CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Cover Page

Order ID : O1233

Project ID : NYCDDC Phase II SCI Arthur Kill Road CEQR

Client : Louis Berger U.S., Inc., A WSP Company

Lab Sample Number	Client Sample Number
O1233-02	B-P34A
O1233-03	B-P34B
O1233-04	B-P36A
O1233-05	B-P36B
O1233-06	B-P37A
O1233-07	B-P37B
O1233-08	B-38A
O1233-09	B-P38B
O1233-10	WC-38
O1233-11	B-P38C
O1233-12	FB01

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

Signature : _____ Date: 1/31/2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **O1233**

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

1st Level QA Review Signature: **KETAN PATEL** **Date:** **01/31/2023**

2nd Level QA Review Signature: _____ **Date:** _____

CHEMTECH

284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1233	**OrderDate:**	1/19/2023 1:53:00 PM
Client:	Louis Berger U.S., Inc., A WSP Company	**Project:**	NYCDDC Phase II SCI Arthur Kill Road CEQR
Contact:	Jonathan Ganz	**Location:**	N11,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1233-02	**B-P34A**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-03	**B-P34B**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-04	**B-P36A**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-05	**B-P36B**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-06	**B-P37A**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-07	**B-P37B**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-08	**B-38A**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-09	**B-P38B**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	
O1233-10	**WC-38**	**TCLP**			**01/18/23**			**01/19/23**
			TCLP ICP Metals	6010D		01/24/23	01/25/23	

CHEMTECH

284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

			TCLP Mercury	7470A		01/23/23	01/24/23	
O1233-11	**B-P38C**	**SOIL**			**01/18/23**			**01/19/23**
			Mercury	7471B		01/20/23	01/23/23	
			Metals ICP-TAL	6010D		01/20/23	01/24/23	

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: O1233 **Order ID:** O1233

Client: Louis Berger U.S., Inc., A WSP Company **Project ID:** NYCDDC Phase II SCI Arthur Kill Road C

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : B-P34A								
O1233-02	B-P34A	SOIL	Aluminum	10800		2.44	5.53	mg/Kg
O1233-02	B-P34A	SOIL	Arsenic	7.51		0.23	1.11	mg/Kg
O1233-02	B-P34A	SOIL	Barium	39.6		0.80	5.53	mg/Kg
O1233-02	B-P34A	SOIL	Beryllium	0.68		0.023	0.33	mg/Kg
O1233-02	B-P34A	SOIL	Cadmium	0.13	J	0.030	0.33	mg/Kg
O1233-02	B-P34A	SOIL	Calcium	1060		7.90	111	mg/Kg
O1233-02	B-P34A	SOIL	Chromium	30.9		0.10	0.55	mg/Kg
O1233-02	B-P34A	SOIL	Cobalt	12.2		0.083	1.66	mg/Kg
O1233-02	B-P34A	SOIL	Copper	17.3		0.47	1.11	mg/Kg
O1233-02	B-P34A	SOIL	Iron	20900		4.35	5.53	mg/Kg
O1233-02	B-P34A	SOIL	Lead	19.1		0.29	0.66	mg/Kg
O1233-02	B-P34A	SOIL	Magnesium	2210		10.1	111	mg/Kg
O1233-02	B-P34A	SOIL	Manganese	286		0.12	1.11	mg/Kg
O1233-02	B-P34A	SOIL	Mercury	0.018		0.0040	0.015	mg/Kg
O1233-02	B-P34A	SOIL	Nickel	56.2		0.20	2.21	mg/Kg
O1233-02	B-P34A	SOIL	Potassium	715		25.8	111	mg/Kg
O1233-02	B-P34A	SOIL	Silver	1.24		0.086	0.55	mg/Kg
O1233-02	B-P34A	SOIL	Sodium	61.2	J	25.9	111	mg/Kg
O1233-02	B-P34A	SOIL	Vanadium	24.4		0.35	2.21	mg/Kg
O1233-02	B-P34A	SOIL	Zinc	46.0		0.22	2.21	mg/Kg
Client ID : B-P34B								
O1233-03	B-P34B	SOIL	Aluminum	3100		2.42	5.49	mg/Kg
O1233-03	B-P34B	SOIL	Arsenic	3.13		0.23	1.10	mg/Kg
O1233-03	B-P34B	SOIL	Barium	24.2		0.79	5.49	mg/Kg
O1233-03	B-P34B	SOIL	Beryllium	0.51		0.023	0.33	mg/Kg
O1233-03	B-P34B	SOIL	Cadmium	0.17	J	0.030	0.33	mg/Kg
O1233-03	B-P34B	SOIL	Calcium	1520		7.83	110	mg/Kg
O1233-03	B-P34B	SOIL	Chromium	54.3		0.099	0.55	mg/Kg
O1233-03	B-P34B	SOIL	Cobalt	9.66		0.082	1.65	mg/Kg
O1233-03	B-P34B	SOIL	Copper	7.54		0.46	1.10	mg/Kg
O1233-03	B-P34B	SOIL	Iron	10800		4.31	5.49	mg/Kg
O1233-03	B-P34B	SOIL	Lead	240		0.28	0.66	mg/Kg
O1233-03	B-P34B	SOIL	Magnesium	3560		9.99	110	mg/Kg
O1233-03	B-P34B	SOIL	Manganese	331		0.12	1.10	mg/Kg
O1233-03	B-P34B	SOIL	Mercury	0.0070	J	0.0030	0.014	mg/Kg
O1233-03	B-P34B	SOIL	Nickel	128		0.20	2.19	mg/Kg
O1233-03	B-P34B	SOIL	Potassium	620		25.6	110	mg/Kg
O1233-03	B-P34B	SOIL	Silver	0.60		0.086	0.55	mg/Kg

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: O1233 **Order ID:** O1233

Client: Louis Berger U.S., Inc., A WSP Company **Project ID:** NYCDDC Phase II SCI Arthur Kill Road C

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
O1233-03	B-P34B	SOIL	Sodium	117		25.7	110	mg/Kg
O1233-03	B-P34B	SOIL	Vanadium	10.3		0.35	2.19	mg/Kg
O1233-03	B-P34B	SOIL	Zinc	52.8		0.22	2.19	mg/Kg
Client ID :	**B-P36A**							
O1233-04	B-P36A	SOIL	Aluminum	7380		2.25	5.10	mg/Kg
O1233-04	B-P36A	SOIL	Arsenic	8.08		0.21	1.02	mg/Kg
O1233-04	B-P36A	SOIL	Barium	60.2		0.73	5.10	mg/Kg
O1233-04	B-P36A	SOIL	Beryllium	0.82		0.021	0.31	mg/Kg
O1233-04	B-P36A	SOIL	Cadmium	0.63		0.028	0.31	mg/Kg
O1233-04	B-P36A	SOIL	Calcium	1650		7.28	102	mg/Kg
O1233-04	B-P36A	SOIL	Chromium	20.8		0.092	0.51	mg/Kg
O1233-04	B-P36A	SOIL	Cobalt	10.1		0.076	1.53	mg/Kg
O1233-04	B-P36A	SOIL	Copper	24.8		0.43	1.02	mg/Kg
O1233-04	B-P36A	SOIL	Iron	17500		4.01	5.10	mg/Kg
O1233-04	B-P36A	SOIL	Lead	69.2		0.27	0.61	mg/Kg
O1233-04	B-P36A	SOIL	Magnesium	3010		9.29	102	mg/Kg
O1233-04	B-P36A	SOIL	Manganese	202		0.11	1.02	mg/Kg
O1233-04	B-P36A	SOIL	Mercury	0.0070	J	0.0030	0.014	mg/Kg
O1233-04	B-P36A	SOIL	Nickel	53.4		0.18	2.04	mg/Kg
O1233-04	B-P36A	SOIL	Potassium	789		23.7	102	mg/Kg
O1233-04	B-P36A	SOIL	Silver	1.08		0.080	0.51	mg/Kg
O1233-04	B-P36A	SOIL	Sodium	89.6	J	23.9	102	mg/Kg
O1233-04	B-P36A	SOIL	Vanadium	20.7		0.33	2.04	mg/Kg
O1233-04	B-P36A	SOIL	Zinc	88.8		0.20	2.04	mg/Kg
Client ID :	**B-P36B**							
O1233-05	B-P36B	SOIL	Aluminum	3890		2.26	5.12	mg/Kg
O1233-05	B-P36B	SOIL	Arsenic	1.69		0.22	1.02	mg/Kg
O1233-05	B-P36B	SOIL	Barium	24.5		0.74	5.12	mg/Kg
O1233-05	B-P36B	SOIL	Beryllium	0.40		0.022	0.31	mg/Kg
O1233-05	B-P36B	SOIL	Cadmium	0.18	J	0.028	0.31	mg/Kg
O1233-05	B-P36B	SOIL	Calcium	6970		7.31	102	mg/Kg
O1233-05	B-P36B	SOIL	Chromium	10.0		0.092	0.51	mg/Kg
O1233-05	B-P36B	SOIL	Cobalt	5.02		0.077	1.54	mg/Kg
O1233-05	B-P36B	SOIL	Copper	8.78		0.43	1.02	mg/Kg
O1233-05	B-P36B	SOIL	Iron	9590		4.03	5.12	mg/Kg
O1233-05	B-P36B	SOIL	Lead	5.23		0.27	0.62	mg/Kg
O1233-05	B-P36B	SOIL	Magnesium	4880		9.33	102	mg/Kg
O1233-05	B-P36B	SOIL	Manganese	261		0.11	1.02	mg/Kg
O1233-05	B-P36B	SOIL	Nickel	15.9		0.18	2.05	mg/Kg
O1233-05	B-P36B	SOIL	Potassium	603		23.9	102	mg/Kg
O1233-05	B-P36B	SOIL	Silver	0.56		0.080	0.51	mg/Kg

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: O1233 **Order ID:** O1233

Client: Louis Berger U.S., Inc., A WSP Company **Project ID:** NYCDDC Phase II SCI Arthur Kill Road C

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
O1233-05	B-P36B	SOIL	Sodium	156		24.0	102	mg/Kg
O1233-05	B-P36B	SOIL	Vanadium	11.6		0.33	2.05	mg/Kg
O1233-05	B-P36B	SOIL	Zinc	19.8		0.21	2.05	mg/Kg
Client ID :	**B-P37A**							
O1233-06	B-P37A	SOIL	Aluminum	5130		2.24	5.08	mg/Kg
O1233-06	B-P37A	SOIL	Arsenic	4.27		0.21	1.02	mg/Kg
O1233-06	B-P37A	SOIL	Barium	47.5		0.73	5.08	mg/Kg
O1233-06	B-P37A	SOIL	Beryllium	0.60		0.021	0.31	mg/Kg
O1233-06	B-P37A	SOIL	Cadmium	0.40		0.027	0.31	mg/Kg
O1233-06	B-P37A	SOIL	Calcium	890		7.25	102	mg/Kg
O1233-06	B-P37A	SOIL	Chromium	18.1		0.091	0.51	mg/Kg
O1233-06	B-P37A	SOIL	Cobalt	9.11		0.076	1.52	mg/Kg
O1233-06	B-P37A	SOIL	Copper	29.7		0.43	1.02	mg/Kg
O1233-06	B-P37A	SOIL	Iron	13600		3.99	5.08	mg/Kg
O1233-06	B-P37A	SOIL	Lead	33.5		0.26	0.61	mg/Kg
O1233-06	B-P37A	SOIL	Magnesium	2200		9.25	102	mg/Kg
O1233-06	B-P37A	SOIL	Manganese	328		0.11	1.02	mg/Kg
O1233-06	B-P37A	SOIL	Mercury	0.032		0.0040	0.015	mg/Kg
O1233-06	B-P37A	SOIL	Nickel	54.5		0.18	2.03	mg/Kg
O1233-06	B-P37A	SOIL	Potassium	569		23.7	102	mg/Kg
O1233-06	B-P37A	SOIL	Silver	0.87		0.079	0.51	mg/Kg
O1233-06	B-P37A	SOIL	Sodium	71.8	J	23.8	102	mg/Kg
O1233-06	B-P37A	SOIL	Vanadium	17.5		0.33	2.03	mg/Kg
O1233-06	B-P37A	SOIL	Zinc	50.8		0.20	2.03	mg/Kg
Client ID :	**B-P37B**							
O1233-07	B-P37B	SOIL	Aluminum	4240		2.40	5.42	mg/Kg
O1233-07	B-P37B	SOIL	Arsenic	1.84		0.23	1.08	mg/Kg
O1233-07	B-P37B	SOIL	Barium	15.8		0.78	5.42	mg/Kg
O1233-07	B-P37B	SOIL	Beryllium	0.51		0.023	0.33	mg/Kg
O1233-07	B-P37B	SOIL	Cadmium	0.23	J	0.029	0.33	mg/Kg
O1233-07	B-P37B	SOIL	Calcium	1010		7.74	108	mg/Kg
O1233-07	B-P37B	SOIL	Chromium	14.6		0.098	0.54	mg/Kg
O1233-07	B-P37B	SOIL	Cobalt	6.49		0.081	1.63	mg/Kg
O1233-07	B-P37B	SOIL	Copper	14.4		0.46	1.08	mg/Kg
O1233-07	B-P37B	SOIL	Iron	13300		4.26	5.42	mg/Kg
O1233-07	B-P37B	SOIL	Lead	7.88		0.28	0.65	mg/Kg
O1233-07	B-P37B	SOIL	Magnesium	2070		9.87	108	mg/Kg
O1233-07	B-P37B	SOIL	Manganese	71.3		0.12	1.08	mg/Kg
O1233-07	B-P37B	SOIL	Mercury	0.021		0.0040	0.015	mg/Kg
O1233-07	B-P37B	SOIL	Nickel	37.7		0.20	2.17	mg/Kg
O1233-07	B-P37B	SOIL	Potassium	569		25.3	108	mg/Kg

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: O1233 **Order ID:** O1233

Client: Louis Berger U.S., Inc., A WSP Company **Project ID:** NYCDDC Phase II SCI Arthur Kill Road C

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
O1233-07	B-P37B	SOIL	Silver	0.82		0.085	0.54	mg/Kg
O1233-07	B-P37B	SOIL	Sodium	59.0	J	25.4	108	mg/Kg
O1233-07	B-P37B	SOIL	Vanadium	17.1		0.35	2.17	mg/Kg
O1233-07	B-P37B	SOIL	Zinc	29.3		0.22	2.17	mg/Kg
Client ID :	**B-38A**							
O1233-08	B-38A	SOIL	Aluminum	9770		2.07	4.69	mg/Kg
O1233-08	B-38A	SOIL	Arsenic	5.73		0.20	0.94	mg/Kg
O1233-08	B-38A	SOIL	Barium	54.3		0.68	4.69	mg/Kg
O1233-08	B-38A	SOIL	Beryllium	0.93		0.020	0.28	mg/Kg
O1233-08	B-38A	SOIL	Cadmium	0.79		0.025	0.28	mg/Kg
O1233-08	B-38A	SOIL	Calcium	2820		6.69	93.7	mg/Kg
O1233-08	B-38A	SOIL	Chromium	40.9		0.084	0.47	mg/Kg
O1233-08	B-38A	SOIL	Cobalt	20.6		0.070	1.41	mg/Kg
O1233-08	B-38A	SOIL	Copper	21.6		0.39	0.94	mg/Kg
O1233-08	B-38A	SOIL	Iron	25800		3.68	4.69	mg/Kg
O1233-08	B-38A	SOIL	Lead	25.0		0.24	0.56	mg/Kg
O1233-08	B-38A	SOIL	Magnesium	4700		8.54	93.7	mg/Kg
O1233-08	B-38A	SOIL	Manganese	872		0.10	0.94	mg/Kg
O1233-08	B-38A	SOIL	Mercury	0.049		0.0040	0.015	mg/Kg
O1233-08	B-38A	SOIL	Nickel	207		0.17	1.87	mg/Kg
O1233-08	B-38A	SOIL	Potassium	877		21.8	93.7	mg/Kg
O1233-08	B-38A	SOIL	Silver	1.67		0.073	0.47	mg/Kg
O1233-08	B-38A	SOIL	Sodium	62.0	J	21.9	93.7	mg/Kg
O1233-08	B-38A	SOIL	Vanadium	29.6		0.30	1.87	mg/Kg
O1233-08	B-38A	SOIL	Zinc	47.9		0.19	1.87	mg/Kg
Client ID :	**B-P38B**							
O1233-09	B-P38B	SOIL	Aluminum	2410		2.41	5.46	mg/Kg
O1233-09	B-P38B	SOIL	Arsenic	4.14		0.23	1.09	mg/Kg
O1233-09	B-P38B	SOIL	Barium	41.9		0.79	5.46	mg/Kg
O1233-09	B-P38B	SOIL	Beryllium	0.66		0.023	0.33	mg/Kg
O1233-09	B-P38B	SOIL	Cadmium	0.37		0.029	0.33	mg/Kg
O1233-09	B-P38B	SOIL	Calcium	1190		7.80	109	mg/Kg
O1233-09	B-P38B	SOIL	Chromium	19.3		0.098	0.55	mg/Kg
O1233-09	B-P38B	SOIL	Cobalt	12.1		0.082	1.64	mg/Kg
O1233-09	B-P38B	SOIL	Copper	20.3		0.46	1.09	mg/Kg
O1233-09	B-P38B	SOIL	Iron	15000		4.29	5.46	mg/Kg
O1233-09	B-P38B	SOIL	Lead	9.01		0.28	0.66	mg/Kg
O1233-09	B-P38B	SOIL	Magnesium	5140		9.95	109	mg/Kg
O1233-09	B-P38B	SOIL	Manganese	391		0.12	1.09	mg/Kg
O1233-09	B-P38B	SOIL	Nickel	120		0.20	2.18	mg/Kg
O1233-09	B-P38B	SOIL	Potassium	640		25.4	109	mg/Kg

