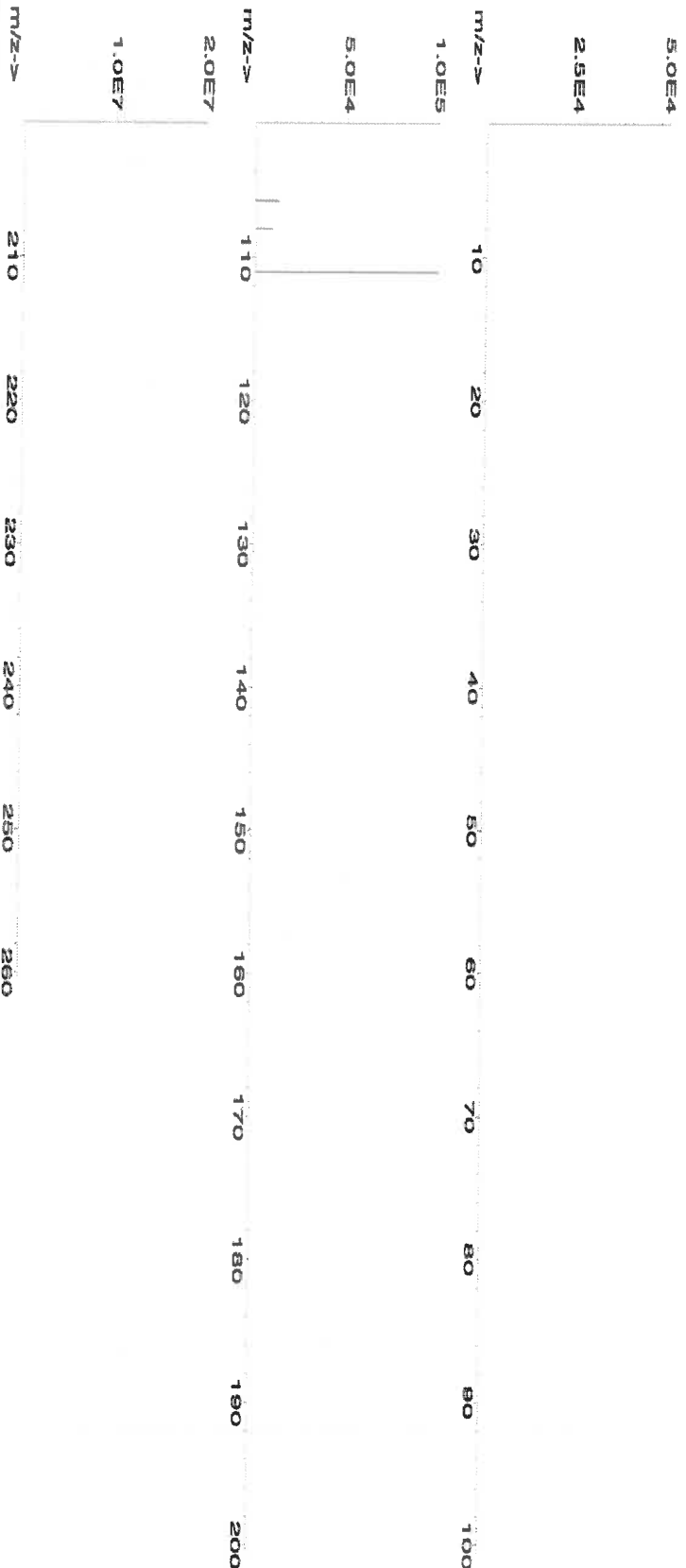
Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

Compound

Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
------------	-----------------------	------------	-----------------------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. Cadmium nitrate tetrahydrate (Cd)	INO24 CDM09221A1	1000	99.999	0.10	36.5	5.4797	5.4804	1000.1	2.0	10022-68-1	0.01 mg/m3	or-rat 60.2mg/kg 3108
--------------------------------------	------------------	------	--------	------	------	--------	--------	--------	-----	------------	------------	-----------------------

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





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

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

Al	<0.02	Cd	<0.2	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Cd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

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

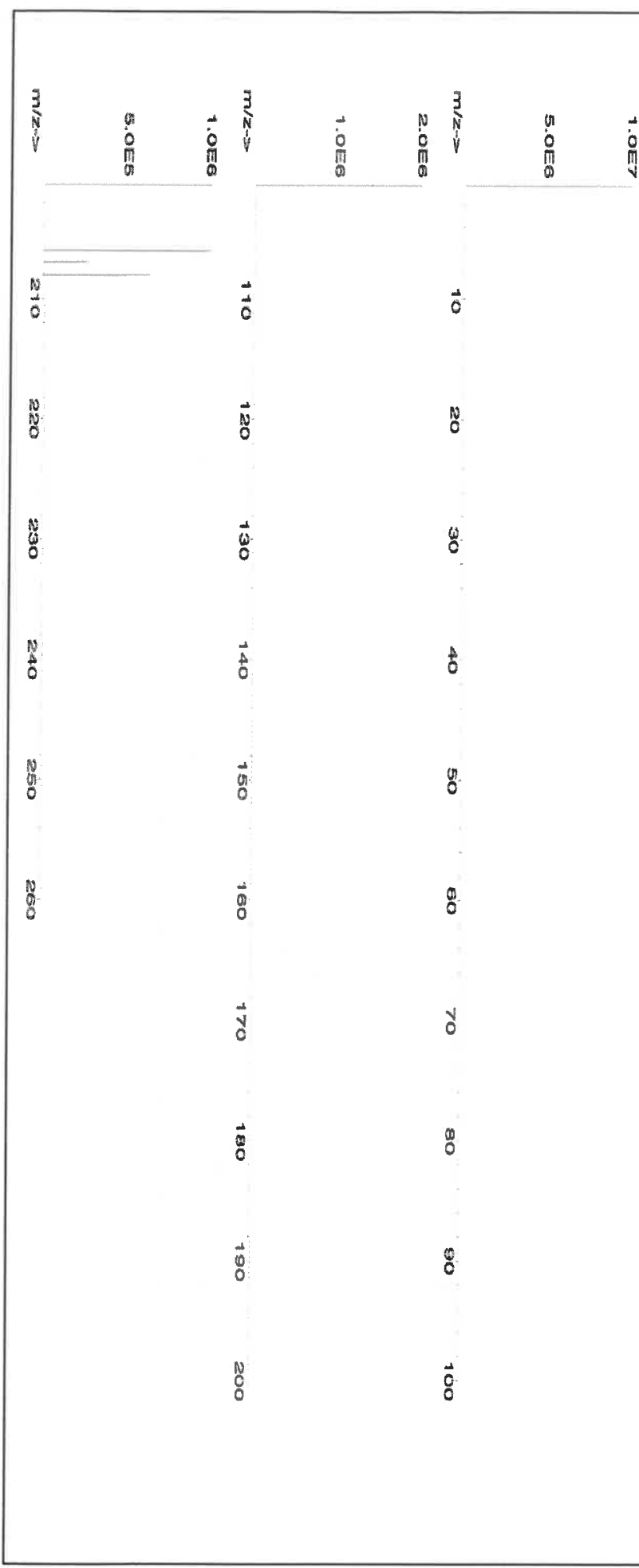
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

Compound	SDS Information									
	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)

1. Lead(II) nitrate (Pb) IN029 PED122016A1 10000 99.999 0.10 62.5 32.0006 32.0040 10001.1 20.0 10099-74-8 0.05 mg/m3 Inverse rat 83 mg/kg 3128

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

Physical Characterization:

(T)= Target analyte

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M5288 R: 07/21/2022 SA

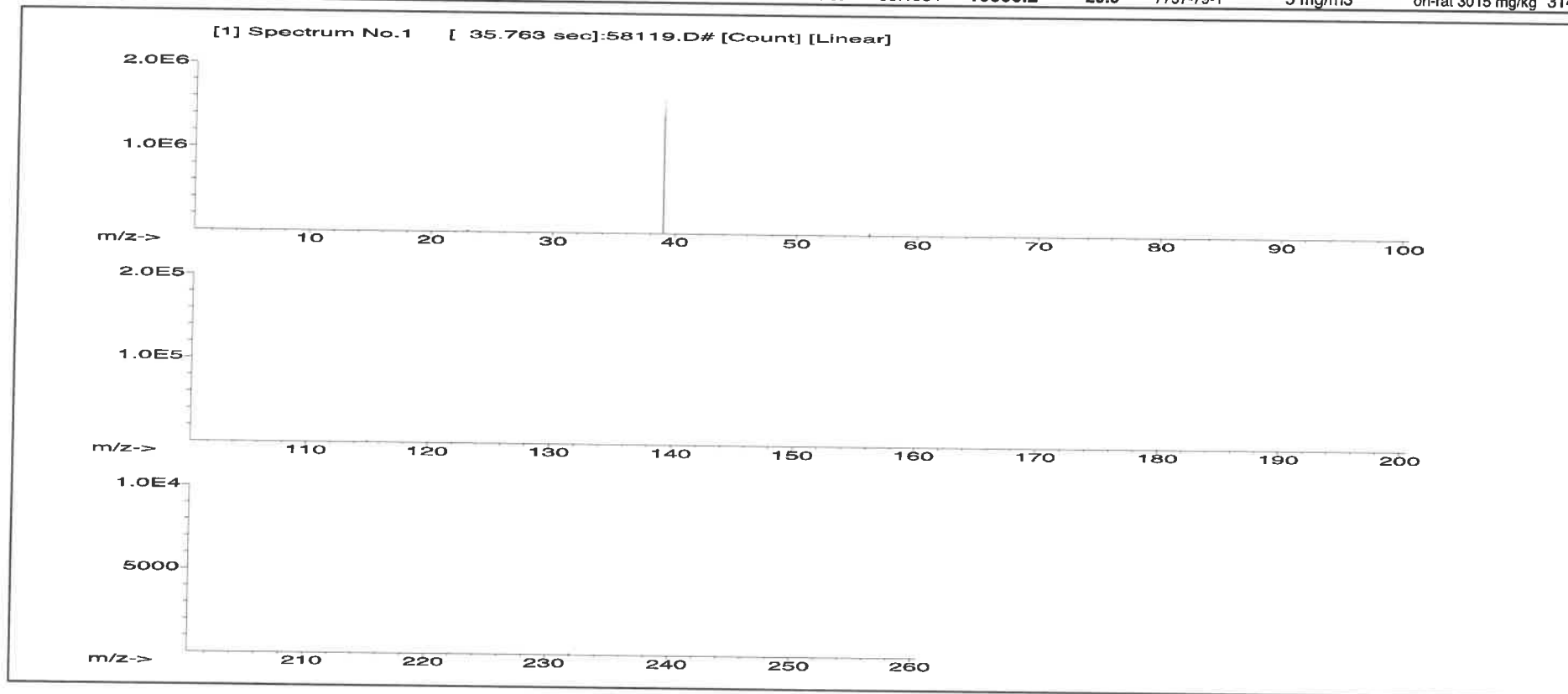


CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 071122
Description: Potassium (K)
Solvent: 20510011 Nitric Acid
2% 40.0 Nitric Acid (mL)
Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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.)				NIST SRM
											CAS#	OSHA PEL (TWA)	LD50		
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	ori-rat 3015 mg/kg	3141a	





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	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.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



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

34



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

CERTIFIED WEIGHT REPORT:

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

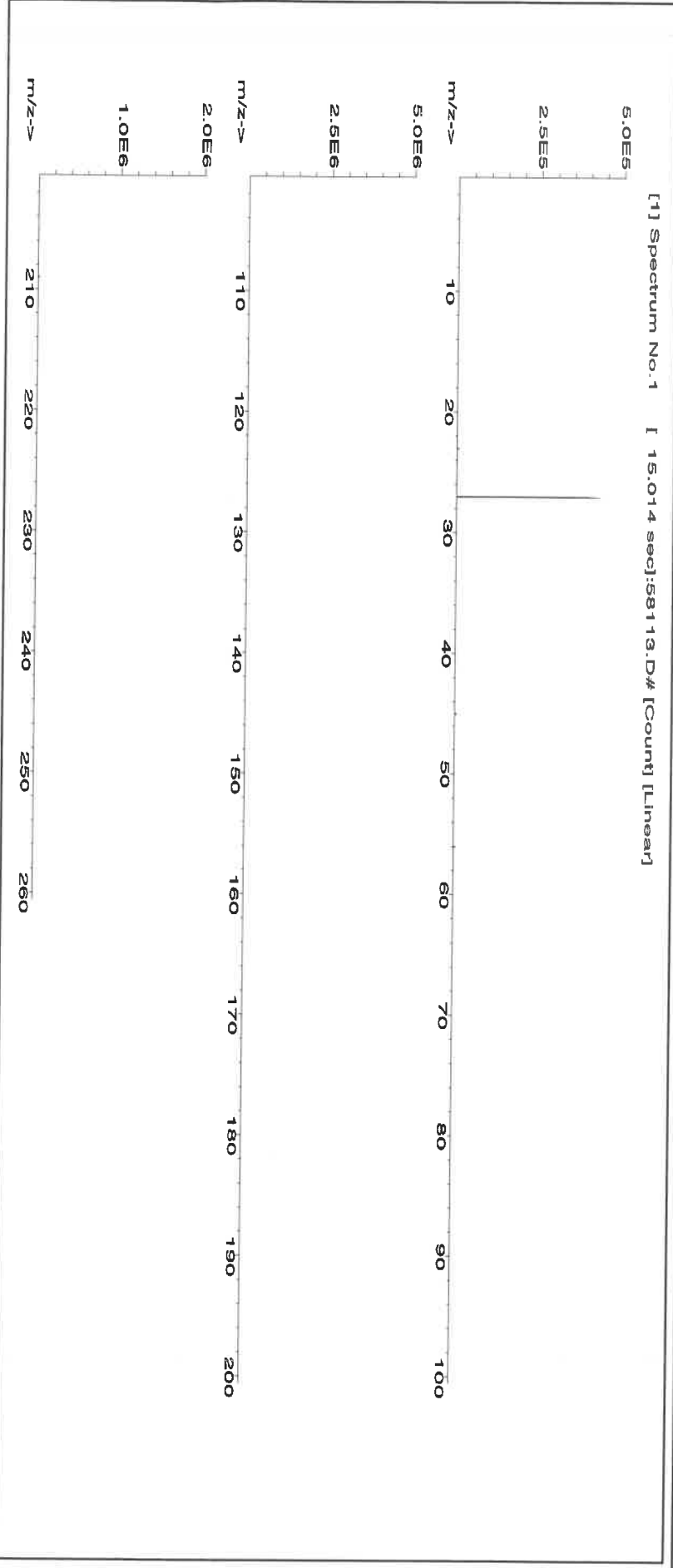
Lot #
Solvent: 20370011 Nitric Acid

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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

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

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





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

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

Al	T	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ti	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 4/20/21

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

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

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M5291
M15292
M15293
M15294
M15295

(A) SAMPLE DESCRIPTION

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

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) ANALYSIS OF SAMPLES

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

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





QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

- ICV1-1014** For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.
- ICV5-0415** For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.
- ICV6-0400** For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS

ICV1-1014		
Element	Concentration (µg/L) (after 10-fold dilution)	Concentration (µg/L) (after 50-fold dilution)
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	Concentration (µg/L) (after 100-fold dilution)	Analyte	Concentration (µg/L) (after 100-fold dilution)
Hg	4.0	CN ⁻	99



Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020CAL-1
Lot Number: S2-MEB711244
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s): 20 µg/mL ea:
Silver, Aluminum,
Arsenic, Barium,
Beryllium, Calcium,
Cadmium, Cobalt,
Chromium, Copper,
Iron, Potassium,
Magnesium, Manganese,
Sodium, Nickel,
Lead, Antimony,
Selenium, Thallium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	20.01 ± 0.08 µg/mL	Antimony, Sb	20.01 ± 0.12 µg/mL
Arsenic, As	20.01 ± 0.18 µg/mL	Barium, Ba	20.01 ± 0.11 µg/mL
Beryllium, Be	20.01 ± 0.14 µg/mL	Cadmium, Cd	20.01 ± 0.11 µg/mL
Calcium, Ca	20.01 ± 0.10 µg/mL	Chromium, Cr	20.01 ± 0.16 µg/mL
Cobalt, Co	20.01 ± 0.11 µg/mL	Copper, Cu	20.01 ± 0.10 µg/mL
Iron, Fe	20.01 ± 0.09 µg/mL	Lead, Pb	20.01 ± 0.11 µg/mL
Magnesium, Mg	19.99 ± 0.10 µg/mL	Manganese, Mn	20.01 ± 0.10 µg/mL
Nickel, Ni	20.01 ± 0.11 µg/mL	Potassium, K	20.01 ± 0.10 µg/mL
Selenium, Se	20.02 ± 0.14 µg/mL	Silver, Ag	20.02 ± 0.09 µg/mL
Sodium, Na	20.01 ± 0.10 µg/mL	Thallium, Tl	20.01 ± 0.13 µg/mL
Vanadium, V	20.01 ± 0.11 µg/mL	Zinc, Zn	20.01 ± 0.11 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Fe	Calculated		See Sec. 4.2
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

HF Note: This standard should not be prepared or stored in glass.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 20, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 20, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





R-09/18/22 **(RTH)**

Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: **57056**
Lot Number: **072122**
Description: **Barium (Ba)**

Solvent: **20510011 Nitric Acid**

Lot #

Expiration Date: **072125**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **2000.02**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

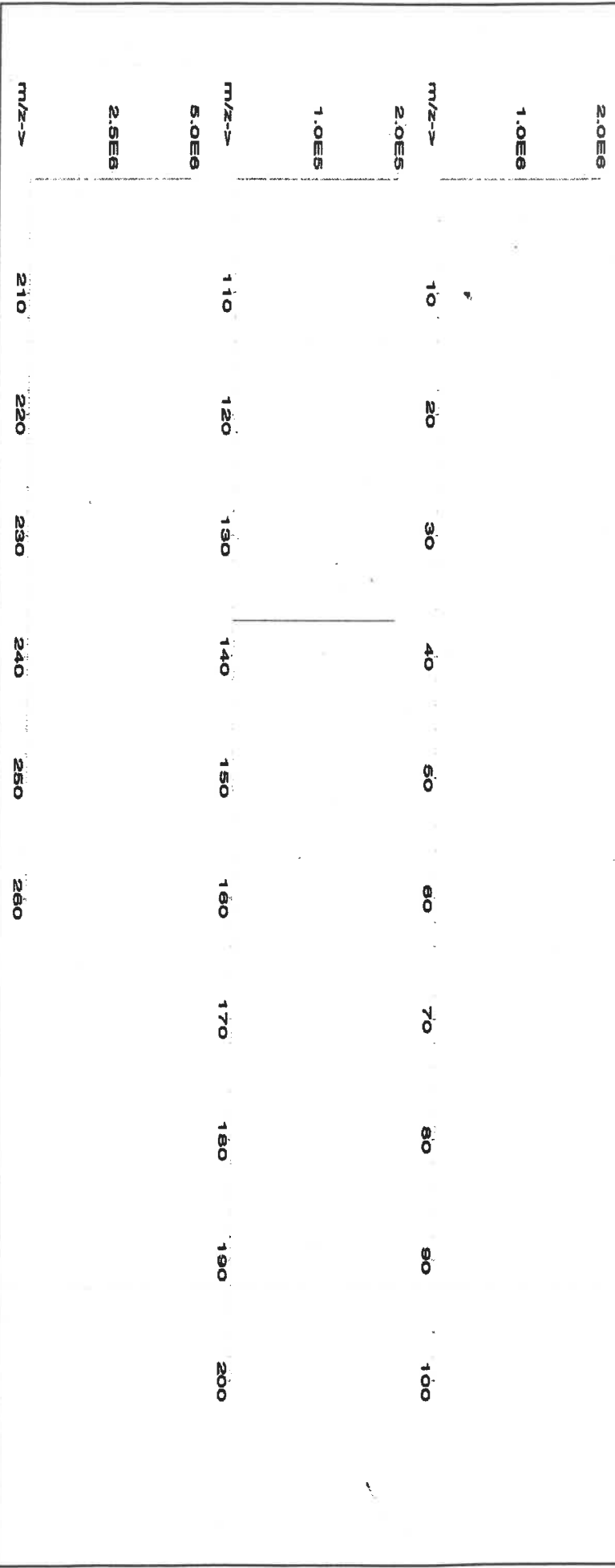
2% **40.0** **Nitric Acid**
(mL)

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentes</i>
	072122

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

1. Barium nitrate (Ba)	IN023	BA022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	1000.0	2.0	10022-31-8	0.5 mg/m3	original 355 mg/kg	3104a
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[1] Spectrum No. 1 [12.514 sec]:58156.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.02	Er	<0.2	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Cd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.2	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

Ben. L. R.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * 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).