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: O1233 **Order ID:** O1233

Client: Louis Berger U.S., Inc., A WSP Company **Project ID:** NYCDDC Phase II SCI Arthur Kill Road C

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
O1233-09	B-P38B	SOIL	Silver	0.87		0.085	0.55	mg/Kg
O1233-09	B-P38B	SOIL	Sodium	75.2	J	25.5	109	mg/Kg
O1233-09	B-P38B	SOIL	Vanadium	14.3		0.35	2.18	mg/Kg
O1233-09	B-P38B	SOIL	Zinc	31.3		0.22	2.18	mg/Kg
Client ID :	**B-P38C**							
O1233-11	B-P38C	SOIL	Aluminum	2800		2.40	5.44	mg/Kg
O1233-11	B-P38C	SOIL	Arsenic	3.54		0.23	1.09	mg/Kg
O1233-11	B-P38C	SOIL	Barium	29.2		0.78	5.44	mg/Kg
O1233-11	B-P38C	SOIL	Beryllium	0.69		0.023	0.33	mg/Kg
O1233-11	B-P38C	SOIL	Cadmium	0.43		0.029	0.33	mg/Kg
O1233-11	B-P38C	SOIL	Calcium	549		7.77	109	mg/Kg
O1233-11	B-P38C	SOIL	Chromium	15.3		0.098	0.54	mg/Kg
O1233-11	B-P38C	SOIL	Cobalt	9.31		0.082	1.63	mg/Kg
O1233-11	B-P38C	SOIL	Copper	19.2		0.46	1.09	mg/Kg
O1233-11	B-P38C	SOIL	Iron	15000		4.28	5.44	mg/Kg
O1233-11	B-P38C	SOIL	Lead	9.68		0.28	0.65	mg/Kg
O1233-11	B-P38C	SOIL	Magnesium	2330		9.91	109	mg/Kg
O1233-11	B-P38C	SOIL	Manganese	551		0.12	1.09	mg/Kg
O1233-11	B-P38C	SOIL	Nickel	95.3		0.20	2.18	mg/Kg
O1233-11	B-P38C	SOIL	Potassium	692		25.4	109	mg/Kg
O1233-11	B-P38C	SOIL	Silver	0.87		0.085	0.54	mg/Kg
O1233-11	B-P38C	SOIL	Sodium	33.2	J	25.5	109	mg/Kg
O1233-11	B-P38C	SOIL	Vanadium	15.9		0.35	2.18	mg/Kg
O1233-11	B-P38C	SOIL	Zinc	33.2		0.22	2.18	mg/Kg

CHEMTECH

SAMPLE DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34A	SDG No.:	O1233
Lab Sample ID:	O1233-02	Matrix:	SOIL
Level (low/med):	low	% Solid:	85.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	10800		1	2.44	5.53	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-36-0	Antimony	0.39	UN	1	0.39	2.76	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-38-2	Arsenic	7.51		1	0.23	1.11	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-39-3	Barium	39.6		1	0.80	5.53	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-41-7	Beryllium	0.68	N	1	0.023	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-43-9	Cadmium	0.13	J	1	0.030	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-70-2	Calcium	1060		1	7.90	111	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-47-3	Chromium	30.9		1	0.10	0.55	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-48-4	Cobalt	12.2		1	0.083	1.66	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-50-8	Copper	17.3	N	1	0.47	1.11	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7439-89-6	Iron	20900		1	4.35	5.53	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7439-92-1	Lead	19.1		1	0.29	0.66	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7439-95-4	Magnesium	2210		1	10.1	111	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7439-96-5	Manganese	286		1	0.12	1.11	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7439-97-6	Mercury	0.018		1	0.0040	0.015	mg/Kg	01/20/23 16:35	01/23/23 11:36	SW7471B	
7440-02-0	Nickel	56.2		1	0.20	2.21	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-09-7	Potassium	715		1	25.8	111	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7782-49-2	Selenium	0.48	U	1	0.48	1.11	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-22-4	Silver	1.24		1	0.086	0.55	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-23-5	Sodium	61.2	J	1	25.9	111	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-28-0	Thallium	0.34	U	1	0.34	2.21	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-62-2	Vanadium	24.4		1	0.35	2.21	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050
7440-66-6	Zinc	46.0		1	0.22	2.21	mg/Kg	01/20/23 15:00	01/24/23 14:04	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P34B	SDG No.:	O1233
Lab Sample ID:	O1233-03	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	3100		1	2.42	5.49	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-36-0	Antimony	0.39	UN	1	0.39	2.74	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-38-2	Arsenic	3.13		1	0.23	1.10	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-39-3	Barium	24.2		1	0.79	5.49	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-41-7	Beryllium	0.51	N	1	0.023	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-43-9	Cadmium	0.17	J	1	0.030	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-70-2	Calcium	1520		1	7.83	110	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-47-3	Chromium	54.3		1	0.099	0.55	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-48-4	Cobalt	9.66		1	0.082	1.65	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-50-8	Copper	7.54	N	1	0.46	1.10	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7439-89-6	Iron	10800		1	4.31	5.49	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7439-92-1	Lead	240		1	0.28	0.66	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7439-95-4	Magnesium	3560		1	9.99	110	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7439-96-5	Manganese	331		1	0.12	1.10	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7439-97-6	Mercury	0.0070	J	1	0.0030	0.014	mg/Kg	01/20/23 16:35	01/23/23 11:38	SW7471B	
7440-02-0	Nickel	128		1	0.20	2.19	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-09-7	Potassium	620		1	25.6	110	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7782-49-2	Selenium	0.47	U	1	0.47	1.10	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-22-4	Silver	0.60		1	0.086	0.55	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-23-5	Sodium	117		1	25.7	110	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-28-0	Thallium	0.34	U	1	0.34	2.19	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-62-2	Vanadium	10.3		1	0.35	2.19	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050
7440-66-6	Zinc	52.8		1	0.22	2.19	mg/Kg	01/20/23 15:00	01/24/23 14:08	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P36A	SDG No.:	O1233
Lab Sample ID:	O1233-04	Matrix:	SOIL
Level (low/med):	low	% Solid:	89.6

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	7380		1	2.25	5.10	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-36-0	Antimony	0.36	UN	1	0.36	2.55	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-38-2	Arsenic	8.08		1	0.21	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-39-3	Barium	60.2		1	0.73	5.10	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-41-7	Beryllium	0.82	N	1	0.021	0.31	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-43-9	Cadmium	0.63		1	0.028	0.31	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-70-2	Calcium	1650		1	7.28	102	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-47-3	Chromium	20.8		1	0.092	0.51	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-48-4	Cobalt	10.1		1	0.076	1.53	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-50-8	Copper	24.8	N	1	0.43	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7439-89-6	Iron	17500		1	4.01	5.10	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7439-92-1	Lead	69.2		1	0.27	0.61	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7439-95-4	Magnesium	3010		1	9.29	102	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7439-96-5	Manganese	202		1	0.11	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7439-97-6	Mercury	0.0070	J	1	0.0030	0.014	mg/Kg	01/20/23 16:35	01/23/23 11:40	SW7471B	
7440-02-0	Nickel	53.4		1	0.18	2.04	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-09-7	Potassium	789		1	23.7	102	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7782-49-2	Selenium	0.44	U	1	0.44	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-22-4	Silver	1.08		1	0.080	0.51	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-23-5	Sodium	89.6	J	1	23.9	102	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-28-0	Thallium	0.32	U	1	0.32	2.04	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-62-2	Vanadium	20.7		1	0.33	2.04	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050
7440-66-6	Zinc	88.8		1	0.20	2.04	mg/Kg	01/20/23 15:00	01/24/23 14:12	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P36B	SDG No.:	O1233
Lab Sample ID:	O1233-05	Matrix:	SOIL
Level (low/med):	low	% Solid:	90.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	3890		1	2.26	5.12	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-36-0	Antimony	0.36	UN	1	0.36	2.56	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-38-2	Arsenic	1.69		1	0.22	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-39-3	Barium	24.5		1	0.74	5.12	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-41-7	Beryllium	0.40	N	1	0.022	0.31	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-43-9	Cadmium	0.18	J	1	0.028	0.31	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-70-2	Calcium	6970		1	7.31	102	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-47-3	Chromium	10.0		1	0.092	0.51	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-48-4	Cobalt	5.02		1	0.077	1.54	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-50-8	Copper	8.78	N	1	0.43	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7439-89-6	Iron	9590		1	4.03	5.12	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7439-92-1	Lead	5.23		1	0.27	0.62	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7439-95-4	Magnesium	4880		1	9.33	102	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7439-96-5	Manganese	261		1	0.11	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7439-97-6	Mercury	0.0030	U	1	0.0030	0.014	mg/Kg	01/20/23 16:35	01/23/23 11:43	SW7471B	
7440-02-0	Nickel	15.9		1	0.18	2.05	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-09-7	Potassium	603		1	23.9	102	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7782-49-2	Selenium	0.44	U	1	0.44	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-22-4	Silver	0.56		1	0.080	0.51	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-23-5	Sodium	156		1	24.0	102	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-28-0	Thallium	0.32	U	1	0.32	2.05	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-62-2	Vanadium	11.6		1	0.33	2.05	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050
7440-66-6	Zinc	19.8		1	0.21	2.05	mg/Kg	01/20/23 15:00	01/24/23 14:15	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P37A	SDG No.:	O1233
Lab Sample ID:	O1233-06	Matrix:	SOIL
Level (low/med):	low	% Solid:	87.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	5130		1	2.24	5.08	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-36-0	Antimony	0.36	UN	1	0.36	2.54	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-38-2	Arsenic	4.27		1	0.21	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-39-3	Barium	47.5		1	0.73	5.08	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-41-7	Beryllium	0.60	N	1	0.021	0.31	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-43-9	Cadmium	0.40		1	0.027	0.31	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-70-2	Calcium	890		1	7.25	102	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-47-3	Chromium	18.1		1	0.091	0.51	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-48-4	Cobalt	9.11		1	0.076	1.52	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-50-8	Copper	29.7	N	1	0.43	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7439-89-6	Iron	13600		1	3.99	5.08	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7439-92-1	Lead	33.5		1	0.26	0.61	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7439-95-4	Magnesium	2200		1	9.25	102	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7439-96-5	Manganese	328		1	0.11	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7439-97-6	Mercury	0.032		1	0.0040	0.015	mg/Kg	01/20/23 16:35	01/23/23 11:45	SW7471B	
7440-02-0	Nickel	54.5		1	0.18	2.03	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-09-7	Potassium	569		1	23.7	102	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7782-49-2	Selenium	0.44	U	1	0.44	1.02	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-22-4	Silver	0.87		1	0.079	0.51	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-23-5	Sodium	71.8	J	1	23.8	102	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-28-0	Thallium	0.32	U	1	0.32	2.03	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-62-2	Vanadium	17.5		1	0.33	2.03	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050
7440-66-6	Zinc	50.8		1	0.20	2.03	mg/Kg	01/20/23 15:00	01/24/23 14:19	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P37B	SDG No.:	O1233
Lab Sample ID:	O1233-07	Matrix:	SOIL
Level (low/med):	low	% Solid:	83.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	4240		1	2.40	5.42	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-36-0	Antimony	0.38	UN	1	0.38	2.71	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-38-2	Arsenic	1.84		1	0.23	1.08	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-39-3	Barium	15.8		1	0.78	5.42	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-41-7	Beryllium	0.51	N	1	0.023	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-43-9	Cadmium	0.23	J	1	0.029	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-70-2	Calcium	1010		1	7.74	108	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-47-3	Chromium	14.6		1	0.098	0.54	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-48-4	Cobalt	6.49		1	0.081	1.63	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-50-8	Copper	14.4	N	1	0.46	1.08	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7439-89-6	Iron	13300		1	4.26	5.42	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7439-92-1	Lead	7.88		1	0.28	0.65	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7439-95-4	Magnesium	2070		1	9.87	108	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7439-96-5	Manganese	71.3		1	0.12	1.08	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7439-97-6	Mercury	0.021		1	0.0040	0.015	mg/Kg	01/20/23 16:35	01/23/23 11:47	SW7471B	
7440-02-0	Nickel	37.7		1	0.20	2.17	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-09-7	Potassium	569		1	25.3	108	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7782-49-2	Selenium	0.47	U	1	0.47	1.08	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-22-4	Silver	0.82		1	0.085	0.54	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-23-5	Sodium	59.0	J	1	25.4	108	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-28-0	Thallium	0.34	U	1	0.34	2.17	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-62-2	Vanadium	17.1		1	0.35	2.17	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050
7440-66-6	Zinc	29.3		1	0.22	2.17	mg/Kg	01/20/23 15:00	01/24/23 14:23	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-38A	SDG No.:	O1233
Lab Sample ID:	O1233-08	Matrix:	SOIL
Level (low/med):	low	% Solid:	89.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	9770		1	2.07	4.69	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-36-0	Antimony	0.33	UN	1	0.33	2.34	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-38-2	Arsenic	5.73		1	0.20	0.94	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-39-3	Barium	54.3		1	0.68	4.69	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-41-7	Beryllium	0.93	N	1	0.020	0.28	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-43-9	Cadmium	0.79		1	0.025	0.28	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-70-2	Calcium	2820		1	6.69	93.7	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-47-3	Chromium	40.9		1	0.084	0.47	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-48-4	Cobalt	20.6		1	0.070	1.41	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-50-8	Copper	21.6	N	1	0.39	0.94	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7439-89-6	Iron	25800		1	3.68	4.69	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7439-92-1	Lead	25.0		1	0.24	0.56	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7439-95-4	Magnesium	4700		1	8.54	93.7	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7439-96-5	Manganese	872		1	0.10	0.94	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7439-97-6	Mercury	0.049		1	0.0040	0.015	mg/Kg	01/20/23 16:35	01/23/23 11:50	SW7471B	
7440-02-0	Nickel	207		1	0.17	1.87	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-09-7	Potassium	877		1	21.8	93.7	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7782-49-2	Selenium	0.40	U	1	0.40	0.94	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-22-4	Silver	1.67		1	0.073	0.47	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-23-5	Sodium	62.0	J	1	21.9	93.7	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-28-0	Thallium	0.29	U	1	0.29	1.87	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-62-2	Vanadium	29.6		1	0.30	1.87	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050
7440-66-6	Zinc	47.9		1	0.19	1.87	mg/Kg	01/20/23 15:00	01/24/23 14:42	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P38B	SDG No.:	O1233
Lab Sample ID:	O1233-09	Matrix:	SOIL
Level (low/med):	low	% Solid:	80.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	2410		1	2.41	5.46	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-36-0	Antimony	0.39	UN	1	0.39	2.73	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-38-2	Arsenic	4.14		1	0.23	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-39-3	Barium	41.9		1	0.79	5.46	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-41-7	Beryllium	0.66	N	1	0.023	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-43-9	Cadmium	0.37		1	0.029	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-70-2	Calcium	1190		1	7.80	109	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-47-3	Chromium	19.3		1	0.098	0.55	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-48-4	Cobalt	12.1		1	0.082	1.64	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-50-8	Copper	20.3	N	1	0.46	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7439-89-6	Iron	15000		1	4.29	5.46	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7439-92-1	Lead	9.01		1	0.28	0.66	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7439-95-4	Magnesium	5140		1	9.95	109	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7439-96-5	Manganese	391		1	0.12	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7439-97-6	Mercury	0.0040	U	1	0.0040	0.015	mg/Kg	01/20/23 16:35	01/23/23 11:52	SW7471B	
7440-02-0	Nickel	120		1	0.20	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-09-7	Potassium	640		1	25.4	109	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7782-49-2	Selenium	0.47	U	1	0.47	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-22-4	Silver	0.87		1	0.085	0.55	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-23-5	Sodium	75.2	J	1	25.5	109	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-28-0	Thallium	0.34	U	1	0.34	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-62-2	Vanadium	14.3		1	0.35	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050
7440-66-6	Zinc	31.3		1	0.22	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:46	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Louis Berger U.S., Inc., A WSP Company	Date Collected:	01/18/23
Project:	NYCDDC Phase II SCI Arthur Kill Road CEQR	Date Received:	01/19/23
Client Sample ID:	B-P38C	SDG No.:	O1233
Lab Sample ID:	O1233-11	Matrix:	SOIL
Level (low/med):	low	% Solid:	85.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	2800		1	2.40	5.44	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-36-0	Antimony	0.38	UN	1	0.38	2.72	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-38-2	Arsenic	3.54		1	0.23	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-39-3	Barium	29.2		1	0.78	5.44	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-41-7	Beryllium	0.69	N	1	0.023	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-43-9	Cadmium	0.43		1	0.029	0.33	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-70-2	Calcium	549		1	7.77	109	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-47-3	Chromium	15.3		1	0.098	0.54	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-48-4	Cobalt	9.31		1	0.082	1.63	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-50-8	Copper	19.2	N	1	0.46	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7439-89-6	Iron	15000		1	4.28	5.44	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7439-92-1	Lead	9.68		1	0.28	0.65	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7439-95-4	Magnesium	2330		1	9.91	109	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7439-96-5	Manganese	551		1	0.12	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7439-97-6	Mercury	0.0040	U	1	0.0040	0.015	mg/Kg	01/20/23 16:35	01/23/23 11:59	SW7471B	
7440-02-0	Nickel	95.3		1	0.20	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-09-7	Potassium	692		1	25.4	109	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7782-49-2	Selenium	0.47	U	1	0.47	1.09	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-22-4	Silver	0.87		1	0.085	0.54	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-23-5	Sodium	33.2	J	1	25.5	109	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-28-0	Thallium	0.34	U	1	0.34	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-62-2	Vanadium	15.9		1	0.35	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050
7440-66-6	Zinc	33.2		1	0.22	2.18	mg/Kg	01/20/23 15:00	01/24/23 14:50	SW6010	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	Brown	Clarity After:		Artifacts:	No
Comments:	METALS-TAL				

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH

METAL CALIBRATION DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV12	Mercury	3.91	4.0	98	90 - 110	CV	01/23/2023	10:28	LB123763

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV93	Mercury	4.87	5.0	97	90 - 110	CV	01/23/2023	10:33	LB123763
CCV94	Mercury	4.70	5.0	94	90 - 110	CV	01/23/2023	11:00	LB123763
CCV95	Mercury	4.66	5.0	93	90 - 110	CV	01/23/2023	11:27	LB123763
CCV96	Mercury	4.90	5.0	98	90 - 110	CV	01/23/2023	11:54	LB123763
CCV97	Mercury	4.96	5.0	99	90 - 110	CV	01/23/2023	12:21	LB123763
CCV98	Mercury	4.71	5.0	94	90 - 110	CV	01/23/2023	12:35	LB123763

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2530	2500	101	90 - 110	P	01/20/2023	12:38	LB123754
	Antimony	999	1000	100	90 - 110	P	01/20/2023	12:38	LB123754
	Arsenic	1040	1000	104	90 - 110	P	01/20/2023	12:38	LB123754
	Barium	505	520	97	90 - 110	P	01/20/2023	12:38	LB123754
	Beryllium	512	510	100	90 - 110	P	01/20/2023	12:38	LB123754
	Cadmium	509	510	100	90 - 110	P	01/20/2023	12:38	LB123754
	Calcium	9870	10000	99	90 - 110	P	01/20/2023	12:38	LB123754
	Chromium	524	520	101	90 - 110	P	01/20/2023	12:38	LB123754
	Cobalt	502	520	97	90 - 110	P	01/20/2023	12:38	LB123754
	Copper	525	510	103	90 - 110	P	01/20/2023	12:38	LB123754
	Iron	10100	10000	101	90 - 110	P	01/20/2023	12:38	LB123754
	Lead	1020	1000	102	90 - 110	P	01/20/2023	12:38	LB123754
	Magnesium	5910	6000	98	90 - 110	P	01/20/2023	12:38	LB123754
	Manganese	514	520	99	90 - 110	P	01/20/2023	12:38	LB123754
	Nickel	506	530	95	90 - 110	P	01/20/2023	12:38	LB123754
	Potassium	9940	9900	100	90 - 110	P	01/20/2023	12:38	LB123754
	Selenium	1040	1000	104	90 - 110	P	01/20/2023	12:38	LB123754
	Silver	255	250	102	90 - 110	P	01/20/2023	12:38	LB123754
	Sodium	9970	10000	100	90 - 110	P	01/20/2023	12:38	LB123754
	Thallium	1040	1000	104	90 - 110	P	01/20/2023	12:38	LB123754
	Vanadium	493	500	99	90 - 110	P	01/20/2023	12:38	LB123754
	Zinc	1020	1000	102	90 - 110	P	01/20/2023	12:38	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9850	10000	98	90 - 110	P	01/20/2023	13:42	LB123754
	Antimony	4950	5000	99	90 - 110	P	01/20/2023	13:42	LB123754
	Arsenic	5070	5000	101	90 - 110	P	01/20/2023	13:42	LB123754
	Barium	10600	10000	106	90 - 110	P	01/20/2023	13:42	LB123754
	Beryllium	238	250	95	90 - 110	P	01/20/2023	13:42	LB123754
	Cadmium	2490	2500	100	90 - 110	P	01/20/2023	13:42	LB123754
	Calcium	25100	25000	100	90 - 110	P	01/20/2023	13:42	LB123754
	Chromium	964	1000	96	90 - 110	P	01/20/2023	13:42	LB123754
	Cobalt	2440	2500	98	90 - 110	P	01/20/2023	13:42	LB123754
	Copper	1230	1250	99	90 - 110	P	01/20/2023	13:42	LB123754
	Iron	5090	5000	102	90 - 110	P	01/20/2023	13:42	LB123754
	Lead	4940	5000	99	90 - 110	P	01/20/2023	13:42	LB123754
	Magnesium	24400	25000	98	90 - 110	P	01/20/2023	13:42	LB123754
	Manganese	2520	2500	101	90 - 110	P	01/20/2023	13:42	LB123754
	Nickel	2500	2500	100	90 - 110	P	01/20/2023	13:42	LB123754
	Potassium	25300	25000	101	90 - 110	P	01/20/2023	13:42	LB123754
	Selenium	5020	5000	100	90 - 110	P	01/20/2023	13:42	LB123754
	Silver	1210	1250	97	90 - 110	P	01/20/2023	13:42	LB123754
	Sodium	24200	25000	97	90 - 110	P	01/20/2023	13:42	LB123754
	Thallium	5070	5000	101	90 - 110	P	01/20/2023	13:42	LB123754
	Vanadium	2530	2500	101	90 - 110	P	01/20/2023	13:42	LB123754
	Zinc	2510	2500	100	90 - 110	P	01/20/2023	13:42	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV01	Aluminum	105	100	105	80 - 120	P	01/20/2023	13:46	LB123754
	Antimony	52.1	50.0	104	80 - 120	P	01/20/2023	13:46	LB123754
	Arsenic	20.6	20.0	103	80 - 120	P	01/20/2023	13:46	LB123754
	Barium	102	100	102	80 - 120	P	01/20/2023	13:46	LB123754
	Beryllium	6.28	6.0	105	80 - 120	P	01/20/2023	13:46	LB123754
	Cadmium	6.60	6.0	110	80 - 120	P	01/20/2023	13:46	LB123754
	Calcium	2000	2000	100	80 - 120	P	01/20/2023	13:46	LB123754
	Chromium	9.74	10.0	97	80 - 120	P	01/20/2023	13:46	LB123754
	Cobalt	29.3	30.0	98	80 - 120	P	01/20/2023	13:46	LB123754
	Copper	22.4	20.0	112	80 - 120	P	01/20/2023	13:46	LB123754
	Iron	112	100	112	80 - 120	P	01/20/2023	13:46	LB123754
	Lead	11.7	12.0	98	80 - 120	P	01/20/2023	13:46	LB123754
	Magnesium	2130	2000	107	80 - 120	P	01/20/2023	13:46	LB123754
	Manganese	21.5	20.0	108	80 - 120	P	01/20/2023	13:46	LB123754
	Nickel	39.9	40.0	100	80 - 120	P	01/20/2023	13:46	LB123754
	Potassium	2070	2000	104	80 - 120	P	01/20/2023	13:46	LB123754
	Selenium	19.2	20.0	96	80 - 120	P	01/20/2023	13:46	LB123754
	Silver	11.8	10.0	118	80 - 120	P	01/20/2023	13:46	LB123754
	Sodium	1990	2000	100	80 - 120	P	01/20/2023	13:46	LB123754
	Thallium	42.0	40.0	105	80 - 120	P	01/20/2023	13:46	LB123754
	Vanadium	36.3	40.0	91	80 - 120	P	01/20/2023	13:46	LB123754
	Zinc	43.0	40.0	108	80 - 120	P	01/20/2023	13:46	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Aluminum	10500	10000	105	90 - 110	P	01/20/2023	14:37	LB123754
	Antimony	5270	5000	105	90 - 110	P	01/20/2023	14:37	LB123754
	Arsenic	5370	5000	108	90 - 110	P	01/20/2023	14:37	LB123754
	Barium	10900	10000	109	90 - 110	P	01/20/2023	14:37	LB123754
	Beryllium	245	250	98	90 - 110	P	01/20/2023	14:37	LB123754
	Cadmium	2610	2500	104	90 - 110	P	01/20/2023	14:37	LB123754
	Calcium	26000	25000	104	90 - 110	P	01/20/2023	14:37	LB123754
	Chromium	1030	1000	103	90 - 110	P	01/20/2023	14:37	LB123754
	Cobalt	2560	2500	102	90 - 110	P	01/20/2023	14:37	LB123754
	Copper	1290	1250	104	90 - 110	P	01/20/2023	14:37	LB123754
	Iron	5370	5000	107	90 - 110	P	01/20/2023	14:37	LB123754
	Lead	5170	5000	103	90 - 110	P	01/20/2023	14:37	LB123754
	Magnesium	25700	25000	103	90 - 110	P	01/20/2023	14:37	LB123754
	Manganese	2570	2500	103	90 - 110	P	01/20/2023	14:37	LB123754
	Nickel	2620	2500	105	90 - 110	P	01/20/2023	14:37	LB123754
	Potassium	26700	25000	107	90 - 110	P	01/20/2023	14:37	LB123754
	Selenium	5250	5000	105	90 - 110	P	01/20/2023	14:37	LB123754
	Silver	1290	1250	103	90 - 110	P	01/20/2023	14:37	LB123754
	Sodium	25100	25000	101	90 - 110	P	01/20/2023	14:37	LB123754
	Thallium	5390	5000	108	90 - 110	P	01/20/2023	14:37	LB123754
	Vanadium	2660	2500	106	90 - 110	P	01/20/2023	14:37	LB123754
	Zinc	2700	2500	108	90 - 110	P	01/20/2023	14:37	LB123754
CCV03	Aluminum	10100	10000	101	90 - 110	P	01/20/2023	15:29	LB123754
	Antimony	5210	5000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Arsenic	5270	5000	106	90 - 110	P	01/20/2023	15:29	LB123754
	Barium	10500	10000	105	90 - 110	P	01/20/2023	15:29	LB123754
	Beryllium	235	250	94	90 - 110	P	01/20/2023	15:29	LB123754
	Cadmium	2570	2500	103	90 - 110	P	01/20/2023	15:29	LB123754
	Calcium	25100	25000	100	90 - 110	P	01/20/2023	15:29	LB123754
	Chromium	994	1000	99	90 - 110	P	01/20/2023	15:29	LB123754
	Cobalt	2540	2500	102	90 - 110	P	01/20/2023	15:29	LB123754
	Copper	1280	1250	103	90 - 110	P	01/20/2023	15:29	LB123754
	Iron	5210	5000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Lead	5110	5000	102	90 - 110	P	01/20/2023	15:29	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV03	Magnesium	24500	25000	98	90 - 110	P	01/20/2023	15:29	LB123754
	Manganese	2480	2500	99	90 - 110	P	01/20/2023	15:29	LB123754
	Nickel	2580	2500	103	90 - 110	P	01/20/2023	15:29	LB123754
	Potassium	25900	25000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Selenium	5200	5000	104	90 - 110	P	01/20/2023	15:29	LB123754
	Silver	1240	1250	99	90 - 110	P	01/20/2023	15:29	LB123754
	Sodium	25100	25000	100	90 - 110	P	01/20/2023	15:29	LB123754
	Thallium	5300	5000	106	90 - 110	P	01/20/2023	15:29	LB123754
	Vanadium	2560	2500	102	90 - 110	P	01/20/2023	15:29	LB123754
	Zinc	2570	2500	103	90 - 110	P	01/20/2023	15:29	LB123754
CCV04	Aluminum	10000	10000	100	90 - 110	P	01/20/2023	16:15	LB123754
	Antimony	5240	5000	105	90 - 110	P	01/20/2023	16:15	LB123754
	Arsenic	5290	5000	106	90 - 110	P	01/20/2023	16:15	LB123754
	Barium	10300	10000	103	90 - 110	P	01/20/2023	16:15	LB123754
	Beryllium	238	250	95	90 - 110	P	01/20/2023	16:15	LB123754
	Cadmium	2590	2500	104	90 - 110	P	01/20/2023	16:15	LB123754
	Calcium	24900	25000	100	90 - 110	P	01/20/2023	16:15	LB123754
	Chromium	997	1000	100	90 - 110	P	01/20/2023	16:15	LB123754
	Cobalt	2560	2500	102	90 - 110	P	01/20/2023	16:15	LB123754
	Copper	1290	1250	103	90 - 110	P	01/20/2023	16:15	LB123754
	Iron	5180	5000	104	90 - 110	P	01/20/2023	16:15	LB123754
	Lead	5140	5000	103	90 - 110	P	01/20/2023	16:15	LB123754
	Magnesium	24600	25000	98	90 - 110	P	01/20/2023	16:15	LB123754
	Manganese	2460	2500	98	90 - 110	P	01/20/2023	16:15	LB123754
	Nickel	2600	2500	104	90 - 110	P	01/20/2023	16:15	LB123754
	Potassium	25800	25000	103	90 - 110	P	01/20/2023	16:15	LB123754
	Selenium	5220	5000	104	90 - 110	P	01/20/2023	16:15	LB123754
	Silver	1250	1250	100	90 - 110	P	01/20/2023	16:15	LB123754
	Sodium	25300	25000	101	90 - 110	P	01/20/2023	16:15	LB123754
	Thallium	5320	5000	106	90 - 110	P	01/20/2023	16:15	LB123754
	Vanadium	2530	2500	101	90 - 110	P	01/20/2023	16:15	LB123754
	Zinc	2580	2500	103	90 - 110	P	01/20/2023	16:15	LB123754
CCV05	Aluminum	9970	10000	100	90 - 110	P	01/20/2023	17:11	LB123754
	Antimony	4970	5000	99	90 - 110	P	01/20/2023	17:11	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Arsenic	5020	5000	100	90 - 110	P	01/20/2023	17:11	LB123754
	Barium	10100	10000	101	90 - 110	P	01/20/2023	17:11	LB123754
	Beryllium	236	250	94	90 - 110	P	01/20/2023	17:11	LB123754
	Cadmium	2460	2500	98	90 - 110	P	01/20/2023	17:11	LB123754
	Calcium	24600	25000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Chromium	980	1000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Cobalt	2430	2500	97	90 - 110	P	01/20/2023	17:11	LB123754
	Copper	1230	1250	98	90 - 110	P	01/20/2023	17:11	LB123754
	Iron	5130	5000	103	90 - 110	P	01/20/2023	17:11	LB123754
	Lead	4900	5000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Magnesium	24300	25000	97	90 - 110	P	01/20/2023	17:11	LB123754
	Manganese	2420	2500	97	90 - 110	P	01/20/2023	17:11	LB123754
	Nickel	2470	2500	99	90 - 110	P	01/20/2023	17:11	LB123754
	Potassium	25100	25000	100	90 - 110	P	01/20/2023	17:11	LB123754
	Selenium	4930	5000	99	90 - 110	P	01/20/2023	17:11	LB123754
	Silver	1220	1250	98	90 - 110	P	01/20/2023	17:11	LB123754
	Sodium	24600	25000	98	90 - 110	P	01/20/2023	17:11	LB123754
	Thallium	5040	5000	101	90 - 110	P	01/20/2023	17:11	LB123754
	Vanadium	2480	2500	99	90 - 110	P	01/20/2023	17:11	LB123754
	Zinc	2530	2500	101	90 - 110	P	01/20/2023	17:11	LB123754
CCV06	Aluminum	10000	10000	100	90 - 110	P	01/20/2023	18:47	LB123754
	Antimony	5000	5000	100	90 - 110	P	01/20/2023	18:47	LB123754
	Arsenic	5190	5000	104	90 - 110	P	01/20/2023	18:47	LB123754
	Barium	11000	10000	110	90 - 110	P	01/20/2023	18:47	LB123754
	Beryllium	229	250	92	90 - 110	P	01/20/2023	18:47	LB123754
	Cadmium	2480	2500	99	90 - 110	P	01/20/2023	18:47	LB123754
	Calcium	25200	25000	101	90 - 110	P	01/20/2023	18:47	LB123754
	Chromium	965	1000	96	90 - 110	P	01/20/2023	18:47	LB123754
	Cobalt	2380	2500	95	90 - 110	P	01/20/2023	18:47	LB123754
	Copper	1210	1250	97	90 - 110	P	01/20/2023	18:47	LB123754
	Iron	5370	5000	108	90 - 110	P	01/20/2023	18:47	LB123754
	Lead	4910	5000	98	90 - 110	P	01/20/2023	18:47	LB123754
	Magnesium	24600	25000	99	90 - 110	P	01/20/2023	18:47	LB123754
	Manganese	2530	2500	101	90 - 110	P	01/20/2023	18:47	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV06	Nickel	2510	2500	100	90 - 110	P	01/20/2023	18:47	LB123754
	Potassium	26900	25000	108	90 - 110	P	01/20/2023	18:47	LB123754
	Selenium	5070	5000	102	90 - 110	P	01/20/2023	18:47	LB123754
	Silver	1220	1250	98	90 - 110	P	01/20/2023	18:47	LB123754
	Sodium	23700	25000	95	90 - 110	P	01/20/2023	18:47	LB123754
	Thallium	5190	5000	104	90 - 110	P	01/20/2023	18:47	LB123754
	Vanadium	2580	2500	103	90 - 110	P	01/20/2023	18:47	LB123754
	Zinc	2580	2500	103	90 - 110	P	01/20/2023	18:47	LB123754
CCV07	Aluminum	9640	10000	96	90 - 110	P	01/20/2023	19:44	LB123754
	Antimony	4890	5000	98	90 - 110	P	01/20/2023	19:44	LB123754
	Arsenic	5060	5000	101	90 - 110	P	01/20/2023	19:44	LB123754
	Barium	10600	10000	106	90 - 110	P	01/20/2023	19:44	LB123754
	Beryllium	251	250	100	90 - 110	P	01/20/2023	19:44	LB123754
	Cadmium	2400	2500	96	90 - 110	P	01/20/2023	19:44	LB123754
	Calcium	24200	25000	97	90 - 110	P	01/20/2023	19:44	LB123754
	Chromium	935	1000	94	90 - 110	P	01/20/2023	19:44	LB123754
	Cobalt	2300	2500	92	90 - 110	P	01/20/2023	19:44	LB123754
	Copper	1170	1250	94	90 - 110	P	01/20/2023	19:44	LB123754
	Iron	5220	5000	104	90 - 110	P	01/20/2023	19:44	LB123754
	Lead	4750	5000	95	90 - 110	P	01/20/2023	19:44	LB123754
	Magnesium	23700	25000	95	90 - 110	P	01/20/2023	19:44	LB123754
	Manganese	2440	2500	97	90 - 110	P	01/20/2023	19:44	LB123754
	Nickel	2440	2500	98	90 - 110	P	01/20/2023	19:44	LB123754
	Potassium	25500	25000	102	90 - 110	P	01/20/2023	19:44	LB123754
	Selenium	4950	5000	99	90 - 110	P	01/20/2023	19:44	LB123754
	Silver	1180	1250	95	90 - 110	P	01/20/2023	19:44	LB123754
	Sodium	23300	25000	93	90 - 110	P	01/20/2023	19:44	LB123754
	Thallium	5060	5000	101	90 - 110	P	01/20/2023	19:44	LB123754
	Vanadium	2510	2500	100	90 - 110	P	01/20/2023	19:44	LB123754
	Zinc	2490	2500	100	90 - 110	P	01/20/2023	19:44	LB123754
CCV08	Aluminum	9870	10000	99	90 - 110	P	01/20/2023	20:30	LB123754
	Antimony	5000	5000	100	90 - 110	P	01/20/2023	20:30	LB123754
	Arsenic	5200	5000	104	90 - 110	P	01/20/2023	20:30	LB123754
	Barium	10700	10000	107	90 - 110	P	01/20/2023	20:30	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV08	Beryllium	257	250	103	90 - 110	P	01/20/2023	20:30	LB123754
	Cadmium	2460	2500	99	90 - 110	P	01/20/2023	20:30	LB123754
	Calcium	24700	25000	99	90 - 110	P	01/20/2023	20:30	LB123754