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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.02	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58120
031523
Calcium (Ca)

Solvent: 21110221 Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

031526
Ambient (20 °C)
10000
6UTB
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Weight shown below was diluted to (mL): 3000.41

Giovanni Esposito

Formulated By: Giovanni Esposito **031523**

Pedro L. Rentas

Reviewed By: Pedro L. Rentas **031523**

SDS Information

(Solvent Safety Info. On Attached pg.)
NIST
SRM

Expanded
Uncertainty

Actual
Conc. (µg/mL)

Actual
Weight (g)

Target
Weight (g)

Assay
(%)

Purity
(%)

Nominal
Conc. (µg/mL)

Lot
Number

RM#

Actual
Conc. (µg/mL)

Actual
Weight (g)

Target
Weight (g)

Assay
(%)

OSHA PEL (TWA)
LD50

5 mg/m3

471-34-1

20.0

10001.4

75.2093

75.1990

39.9

0.10

99.999

10000

IN014

CAD072022A1

Calcium carbonate (Ca)

or-rat >2000mg/kg

3109a

[1] Spectrum No.1 [12.514 sec]:58120.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.2	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57182
061522
Lead (Pb)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

061525
Ambient (20 °C)
10000
6UTB

Weight shown below was diluted to (mL):

2000.02

5E-05 Balance Uncertainty

0.058 Flask Uncertainty

Lot #

Solvent: 20510011 Nitric Acid

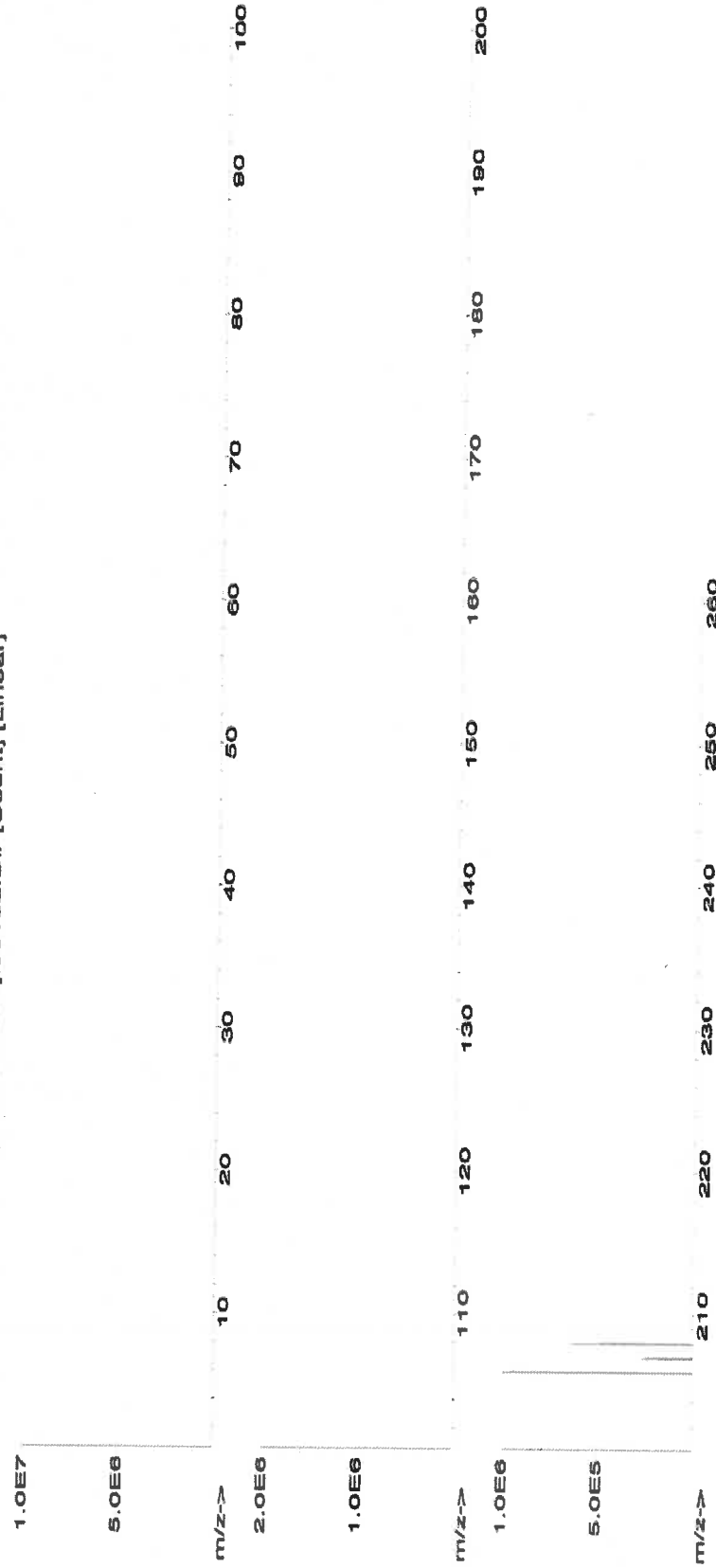
2% 40.0 Nitric Acid
(mL)

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito 061522
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas 061522

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

1. Lead(II) nitrate (Pb)	IN029	PBD12201641	10000	99.999	0.10	82.5	32.0006	32.0041	10001.1	20.0	10099-74-8	0.05 mg/m3	inhalation 88 mg/kg 3128
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[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS (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	<0.2	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

M5514, M5515
Lot #

R: 03/12/23

Part Number:

Solvent:

Lot Number:

Nitric Acid

Description:

Nitric Acid

Expiration Date:

7.0% 350.0 (mL) Nitric Acid

Recommended Storage:

Nominal Concentration (µg/mL):

NIST Test Number:

Weight shown below was diluted to (mL):

5000.1

0.12 Flask Uncertainty

Compound

Lot

Nominal Conc. (µg/mL)

Purity (%)

Assay (%)

Target Weight (g)

Actual Weight (g)

Actual Conc. (µg/mL)

Expanded Uncertainty +/- (µg/mL)

CAS#

OSHA PEL (TWA)

LD50

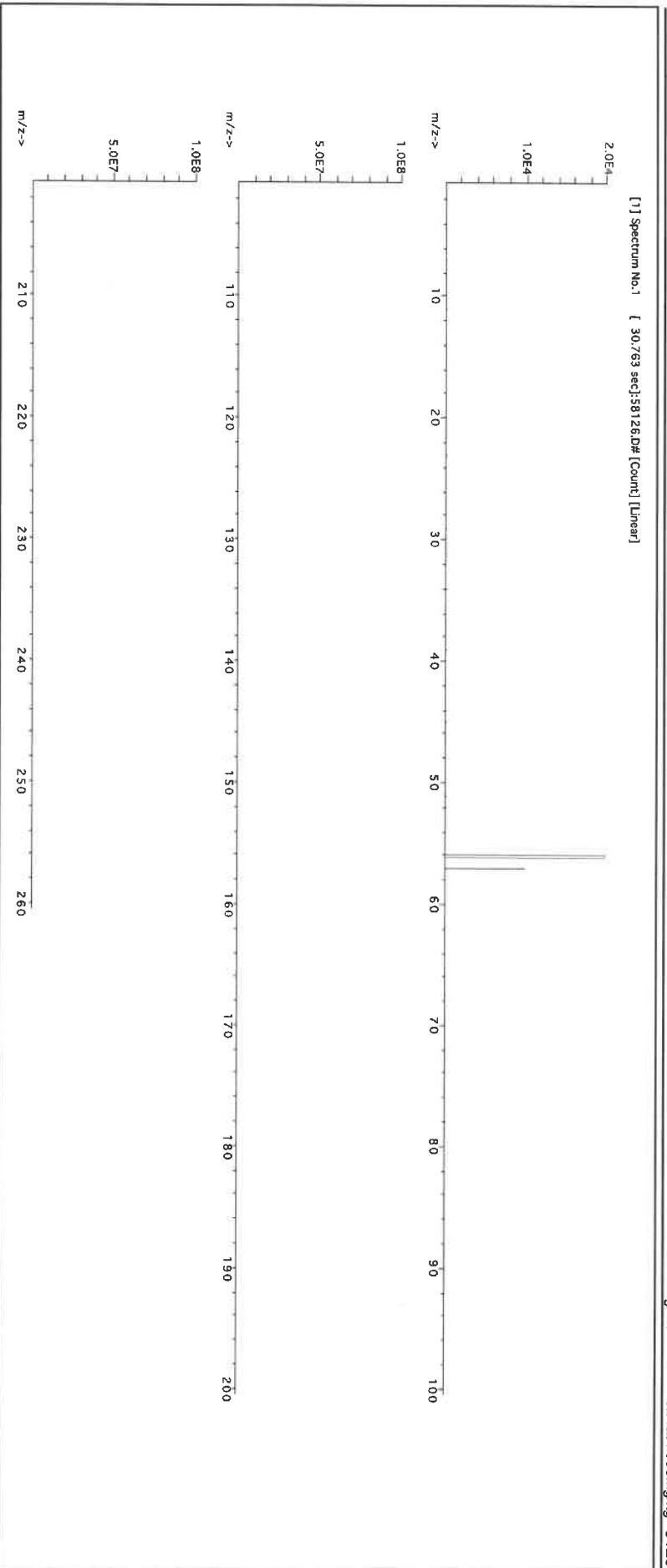
NIST SRM

SDS Information

(Solvent Safety Info. On Attached pg.)

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

1. Iron (Fe) IN346 2224912-500 10000 99.995 0.10 100.0 50.0034 50.0111 10001.5 20.0 7439-89-6 5 mg/m3 or-hal 7500mg/kg 3126a





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	La	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

Bar P. Jha

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: **58119**
Lot Number: **120822**
Description: **Potassium (K)**

Solvent: 20510011 Nitric Acid

Lot #

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 60.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 3000.4

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

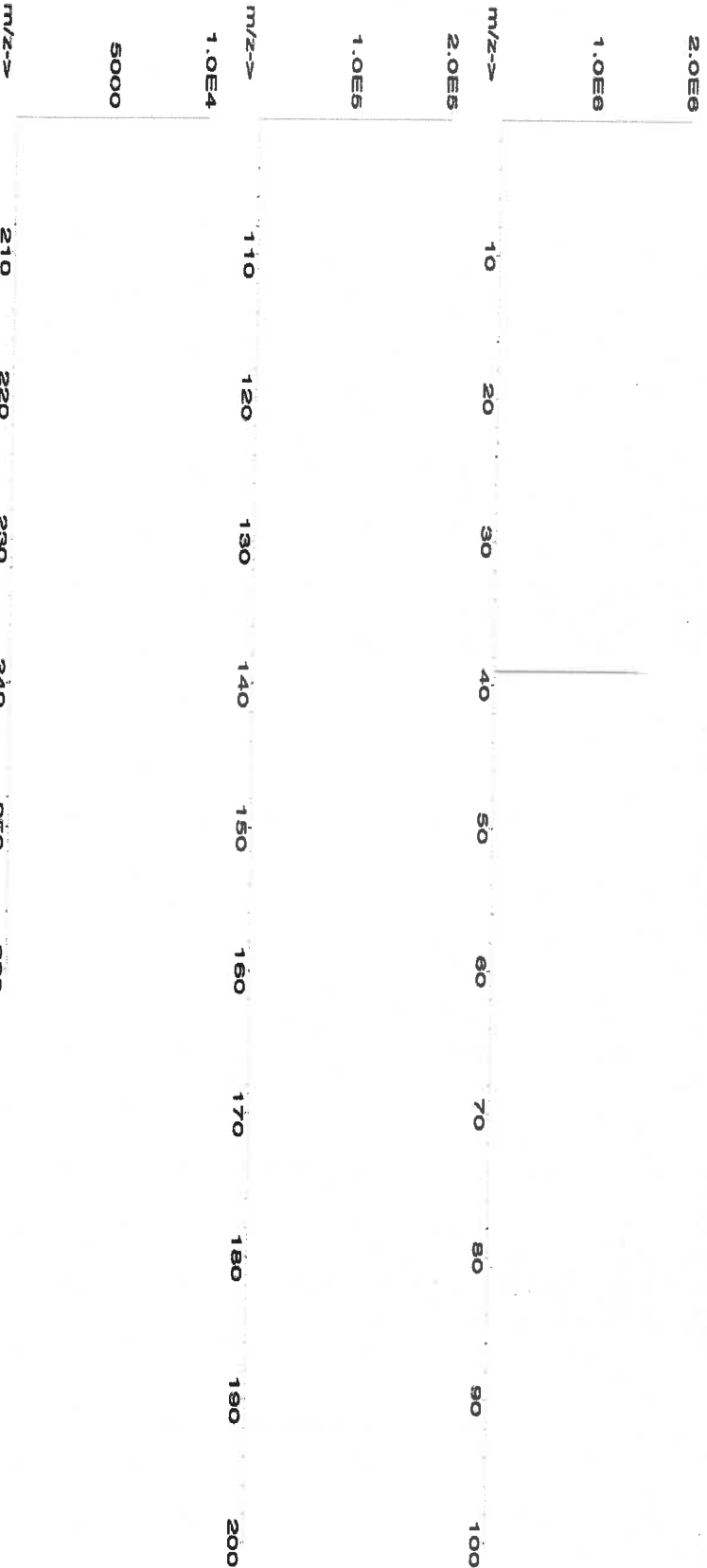
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	Pedro L. Rentas
	120822

Compound

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

1. Potassium nitrate (K) IN034 KD022021A1 10000 99.989 0.10 37.6 79.7990 79.8075 10001.1 20.0 7757-79-1 5 mg/m3 crtat 3015 mg/kg 3141a

[1] Spectrum No.1 [35.763 sec]:58119.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	Pb	<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			Nd	<0.02	K		Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot # 21110221
Solvent: Nitric Acid

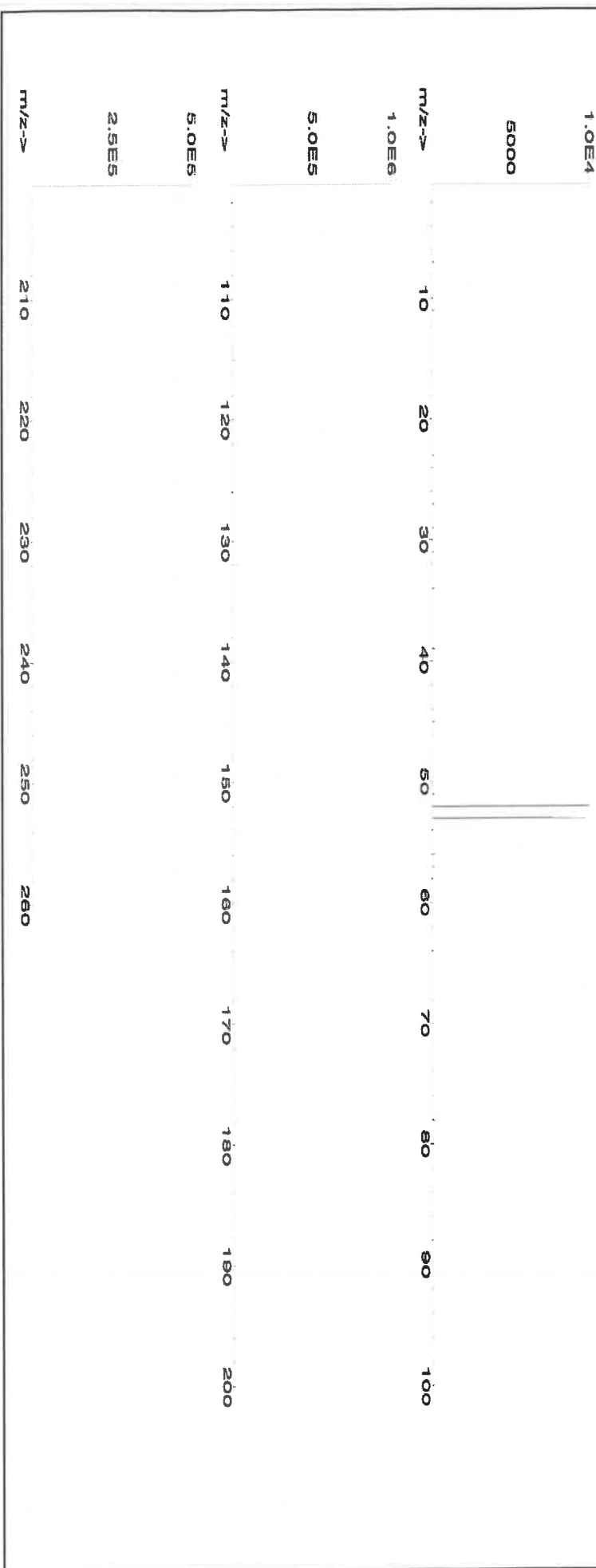
Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Chromium(III) nitrate nonahydrate (Cr) 58124 071122 0.1000 200.0 0.084 1000 10000.1 1000.0 2.2 7789-02-8 0.5 mg(Cr)/m3 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
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- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M5698 R: 10/23/23