	Chromium	941	1000	94	90 - 110	P	01/20/2023	20:30	LB123754
	Cobalt	2360	2500	94	90 - 110	P	01/20/2023	20:30	LB123754
	Copper	1200	1250	96	90 - 110	P	01/20/2023	20:30	LB123754
	Iron	5230	5000	105	90 - 110	P	01/20/2023	20:30	LB123754
	Lead	4890	5000	98	90 - 110	P	01/20/2023	20:30	LB123754
	Magnesium	24200	25000	97	90 - 110	P	01/20/2023	20:30	LB123754
	Manganese	2470	2500	99	90 - 110	P	01/20/2023	20:30	LB123754
	Nickel	2510	2500	100	90 - 110	P	01/20/2023	20:30	LB123754
	Potassium	25100	25000	100	90 - 110	P	01/20/2023	20:30	LB123754
	Selenium	5060	5000	101	90 - 110	P	01/20/2023	20:30	LB123754
	Silver	1190	1250	95	90 - 110	P	01/20/2023	20:30	LB123754
	Sodium	23100	25000	92	90 - 110	P	01/20/2023	20:30	LB123754
	Thallium	5190	5000	104	90 - 110	P	01/20/2023	20:30	LB123754
	Vanadium	2540	2500	102	90 - 110	P	01/20/2023	20:30	LB123754
	Zinc	2510	2500	101	90 - 110	P	01/20/2023	20:30	LB123754
CCV09	Aluminum	9620	10000	96	90 - 110	P	01/20/2023	21:16	LB123754
	Antimony	4940	5000	99	90 - 110	P	01/20/2023	21:16	LB123754
	Arsenic	5120	5000	102	90 - 110	P	01/20/2023	21:16	LB123754
	Barium	10500	10000	105	90 - 110	P	01/20/2023	21:16	LB123754
	Beryllium	255	250	102	90 - 110	P	01/20/2023	21:16	LB123754
	Cadmium	2430	2500	97	90 - 110	P	01/20/2023	21:16	LB123754
	Calcium	24100	25000	96	90 - 110	P	01/20/2023	21:16	LB123754
	Chromium	929	1000	93	90 - 110	P	01/20/2023	21:16	LB123754
	Cobalt	2320	2500	93	90 - 110	P	01/20/2023	21:16	LB123754
	Copper	1180	1250	94	90 - 110	P	01/20/2023	21:16	LB123754
	Iron	5100	5000	102	90 - 110	P	01/20/2023	21:16	LB123754
	Lead	4820	5000	96	90 - 110	P	01/20/2023	21:16	LB123754
	Magnesium	23800	25000	95	90 - 110	P	01/20/2023	21:16	LB123754
	Manganese	2410	2500	96	90 - 110	P	01/20/2023	21:16	LB123754
	Nickel	2480	2500	99	90 - 110	P	01/20/2023	21:16	LB123754
	Potassium	24700	25000	99	90 - 110	P	01/20/2023	21:16	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV09	Selenium	5000	5000	100	90 - 110	P	01/20/2023	21:16	LB123754
	Silver	1180	1250	94	90 - 110	P	01/20/2023	21:16	LB123754
	Sodium	22900	25000	92	90 - 110	P	01/20/2023	21:16	LB123754
	Thallium	5120	5000	102	90 - 110	P	01/20/2023	21:16	LB123754
	Vanadium	2490	2500	100	90 - 110	P	01/20/2023	21:16	LB123754
	Zinc	2490	2500	99	90 - 110	P	01/20/2023	21:16	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Aluminum	2520	2500	101	90 - 110	P	01/24/2023	13:12	LB123785
	Antimony	1000	1000	100	90 - 110	P	01/24/2023	13:12	LB123785
	Arsenic	1050	1000	105	90 - 110	P	01/24/2023	13:12	LB123785
	Barium	497	520	96	90 - 110	P	01/24/2023	13:12	LB123785
	Beryllium	507	510	100	90 - 110	P	01/24/2023	13:12	LB123785
	Cadmium	511	510	100	90 - 110	P	01/24/2023	13:12	LB123785
	Calcium	9880	10000	99	90 - 110	P	01/24/2023	13:12	LB123785
	Chromium	519	520	100	90 - 110	P	01/24/2023	13:12	LB123785
	Cobalt	504	520	97	90 - 110	P	01/24/2023	13:12	LB123785
	Copper	528	510	104	90 - 110	P	01/24/2023	13:12	LB123785
	Iron	9840	10000	98	90 - 110	P	01/24/2023	13:12	LB123785
	Lead	1020	1000	102	90 - 110	P	01/24/2023	13:12	LB123785
	Magnesium	6000	6000	100	90 - 110	P	01/24/2023	13:12	LB123785
	Manganese	510	520	98	90 - 110	P	01/24/2023	13:12	LB123785
	Nickel	508	530	96	90 - 110	P	01/24/2023	13:12	LB123785
	Potassium	9640	9900	97	90 - 110	P	01/24/2023	13:12	LB123785
	Selenium	1050	1000	105	90 - 110	P	01/24/2023	13:12	LB123785
	Silver	252	250	101	90 - 110	P	01/24/2023	13:12	LB123785
	Sodium	9740	10000	97	90 - 110	P	01/24/2023	13:12	LB123785
	Thallium	1050	1000	105	90 - 110	P	01/24/2023	13:12	LB123785
	Vanadium	503	500	101	90 - 110	P	01/24/2023	13:12	LB123785
	Zinc	1010	1000	101	90 - 110	P	01/24/2023	13:12	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Aluminum	9760	10000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Antimony	4880	5000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Arsenic	4860	5000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Barium	9840	10000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Beryllium	241	250	96	90 - 110	P	01/24/2023	13:33	LB123785
	Cadmium	2420	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Calcium	24300	25000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Chromium	984	1000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Cobalt	2420	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Copper	1230	1250	98	90 - 110	P	01/24/2023	13:33	LB123785
	Iron	5000	5000	100	90 - 110	P	01/24/2023	13:33	LB123785
	Lead	4840	5000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Magnesium	24200	25000	97	90 - 110	P	01/24/2023	13:33	LB123785
	Manganese	2440	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Nickel	2420	2500	97	90 - 110	P	01/24/2023	13:33	LB123785
	Potassium	24800	25000	99	90 - 110	P	01/24/2023	13:33	LB123785
	Selenium	4880	5000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Silver	1220	1250	98	90 - 110	P	01/24/2023	13:33	LB123785
	Sodium	24800	25000	99	90 - 110	P	01/24/2023	13:33	LB123785
	Thallium	4880	5000	98	90 - 110	P	01/24/2023	13:33	LB123785
	Vanadium	2440	2500	98	90 - 110	P	01/24/2023	13:33	LB123785
	Zinc	2460	2500	98	90 - 110	P	01/24/2023	13:33	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV01	Aluminum	90.7	100	91	80 - 120	P	01/24/2023	13:41	LB123785
	Antimony	48.3	50.0	97	80 - 120	P	01/24/2023	13:41	LB123785
	Arsenic	21.7	20.0	109	80 - 120	P	01/24/2023	13:41	LB123785
	Barium	100	100	100	80 - 120	P	01/24/2023	13:41	LB123785
	Beryllium	6.49	6.0	108	80 - 120	P	01/24/2023	13:41	LB123785
	Cadmium	6.42	6.0	107	80 - 120	P	01/24/2023	13:41	LB123785
	Calcium	1930	2000	97	80 - 120	P	01/24/2023	13:41	LB123785
	Chromium	10.7	10.0	107	80 - 120	P	01/24/2023	13:41	LB123785
	Cobalt	29.7	30.0	99	80 - 120	P	01/24/2023	13:41	LB123785
	Copper	23.0	20.0	115	80 - 120	P	01/24/2023	13:41	LB123785
	Iron	88.9	100	89	80 - 120	P	01/24/2023	13:41	LB123785
	Lead	11.4	12.0	95	80 - 120	P	01/24/2023	13:41	LB123785
	Magnesium	2150	2000	107	80 - 120	P	01/24/2023	13:41	LB123785
	Manganese	19.9	20.0	100	80 - 120	P	01/24/2023	13:41	LB123785
	Nickel	39.0	40.0	98	80 - 120	P	01/24/2023	13:41	LB123785
	Potassium	1960	2000	98	80 - 120	P	01/24/2023	13:41	LB123785
	Selenium	21.8	20.0	109	80 - 120	P	01/24/2023	13:41	LB123785
	Silver	10.5	10.0	105	80 - 120	P	01/24/2023	13:41	LB123785
	Sodium	2040	2000	102	80 - 120	P	01/24/2023	13:41	LB123785
	Thallium	40.2	40.0	100	80 - 120	P	01/24/2023	13:41	LB123785
	Vanadium	39.1	40.0	98	80 - 120	P	01/24/2023	13:41	LB123785
	Zinc	42.2	40.0	106	80 - 120	P	01/24/2023	13:41	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV02	Aluminum	9780	10000	98	90 - 110	P	01/24/2023	14:35	LB123785
	Antimony	5010	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Arsenic	4980	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Barium	9860	10000	99	90 - 110	P	01/24/2023	14:35	LB123785
	Beryllium	259	250	103	90 - 110	P	01/24/2023	14:35	LB123785
	Cadmium	2460	2500	98	90 - 110	P	01/24/2023	14:35	LB123785
	Calcium	24300	25000	97	90 - 110	P	01/24/2023	14:35	LB123785
	Chromium	1010	1000	101	90 - 110	P	01/24/2023	14:35	LB123785
	Cobalt	2440	2500	98	90 - 110	P	01/24/2023	14:35	LB123785
	Copper	1250	1250	100	90 - 110	P	01/24/2023	14:35	LB123785
	Iron	4980	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Lead	4970	5000	99	90 - 110	P	01/24/2023	14:35	LB123785
	Magnesium	24200	25000	97	90 - 110	P	01/24/2023	14:35	LB123785
	Manganese	2420	2500	97	90 - 110	P	01/24/2023	14:35	LB123785
	Nickel	2470	2500	99	90 - 110	P	01/24/2023	14:35	LB123785
	Potassium	25000	25000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Selenium	5000	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Silver	1260	1250	101	90 - 110	P	01/24/2023	14:35	LB123785
	Sodium	25100	25000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Thallium	5000	5000	100	90 - 110	P	01/24/2023	14:35	LB123785
	Vanadium	2440	2500	98	90 - 110	P	01/24/2023	14:35	LB123785
	Zinc	2520	2500	101	90 - 110	P	01/24/2023	14:35	LB123785
CCV03	Aluminum	9370	10000	94	90 - 110	P	01/24/2023	17:46	LB123785
	Antimony	4930	5000	98	90 - 110	P	01/24/2023	17:46	LB123785
	Arsenic	4940	5000	99	90 - 110	P	01/24/2023	17:46	LB123785
	Barium	10200	10000	102	90 - 110	P	01/24/2023	17:46	LB123785
	Beryllium	234	250	94	90 - 110	P	01/24/2023	17:46	LB123785
	Cadmium	2320	2500	93	90 - 110	P	01/24/2023	17:46	LB123785
	Calcium	23700	25000	95	90 - 110	P	01/24/2023	17:46	LB123785
	Chromium	959	1000	96	90 - 110	P	01/24/2023	17:46	LB123785
	Cobalt	2500	2500	100	90 - 110	P	01/24/2023	17:46	LB123785
	Copper	1160	1250	93	90 - 110	P	01/24/2023	17:46	LB123785
	Iron	5200	5000	104	90 - 110	P	01/24/2023	17:46	LB123785
	Lead	4930	5000	99	90 - 110	P	01/24/2023	17:46	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV03	Magnesium	23600	25000	95	90 - 110	P	01/24/2023	17:46	LB123785
	Manganese	2440	2500	98	90 - 110	P	01/24/2023	17:46	LB123785
	Nickel	2380	2500	95	90 - 110	P	01/24/2023	17:46	LB123785
	Potassium	25300	25000	101	90 - 110	P	01/24/2023	17:46	LB123785
	Selenium	5070	5000	101	90 - 110	P	01/24/2023	17:46	LB123785
	Silver	1250	1250	100	90 - 110	P	01/24/2023	17:46	LB123785
	Sodium	24000	25000	96	90 - 110	P	01/24/2023	17:46	LB123785
	Thallium	4890	5000	98	90 - 110	P	01/24/2023	17:46	LB123785
	Vanadium	2420	2500	97	90 - 110	P	01/24/2023	17:46	LB123785
	Zinc	2400	2500	96	90 - 110	P	01/24/2023	17:46	LB123785
CCV04	Aluminum	10800	10000	108	90 - 110	P	01/24/2023	18:37	LB123785
	Antimony	4850	5000	97	90 - 110	P	01/24/2023	18:37	LB123785
	Arsenic	4820	5000	96	90 - 110	P	01/24/2023	18:37	LB123785
	Barium	10200	10000	102	90 - 110	P	01/24/2023	18:37	LB123785
	Beryllium	235	250	94	90 - 110	P	01/24/2023	18:37	LB123785
	Cadmium	2260	2500	90	90 - 110	P	01/24/2023	18:37	LB123785
	Calcium	23700	25000	95	90 - 110	P	01/24/2023	18:37	LB123785
	Chromium	953	1000	95	90 - 110	P	01/24/2023	18:37	LB123785
	Cobalt	2730	2500	109	90 - 110	P	01/24/2023	18:37	LB123785
	Copper	1290	1250	103	90 - 110	P	01/24/2023	18:37	LB123785
	Iron	5140	5000	103	90 - 110	P	01/24/2023	18:37	LB123785
	Lead	4850	5000	97	90 - 110	P	01/24/2023	18:37	LB123785
	Magnesium	23800	25000	95	90 - 110	P	01/24/2023	18:37	LB123785
	Manganese	2450	2500	98	90 - 110	P	01/24/2023	18:37	LB123785
	Nickel	2340	2500	94	90 - 110	P	01/24/2023	18:37	LB123785
	Potassium	25100	25000	100	90 - 110	P	01/24/2023	18:37	LB123785
	Selenium	4930	5000	99	90 - 110	P	01/24/2023	18:37	LB123785
	Silver	1250	1250	100	90 - 110	P	01/24/2023	18:37	LB123785
	Sodium	23600	25000	94	90 - 110	P	01/24/2023	18:37	LB123785
	Thallium	4820	5000	96	90 - 110	P	01/24/2023	18:37	LB123785
	Vanadium	2430	2500	97	90 - 110	P	01/24/2023	18:37	LB123785
	Zinc	2380	2500	95	90 - 110	P	01/24/2023	18:37	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Aluminum	110	100	110	40 - 160	P	01/20/2023	17:07	LB123754
	Antimony	50.4	50.0	101	40 - 160	P	01/20/2023	17:07	LB123754
	Arsenic	20.2	20.0	101	40 - 160	P	01/20/2023	17:07	LB123754
	Barium	94.4	100	94	40 - 160	P	01/20/2023	17:07	LB123754
	Beryllium	6.17	6.0	103	40 - 160	P	01/20/2023	17:07	LB123754
	Cadmium	6.40	6.0	107	40 - 160	P	01/20/2023	17:07	LB123754
	Calcium	1910	2000	96	40 - 160	P	01/20/2023	17:07	LB123754
	Chromium	9.67	10.0	97	40 - 160	P	01/20/2023	17:07	LB123754
	Cobalt	29.1	30.0	97	40 - 160	P	01/20/2023	17:07	LB123754
	Copper	22.3	20.0	112	40 - 160	P	01/20/2023	17:07	LB123754
	Iron	107	100	107	40 - 160	P	01/20/2023	17:07	LB123754
	Lead	11.3	12.0	94	40 - 160	P	01/20/2023	17:07	LB123754
	Magnesium	2060	2000	103	40 - 160	P	01/20/2023	17:07	LB123754
	Manganese	19.9	20.0	100	40 - 160	P	01/20/2023	17:07	LB123754
	Nickel	39.2	40.0	98	40 - 160	P	01/20/2023	17:07	LB123754
	Potassium	2060	2000	103	40 - 160	P	01/20/2023	17:07	LB123754
	Selenium	17.2	20.0	86	40 - 160	P	01/20/2023	17:07	LB123754
	Silver	11.3	10.0	113	40 - 160	P	01/20/2023	17:07	LB123754
	Sodium	2140	2000	107	40 - 160	P	01/20/2023	17:07	LB123754
	Thallium	39.8	40.0	100	40 - 160	P	01/20/2023	17:07	LB123754
	Vanadium	36.8	40.0	92	40 - 160	P	01/20/2023	17:07	LB123754
	Zinc	42.1	40.0	105	40 - 160	P	01/20/2023	17:07	LB123754
CRA	Mercury	0.16	0.2	82	40 - 160	CV	01/23/2023	10:37	LB123763
CRI01	Aluminum	93.4	100	93	40 - 160	P	01/24/2023	13:20	LB123785
	Antimony	51.7	50.0	104	40 - 160	P	01/24/2023	13:20	LB123785
	Arsenic	22.2	20.0	111	40 - 160	P	01/24/2023	13:20	LB123785
	Barium	101	100	101	40 - 160	P	01/24/2023	13:20	LB123785
	Beryllium	6.48	6.0	108	40 - 160	P	01/24/2023	13:20	LB123785
	Cadmium	6.52	6.0	109	40 - 160	P	01/24/2023	13:20	LB123785
	Calcium	1980	2000	99	40 - 160	P	01/24/2023	13:20	LB123785
	Chromium	10.7	10.0	107	40 - 160	P	01/24/2023	13:20	LB123785
	Cobalt	29.9	30.0	100	40 - 160	P	01/24/2023	13:20	LB123785
	Copper	23.0	20.0	115	40 - 160	P	01/24/2023	13:20	LB123785
	Iron	90.6	100	91	40 - 160	P	01/24/2023	13:20	LB123785
	Lead	12.1	12.0	100	40 - 160	P	01/24/2023	13:20	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Magnesium	2190	2000	110	40 - 160	P	01/24/2023	13:20	LB123785
	Manganese	21.0	20.0	105	40 - 160	P	01/24/2023	13:20	LB123785
	Nickel	39.8	40.0	100	40 - 160	P	01/24/2023	13:20	LB123785
	Potassium	1960	2000	98	40 - 160	P	01/24/2023	13:20	LB123785
	Selenium	22.7	20.0	114	40 - 160	P	01/24/2023	13:20	LB123785
	Silver	10.5	10.0	105	40 - 160	P	01/24/2023	13:20	LB123785
	Sodium	2000	2000	100	40 - 160	P	01/24/2023	13:20	LB123785
	Thallium	40.7	40.0	102	40 - 160	P	01/24/2023	13:20	LB123785
	Vanadium	42.2	40.0	106	40 - 160	P	01/24/2023	13:20	LB123785
	Zinc	42.0	40.0	105	40 - 160	P	01/24/2023	13:20	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB12	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	10:30	LB123763

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB93	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	10:35	LB123763
CCB94	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	11:02	LB123763
CCB95	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	11:29	LB123763
CCB96	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	11:56	LB123763
CCB97	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	12:24	LB123763
CCB98	Mercury	0.20	+/-0.20	U	0.20	CV	01/23/2023	12:37	LB123763

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	100	P	01/20/2023	12:43	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	12:43	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	12:43	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	12:43	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	12:43	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	12:43	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	12:43	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	12:43	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	12:43	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	12:43	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	12:43	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	12:43	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	12:43	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	12:43	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	12:43	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	12:43	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	12:43	LB123754
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2023	12:43	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	12:43	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	12:43	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	12:43	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	12:43	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	100	P	01/20/2023	13:50	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	13:50	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	13:50	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	13:50	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	13:50	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	13:50	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	13:50	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	13:50	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	13:50	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	13:50	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	13:50	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	13:50	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	13:50	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	13:50	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	13:50	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	13:50	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	13:50	LB123754
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2023	13:50	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	13:50	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	13:50	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	13:50	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	13:50	LB123754
CCB02	Aluminum	100	+/-100	U	100	P	01/20/2023	14:41	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	14:41	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	14:41	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	14:41	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	14:41	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	14:41	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	14:41	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	14:41	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	14:41	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	14:41	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	14:41	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	14:41	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	14:41	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	14:41	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	14:41	LB123754
	Potassium	298	+/-2000	J	2000	P	01/20/2023	14:41	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	14:41	LB123754
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2023	14:41	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Sodium	2000	+/-2000	U	2000	P	01/20/2023	14:41	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	14:41	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	14:41	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	14:41	LB123754
CCB03	Aluminum	100	+/-100	U	100	P	01/20/2023	15:33	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	15:33	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	15:33	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	15:33	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	15:33	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	15:33	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	15:33	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	15:33	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	15:33	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	15:33	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	15:33	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	15:33	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	15:33	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	15:33	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	15:33	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	15:33	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	15:33	LB123754
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2023	15:33	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	15:33	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	15:33	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	15:33	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	15:33	LB123754
CCB04	Aluminum	100	+/-100	U	100	P	01/20/2023	16:18	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	16:18	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	16:18	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	16:18	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	16:18	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	16:18	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	16:18	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	16:18	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	16:18	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	16:18	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	16:18	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	16:18	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	16:18	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	16:18	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	16:18	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	16:18	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	16:18	LB123754
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2023	16:18	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	16:18	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	16:18	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	16:18	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	16:18	LB123754
CCB05	Aluminum	100	+/-100	U	100	P	01/20/2023	17:15	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	17:15	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	17:15	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	17:15	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	17:15	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	17:15	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	17:15	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	17:15	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	17:15	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	17:15	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	17:15	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	17:15	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	17:15	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	17:15	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	17:15	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	17:15	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	17:15	LB123754
	Silver	10.0	+/-10.0	U	10.0	P	01/20/2023	17:15	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	17:15	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	17:15	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	17:15	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	17:15	LB123754
CCB06	Aluminum	100	+/-100	U	100	P	01/20/2023	18:51	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	18:51	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	18:51	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	18:51	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	18:51	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	18:51	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	18:51	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	18:51	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	18:51	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	18:51	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Iron	100	+/-100	U	100	P	01/20/2023	18:51	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	18:51	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	18:51	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	18:51	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	18:51	LB123754
	Potassium	852	+/-2000	J	2000	P	01/20/2023	18:51	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	18:51	LB123754
	Silver	1.75	+/-10.0	J	10.0	P	01/20/2023	18:51	LB123754
	Sodium	711	+/-2000	J	2000	P	01/20/2023	18:51	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	18:51	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	18:51	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	18:51	LB123754
CCB07	Aluminum	100	+/-100	U	100	P	01/20/2023	19:48	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	19:48	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	19:48	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	19:48	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	19:48	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	19:48	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	19:48	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	19:48	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	19:48	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	19:48	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	19:48	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	19:48	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	19:48	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	19:48	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	19:48	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	19:48	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	19:48	LB123754
	Silver	2.00	+/-10.0	J	10.0	P	01/20/2023	19:48	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	19:48	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	19:48	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	19:48	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	19:48	LB123754
CCB08	Aluminum	100	+/-100	U	100	P	01/20/2023	20:34	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	20:34	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	20:34	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	20:34	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	20:34	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	20:34	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB08	Calcium	2000	+/-2000	U	2000	P	01/20/2023	20:34	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	20:34	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	20:34	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	20:34	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	20:34	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	20:34	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	20:34	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	20:34	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	20:34	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	20:34	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	20:34	LB123754
	Silver	2.03	+/-10.0	J	10.0	P	01/20/2023	20:34	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	20:34	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	20:34	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	20:34	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	20:34	LB123754
CCB09	Aluminum	100	+/-100	U	100	P	01/20/2023	21:20	LB123754
	Antimony	50.0	+/-50.0	U	50.0	P	01/20/2023	21:20	LB123754
	Arsenic	20.0	+/-20.0	U	20.0	P	01/20/2023	21:20	LB123754
	Barium	100	+/-100	U	100	P	01/20/2023	21:20	LB123754
	Beryllium	6.00	+/-6.00	U	6.00	P	01/20/2023	21:20	LB123754
	Cadmium	6.00	+/-6.00	U	6.00	P	01/20/2023	21:20	LB123754
	Calcium	2000	+/-2000	U	2000	P	01/20/2023	21:20	LB123754
	Chromium	10.0	+/-10.0	U	10.0	P	01/20/2023	21:20	LB123754
	Cobalt	30.0	+/-30.0	U	30.0	P	01/20/2023	21:20	LB123754
	Copper	20.0	+/-20.0	U	20.0	P	01/20/2023	21:20	LB123754
	Iron	100	+/-100	U	100	P	01/20/2023	21:20	LB123754
	Lead	12.0	+/-12.0	U	12.0	P	01/20/2023	21:20	LB123754
	Magnesium	2000	+/-2000	U	2000	P	01/20/2023	21:20	LB123754
	Manganese	20.0	+/-20.0	U	20.0	P	01/20/2023	21:20	LB123754
	Nickel	40.0	+/-40.0	U	40.0	P	01/20/2023	21:20	LB123754
	Potassium	2000	+/-2000	U	2000	P	01/20/2023	21:20	LB123754
	Selenium	20.0	+/-20.0	U	20.0	P	01/20/2023	21:20	LB123754
	Silver	1.70	+/-10.0	J	10.0	P	01/20/2023	21:20	LB123754
	Sodium	2000	+/-2000	U	2000	P	01/20/2023	21:20	LB123754
	Thallium	40.0	+/-40.0	U	40.0	P	01/20/2023	21:20	LB123754
	Vanadium	40.0	+/-40.0	U	40.0	P	01/20/2023	21:20	LB123754
	Zinc	40.0	+/-40.0	U	40.0	P	01/20/2023	21:20	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Aluminum	100	+/-100	U	100	P	01/24/2023	13:16	LB123785
	Antimony	50.0	+/-50.0	U	50.0	P	01/24/2023	13:16	LB123785
	Arsenic	20.0	+/-20.0	U	20.0	P	01/24/2023	13:16	LB123785
	Barium	100	+/-100	U	100	P	01/24/2023	13:16	LB123785
	Beryllium	6.00	+/-6.00	U	6.00	P	01/24/2023	13:16	LB123785
	Cadmium	6.00	+/-6.00	U	6.00	P	01/24/2023	13:16	LB123785
	Calcium	2000	+/-2000	U	2000	P	01/24/2023	13:16	LB123785
	Chromium	10.0	+/-10.0	U	10.0	P	01/24/2023	13:16	LB123785
	Cobalt	30.0	+/-30.0	U	30.0	P	01/24/2023	13:16	LB123785
	Copper	20.0	+/-20.0	U	20.0	P	01/24/2023	13:16	LB123785
	Iron	100	+/-100	U	100	P	01/24/2023	13:16	LB123785
	Lead	12.0	+/-12.0	U	12.0	P	01/24/2023	13:16	LB123785
	Magnesium	2000	+/-2000	U	2000	P	01/24/2023	13:16	LB123785
	Manganese	20.0	+/-20.0	U	20.0	P	01/24/2023	13:16	LB123785
	Nickel	40.0	+/-40.0	U	40.0	P	01/24/2023	13:16	LB123785
	Potassium	2000	+/-2000	U	2000	P	01/24/2023	13:16	LB123785
	Selenium	20.0	+/-20.0	U	20.0	P	01/24/2023	13:16	LB123785
	Silver	10.0	+/-10.0	U	10.0	P	01/24/2023	13:16	LB123785
	Sodium	2000	+/-2000	U	2000	P	01/24/2023	13:16	LB123785
	Thallium	40.0	+/-40.0	U	40.0	P	01/24/2023	13:16	LB123785
	Vanadium	40.0	+/-40.0	U	40.0	P	01/24/2023	13:16	LB123785
	Zinc	40.0	+/-40.0	U	40.0	P	01/24/2023	13:16	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Aluminum	100	+/-100	U	100	P	01/24/2023	13:45	LB123785
	Antimony	50.0	+/-50.0	U	50.0	P	01/24/2023	13:45	LB123785
	Arsenic	20.0	+/-20.0	U	20.0	P	01/24/2023	13:45	LB123785
	Barium	100	+/-100	U	100	P	01/24/2023	13:45	LB123785
	Beryllium	6.00	+/-6.00	U	6.00	P	01/24/2023	13:45	LB123785
	Cadmium	6.00	+/-6.00	U	6.00	P	01/24/2023	13:45	LB123785
	Calcium	2000	+/-2000	U	2000	P	01/24/2023	13:45	LB123785
	Chromium	10.0	+/-10.0	U	10.0	P	01/24/2023	13:45	LB123785
	Cobalt	30.0	+/-30.0	U	30.0	P	01/24/2023	13:45	LB123785
	Copper	20.0	+/-20.0	U	20.0	P	01/24/2023	13:45	LB123785
	Iron	100	+/-100	U	100	P	01/24/2023	13:45	LB123785
	Lead	12.0	+/-12.0	U	12.0	P	01/24/2023	13:45	LB123785
	Magnesium	2000	+/-2000	U	2000	P	01/24/2023	13:45	LB123785
	Manganese	20.0	+/-20.0	U	20.0	P	01/24/2023	13:45	LB123785
	Nickel	40.0	+/-40.0	U	40.0	P	01/24/2023	13:45	LB123785
	Potassium	2000	+/-2000	U	2000	P	01/24/2023	13:45	LB123785
	Selenium	20.0	+/-20.0	U	20.0	P	01/24/2023	13:45	LB123785
	Silver	10.0	+/-10.0	U	10.0	P	01/24/2023	13:45	LB123785
	Sodium	2000	+/-2000	U	2000	P	01/24/2023	13:45	LB123785
	Thallium	40.0	+/-40.0	U	40.0	P	01/24/2023	13:45	LB123785
	Vanadium	40.0	+/-40.0	U	40.0	P	01/24/2023	13:45	LB123785
	Zinc	40.0	+/-40.0	U	40.0	P	01/24/2023	13:45	LB123785
CCB02	Aluminum	100	+/-100	U	100	P	01/24/2023	14:38	LB123785
	Antimony	50.0	+/-50.0	U	50.0	P	01/24/2023	14:38	LB123785
	Arsenic	20.0	+/-20.0	U	20.0	P	01/24/2023	14:38	LB123785
	Barium	100	+/-100	U	100	P	01/24/2023	14:38	LB123785
	Beryllium	6.00	+/-6.00	U	6.00	P	01/24/2023	14:38	LB123785
	Cadmium	6.00	+/-6.00	U	6.00	P	01/24/2023	14:38	LB123785
	Calcium	2000	+/-2000	U	2000	P	01/24/2023	14:38	LB123785
	Chromium	10.0	+/-10.0	U	10.0	P	01/24/2023	14:38	LB123785
	Cobalt	30.0	+/-30.0	U	30.0	P	01/24/2023	14:38	LB123785
	Copper	20.0	+/-20.0	U	20.0	P	01/24/2023	14:38	LB123785
	Iron	100	+/-100	U	100	P	01/24/2023	14:38	LB123785
	Lead	12.0	+/-12.0	U	12.0	P	01/24/2023	14:38	LB123785
	Magnesium	2000	+/-2000	U	2000	P	01/24/2023	14:38	LB123785
	Manganese	20.0	+/-20.0	U	20.0	P	01/24/2023	14:38	LB123785
	Nickel	40.0	+/-40.0	U	40.0	P	01/24/2023	14:38	LB123785
	Potassium	2000	+/-2000	U	2000	P	01/24/2023	14:38	LB123785
	Selenium	20.0	+/-20.0	U	20.0	P	01/24/2023	14:38	LB123785
	Silver	10.0	+/-10.0	U	10.0	P	01/24/2023	14:38	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB02	Sodium	2000	+/-2000	U	2000	P	01/24/2023	14:38	LB123785
	Thallium	40.0	+/-40.0	U	40.0	P	01/24/2023	14:38	LB123785
	Vanadium	40.0	+/-40.0	U	40.0	P	01/24/2023	14:38	LB123785
	Zinc	40.0	+/-40.0	U	40.0	P	01/24/2023	14:38	LB123785
CCB03	Aluminum	100	+/-100	U	100	P	01/24/2023	17:50	LB123785
	Antimony	50.0	+/-50.0	U	50.0	P	01/24/2023	17:50	LB123785
	Arsenic	20.0	+/-20.0	U	20.0	P	01/24/2023	17:50	LB123785
	Barium	100	+/-100	U	100	P	01/24/2023	17:50	LB123785
	Beryllium	6.00	+/-6.00	U	6.00	P	01/24/2023	17:50	LB123785
	Cadmium	6.00	+/-6.00	U	6.00	P	01/24/2023	17:50	LB123785
	Calcium	2000	+/-2000	U	2000	P	01/24/2023	17:50	LB123785
	Chromium	10.0	+/-10.0	U	10.0	P	01/24/2023	17:50	LB123785
	Cobalt	30.0	+/-30.0	U	30.0	P	01/24/2023	17:50	LB123785
	Copper	20.0	+/-20.0	U	20.0	P	01/24/2023	17:50	LB123785
	Iron	100	+/-100	U	100	P	01/24/2023	17:50	LB123785
	Lead	12.0	+/-12.0	U	12.0	P	01/24/2023	17:50	LB123785
	Magnesium	2000	+/-2000	U	2000	P	01/24/2023	17:50	LB123785
	Manganese	20.0	+/-20.0	U	20.0	P	01/24/2023	17:50	LB123785
	Nickel	40.0	+/-40.0	U	40.0	P	01/24/2023	17:50	LB123785
	Potassium	2000	+/-2000	U	2000	P	01/24/2023	17:50	LB123785
	Selenium	20.0	+/-20.0	U	20.0	P	01/24/2023	17:50	LB123785
	Silver	10.0	+/-10.0	U	10.0	P	01/24/2023	17:50	LB123785
	Sodium	2000	+/-2000	U	2000	P	01/24/2023	17:50	LB123785
	Thallium	40.0	+/-40.0	U	40.0	P	01/24/2023	17:50	LB123785
	Vanadium	40.0	+/-40.0	U	40.0	P	01/24/2023	17:50	LB123785
	Zinc	40.0	+/-40.0	U	40.0	P	01/24/2023	17:50	LB123785
CCB04	Aluminum	100	+/-100	U	100	P	01/24/2023	18:41	LB123785
	Antimony	50.0	+/-50.0	U	50.0	P	01/24/2023	18:41	LB123785
	Arsenic	20.0	+/-20.0	U	20.0	P	01/24/2023	18:41	LB123785
	Barium	100	+/-100	U	100	P	01/24/2023	18:41	LB123785
	Beryllium	6.00	+/-6.00	U	6.00	P	01/24/2023	18:41	LB123785
	Cadmium	6.00	+/-6.00	U	6.00	P	01/24/2023	18:41	LB123785
	Calcium	2000	+/-2000	U	2000	P	01/24/2023	18:41	LB123785
	Chromium	10.0	+/-10.0	U	10.0	P	01/24/2023	18:41	LB123785
	Cobalt	30.0	+/-30.0	U	30.0	P	01/24/2023	18:41	LB123785
	Copper	20.0	+/-20.0	U	20.0	P	01/24/2023	18:41	LB123785
	Iron	100	+/-100	U	100	P	01/24/2023	18:41	LB123785
	Lead	12.0	+/-12.0	U	12.0	P	01/24/2023	18:41	LB123785
	Magnesium	2000	+/-2000	U	2000	P	01/24/2023	18:41	LB123785
	Manganese	20.0	+/-20.0	U	20.0	P	01/24/2023	18:41	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB04	Nickel	40.0	+/-40.0	U	40.0	P	01/24/2023	18:41	LB123785
	Potassium	2000	+/-2000	U	2000	P	01/24/2023	18:41	LB123785
	Selenium	20.0	+/-20.0	U	20.0	P	01/24/2023	18:41	LB123785
	Silver	10.0	+/-10.0	U	10.0	P	01/24/2023	18:41	LB123785
	Sodium	2000	+/-2000	U	2000	P	01/24/2023	18:41	LB123785
	Thallium	40.0	+/-40.0	U	40.0	P	01/24/2023	18:41	LB123785
	Vanadium	40.0	+/-40.0	U	40.0	P	01/24/2023	18:41	LB123785
	Zinc	40.0	+/-40.0	U	40.0	P	01/24/2023	18:41	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Instrument: CV1