CERTIFIED WEIGHT REPORT:

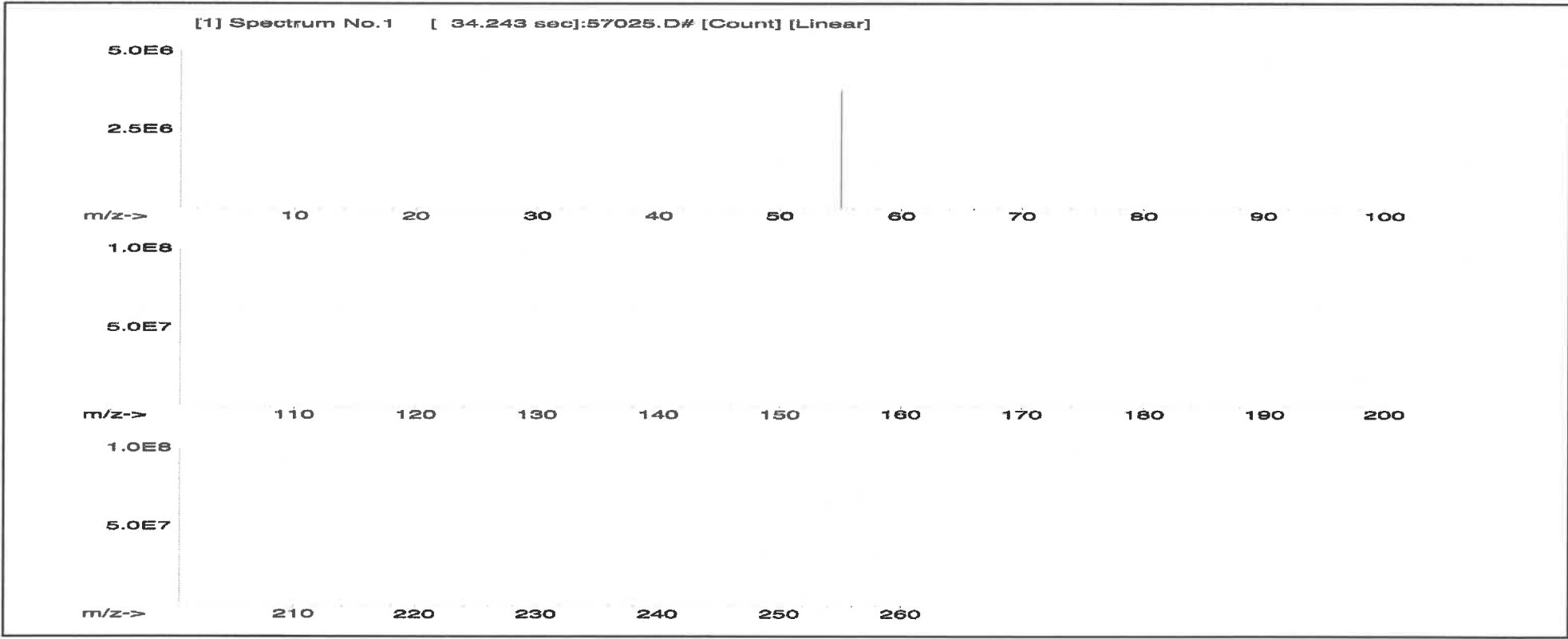
Part Number: 58025
Lot Number: 102623
Description: Manganese (Mn)

Lot # 24002546
Solvent: Nitric Acid
2.0% 60.0 (mL) Nitric Acid

Expiration Date: 102626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By: Benson Chan 102623
Reviewed By: Pedro L. Rentas 102623

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	SDS Information			NIST
									Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)			SRM
										CAS#	OSHA PEL (TWA)	LD50	
Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	1000.0	2.1	20694-39-7	5 mg/m3	ori-rat >300mg/kg	3132





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 balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **58029**
Lot Number: **071723**
Description: **Copper (Cu)**

Lot #: **2110221**
Solvent: **Nitric Acid**

2.0%

40.0 (mL)
Nitric Acid

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Ruelas	071723

Expiration Date: **071726**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**

NIST Test Number: **6L7B**

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

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Copper(II) nitrate trihydrate (Cu) 58129 022723 0.1000 200.0 0.084 1000 10000.5 1000.0 2.2 10031-43-3 1 mg/m3 or-rat 794 mg/kg 3114

[1] Spectrum No.1 [33.422 sec]:58029.D# [Count] [Linear]

1.0E6	m/z-->	10	20	30	40	50	60	70	80	90	100
5.0E5	m/z-->	110	120	130	140	150	160	170	180	190	200
2.5E7	m/z-->	210	220	230	240	250	260				



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	La	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	Pb	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02			Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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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).



M5768 M5769
Certified Reference Material CRM
R: 1/13/24



CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826
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

2% 40.0 (mL) Nitric Acid

M5768 M5769

R: 1/13/24

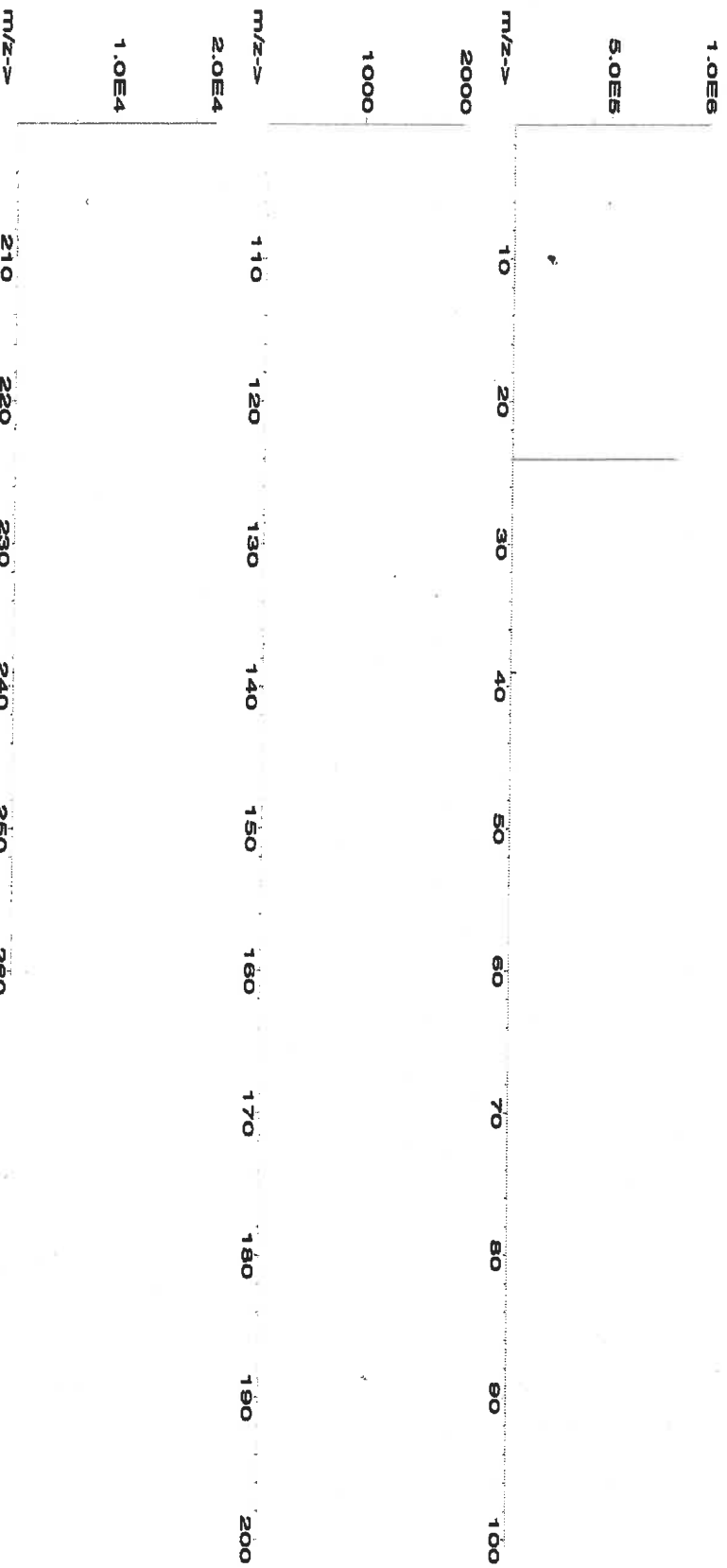
Formulated By: <i>Lawrence Barry</i>		091823
Reviewed By: <i>Pedro L. Rentas</i>		091823

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	SRM

1. Magnesium nitrate hexahydrate (Mg) IN030 M500222A1 10000 99.999 0.10 8.51 234.9118 234.9126 10000.0 20.0 13446-18-9 NA or-rat 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.923 sec]:58112.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



M5768 M5769
Certified Reference Material CRM
R: 1/13/24



CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826
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

2% 40.0 (mL) Nitric Acid

M5768 M5769

R: 1/13/24

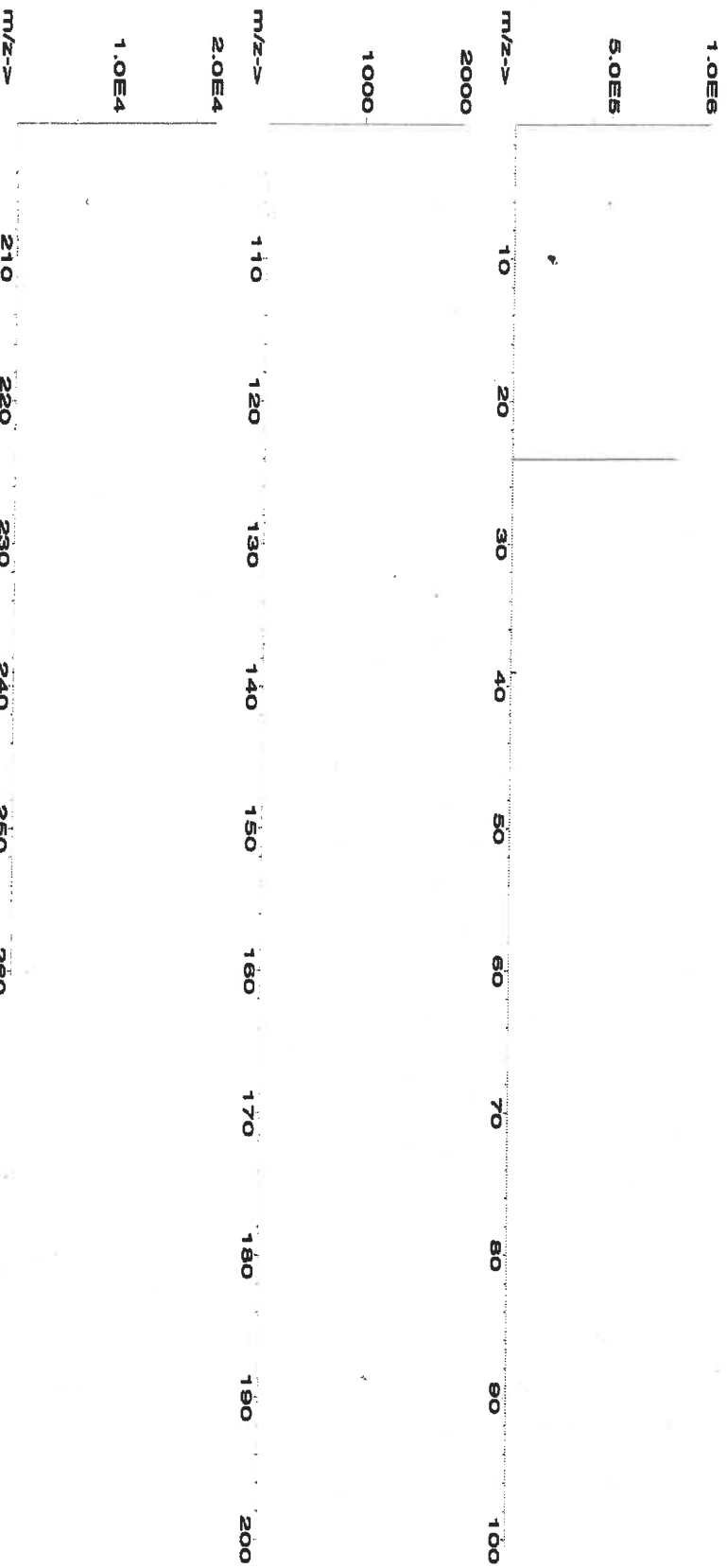
Formulated By: <i>Lawrence Barry</i>		091823
Reviewed By: <i>Pedro L. Rentas</i>		091823

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	SRM

1. Magnesium nitrate hexahydrate (Mg) IN030 M500222A1 10000 99.999 0.10 8.51 234.9118 234.9126 10000.0 20.0 13446-18-9 NA or-rat 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.923 sec]:58112.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57004**
Lot Number: **102523**
Description: **Beryllium (Be)**

Lot # **24002546**
Solvent: **Nitric Acid**

Expiration Date:

102526

2.0%

40.0 (mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty

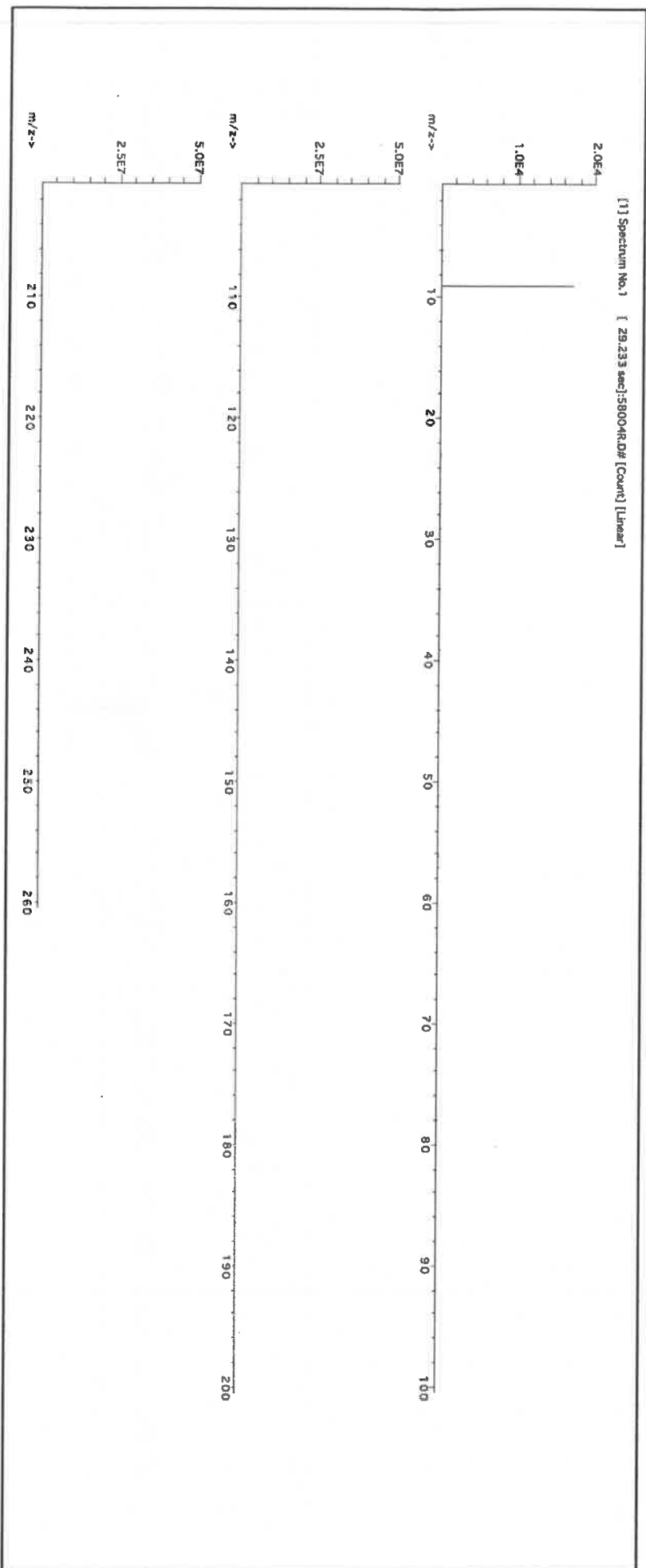
0.058 Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

SDS Information

Compound	Part Number	Lot	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	-----	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	------	----------------	------	----------

1. Beryllium nitrate (Be) 58104 091423 0.1000 200.0 0.084 1000 10001.5 1000.0 2.2 13597-99-4 0.2µg/m3 Inj/mg-rat 3.16mg/kg NA





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.02	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.02	Sc	<0.02	Ta	<0.02	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.

* All standard containers are meticulously cleaned prior to use.

* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).

* Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.

* All Standards should be stored with caps tight and under appropriate laboratory conditions.

* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)
Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

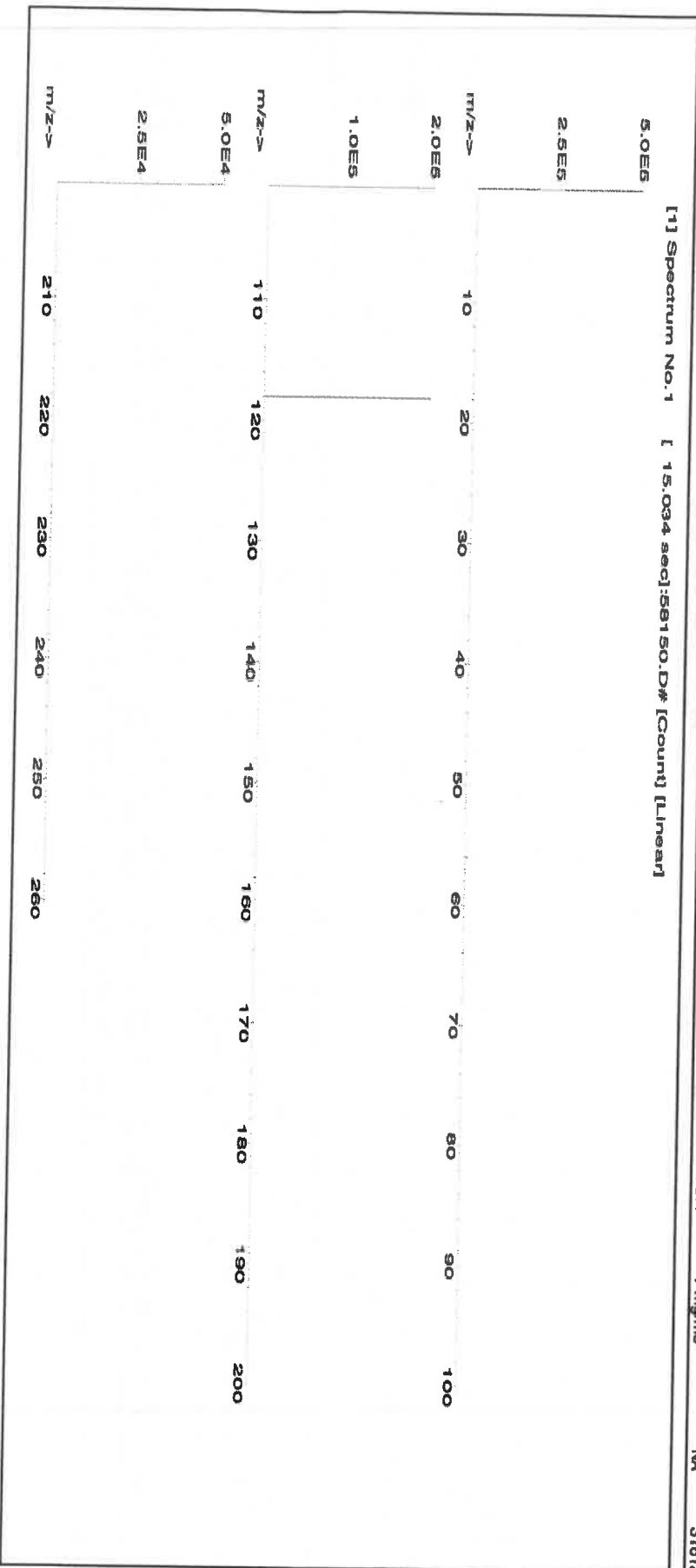
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
	071123
Reviewed By:	Pedro L. Rentas
	071123

SDS Information														NIST				
Compound		Lot		Nominal		Purity		Uncertainty		Assay		Target			Actual		Expanded	
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(%)	(Solvent Safety Info. On Attached pg.)

1. Ammonium hexafluoroantimonate(V) (Sn) IN010 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [15.034 sec]:56150.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Bc	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ta	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

Mr. P. J. ...

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



R: 02/09/24 115800 (54)

CERTIFIED WEIGHT REPORT:

Part Number: 57027
Lot Number: 091923
Description: Cobalt (Co)

Expiration Date: 091926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

2.0% Nitric Acid
40.0 (mL)

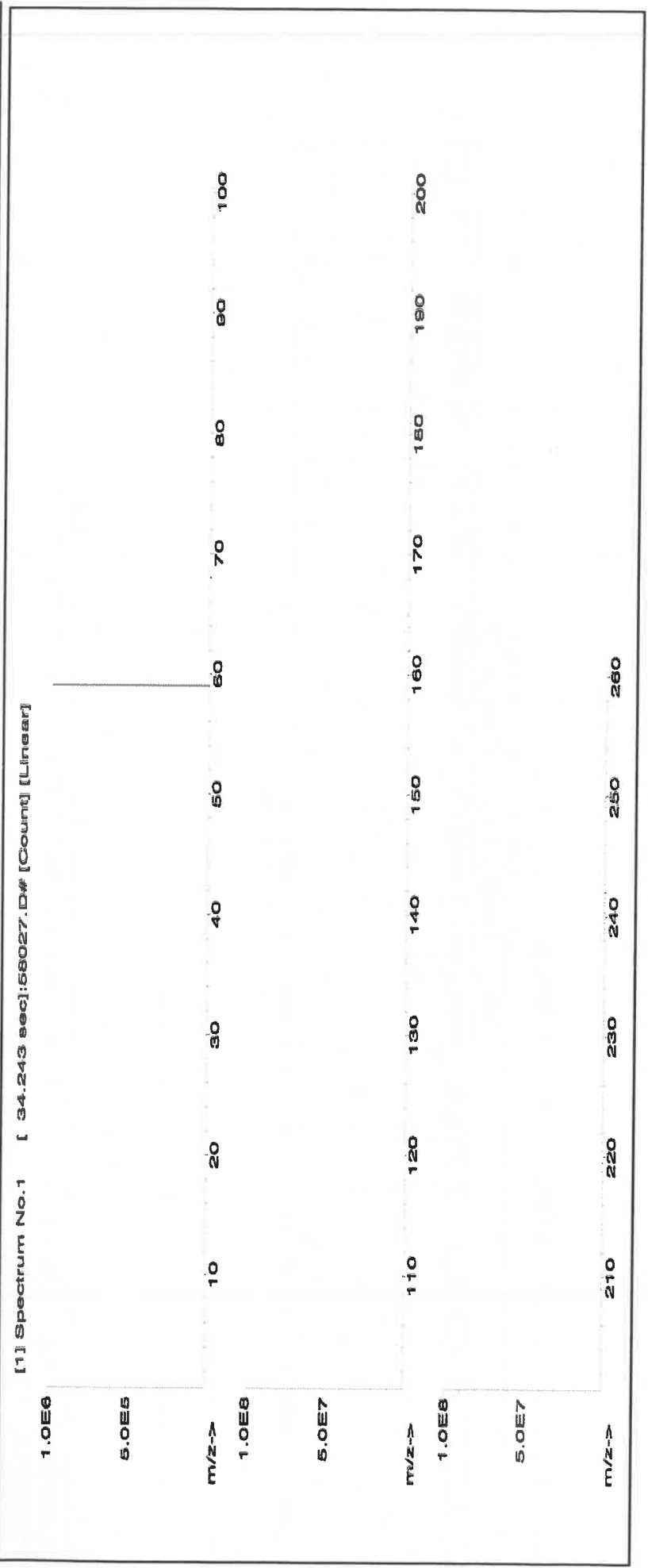
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

Expanded Uncertainty +/- (µg/mL)
Final Conc. (µg/mL)
Initial Conc. (µg/mL)
Nominal Conc. (µg/mL)
Pipette (mL)
Initial Vol. (mL)
Dilution Factor
Part Number
Lot Number

(Solvent Safety Info. On Attached pg.)
NIST SRM
CAS# OSHA PEL (TWA) LD50

1. Cobalt(II) nitrate hexahydrate (Co) 58127 050923 0.1000 200.0 0.084 1000 10000.0 1000.0 2.2 10026-22-9 0.02 mg/m3 orl-rat 691 mg/kg 3113





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.2	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57033
111323
Arsenic (As)

Lot #
Solvent:

24002546
Nitric Acid

2.0%

80.0

Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

111326
Ambient (20 °C)
1000

NIST Test Number:
Volume shown below was diluted to (mL):

6UTB
4000.0

5E-05
Balance Uncertainty
0.06
Flask Uncertainty

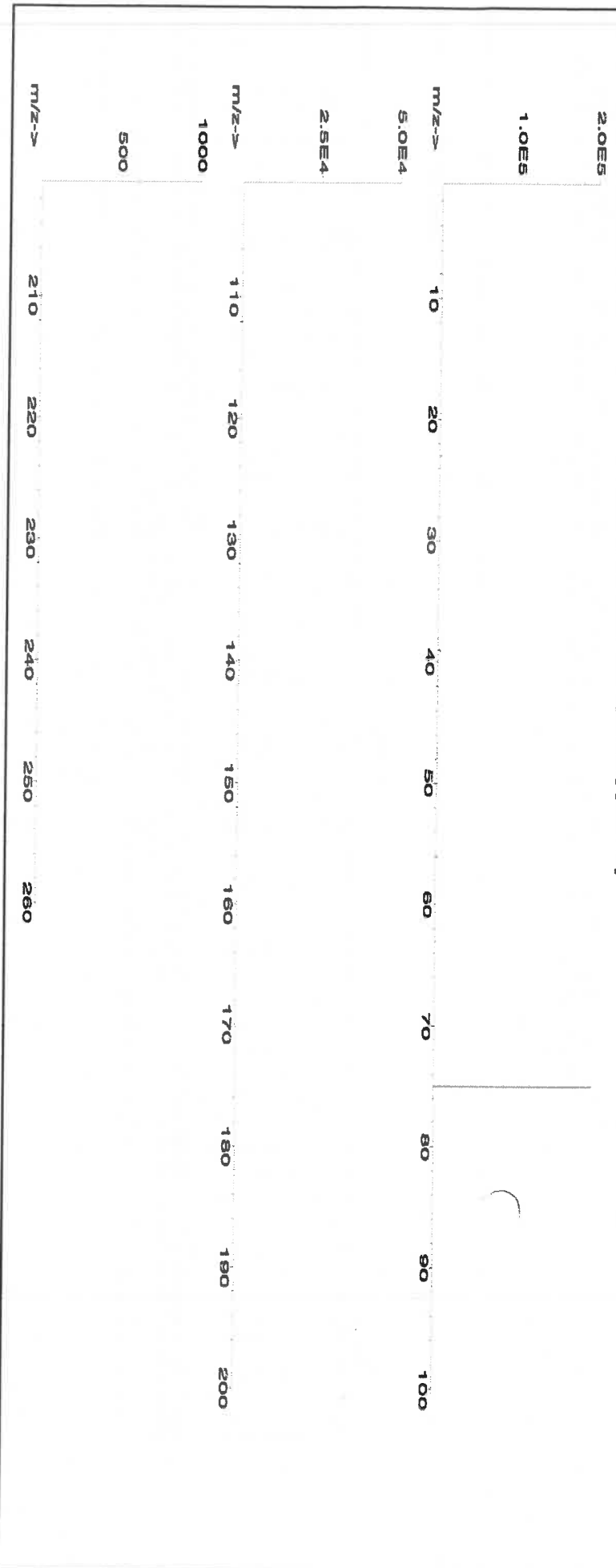
Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rendas	111323

Compound

Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	1000.0	2.0	7440-38-2	0.5 mg/m3	or-rat 500 mg/kg	3103a
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[1] Spectrum No.1 [34.433 sec]:57033.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tl	<0.02	Yb	<0.02
Bc	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sa	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	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.
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- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Solvent: 21110221 Nitric Acid

Lot #

R102109124 M5815

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 40.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty Flask Uncertainty

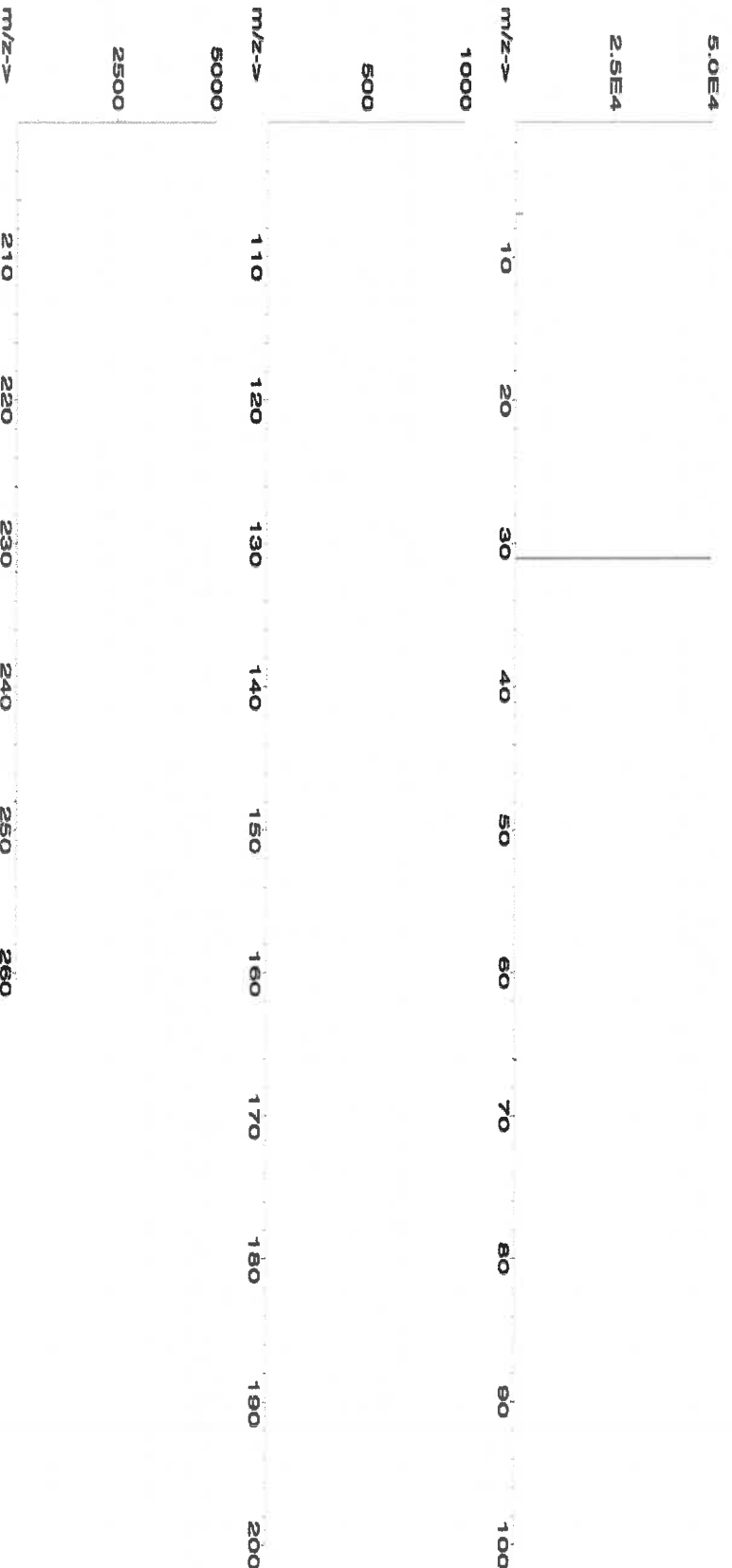
Formulated By:	Lawrence Barry
	041723
Reviewed By:	Pedro L. Rentas
	041723

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium dihydrogen phosphate (P) IN008 P082019A1 10000 99.999 0.10 27.5 72.7287 72.7289 10000.0 20.0 7722-76-1 5 mg/m3 or-hal >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57016
122923
Sulfur (S)

Lot #

ASTM Type 1 Water

Formulated By:	Benson Chan
122923	
Reviewed By:	Pedro L. Rentas
122923	

Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6L7B

Weight shown below was diluted to (mL): 4000.0
SE-05 Balance Uncertainty
0.06 Flask Uncertainty

Compound

RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium sulfate (S) IN117 SLBR725V 1000 99.9 0.10 24.3 16.4979 16.4980 1000.0 2.0 7783-20-2 NA off-rel 4250mg/kg 3181

[1] Spectrum No. 1 [33.603 sec]:57016.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	S	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57116**
Lot Number: **071123**
Description: **Sulfur (S)**

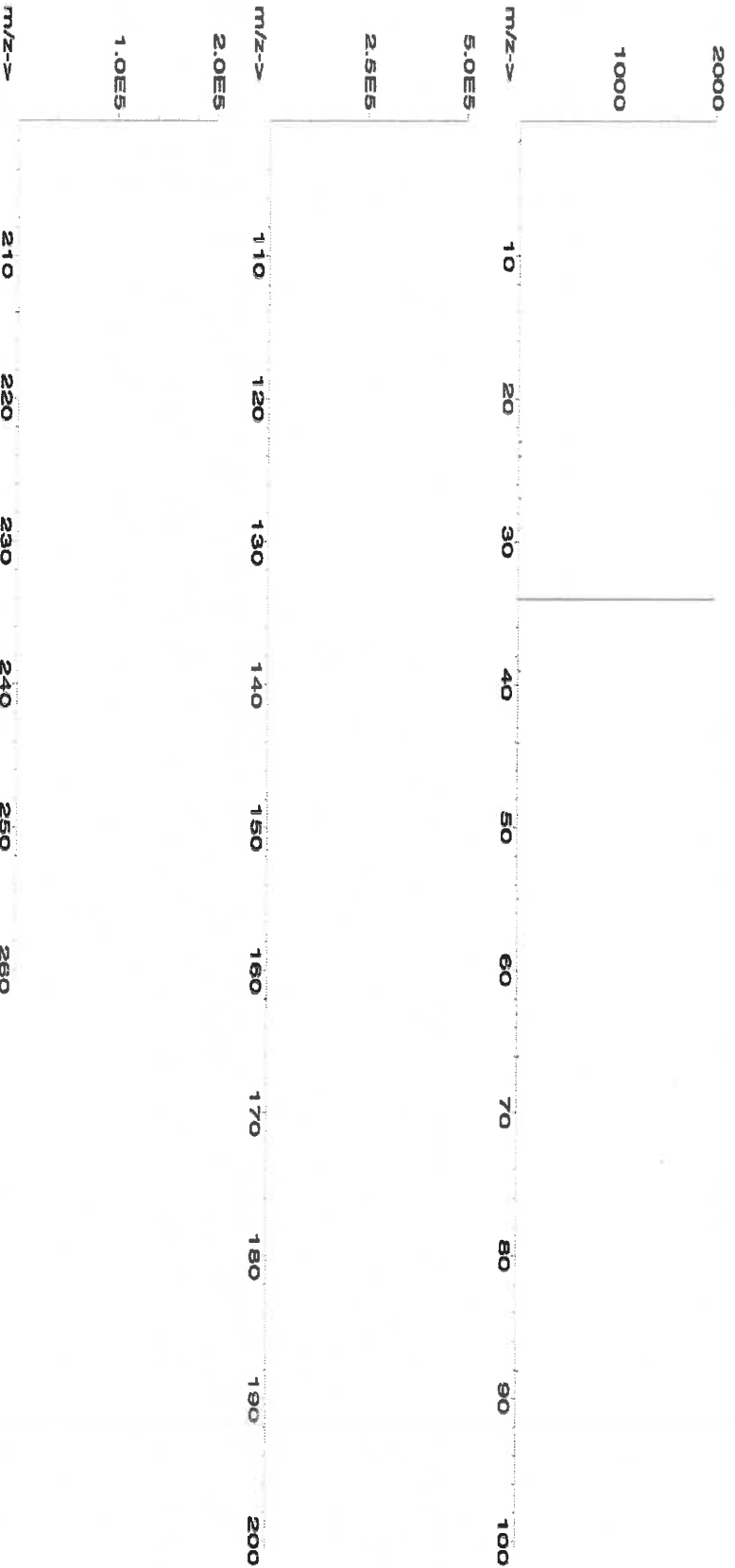
Lot #
Solvent: 071123
ASTM Type 1 Water

Formulated By:	Lawrence Barry
071123	
Reviewed By:	Pedro L. Rentas
071123	

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

SDS Information									
Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
Ammonium sulfate (S)	IN117 SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4692	10000.1	20.0
						7763-20-2	NA		oral 4250mg/kg 3181