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB150382BL		**SOLID**		**Batch Number:**	**PB150382**		**Prep Date:**	**01/20/2023**	
	Mercury	0.012	<0.012	U	0.012	CV	01/23/2023	11:31	LB123763

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB150370BL		**SOLID**		**Batch Number:**	**PB150370**		**Prep Date:**	**01/20/2023**	
	Aluminum	4.78	<4.78	U	4.78	P	01/20/2023	20:23	LB123754
	Antimony	2.39	<2.39	U	2.39	P	01/20/2023	20:23	LB123754
	Arsenic	0.96	<0.96	U	0.96	P	01/20/2023	20:23	LB123754
	Barium	4.78	<4.78	U	4.78	P	01/20/2023	20:23	LB123754
	Beryllium	0.29	<0.29	U	0.29	P	01/20/2023	20:23	LB123754
	Cadmium	0.29	<0.29	U	0.29	P	01/20/2023	20:23	LB123754
	Calcium	95.7	<95.7	U	95.7	P	01/20/2023	20:23	LB123754
	Chromium	0.48	<0.48	U	0.48	P	01/20/2023	20:23	LB123754
	Cobalt	1.44	<1.44	U	1.44	P	01/20/2023	20:23	LB123754
	Copper	0.96	<0.96	U	0.96	P	01/20/2023	20:23	LB123754
	Iron	4.78	<4.78	U	4.78	P	01/20/2023	20:23	LB123754
	Lead	0.57	<0.57	U	0.57	P	01/20/2023	20:23	LB123754
	Magnesium	95.7	<95.7	U	95.7	P	01/20/2023	20:23	LB123754
	Manganese	0.96	<0.96	U	0.96	P	01/20/2023	20:23	LB123754
	Nickel	1.91	<1.91	U	1.91	P	01/20/2023	20:23	LB123754
	Potassium	95.7	<95.7	U	95.7	P	01/20/2023	20:23	LB123754
	Selenium	0.96	<0.96	U	0.96	P	01/20/2023	20:23	LB123754
	Silver	0.090	<0.48	J	0.48	P	01/20/2023	20:23	LB123754
	Sodium	95.7	<95.7	U	95.7	P	01/20/2023	20:23	LB123754
	Thallium	1.91	<1.91	U	1.91	P	01/20/2023	20:23	LB123754
	Vanadium	1.91	<1.91	U	1.91	P	01/20/2023	20:23	LB123754
	Zinc	1.91	<1.91	U	1.91	P	01/20/2023	20:23	LB123754

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Aluminum	257000	250000	103	210000	290000	01/20/2023	13:26	LB123754
	Antimony	2.20			-50	50	01/20/2023	13:26	LB123754
	Arsenic	-4.95			-20	20	01/20/2023	13:26	LB123754
	Barium	1.98	6.0	33	-94	106	01/20/2023	13:26	LB123754
	Beryllium	0.68			-6	6	01/20/2023	13:26	LB123754
	Cadmium	0.15	1.0	15	-5	7	01/20/2023	13:26	LB123754
	Calcium	250000	240000	104	200000	280000	01/20/2023	13:26	LB123754
	Chromium	55.1	52.0	106	42	62	01/20/2023	13:26	LB123754
	Cobalt	1.24			-30	30	01/20/2023	13:26	LB123754
	Copper	-2.55	2.0	128	-18	22	01/20/2023	13:26	LB123754
	Iron	108000	100000	108	85000	120000	01/20/2023	13:26	LB123754
	Lead	-3.73			-12	12	01/20/2023	13:26	LB123754
	Magnesium	257000	260000	99	220000	300000	01/20/2023	13:26	LB123754
	Manganese	10.2	7.0	145	-13	27	01/20/2023	13:26	LB123754
	Nickel	3.44	2.0	172	-38	42	01/20/2023	13:26	LB123754
	Potassium	-136			0	0	01/20/2023	13:26	LB123754
	Selenium	-17.7			-20	20	01/20/2023	13:26	LB123754
	Silver	2.09			-10	10	01/20/2023	13:26	LB123754
	Sodium	8.74			0	0	01/20/2023	13:26	LB123754
	Thallium	-7.43			-40	40	01/20/2023	13:26	LB123754
	Vanadium	-0.77			-40	40	01/20/2023	13:26	LB123754
	Zinc	-0.52			-40	40	01/20/2023	13:26	LB123754
ICSAB01	Aluminum	245000	250000	98	210000	290000	01/20/2023	13:30	LB123754
	Antimony	597	620	96	530	710	01/20/2023	13:30	LB123754
	Arsenic	102	100	102	85	120	01/20/2023	13:30	LB123754
	Barium	518	540	96	440	640	01/20/2023	13:30	LB123754
	Beryllium	490	500	98	430	580	01/20/2023	13:30	LB123754
	Cadmium	1030	970	106	820	1100	01/20/2023	13:30	LB123754
	Calcium	238000	230000	104	200000	260000	01/20/2023	13:30	LB123754
	Chromium	545	540	101	460	620	01/20/2023	13:30	LB123754
	Cobalt	494	480	103	410	550	01/20/2023	13:30	LB123754
	Copper	480	510	94	430	590	01/20/2023	13:30	LB123754
	Iron	102000	99000	103	84000	110000	01/20/2023	13:30	LB123754
	Lead	44.8	49.0	91	37	61	01/20/2023	13:30	LB123754
	Magnesium	246000	250000	98	210000	290000	01/20/2023	13:30	LB123754
	Manganese	502	510	98	430	590	01/20/2023	13:30	LB123754
	Nickel	1000	950	105	810	1100	01/20/2023	13:30	LB123754
	Potassium	-121			0	0	01/20/2023	13:30	LB123754
	Selenium	38.2	46.0	83	26	66	01/20/2023	13:30	LB123754
	Silver	212	200	106	170	230	01/20/2023	13:30	LB123754
	Sodium	18.8			0	0	01/20/2023	13:30	LB123754
	Thallium	93.1	110	85	70	150	01/20/2023	13:30	LB123754
	Vanadium	488	490	100	420	560	01/20/2023	13:30	LB123754
	Zinc	1040	950	110	810	1100	01/20/2023	13:30	LB123754
ICSA01	Aluminum	247000	250000	99	210000	290000	01/24/2023	13:25	LB123785

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

ICS Source: EPA **Instrument ID:** P4

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Antimony	-3.42			-50	50	01/24/2023	13:25	LB123785
	Arsenic	5.47			-20	20	01/24/2023	13:25	LB123785
	Barium	7.42	6.0	124	-94	106	01/24/2023	13:25	LB123785
	Beryllium	1.36			-6	6	01/24/2023	13:25	LB123785
	Cadmium	0.46	1.0	46	-5	7	01/24/2023	13:25	LB123785
	Calcium	237000	240000	99	200000	280000	01/24/2023	13:25	LB123785
	Chromium	61.1	52.0	118	42	62	01/24/2023	13:25	LB123785
	Cobalt	1.04			-30	30	01/24/2023	13:25	LB123785
	Copper	-11.8	2.0	590	-18	22	01/24/2023	13:25	LB123785
	Iron	108000	100000	108	85000	120000	01/24/2023	13:25	LB123785
	Lead	-3.03			-12	12	01/24/2023	13:25	LB123785
	Magnesium	247000	260000	95	220000	300000	01/24/2023	13:25	LB123785
	Manganese	9.76	7.0	139	-13	27	01/24/2023	13:25	LB123785
	Nickel	3.04	2.0	152	-38	42	01/24/2023	13:25	LB123785
	Potassium	-217			0	0	01/24/2023	13:25	LB123785
	Selenium	-7.48			-20	20	01/24/2023	13:25	LB123785
	Silver	4.83			-10	10	01/24/2023	13:25	LB123785
	Sodium	-5.35			0	0	01/24/2023	13:25	LB123785
	Thallium	-6.97			-40	40	01/24/2023	13:25	LB123785
	Vanadium	3.06			-40	40	01/24/2023	13:25	LB123785
	Zinc	0.0080			-40	40	01/24/2023	13:25	LB123785
ICSAB01	Aluminum	243000	250000	97	210000	290000	01/24/2023	13:29	LB123785
	Antimony	598	620	96	530	710	01/24/2023	13:29	LB123785
	Arsenic	110	100	110	85	120	01/24/2023	13:29	LB123785
	Barium	482	540	89	440	640	01/24/2023	13:29	LB123785
	Beryllium	492	500	98	430	580	01/24/2023	13:29	LB123785
	Cadmium	1010	970	104	820	1100	01/24/2023	13:29	LB123785
	Calcium	234000	230000	102	200000	260000	01/24/2023	13:29	LB123785
	Chromium	558	540	103	460	620	01/24/2023	13:29	LB123785
	Cobalt	495	480	103	410	550	01/24/2023	13:29	LB123785
	Copper	475	510	93	430	590	01/24/2023	13:29	LB123785
	Iron	102000	99000	103	84000	110000	01/24/2023	13:29	LB123785
	Lead	47.1	49.0	96	37	61	01/24/2023	13:29	LB123785
	Magnesium	243000	250000	97	210000	290000	01/24/2023	13:29	LB123785
	Manganese	484	510	95	430	590	01/24/2023	13:29	LB123785
	Nickel	983	950	104	810	1100	01/24/2023	13:29	LB123785
	Potassium	-161			0	0	01/24/2023	13:29	LB123785
	Selenium	40.7	46.0	88	26	66	01/24/2023	13:29	LB123785
	Silver	215	200	108	170	230	01/24/2023	13:29	LB123785
	Sodium	-0.86			0	0	01/24/2023	13:29	LB123785
	Thallium	93.1	110	85	70	150	01/24/2023	13:29	LB123785
	Vanadium	471	490	96	420	560	01/24/2023	13:29	LB123785
	Zinc	1020	950	107	810	1100	01/24/2023	13:29	LB123785

CHEMTECH

METAL QC DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Louis Berger U.S., Inc., A WSP Company **level:** low **sdg no.:** O1233

contract: loui01 **lab code:** CHEM **case no.:** O1233 **sas no.:** O1233

matrix: Solid **sample id:** O1232-01 **client id:** B-P-17AMS

Percent Solids for Sample: 89.4 **Spiked ID:** O1232-01MS **Percent Solids for Spike Sample:** 89.4

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	2860		2510		100	356		P
Antimony	mg/Kg	75 - 125	30.5		0.37	J	40.7	74	N	P
Arsenic	mg/Kg	75 - 125	35.8		1.07		40.7	85		P
Barium	mg/Kg	75 - 125	42.8		33.0		10.2	96		P
Beryllium	mg/Kg	75 - 125	7.71		0.28	J	10.2	73	N	P
Cadmium	mg/Kg	75 - 125	9.44		0.13	J	10.2	91		P
Calcium	mg/Kg	75 - 125	1880		1460		50.8	837		P
Chromium	mg/Kg	75 - 125	28.2		11.7		20.3	82		P
Cobalt	mg/Kg	75 - 125	13.7		4.76		10.2	88		P
Copper	mg/Kg	75 - 125	20.1		8.92		15.3	73	N	P
Iron	mg/Kg	75 - 125	10300		8860		150	987		P
Lead	mg/Kg	75 - 125	51.9		7.47		50.8	87		P
Magnesium	mg/Kg	75 - 125	2200		1820		100	372		P
Manganese	mg/Kg	75 - 125	234		288		10.2	-530		P
Nickel	mg/Kg	75 - 125	48.0		22.9		25.4	99		P
Potassium	mg/Kg	75 - 125	1010		556		510	90		P
Selenium	mg/Kg	75 - 125	82.6		1.04	U	100	83		P
Silver	mg/Kg	75 - 125	3.62		0.58		3.8	80		P
Sodium	mg/Kg	75 - 125	176		52.5	J	150	82		P
Thallium	mg/Kg	75 - 125	94.5		2.08	U	100	94		P
Vanadium	mg/Kg	75 - 125	23.8		9.25		15.3	95		P
Zinc	mg/Kg	75 - 125	31.0		18.7		10.2	120		P

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Louis Berger U.S., Inc., A WSP Company **level:** low **sdg no.:** O1233

contract: loui01 **lab code:** CHEM **case no.:** O1233 **sas no.:** O1233

matrix: Solid **sample id:** O1232-01 **client id:** B-P-17AMSD

Percent Solids for Sample: 89.4 **Spiked ID:** O1232-01MSD **Percent Solids for Spike Sample:** 89.4

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	mg/Kg	75 - 125	2900		2510		100	396		P
Antimony	mg/Kg	75 - 125	32.0		0.37	J	41.8	76		P
Arsenic	mg/Kg	75 - 125	37.5		1.07		41.8	87		P
Barium	mg/Kg	75 - 125	42.5		33.0		10.5	91		P
Beryllium	mg/Kg	75 - 125	8.15		0.28	J	10.5	75		P
Cadmium	mg/Kg	75 - 125	9.99		0.13	J	10.5	94		P
Calcium	mg/Kg	75 - 125	1730		1460		52.3	511		P
Chromium	mg/Kg	75 - 125	30.3		11.7		20.9	89		P
Cobalt	mg/Kg	75 - 125	14.5		4.76		10.5	93		P
Copper	mg/Kg	75 - 125	21.3		8.92		15.7	79		P
Iron	mg/Kg	75 - 125	10200		8860		160	860		P
Lead	mg/Kg	75 - 125	54.2		7.47		52.3	89		P
Magnesium	mg/Kg	75 - 125	2350		1820		100	529		P
Manganese	mg/Kg	75 - 125	231		288		10.5	-547		P
Nickel	mg/Kg	75 - 125	52.3		22.9		26.1	113		P
Potassium	mg/Kg	75 - 125	999		556		520	85		P
Selenium	mg/Kg	75 - 125	86.9		1.04	U	100	87		P
Silver	mg/Kg	75 - 125	3.65		0.58		3.9	79		P
Sodium	mg/Kg	75 - 125	172		52.5	J	160	75		P
Thallium	mg/Kg	75 - 125	99.3		2.08	U	100	99		P
Vanadium	mg/Kg	75 - 125	24.0		9.25		15.7	94		P
Zinc	mg/Kg	75 - 125	30.9		18.7		10.5	115		P

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 5a -
MATRIX SPIKE SUMMARY

client: Louis Berger U.S., Inc., A WSP Company **level:** low **sdg no.:** O1233

contract: loui01 **lab code:** CHEM **case no.:** O1233 **sas no.:** O1233

matrix: Solid **sample id:** O1252-01 **client id:** MH-9MS

Percent Solids for Sample: 94.2 **Spiked ID:** O1252-01MS **Percent Solids for Spike Sample:** 94.2

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.24		0.0080	J	0.27	86		CV

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Louis Berger U.S., Inc., A WSP Company **level:** low **sdg no.:** O1233

contract: loui01 **lab code:** CHEM **case no.:** O1233 **sas no.:** O1233

matrix: Solid **sample id:** O1252-01 **client id:** MH-9MSD

Percent Solids for Sample: 94.2 **Spiked ID:** O1252-01MSD **Percent Solids for Spike Sample:** 94.2

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	mg/Kg	80 - 120	0.25		0.0080	J	0.26	95		CV

CHEMTECH

Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Matrix: Solid **Level:** LOW **Client ID:** B-P-17AA

Sample ID: O1232-01 **Spiked ID:** O1232-01A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	mg/Kg	75 - 125	35.4		0.37	J	41.6	84		P
Beryllium	mg/Kg	75 - 125	8.72		0.28	J	10.4	81		P
Copper	mg/Kg	75 - 125	22.1		8.92		15.6	84		P

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **Level:** LOW **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Matrix: Solid **Sample ID:** O1232-01 **Client ID:** B-P-17ADUP

Percent Solids for Sample: 89.4 **Duplicate ID** O1232-01DUP **Percent Solids for Spike Sample:** 89.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	2510		2500		0		P
Antimony	mg/Kg	20	0.37	J	2.55	U	200.0		P
Arsenic	mg/Kg	20	1.07		1.03		4		P
Barium	mg/Kg	20	33.0		33.0		0		P
Beryllium	mg/Kg	20	0.28	J	0.28	J	0		P
Cadmium	mg/Kg	20	0.13	J	0.12	J	7		P
Calcium	mg/Kg	20	1460		1460		0		P
Chromium	mg/Kg	20	11.7		11.3		3		P
Cobalt	mg/Kg	20	4.76		4.61		3		P
Copper	mg/Kg	20	8.92		8.67		3		P
Iron	mg/Kg	20	8860		8530		4		P
Lead	mg/Kg	20	7.47		7.27		3		P
Magnesium	mg/Kg	20	1820		1820		0		P
Manganese	mg/Kg	20	288		287		0		P
Nickel	mg/Kg	20	22.9		22.2		3		P
Potassium	mg/Kg	20	556		535		4		P
Selenium	mg/Kg	20	1.04	U	1.02	U			P
Silver	mg/Kg	20	0.58		0.53		9		P
Sodium	mg/Kg	20	52.5	J	50.3	J	4		P
Thallium	mg/Kg	20	2.08	U	2.04	U			P
Vanadium	mg/Kg	20	9.25		9.26		0		P
Zinc	mg/Kg	20	18.7		18.2		3		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **Level:** LOW **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Matrix: Solid **Sample ID:** O1232-01MS **Client ID:** B-P-17AMSD

Percent Solids for Sample: 89.4 **Duplicate ID** O1232-01MSD **Percent Solids for Spike Sample:** 89.4

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	mg/Kg	20	2860		2900		1		P
Antimony	mg/Kg	20	30.5		32.0		5		P
Arsenic	mg/Kg	20	35.8		37.5		5		P
Barium	mg/Kg	20	42.8		42.5		1		P
Beryllium	mg/Kg	20	7.71		8.15		6		P
Cadmium	mg/Kg	20	9.44		9.99		6		P
Calcium	mg/Kg	20	1880		1730		8		P
Chromium	mg/Kg	20	28.2		30.3		7		P
Cobalt	mg/Kg	20	13.7		14.5		6		P
Copper	mg/Kg	20	20.1		21.3		6		P
Iron	mg/Kg	20	10300		10200		1		P
Lead	mg/Kg	20	51.9		54.2		4		P
Magnesium	mg/Kg	20	2200		2350		7		P
Manganese	mg/Kg	20	234		231		1		P
Nickel	mg/Kg	20	48.0		52.3		9		P
Potassium	mg/Kg	20	1010		999		1		P
Selenium	mg/Kg	20	82.6		86.9		5		P
Silver	mg/Kg	20	3.62		3.65		1		P
Sodium	mg/Kg	20	176		172		2		P
Thallium	mg/Kg	20	94.5		99.3		5		P
Vanadium	mg/Kg	20	23.8		24.0		1		P
Zinc	mg/Kg	20	31.0		30.9		0		P

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **Level:** LOW **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Matrix: Solid **Sample ID:** O1252-01 **Client ID:** MH-9DUP

Percent Solids for Sample: 94.2 **Duplicate ID** O1252-01DUP **Percent Solids for Spike Sample:** 94.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.0080	J	0.0050	J	46		CV

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **Level:** LOW **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Matrix: Solid **Sample ID:** O1252-01MS **Client ID:** MH-9MSD

Percent Solids for Sample: 94.2 **Duplicate ID** O1252-01MSD **Percent Solids for Spike Sample:** 94.2

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	mg/Kg	20	0.24		0.25		5		CV

"A control limit of ±20% RPD for each matrix applies for sample values greater than 10 times Detection Limit"

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

LABORATORY CONTROL SAMPLE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB150370BS							
Aluminum	mg/Kg	98.5	96.7		98	80 - 120	P
Antimony	mg/Kg	39.4	38.3		97	80 - 120	P
Arsenic	mg/Kg	39.4	40.6		103	80 - 120	P
Barium	mg/Kg	9.9	10.0		101	80 - 120	P
Beryllium	mg/Kg	9.9	8.67		88	80 - 120	P
Cadmium	mg/Kg	9.9	9.52		96	80 - 120	P
Calcium	mg/Kg	49.3	49.4	J	100	80 - 120	P
Chromium	mg/Kg	19.7	18.9		96	80 - 120	P
Cobalt	mg/Kg	9.9	8.98		91	80 - 120	P
Copper	mg/Kg	14.8	14.5		98	80 - 120	P
Iron	mg/Kg	150	156		104	80 - 120	P
Lead	mg/Kg	49.3	47.4		96	80 - 120	P
Magnesium	mg/Kg	98.5	94.2	J	96	80 - 120	P
Manganese	mg/Kg	9.9	9.86		100	80 - 120	P
Nickel	mg/Kg	24.6	24.0		98	80 - 120	P
Potassium	mg/Kg	490	506		103	80 - 120	P
Selenium	mg/Kg	98.5	99.9		101	80 - 120	P
Silver	mg/Kg	3.7	3.59		97	80 - 120	P
Sodium	mg/Kg	150	142		95	80 - 120	P
Thallium	mg/Kg	98.5	102		104	80 - 120	P
Vanadium	mg/Kg	14.8	14.8		100	80 - 120	P
Zinc	mg/Kg	9.9	10.3		104	80 - 120	P

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB150382BS							
Mercury	mg/Kg	0.27	0.23		84	80 - 120	CV

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

B-P-17AL

Lab Name: Chemtech Consulting Group **Contract:** loui01

Lab Code: CHEM **Lb No.:** lb123754 **Lab Sample ID :** O1232-01L **SDG No.:** O1233

Matrix (soil/water): Solid **Level (low/med):** LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	2510		2550		2		P
Antimony	0.37	J	13.0	U	100.0		P
Arsenic	1.07		5.20	U	100.0		P
Barium	33.0		31.3		5		P
Beryllium	0.28	J	0.29	J	4		P
Cadmium	0.13	J	1.56	U	100.0		P
Calcium	1460		1480		1		P
Chromium	11.7		11.5		1		P
Cobalt	4.76		4.47	J	6		P
Copper	8.92		9.79		10		P
Iron	8860		8630		3		P
Lead	7.47		7.16		4		P
Magnesium	1820		1840		1		P
Manganese	288		290		1		P
Nickel	22.9		21.8		5		P
Potassium	556		528		5		P
Selenium	1.04	U	5.20	U			P
Silver	0.58		0.80	J	38		P
Sodium	52.5	J	520	U	100.0		P
Thallium	2.08	U	10.4	U			P
Vanadium	9.25		8.85	J	4		P
Zinc	18.7		18.9		1		P

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

MH-9L

Lab Name: Chemtech Consulting Group **Contract:** loui01

Lab Code: CHEM **Lb No.:** lb123763 **Lab Sample ID :** O1252-01L **SDG No.:** O1233

Matrix (soil/water): Solid **Level (low/med):** LOW

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	0.0080	J	0.064	U	100.0		CV

CHEMTECH

METAL PREPARATION & INSTRUMENT DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	Ag
Aluminum	396.100	0.0000000	0.0002900	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000140	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0001380	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0001340	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000890	0.0000000	0.0000460	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001960	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001430	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	-0.0000910	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0001400	0.0000000	0.0000000

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: As	Ba	Be	Cd	Co
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0021660
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0005750
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0038070
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Cr	Cu	K	Mn	Mo
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0329190
Antimony	206.833	0.0121700	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	-0.0019440	0.0000000	0.0000000	0.0000000	0.0003800
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	-0.0000720	-0.0004950
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0002110	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0007810
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0012940
Iron	240.488	0.0000000	0.0009350	0.0000000	0.0000000	-0.0037480
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000700	-0.0014440
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	-0.0127400
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0004280	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0001890	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0008700	-0.0040480
Vanadium	292.402	-0.0024690	0.0000000	0.0000000	0.0000000	-0.0073200
Zinc	213.800	0.0000000	0.0023040	0.0000000	0.0000000	0.0000000

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Na	Ni	Pb	Sb	Se
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	193.759	0.0000000	0.0002020	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	-0.0001570	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0048560	0.0013380	0.0000000	0.0000000
Iron	240.488	0.0000000	-0.0016160	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0001070	0.0000000	0.0000000	0.0000000
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	0.0058160	0.0000000	0.0000000	0.0000000

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Case No.:** O1233 **SAS No.:** O1233

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Sn	Ti	Tl	V	Zn
Aluminum	396.100	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	-0.0081200	0.0000000	0.0000000	-0.0018770	0.0000000
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0001560	-0.0003220
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	373.690	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0017040	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0002630	0.0000000	0.0000000	0.0005570
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0016400
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0000000	0.0001090
Magnesium	279.079	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.610	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.490	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0001700	0.0000000	-0.0007490	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	-0.0005960	0.0000000	0.0152900	0.0003570
Vanadium	292.402	0.0000000	0.0004650	0.0000000	0.0000000	0.0000000
Zinc	213.800	0.0000000	-0.0005190	0.0000000	0.0000000	0.0000000

CHEMTECH

METAL PREPARATION & ANALYICAL SUMMARY

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Method:**

Case No.: O1233 **SAS No.:** O1233

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB150370**						
O1232-01DUP	B-P-17ADUP	DUP	SOLID	01/20/2023	2.19	100.0	89.40
O1232-01MS	B-P-17AMS	MS	SOLID	01/20/2023	2.20	100.0	89.40
O1232-01MSD	B-P-17AMSD	MSD	SOLID	01/20/2023	2.14	100.0	89.40
O1233-02	B-P34A	SAM	SOLID	01/20/2023	2.12	100.0	85.30
O1233-03	B-P34B	SAM	SOLID	01/20/2023	2.01	100.0	90.70
O1233-04	B-P36A	SAM	SOLID	01/20/2023	2.19	100.0	89.60
O1233-05	B-P36B	SAM	SOLID	01/20/2023	2.16	100.0	90.40
O1233-06	B-P37A	SAM	SOLID	01/20/2023	2.24	100.0	87.90
O1233-07	B-P37B	SAM	SOLID	01/20/2023	2.21	100.0	83.50
O1233-08	B-38A	SAM	SOLID	01/20/2023	2.39	100.0	89.30
O1233-09	B-P38B	SAM	SOLID	01/20/2023	2.27	100.0	80.70
O1233-11	B-P38C	SAM	SOLID	01/20/2023	2.14	100.0	85.90
PB150370BL	PB150370BL	MB	SOLID	01/20/2023	2.09	100.0	100.00
PB150370BS	PB150370BS	LCS	SOLID	01/20/2023	2.03	100.0	100.00

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1233

Contract: loui01 **Lab Code:** CHEM **Method:**

Case No.: O1233 **SAS No.:** O1233

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB150382**						
O1233-02	B-P34A	SAM	SOLID	01/20/2023	0.56	35.0	85.30
O1233-03	B-P34B	SAM	SOLID	01/20/2023	0.56	35.0	90.70
O1233-04	B-P36A	SAM	SOLID	01/20/2023	0.56	35.0	89.60
O1233-05	B-P36B	SAM	SOLID	01/20/2023	0.56	35.0	90.40
O1233-06	B-P37A	SAM	SOLID	01/20/2023	0.54	35.0	87.90
O1233-07	B-P37B	SAM	SOLID	01/20/2023	0.57	35.0	83.50
O1233-08	B-38A	SAM	SOLID	01/20/2023	0.54	35.0	89.30
O1233-09	B-P38B	SAM	SOLID	01/20/2023	0.57	35.0	80.70
O1233-11	B-P38C	SAM	SOLID	01/20/2023	0.54	35.0	85.90
O1252-01DUP	MH-9DUP	DUP	SOLID	01/20/2023	0.57	35.0	94.20
O1252-01MS	MH-9MS	MS	SOLID	01/20/2023	0.55	35.0	94.20
O1252-01MSD	MH-9MSD	MSD	SOLID	01/20/2023	0.57	35.0	94.20
PB150382BL	PB150382BL	MB	SOLID	01/20/2023	0.57	35.0	100.00
PB150382BS	PB150382BS	LCS	SOLID	01/20/2023	0.52	35.0	100.00

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 14 -
ANALYSIS RUN LOG

Client: Louis Berger U.S., Inc., A WSP Company **Contract:** loui01

Lab code: CHEM **Case no.:** O1233 **Sas no.:** O1233 **Sdg no.:** O1233

Instrument id number: **Method:** **Run number:** LB123754

Start date: 01/20/2023 **End date:** 01/20/2023

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1215	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1219	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1223	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1227	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1231	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1234	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1238	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1243	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1326	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1330	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1342	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLCCV01	LLCCV01	1	1346	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1350	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1437	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1441	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1529	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1533	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1615	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1618	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1707	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV05	CCV05	1	1711	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB05	CCB05	1	1715	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV06	CCV06	1	1847	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB06	CCB06	1	1851	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV07	CCV07	1	1944	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB07	CCB07	1	1948	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB150370BL	PB150370BL	1	2023	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
PB150370BS	PB150370BS	1	2027	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV08	CCV08	1	2030	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB08	CCB08	1	2034	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1232-01DUP	B-P-17ADUP	1	2042	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1232-01L	B-P-17AL	5	2046	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1232-01MS	B-P-17AMS	1	2050	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1232-01MSD	B-P-17AMSD	1	2054	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1232-01A	B-P-17AA	1	2057	Be,Cu,Sb
CCV09	CCV09	1	2116	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB09	CCB09	1	2120	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 14 -
ANALYSIS RUN LOG