[1] Spectrum No. 1 [24.004 sec]:58116.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	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

Physical Characterization:

(T)= Target analyte

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57014**
Lot Number: **122023**
Description: **Silicon (Si)**

Solvent: **24002546 Nitric Acid**

Lot #

122023

Expiration Date: **122026**

2% 40.0 (mL) Nitric Acid

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): **1999.48 0.058 Flask Uncertainty**

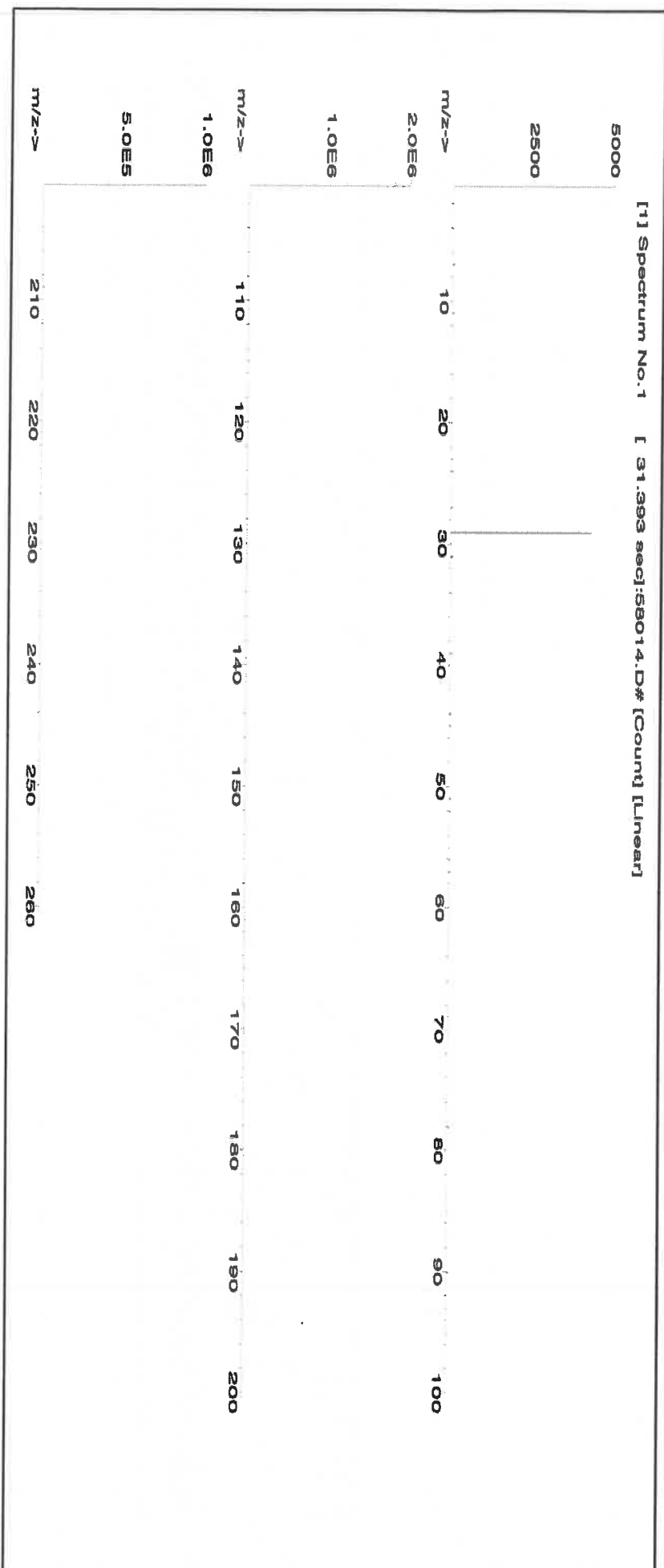
<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	122023

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	------------	-----------------------	------------	-----------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. Ammonium hexafluorosilicate (Si) IN009 SID08022A1 1000 99.999 0.10 14.4 13.8854 13.8855 1000.0 2.0 18919-19-0 2.5 mg/m3 or-mus 70 mg/kg NA

[1] Spectrum No. 1 [31.393 sec; 158014.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Ru	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Solvent: 24002546 Nitric Acid

2% 60.0 (mL) Nitric Acid

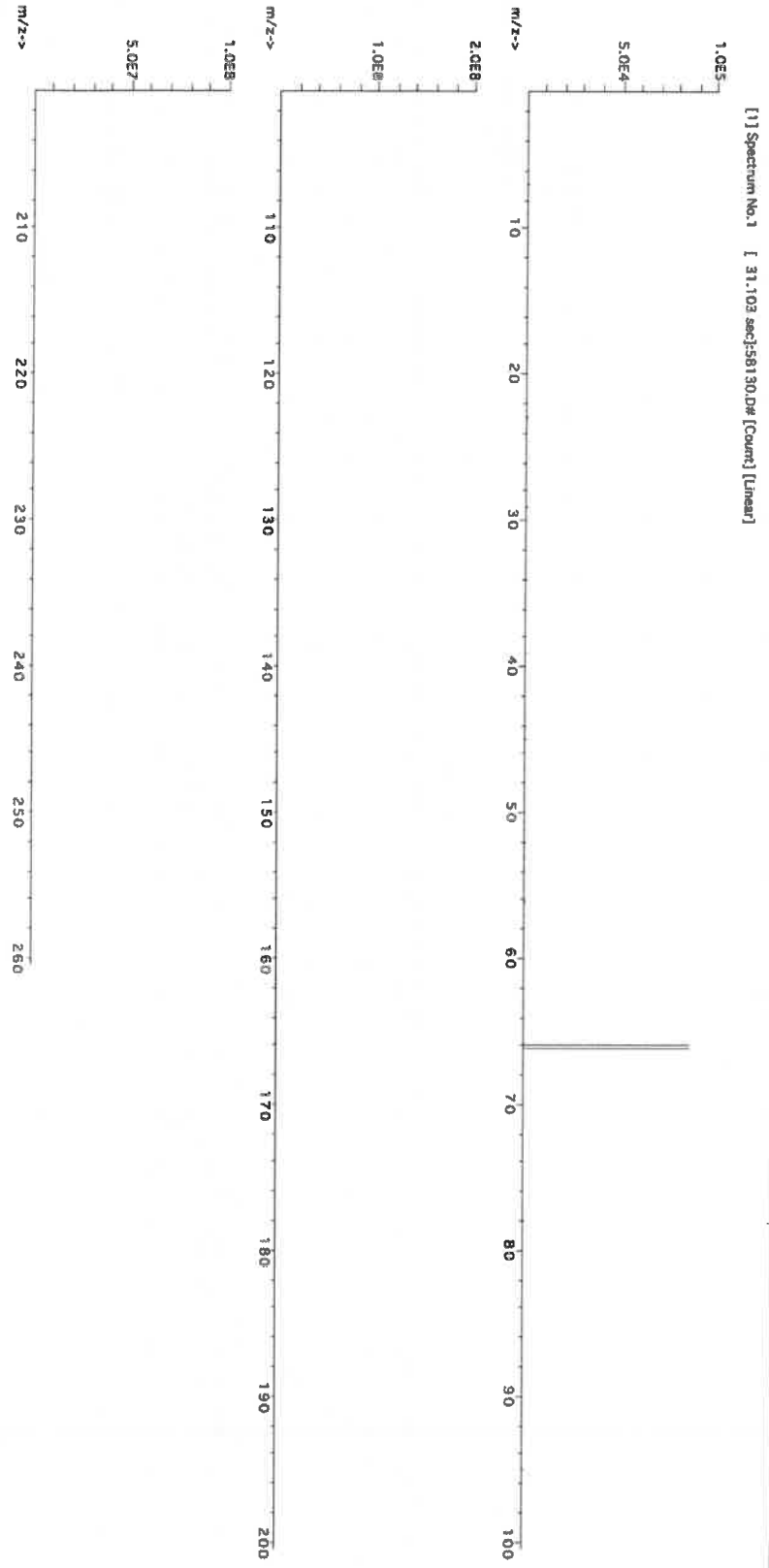
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Balance Uncertainty Flask Uncertainty

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Reintas
111623	

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LDSO	NIST SRM
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1. Zinc nitrate hexahydrate (Zn) IN016 ZNE03021A1 1000 99.999 0.10 24.3 12.3475 12.3502 1000.2 2.0 10196-16-6 1 mg/m³ or-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	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: **57015**
Lot Number: **091123**
Description: **Phosphorous (P)**

Solvent: **24002546 Nitric Acid**

Lot #

R: 02109124 M5820

Expiration Date: **091126**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6LJB**

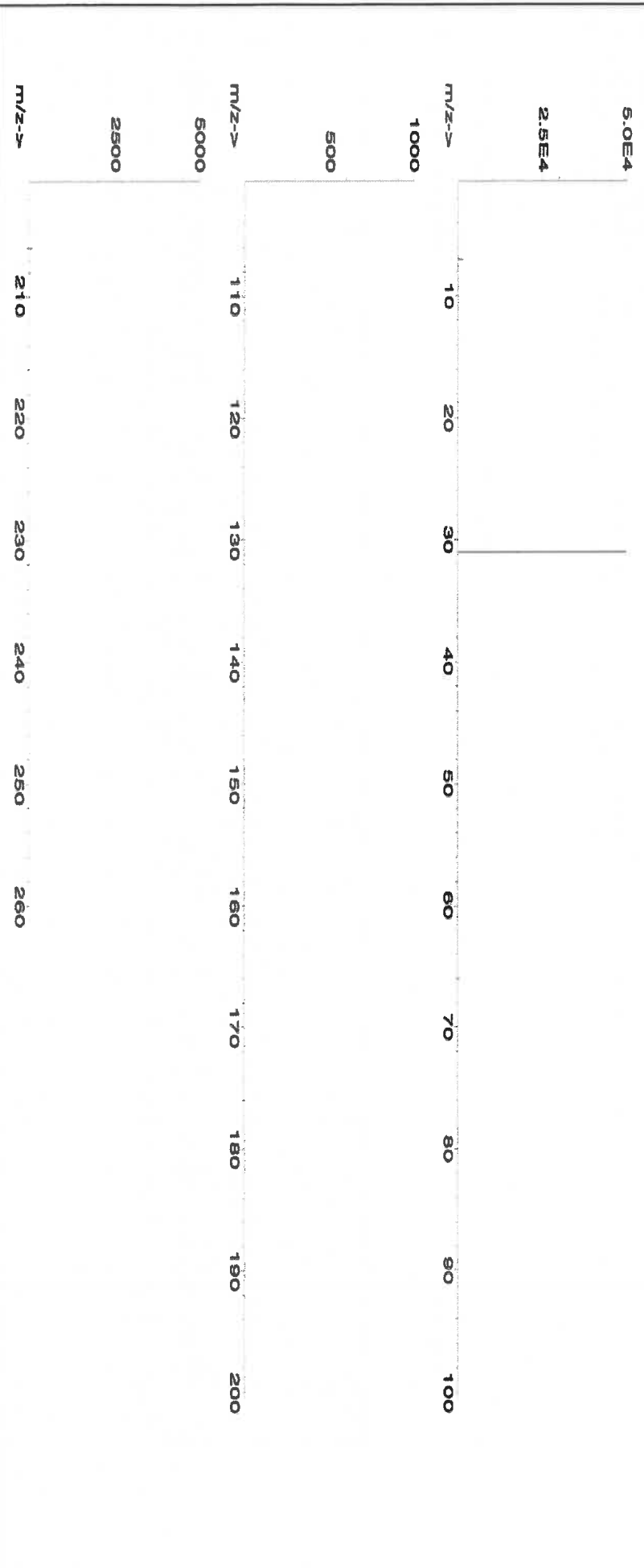
2% **40.0 (mL)** **Nitric Acid**

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

Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas
091123	

SDS Information									
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)
1. 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
									rl-rat >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sa	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM
MS961 R-611/24



CERTIFIED WEIGHT REPORT:

Part Number: 57028

Lot Number: 041124

Description: Nickel (NI)

Solvent: 24002546 Nitric Acid

Lot #

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

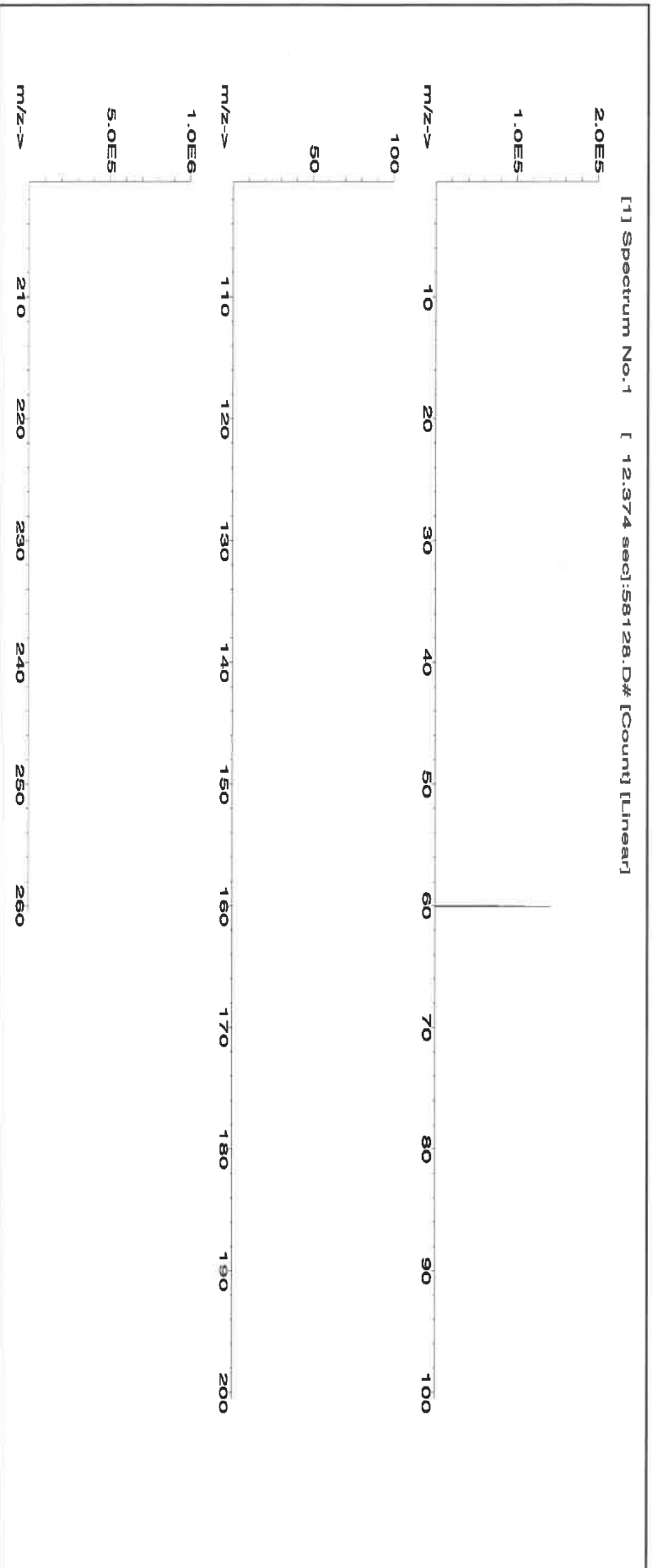
Weight shown below was diluted to (mL): 249.85 0.002 Flask Uncertainty

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

SDS Information

Compound	Lot	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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	rat 1620 mg/kg	3136

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 rat 1620 mg/kg 3136





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	Ba	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Bc	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

MS962 **R: 06/14/24**

Lot # **24002546** Solvent: **Nitric Acid**

Part Number: **57034**
Lot Number: **060624**
Description: **Selenium (Se)**

2.0% 40.0 (mL) Nitric Acid

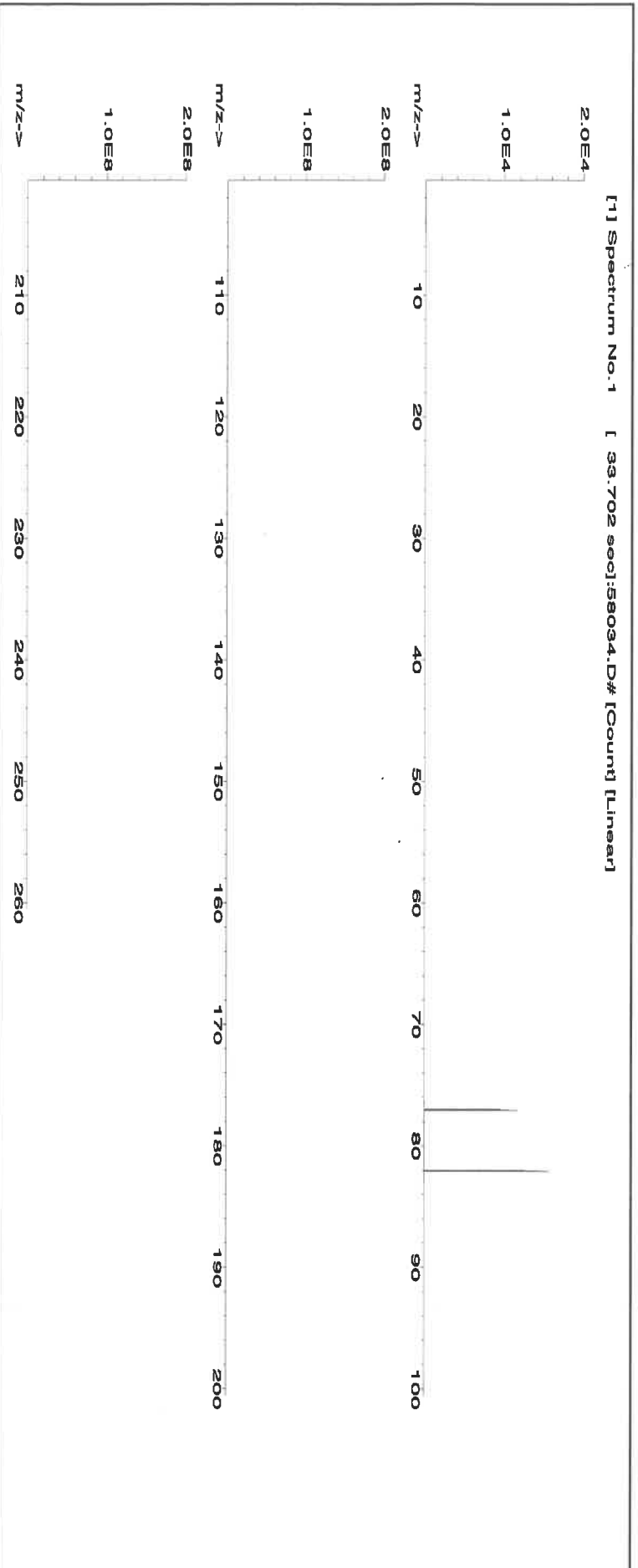
Expiration Date: **060627**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **2000.07**
SE-05 Balance Uncertainty **0.100** Flask Uncertainty

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rantas	060624

SDS Information									
Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	1000.0	2.2

(Solvent Safety Info. On Attached pg.) CAS# OSHA PEL (TWA) LD50 SRM

[1] Spectrum No. 1 [33.702 sec]:58034.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.02	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution
Catalog Number: CGMO1
Lot Number: T2-MO720876
Matrix: H2O
tr. NH4OH
Value / Analyte(s): 1 000 µg/mL ea:
Molybdenum
Starting Material: Ammonium Molybdate
Starting Material Lot#: 2361
Starting Material Purity: 99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL
Density: 1.000 g/mL (measured at 20 ± 4 °C)
Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a) (u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	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,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.569.6799; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate of Analysis



Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

R: 2/22/24

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).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO₃

Value / Analyte(s): tr. HF

Starting Material: 1 000 µg/mL ea.

Starting Material: Titanium

Starting Material Lot#: T1 Metal

Starting Material Purity: 2094

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Method #1

1002 ± 4 µg/mL

ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods
Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = (X_p / U_{CRM})$

X_p = mean of Assay Method A with

U_{CRM} = the standard uncertainty of characterization Method A

k = coverage factor = 2

$U_{CRM} = k \sqrt{U_{CRM}^2 + U_{CRM}^2 + U_{CRM}^2 + U_{CRM}^2}$

U_{CRM} = the mean of Assay Method A with

U_{CRM} = the standard uncertainty of characterization Method A

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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 UHPA-filtered Clean Room. An UHPA-filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M Ag	<	0.000536	M Eu	<	0.000268	O Na	<	0.032670	M Se	<	0.001204	O Zn	<	0.003267
M Al	<	0.000872	O Fe	<	0.003225	O Nb	<	0.043560	O Si	<	0.004735	O Zr	<	0.043560
M As	<	0.008586	M Ga	<	0.000268	M Nd	<	0.000268	M Sm	<	0.000268			
M Au	<	0.004577	M Gd	<	0.000268	O Ni	<	0.010890	M Sn	<	0.000986			
O B	<	0.008929	M Ge	<	0.002146	M Os	<	0.000269	O Sr	<	0.000986			
M Ba	<	0.002683	M Hf	<	0.002161	O P	<	0.054450	M Ta	<	0.010560			
M Be	<	0.005366	M Hg	<	0.003231	M Pb	<	0.001073	M Tb	<	0.000268			
M Bi	<	0.001609	M Ho	<	0.000268	M Pd	<	0.000268	M Th	<	0.001341			
O Ca	<	0.000676	M In	<	0.002683	M Pr	<	0.000268	M Tl	<	0.053663			
M Cd	<	0.000268	M Ir	<	0.000269	M Pt	<	0.000536	S Tl	<				
M Co	<	0.000268	M K	<	0.001172	M Rb	<	0.000268	M Ti	<	0.000268			
M Cr	<	0.000752	O Li	<	0.000268	M Re	<	0.000268	M Tm	<	0.000268			
M Cs	<	0.000268	M Lu	<	0.000268	M Rh	<	0.000268	M U	<	0.000268			
O Cu	<	0.010890	O Mg	<	0.005445	I S	<	0.006976	M Y	<	0.002146			
M Dy	<	0.000268	O Mn	<	0.003267	M Sb	<	0.004900	M Yb	<	0.000536			
M Er	<	0.000268	M Mo	<	0.000774	O Sc	<							

6.0 INTENDED USE

M - Checked by ICP-MS
O - Checked by ICP-OES
I - Spectral Interference
n - Not Checked For
s - Solution Standard Element

- 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 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); K₂SiO₇ - no KF if silica not present); Organic Matrices (Dry ash at 450EC in P10 and dissolve by heating with 1:1:1 H₂O / HF / H₂SO₄ or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystaline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	14 ppt
ICP-MS 48 amu	N/A	
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL	1
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL	1

HF Note: This standard should not be prepared or stored in glass.

W, Mo, Co
Nb, Ta, Cr, U
Ce, Ar, Ni
Ru
(where X = Zr, Mo,
14N17N2, 36Ar12C,
48Ca, 196X=2
14N16O18O,
32S16O, 32S14N,
N/A

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: 800.868.6786; 540.565.3030; Fax: 540.565.3030; Email: info@inorganicventures.com

11.0

CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date:

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0

NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozlikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Paul Gaines

80978



MS981

R: 6/11/24



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57092
060724
Uranium (U)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

060727
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.07

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Lot # Solvent:
24002546 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

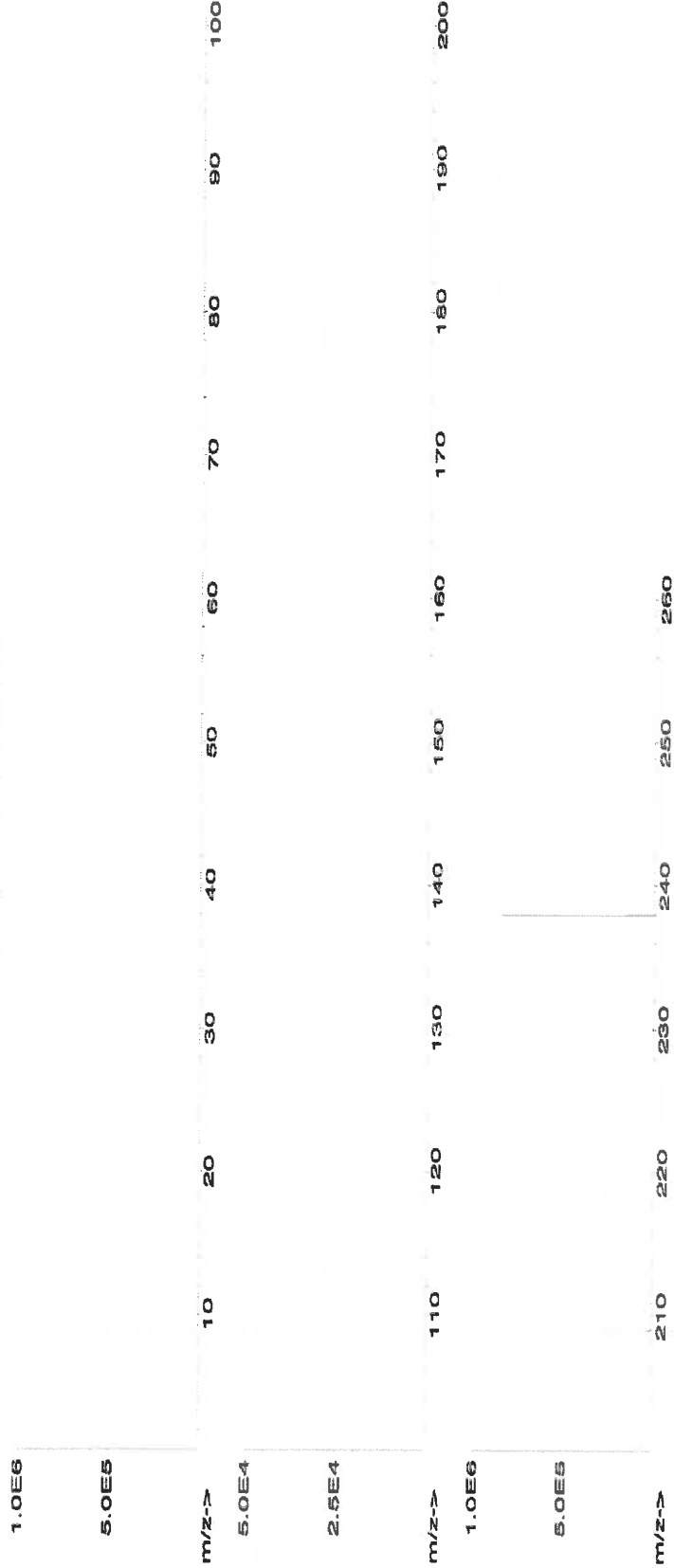
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Uranyl nitrate hexahydrate (U) 58192 041524 0.1000 200.0 0.084 1000 10001.5 1000.0 2.2 13620-83-7 0.05 mg/m3 orl-rat 1040 mg/kg 3164

[1] Spectrum No.1 [23.254 sec]:57092.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.2	Fe	<0.02	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.02	Sc	<0.2	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

7236 673 3.67



Certified Reference Material CRM



45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57038
031524
Strontium (Sr)

Solvent: 24002546 Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

031527
Ambient (20 °C)
1000
6UTB
5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Weight shown below was diluted to (mL): 2000.07

Lot #

2% 40.0 Nitric Acid
(mL)

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

SDS Information

Expanded

Uncertainty

(Solvent Safety Info. On Attached pg.)

+/- (µg/mL)

LD50

CAS#

OSHA PEL (TWA)

Actual

Conc. (µg/mL)

Actual

Weight (g)

Target

Weight (g)

Assay

Purity (%)

Purity (%)

Nominal

Conc. (µg/mL)

Lot

Number

RM#

IN017

SR2022018A1

1000

89.997

0.10

41.2

4.85470

4.85502

1000.1

2.0

10042-76-9

NA

orl-rat >2000mg/kg

3153a

1. Strontium nitrate (Sr)

[1] Spectrum No.1 [14.495 sec]:58136.D# [Count] [Linear]

5.0E6

2.5E6

m/z-->

1.0E6

5.0E5

m/z-->

5.0E6

2.5E6

m/z-->



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

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	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	Tl	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

2024 JUN 7 10:01 AM



145983

R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57040
071423
Zirconium (Zr)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

071426
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # Solvent:
21110221 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas

Expanded
Uncertainty
+/- (µg/mL)

Final
Conc. (µg/mL)

Nominal
Conc. (µg/mL)

Initial
Vol. (mL)

Dilution
Factor

Part
Number

Lot
Number

Compound

1. Zirconyl chloride octahydrate (Zr)

NIST
SRM

LD50

CAS# OSHA PEL (TWA)

13520-92-8

2.2

1000.0

10000.3

1000

0.084

200.0

0.1000

58140

070621

NA

NA

NA

[1] Spectrum No.1 [41.153 sec]:57040.D# [Count] [Linear]

1.OE6

5.OE5

m/z-->

1.OE8

5.OE7

m/z-->

1.OE8

5.OE7

m/z-->



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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.2	Fe	<0.02	Hg	<0.2	P	<0.2	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.02	Sc	<0.2	Ta	<0.02	Ti	<0.02	Zr	<0.02
																			T

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

[Signature]

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/2024
M5999

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: CLPP-SPK-1
Lot Number: T2-MEB721963
Matrix: 7% (v/v) HNO₃
Value / Analyte(s):
2 000 µg/mL ea:
Aluminum, Barium,
1 000 µg/mL ea:
Iron,
500 µg/mL ea:
Manganese, Nickel,
Vanadium, Zinc,
Cobalt,
250 µg/mL ea:
Copper,
200 µg/mL ea:
Chromium,
50 µg/mL ea:
Beryllium, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Chromium, Cr	200.0 ± 1.1 µg/mL
Cobalt, Co	500.0 ± 2.4 µg/mL	Copper, Cu	250.0 ± 1.0 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{tts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{tts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{tts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{tts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 27, 2027

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certified Reference Material CRM
R: 01/03/24 M6033



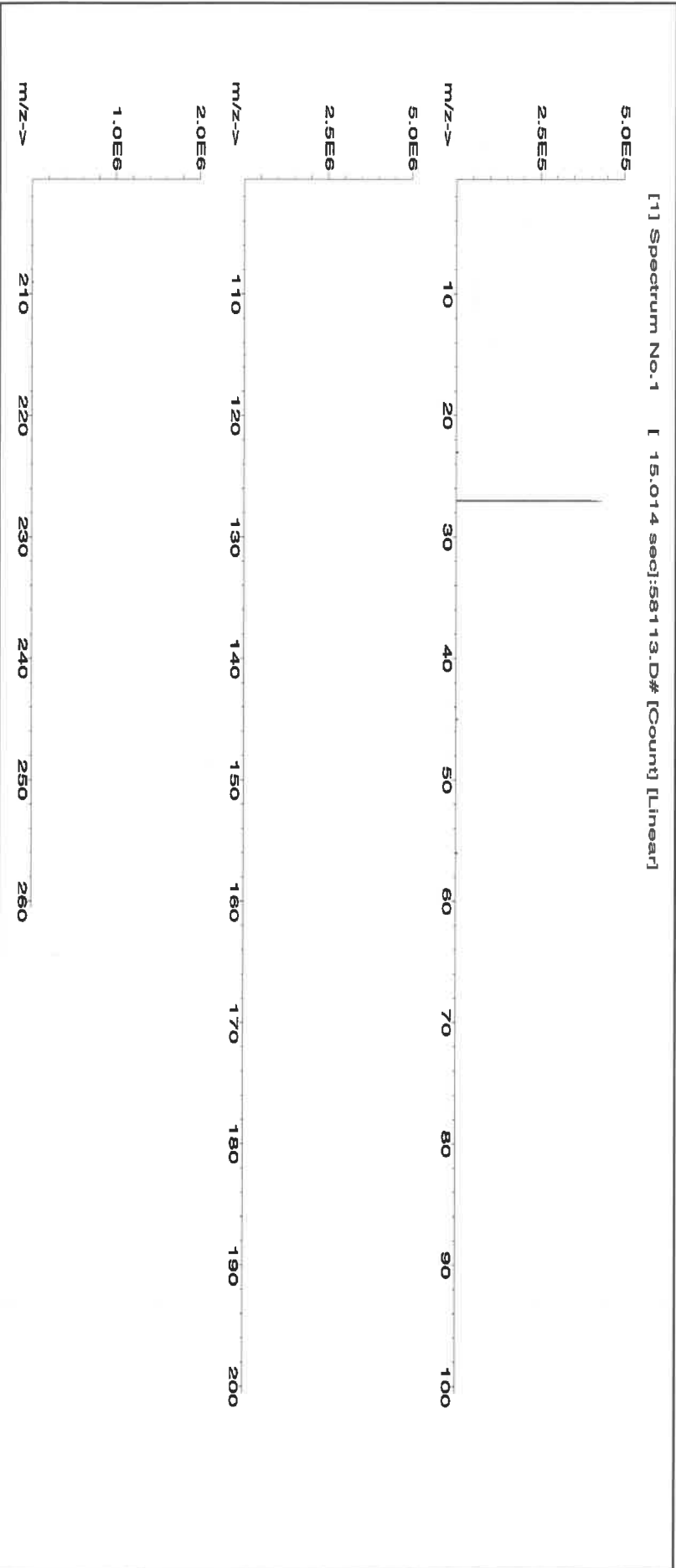
CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 011623
Description: Aluminum (Al)
Expiration Date: 011626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6LUTB
Weight shown below was diluted to (mL): 2000.02
Solvent: 20510011 Nitric Acid
Lot #
2% 40.0 (mL) Nitric Acid
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Aluminum nitrate nonahydrate (Al) IN022 ALUM12021A1 10000 99.999 0.10 7.30 273.9779 274.0078 10001.1 20.0 7784-27-2 2 mg/m³ or rat 3671 mg/kg 3101a



Hydrochloric Acid, 36.5–38.0%
BAKER INTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Received! — 08/01/2024
pater
m6039
m6040

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
------	---------------	--------

For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Production

18/19/24, M6055

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030

F: 540-585-3012

info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories".

Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: IV-STOCK-12
Lot Number: U2-MEB734294
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Barium, Beryllium,
Bismuth, Cerium,
Cobalt, Indium,
Lithium, Nickel,
Lead, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.01 ± 0.04 µg/mL	Beryllium, Be	10.01 ± 0.05 µg/mL
Bismuth, Bi	10.01 ± 0.06 µg/mL	Cerium, Ce	10.01 ± 0.04 µg/mL
Cobalt, Co	10.01 ± 0.05 µg/mL	Indium, In	10.01 ± 0.04 µg/mL
Lead, Pb	10.00 ± 0.04 µg/mL	Lithium, Li	10.01 ± 0.04 µg/mL
Nickel, Ni	10.01 ± 0.04 µg/mL	Uranium, U	10.01 ± 0.05 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	180815
Ce	ICP Assay	3110	160830
Ce	EDTA	928	928
Ce	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
U	ICP Assay	traceable to 3164	R2-U689597
U	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

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

k = coverage factor = 2

$u_{\text{char}} = [\sum ((w_i)^2 (u_{\text{char } i})^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

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

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

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™**



M6094
M6095

metdig
10/21/24

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



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

 **avantorsm**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

avantor™



Receive:
9/29/24
met dig

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantor™**



Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantor™**

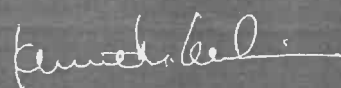


Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

avantor™



Receive:
9/29/24
met dig

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantor™**



Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantor™**

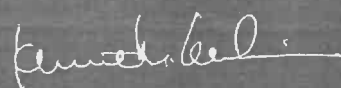


Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Ken Koehnlein
Sr. Manager, Quality Assurance

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis



R → 16/13/24
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

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities – Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities – Iron (Fe)	<= 15.0 ppb	< 1
Trace Impurities – Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities – Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities – Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities – Selenium (Se), For Information Only	ppb	1.0
Trace Impurities – Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities – Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities – Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities – Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities – Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities – Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities – Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities – Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities – Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

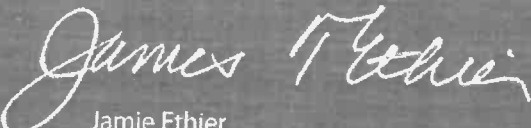
Product Information (not specifications):

Appearance (clear, fuming liquid)

Meets ACS Specifications

Country of Origin: US

Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier

Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Nitric Acid 69%
CMOS



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**TM



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Production



CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 122226

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 10000

NIST Test Number: 6UTB

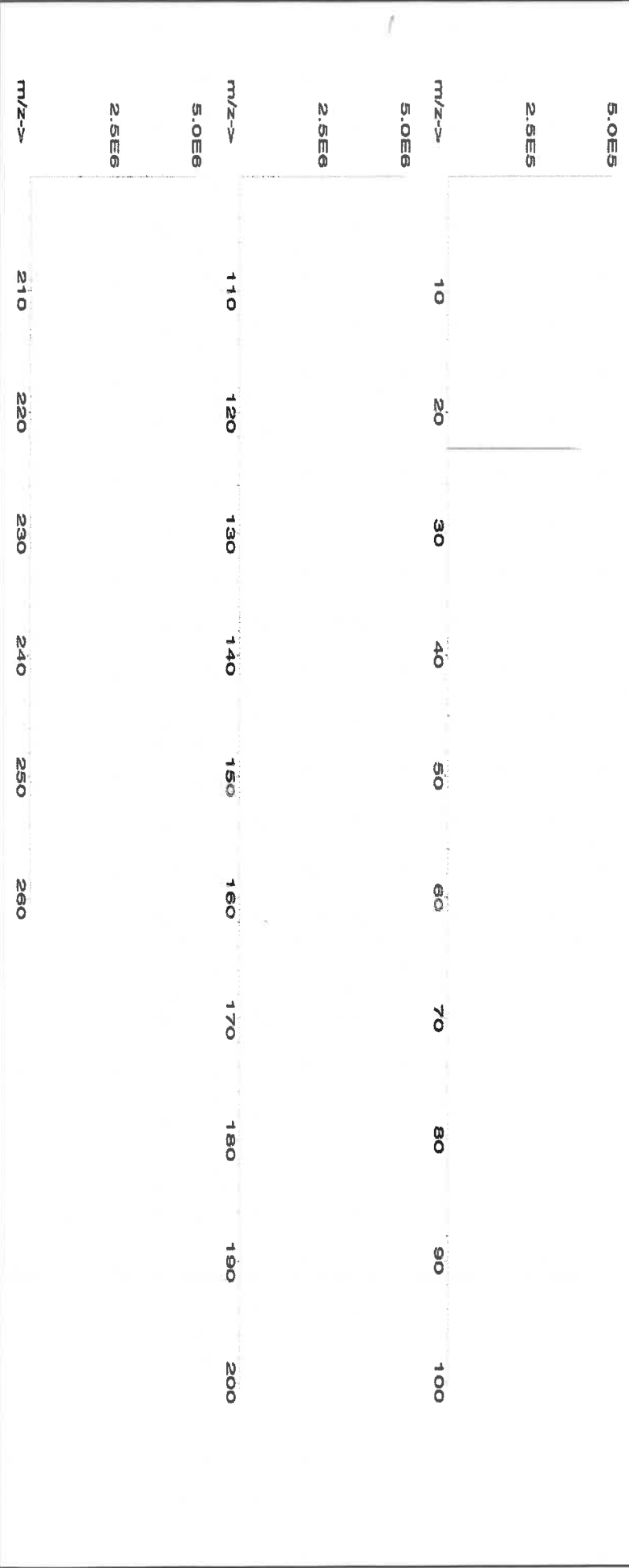
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
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				NIST SRM
											(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50	

1. Sodium nitrate (Na) IN036 NAV01201511 10000 99.999 0.10 26.9 111.5406 111.5479 10000.7 20.0 7631-99-4 5 mg/m3 or-trat 3430 mg/kg 3152a

[1] Spectrum No.1 [8.935 sec]:58111.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	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	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	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	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	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	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

**2.0 PRODUCT DESCRIPTION**

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020ISS
Lot Number: S2-MEB709511
Matrix: 7% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Bismuth, Holmium,
Indium, 6-Lithium,
Rhodium, Scandium,
Terbium, Yttrium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.03 µg/mL	Bismuth, Bi	10.00 ± 0.05 µg/mL
Holmium, Ho	10.00 ± 0.05 µg/mL	Indium, In	10.00 ± 0.04 µg/mL
Rhodium, Rh	10.00 ± 0.07 µg/mL	Scandium, Sc	10.00 ± 0.04 µg/mL
Terbium, Tb	10.00 ± 0.04 µg/mL	Yttrium, Y	10.00 ± 0.04 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bi	ICP Assay	3106	180815
Bi	Calculated		See Sec. 4.2
Ho	ICP Assay	3123a	090408
Ho	EDTA	928	928
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li6	Gravimetric		See Sec. 4.2
Rh	ICP Assay	3144	070619
Sc	ICP Assay	3148a	100701
Sc	EDTA	928	928
Tb	ICP Assay	3157a	100518
Tb	EDTA	928	928
Tb	Calculated		See Sec. 4.2
Y	ICP Assay	3167a	120314
Y	EDTA	928	928
Y	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i^2)(u_{char i}^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)(u_{char a})$$

X_a = mean of Assay Method A with

$u_{char a}$ = the standard uncertainty of characterization Method A

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Lithium Li6	95.6 ± 0.3
Lithium Li7	4.4 ± 0.1

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 03, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **September 03, 2026**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





**QATS LABORATORY INORGANIC REFERENCE MATERIAL
 INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (ICSA WITH ICSB)**

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
 Available Upon Request

(A) SAMPLE DESCRIPTION

Enclosed is a set of one (1) or more bottles of an Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) BREAKAGE OR MISSING ITEMS

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to the Contracting Officer, Ross Miller at miller.ross@epa.gov. If directed by Ross Miller, return the chain of custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
 APTIM Federal Services, LLC
 2700 Chandler Avenue - Building C
 Las Vegas, NV 89120

(C) ANALYSIS OF SAMPLES

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803							
Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20.0	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.1)	-1.9	2.1	19.0	16.2	21.9
Ba	10.0	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.7)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1.0	(0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.



**QATS LABORATORY INORGANIC REFERENCE MATERIAL
 INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (ICSA WITH ICSB)**

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APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

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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.**

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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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 2700 Chandler Avenue - Building C
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(C) ANALYSIS OF SAMPLES

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS ICS SOLUTION(S)

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803							
Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20.0	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.1)	-1.9	2.1	19.0	16.2	21.9
Ba	10.0	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.7)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1.0	(0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57051
120523
Antimony (Sb)

Lot #
Solvent:

24002546
Nitric Acid

2.0%
60.0
Nitric Acid

(mL)

Expiration Date:
Recommended Storage:

120526
Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6U7B

Volume shown below was diluted to (mL):

3000.41
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Renteria	120523

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
SRM

1. Antimony (Sb)

58151

100923

0.1000

300.0

0.084

1000

10001.4

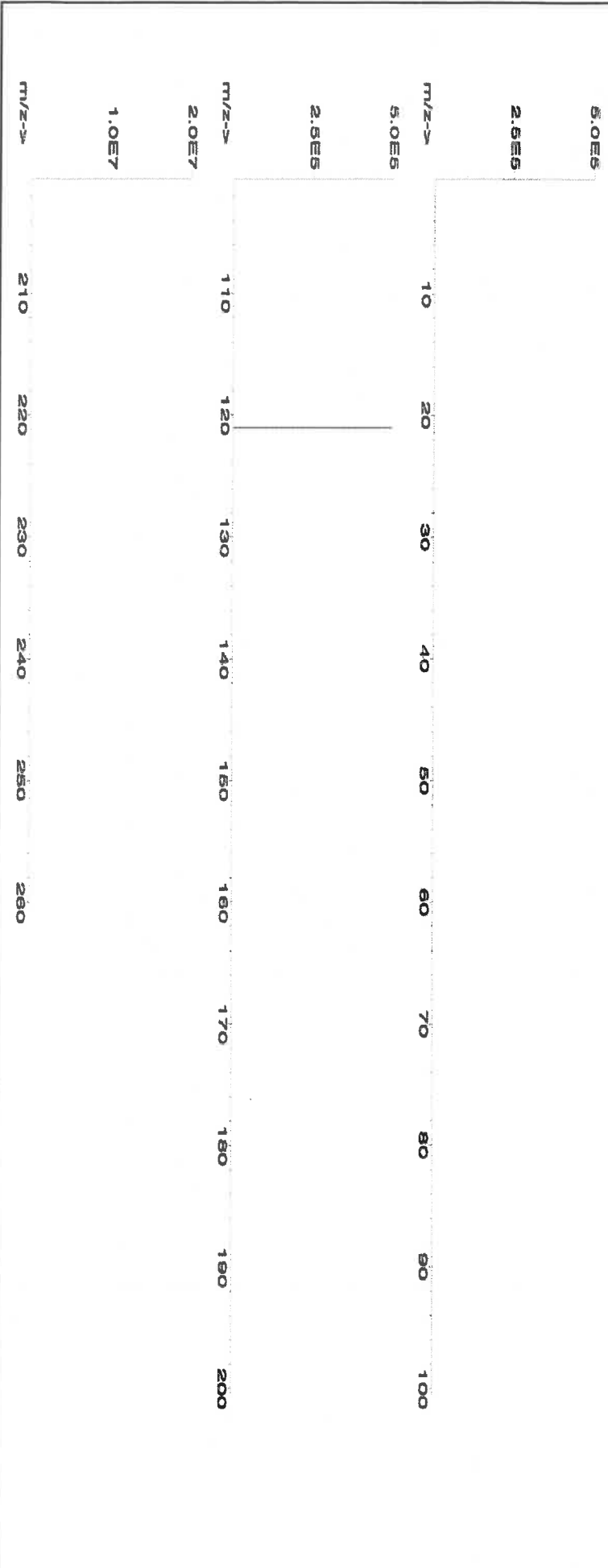
1000.0

2.1

7440-36-0

0.5 mg/m3
or-rel 7000 mg/kg
3102a

[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	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.
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- * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



Certified Reference Material CRM

M6030



CERTIFIED WEIGHT REPORT:

Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**

Lot #
Solvent: 24002546 Nitric Acid

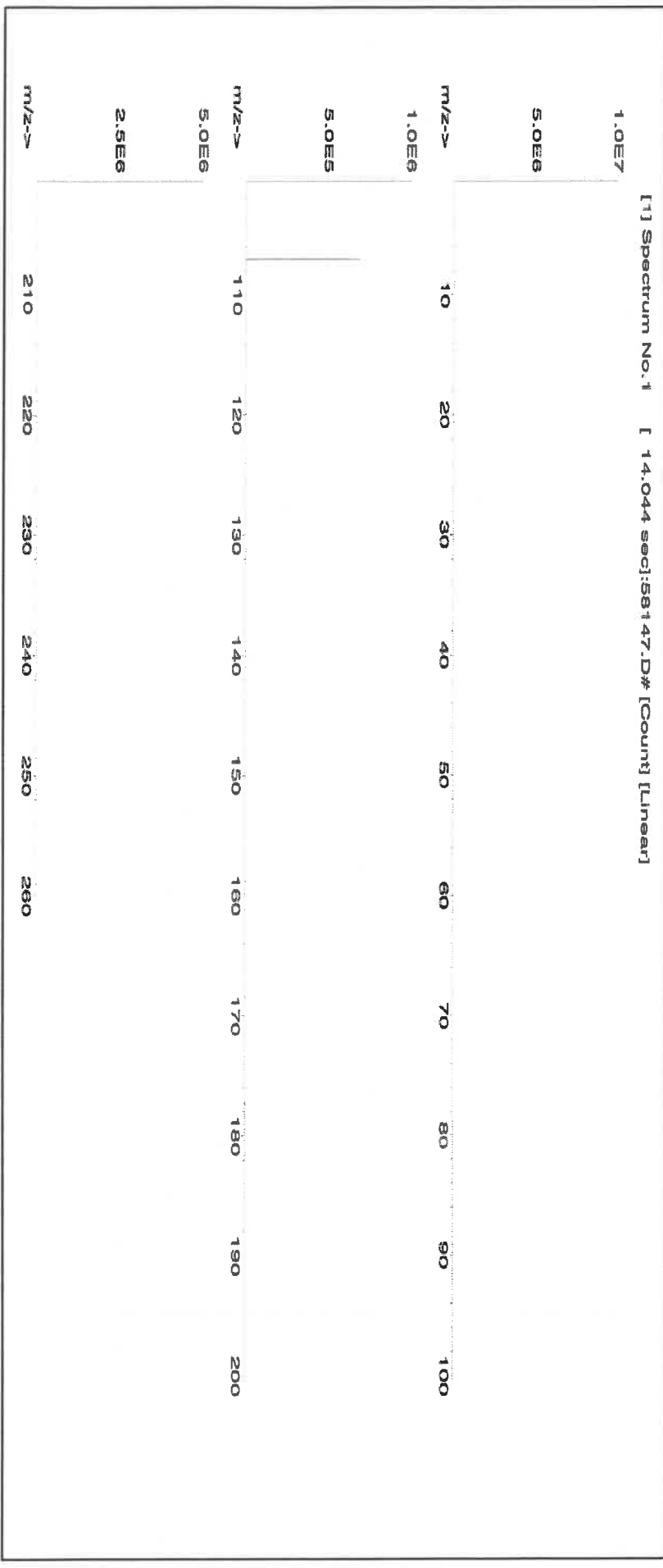
Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

2% 80.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 4000.30
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
	122823

SDS Information									
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9996	0.10	63.7	6.27992	6.27998	1000.0
							2.0	7761-88-8	10 µg/mL
									NA
									3151





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(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 meghom 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).

Absolute Standards, Inc.

800-368-1131

www.absolutestandards.com


Certified Reference Material CRM

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

R: 03/16/23 M5473 M5474 M5475 M5476

CERTIFIED WEIGHT REPORT:

Lot #

Part Number:

56138

Solvent: 20510011 Nitric Acid

Lot Number:

082922

Description:

Strontium (Sr)

2% 20.0 Nitric Acid
(mL)

Expiration Date:

082925

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

10000

NIST Test Number:

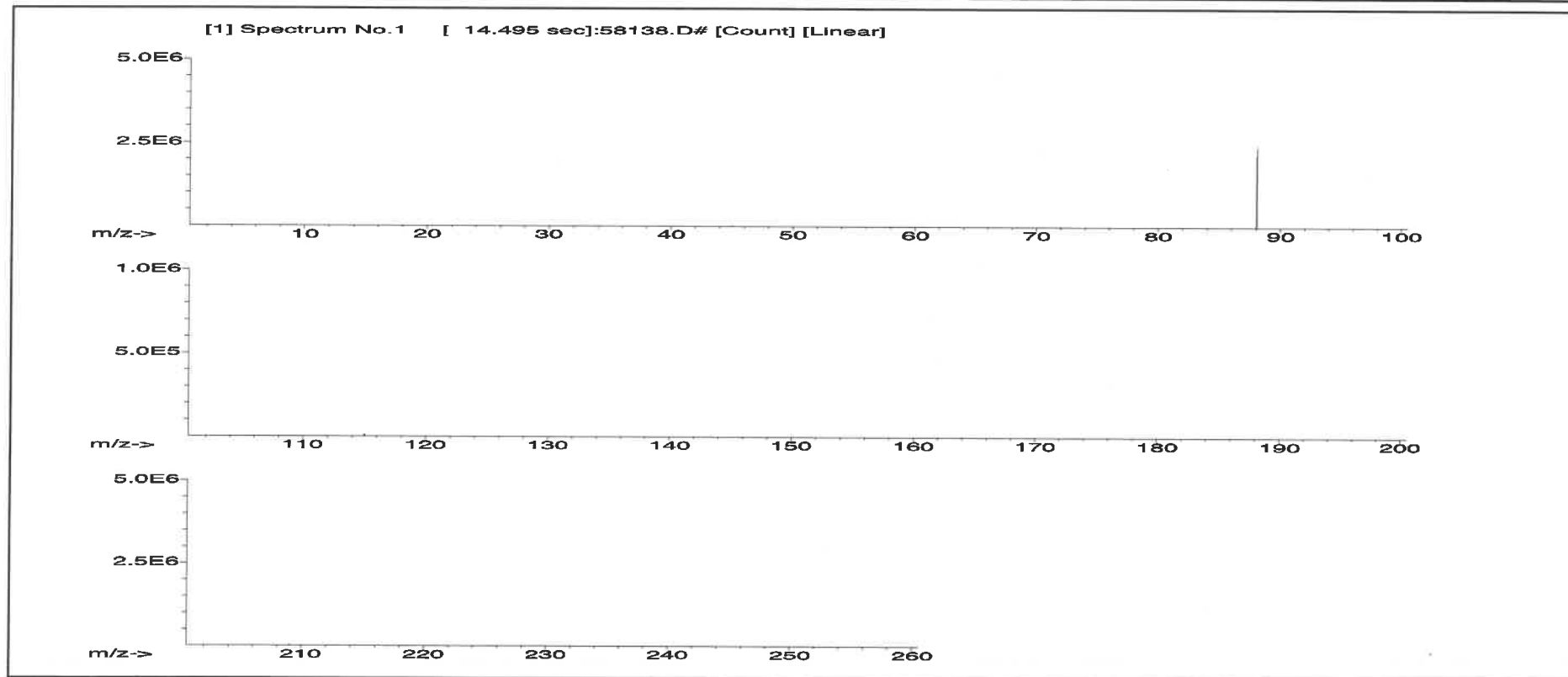
6UTB

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.)			NIST SRM
											CAS#	OSHA PEL (TWA)	LD50	
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	ori-rat >2000mg/kg	3153a





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 certified (+/-) 0.5% of the stated value, unless otherwise stated.
- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (TI)

Lot #

Solvent: 24002546 Nitric Acid

2% 40.0 Nitric Acid (mL)

Expiration Date: 062727

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

Weight shown below was diluted to (mL): 2000.1 0.10 Flask Uncertainty

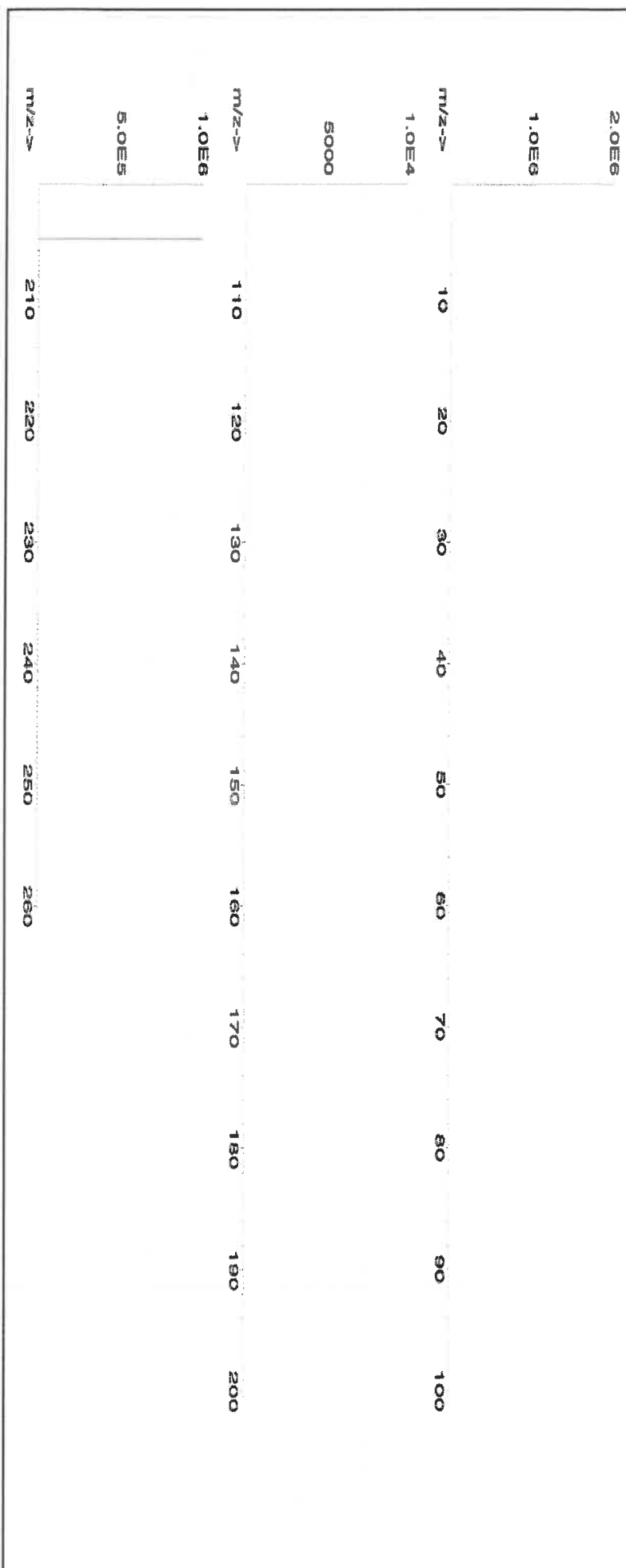
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Renteria</i>
	Pedro L. Renteria
	062724

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	------------	-----------------------	------------	-----------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. Thallium nitrate (TI) IN037 BCCF4399 1000 99.999 0.10 77.0 2.5975 2.5977 1000.1 2.0 10102-45-1 0.1 mg/m3 orl-mus 15mg/kg 3158

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Tm	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Sn	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Ti	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Se	<0.02	Ta	<0.02			Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Certified Reference Material CRM

M6021



CERTIFIED WEIGHT REPORT:

Part Number: **57023**
Lot Number: **062424**
Description: **Vanadium (V)**

Lot # **24002546**
Solvent: **Nitric Acid**

<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
Reviewed By:	Pedro L. Rantas
	062424

Expiration Date: **062427**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**

2.0%
40.0 (mL)
Nitric Acid

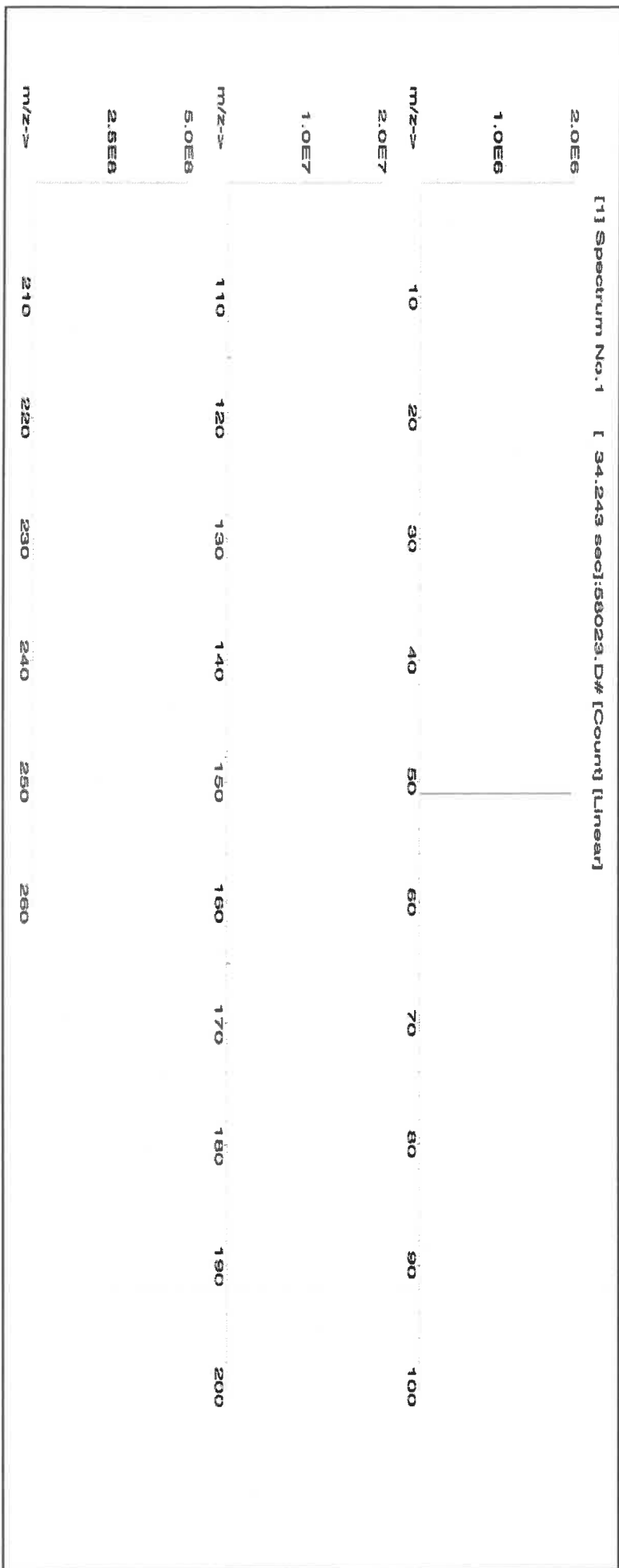
Volume shown below was diluted to (mL): **2000.3**

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

Compound	SDS Information											
	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty		(Solvent Safety Info. On Attached pg.)	NIST SRM
									+/- (µg/mL)	CAS#		
											OSHA PEL (TWA)	LD50

1. Ammonium metavanadate (V) 58123 021224 0.1000 200.0 0.084 1000 10000.3 1000.0 2.2 7803-55-6 0.05 mg/m3 or-at 58.1mg/kg 3165

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]





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

Trace Metals Verification by ICP-MS (µg/mL)															
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<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
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ti	<0.02
														Tb	<0.02
														Te	<0.02
														Tl	<0.02
														Tm	<0.02
														Sn	<0.02
														Ti	<0.02
														W	<0.02
														U	<0.02
														V	T
														Yb	<0.02
														Y	<0.02
														Zn	<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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SOP ID : M200.8-Trace Elements-22, MSFAM01.1-Metals ICPMS-2

SDG No : ME28M0

Matrix : SOIL

Pipette 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: 12/06/2024 Time : 09:30 Temp : 96 °C

End Digest Date: 12/06/2024 Time : 10:10 Temp : 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

Dig Technician Signature: *jepp / Metdig* 12/6/24

Supervisor Signature: *[Signature]*

Temp : 1. 96°C 2. N/A

Standard Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83465
Spike Sol. B	1.00	MP83047
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	4.00	MP83122
1:4 HCl Solution	10.00	MP83105 MP82128 JP 12/20/2024
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#2 CELL#34 Temp:96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/6/24 10:30	<i>jepp / Metdig</i>	<i>[Signature]</i>
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5067-01	ME28M0	N/A	1.30	500	Brown	Yellow	Medium	N/A	N/A	1
P5067-02	ME28M1	N/A	1.36	500	Brown	Yellow	Medium	N/A	N/A	2
P5067-03	ME28M2	N/A	1.27	500	Brown	Yellow	Medium	N/A	N/A	3
P5067-04	ME28M3	N/A	1.21	500	Brown	Yellow	Medium	N/A	N/A	4
P5067-05	ME28M4	N/A	1.22	500	Brown	Yellow	Medium	N/A	N/A	5
P5067-06	ME28M5	N/A	1.47	500	Light Brown	Yellow	Medium	N/A	N/A	6
P5067-07	ME28M6	N/A	1.31	500	Light Brown	Yellow	Medium	N/A	N/A	7
P5067-08	ME28M7	N/A	1.25	500	Brown	Yellow	Medium	N/A	N/A	8
P5067-09	ME28M8	N/A	1.31	500	Brown	Yellow	Medium	N/A	N/A	9
P5067-10	ME28M9	N/A	1.29	500	Brown	Yellow	Medium	N/A	N/A	10
P5067-11	ME28N0	N/A	1.17	500	Brown	Yellow	Medium	N/A	N/A	11
P5067-12	ME28N1	N/A	1.19	500	Brown	Yellow	Medium	N/A	N/A	12
P5067-13	ME28N2	N/A	1.31	500	Brown	Yellow	Medium	N/A	N/A	13
P5067-14	ME28N3	N/A	1.26	500	Brown	Yellow	Medium	N/A	N/A	14
P5067-15	ME28N4	N/A	1.28	500	Black	Yellow	Medium	N/A	N/A	15
P5067-16	ME28N5	N/A	1.43	500	Brown	Yellow	Medium	N/A	N/A	16
P5067-17	ME28N6	N/A	1.33	500	Brown	Yellow	Medium	N/A	N/A	17
P5067-18	ME28N7	N/A	1.31	500	Brown	Yellow	Medium	N/A	N/A	18
P5067-19	ME28N8	N/A	1.30	500	Brown	Yellow	Medium	N/A	N/A	19
P5067-20	ME28N8D	N/A	1.26	500	Brown	Yellow	Medium	N/A	N/A	20
P5067-21	ME28N8S	N/A	1.41	500	Brown	Yellow	Medium	N/A	MP83047	21
PB165414BL	PBS414	N/A	1.00	500	Colorless	Colorless	Fine	N/A	N/A	22
PB165414BS	LCS414	N/A	1.00	500	Colorless	Colorless	Fine	N/A	MP83465	23

Instrument ID: P8

Daily Analysis Runlog For Sequence/QC Batch ID # LB133874

Review By	Mohan Bera	Review On	12/11/2024 3:44:01 AM
Supervise By	Sarabjit Jaswal	Supervise On	12/11/2024 11:09:19 PM

STD. NAME	STD REF.#
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016
ICV Standard	MP83041
CCV Standard	MP83042
ICSA Standard	MP83043,MP83044
CRI Standard	
LCS Standard	MP83465
Chk Standard	MP83050,MP83049

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE001	TUNE	12/10/24 10:30		Jaswal	OK
2	S00	S0	CAL1	12/10/24 11:14		Jaswal	OK
3	S02	S02	CAL3	12/10/24 11:21		Jaswal	OK
4	S03	S03	CAL4	12/10/24 11:24		Jaswal	OK
5	S04	S04	CAL5	12/10/24 11:27		Jaswal	OK
6	S05	S05	CAL6	12/10/24 11:30		Jaswal	OK
7	S06	S06	CAL7	12/10/24 11:33		Jaswal	OK
8	S07	S07	CAL8	12/10/24 11:36		Jaswal	OK
9	S08	S08	CAL9	12/10/24 11:38		Jaswal	OK
10	ICV001	ICV001	ICV	12/10/24 13:26	Inst. paused for calibration review	Jaswal	OK
11	ICB001	ICB001	ICB	12/10/24 13:30		Jaswal	OK
12	ICSA001	ICSA001	ICSA	12/10/24 13:33		Jaswal	OK
13	ICSAB001	ICSAB001	ICSAB	12/10/24 13:36		Jaswal	OK
14	CCV001	CCV001	CCV	12/10/24 13:39		Jaswal	OK
15	CCB001	CCB001	CCB	12/10/24 14:04	Inst. paused for review	Jaswal	OK
16	PB165414BL	PBS414	MB	12/10/24 14:13		Jaswal	OK
17	PB165414BS	LCS414	LCS	12/10/24 14:25		Jaswal	OK
18	P5067-01	ME28M0	SAM	12/10/24 14:28	Cr,Mn,V High	Jaswal	Dilution

Instrument ID: P8

Daily Analysis Runlog For Sequence/QC Batch ID # LB133874

Review By	Mohan Bera	Review On	12/11/2024 3:44:01 AM
Supervise By	Sarabjit Jaswal	Supervise On	12/11/2024 11:09:19 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016		
ICV Standard	MP83041		
CCV Standard	MP83042		
ICSA Standard	MP83043,MP83044		
CRI Standard			
LCS Standard	MP83465		
Chk Standard	MP83050,MP83049		

19	P5067-02	ME28M1	SAM	12/10/24 14:31	Cr,Mn High	Jaswal	Dilution
20	P5067-03	ME28M2	SAM	12/10/24 14:34	Mn High	Jaswal	Dilution
21	P5067-04	ME28M3	SAM	12/10/24 14:38		Jaswal	OK
22	P5067-05	ME28M4	SAM	12/10/24 14:41		Jaswal	OK
23	CCV002	CCV002	CCV	12/10/24 14:44		Jaswal	OK
24	CCB002	CCB002	CCB	12/10/24 14:47		Jaswal	OK
25	P5067-06	ME28M5	SAM	12/10/24 14:50		Jaswal	OK
26	P5067-07	ME28M6	SAM	12/10/24 14:53		Jaswal	OK
27	P5067-08	ME28M7	SAM	12/10/24 14:56		Jaswal	OK
28	P5067-09	ME28M8	SAM	12/10/24 14:59		Jaswal	OK
29	P5067-10	ME28M9	SAM	12/10/24 15:03		Jaswal	OK
30	P5067-11	ME28N0	SAM	12/10/24 15:06		Jaswal	OK
31	P5067-12	ME28N1	SAM	12/10/24 15:09		Jaswal	OK
32	P5067-13	ME28N2	SAM	12/10/24 15:12		Jaswal	OK
33	P5067-14	ME28N3	SAM	12/10/24 15:15		Jaswal	OK
34	P5067-15	ME28N4	SAM	12/10/24 15:19		Jaswal	OK
35	P5067-16	ME28N5	SAM	12/10/24 15:22		Jaswal	OK
36	P5067-17	ME28N6	SAM	12/10/24 15:25		Jaswal	OK
37	P5067-18	ME28N7	SAM	12/10/24 15:28		Jaswal	OK
38	P5067-19	ME28N8	SAM	12/10/24 15:31		Jaswal	OK

Instrument ID: P8

Daily Analysis Runlog For Sequence/QC Batch ID # LB133874

Review By	Mohan Bera	Review On	12/11/2024 3:44:01 AM
Supervise By	Sarabjit Jaswal	Supervise On	12/11/2024 11:09:19 PM
STD. NAME	STD REF.#		
ICAL Standard	MP83014,MP83039,MP83038,MP83036,MP83034,MP83035,MP83033,MP83032,MP83016		
ICV Standard	MP83041		
CCV Standard	MP83042		
ICSA Standard	MP83043,MP83044		
CRI Standard			
LCS Standard	MP83465		
Chk Standard	MP83050,MP83049		

39	P5067-20	ME28N8D	DUP	12/10/24 15:34		Jaswal	OK
40	P5067-19L	ME28N8L	SD	12/10/24 15:38		Jaswal	OK
41	P5067-21	ME28N8S	MS	12/10/24 15:41		Jaswal	OK
42	P5067-01DL	ME28M0	SAM	12/10/24 16:09	2x for Cr,Mn,V Still Mn high	Jaswal	Dilution
43	P5067-01DL2	ME28M0	SAM	12/10/24 16:12	5x for Mn	Jaswal	Confirms
44	P5067-02DL	ME28M1	SAM	12/10/24 16:15	5x for Cr,Mn	Jaswal	Confirms
45	P5067-03DL	ME28M2	SAM	12/10/24 16:18	5x for Mn	Jaswal	Confirms
46	CCV003	CCV003	CCV	12/10/24 16:26		Jaswal	OK
47	CCB003	CCB003	CCB	12/10/24 16:30		Jaswal	OK