Client: Louis Berger U.S., Inc., A WSP Company **Contract:** loui01

Lab code: CHEM **Case no.:** O1233 **Sas no.:** O1233 **Sdg no.:** O1233

Instrument id number: **Method:** **Run number:** LB123763

Start date: 01/23/2023 **End date:** 01/23/2023

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1006	HG
S0.2	S0.2	1	1011	HG
S2.5	S2.5	1	1013	HG
S5	S5	1	1016	HG
S7.5	S7.5	1	1020	HG
S10	S10	1	1023	HG
ICV12	ICV12	1	1028	HG
ICB12	ICB12	1	1030	HG
CCV93	CCV93	1	1033	HG
CCB93	CCB93	1	1035	HG
CRA	CRA	1	1037	HG
CCV94	CCV94	1	1100	HG
CCB94	CCB94	1	1102	HG
CCV95	CCV95	1	1127	HG
CCB95	CCB95	1	1129	HG
PB150382BL	PB150382BL	1	1131	HG
PB150382BS	PB150382BS	1	1134	HG
O1233-02	B-P34A	1	1136	HG
O1233-03	B-P34B	1	1138	HG
O1233-04	B-P36A	1	1140	HG
O1233-05	B-P36B	1	1143	HG
O1233-06	B-P37A	1	1145	HG
O1233-07	B-P37B	1	1147	HG
O1233-08	B-38A	1	1150	HG
O1233-09	B-P38B	1	1152	HG
CCV96	CCV96	1	1154	HG
CCB96	CCB96	1	1156	HG
O1233-11	B-P38C	1	1159	HG
O1252-01DUP	MH-9DUP	1	1215	HG
O1252-01MS	MH-9MS	1	1217	HG
O1252-01MSD	MH-9MSD	1	1219	HG
CCV97	CCV97	1	1221	HG
CCB97	CCB97	1	1224	HG
O1252-01L	MH-9L	5	1230	HG
CCV98	CCV98	1	1235	HG
CCB98	CCB98	1	1237	HG

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

metals
- 14 -
ANALYSIS RUN LOG

Client: Louis Berger U.S., Inc., A WSP Company **Contract:** loui01

Lab code: CHEM **Case no.:** O1233 **Sas no.:** O1233 **Sdg no.:** O1233

Instrument id number: **Method:** **Run number:** LB123785

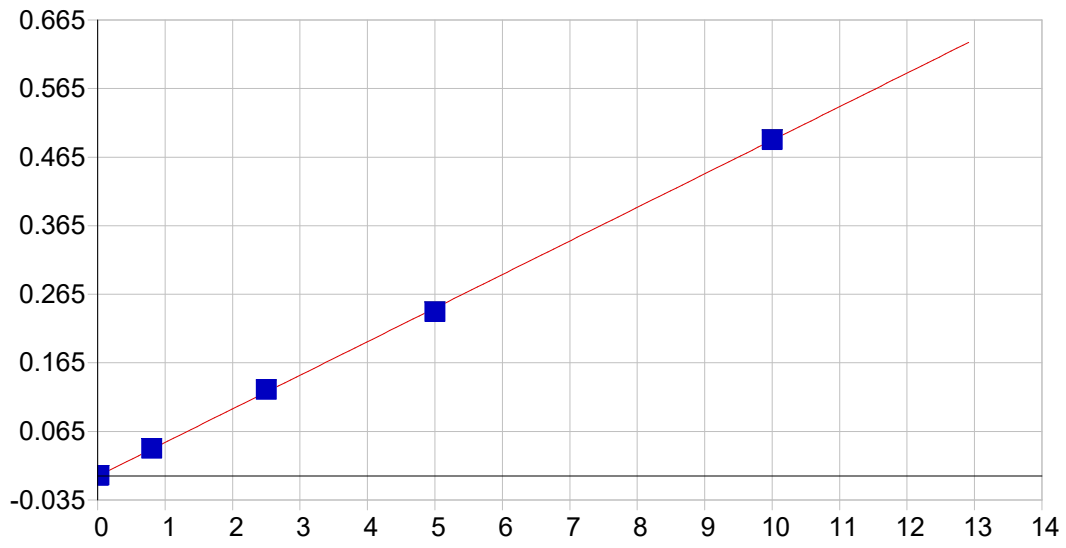
Start date: 01/24/2023 **End date:** 01/24/2023

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1234	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S1	S1	1	1238	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S2	S2	1	1242	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S3	S3	1	1246	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S4	S4	1	1249	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
S5	S5	1	1253	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICV01	ICV01	1	1312	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICB01	ICB01	1	1316	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CRI01	CRI01	1	1320	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSA01	ICSA01	1	1325	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
ICSAB01	ICSAB01	1	1329	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV01	CCV01	1	1333	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
LLCCV01	LLCCV01	1	1341	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB01	CCB01	1	1345	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-02	B-P34A	1	1404	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-03	B-P34B	1	1408	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-04	B-P36A	1	1412	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-05	B-P36B	1	1415	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-06	B-P37A	1	1419	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-07	B-P37B	1	1423	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV02	CCV02	1	1435	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB02	CCB02	1	1438	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-08	B-38A	1	1442	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-09	B-P38B	1	1446	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
O1233-11	B-P38C	1	1450	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV03	CCV03	1	1746	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB03	CCB03	1	1750	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCV04	CCV04	1	1837	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn
CCB04	CCB04	1	1841	Ag,Al,As,Ba,Be,Ca,Cd,Co,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,Pb,Sb,Se,Tl,V,Zn

CHEMTECH

METAL
RAW DATA

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



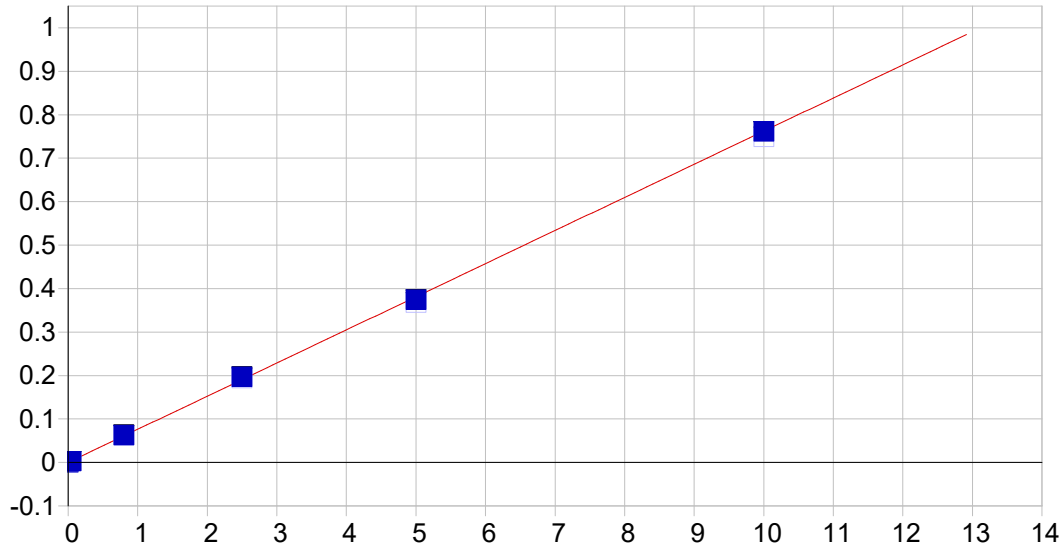
As 189.042 {479}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000083	Re-Slope:	1.000000
A1 (Gain):	0.048970	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999865	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.002998		
Predicted MQL:	0.009994		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00008	.000	1
S1	.02000	.02059	.001	2.96	.00093	.000	1
S3	2.5000	2.5715	.071	2.86	.12583	.000	1
S4	5.0000	4.8930	-.107	-2.14	.23950	.001	1
S5	10.000	10.014	.014	.136	.49022	.000	1
S2	.80000	.82138	.021	2.67	.04013	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



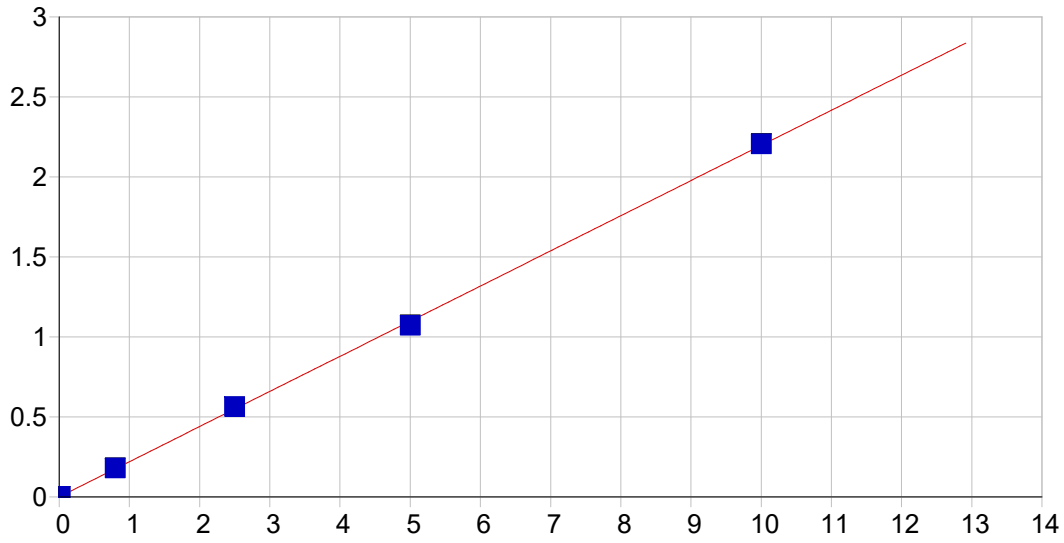
Tl 190.856 {477}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000062	Re-Slope:	1.000000
A1 (Gain):	0.076218	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999853	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.001928		
Predicted MQL:	0.006427		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.04000	.04175	.002	4.38	.00306	.000	1
S3	2.5000	2.5807	.081	3.23	.19363	.000	1
S4	5.0000	4.9057	-.094	-1.89	.36770	.000	1
S5	10.000	9.9875	-.012	-.125	.74876	.000	1
S2	.80000	.82433	.024	3.04	.06189	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



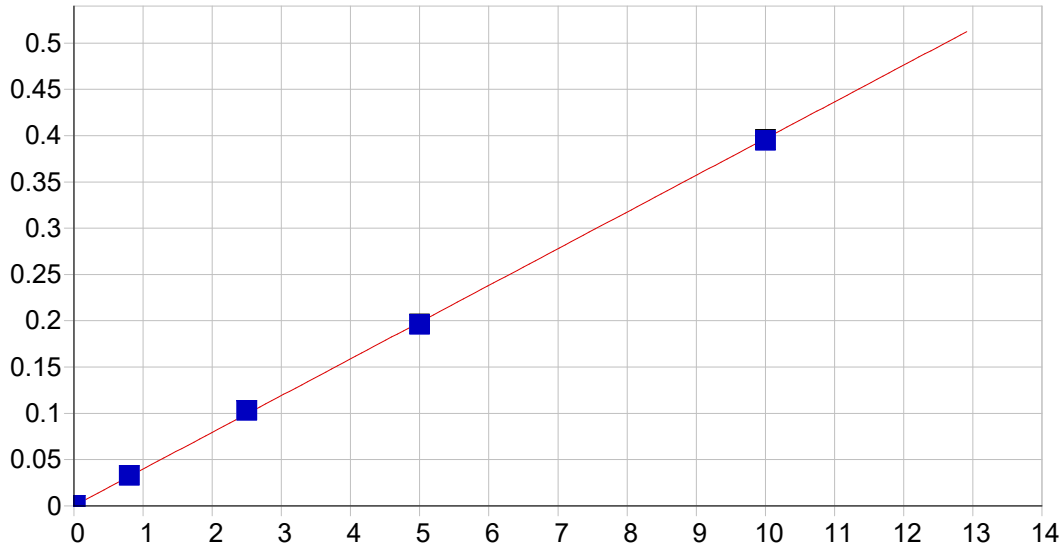
Pb 220.353 {453}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000200	Re-Slope:	1.000000
A1 (Gain):	0.219654	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999857	Status:	OK.
Std Error of Est:	0.000067		
Predicted MDL:	0.001628		
Predicted MQL:	0.005427		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00020	.000	1
S1	.01200	.01163	-.000	-3.05	.00273	.000	1
S3	2.5000	2.5665	.066	2.66	.56382	.001	1
S4	5.0000	4.8787	-.121	-2.43	1.0716	.002	1
S5	10.000	10.038	.038	.379	2.2046	.002	1
S2	.80000	.81730	.017	2.16	.17969	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



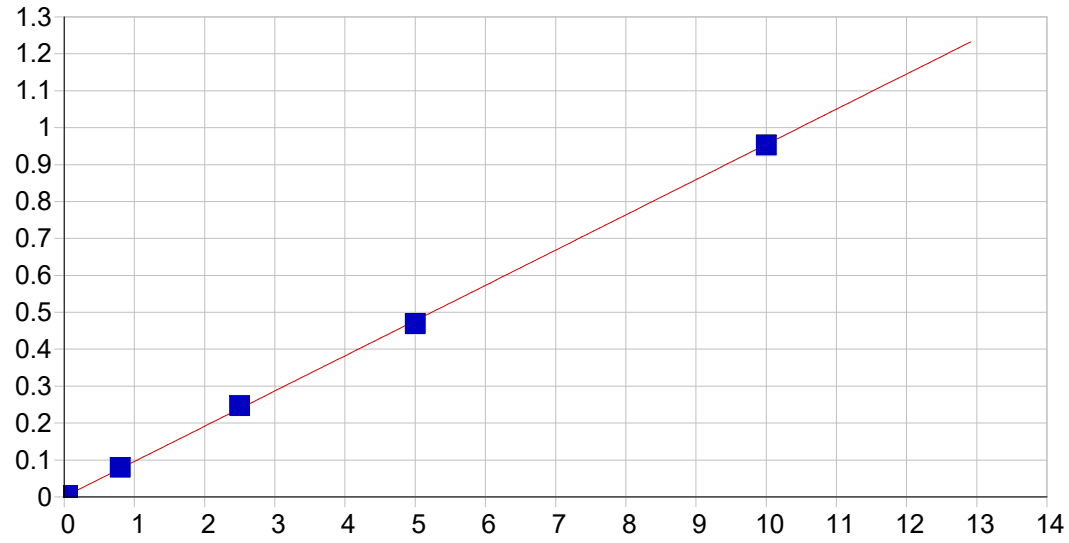
Se 196.090 {472}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000173	Re-Slope:	1.000000
A1 (Gain):	0.039666	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999857	Status:	OK.
Std Error of Est:	0.000016		
Predicted MDL:	0.004229		
Predicted MQL:	0.014095		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00017	.000	1
S1	.02000	.02068	.001	3.38	.00099	.000	1
S3	2.5000	2.5906	.091	3.62	.10296	.000	1
S4	5.0000	4.9337	-.066	-1.33	.19594	.000	1
S5	10.000	9.9495	-.051	-.505	.39496	.001	1
S2	.80000	.82559	.026	3.20	.03293	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



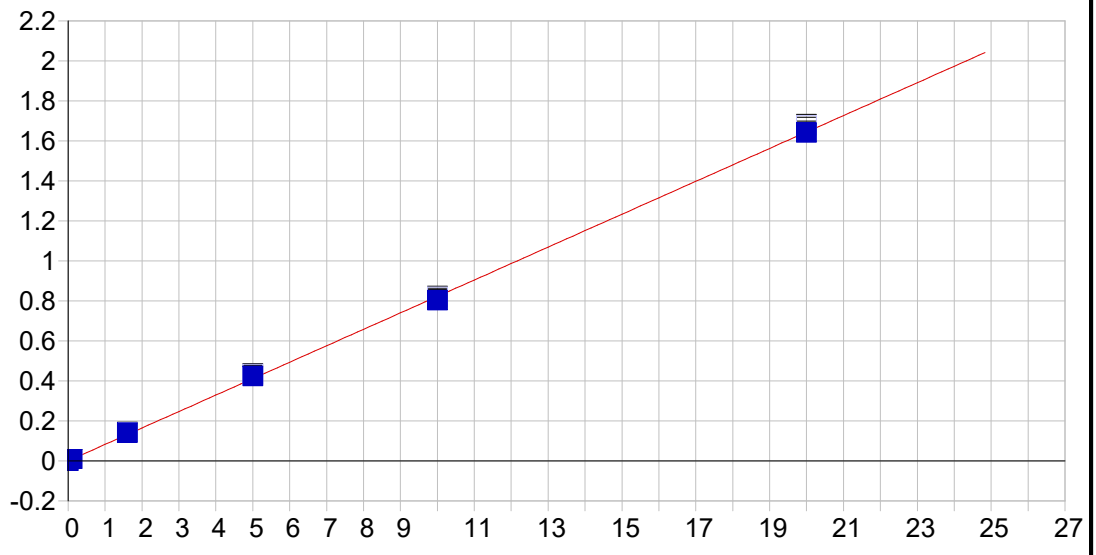
Sb 206.833 {463}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000514	Re-Slope:	1.000000
A1 (Gain):	0.095409	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999839	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.002270		
Predicted MQL:	0.007566		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00051	.000	1
S1	.05000	.04910	-.001	-1.80	.00519	.000	1
S3	2.5000	2.5850	.085	3.40	.24646	.000	1
S4	5.0000	4.9091	-.091	-1.82	.46752	.001	1
S5	10.000	9.9751	-.025	-.249	.94950	.001	1
S2	.80000	.83170	.032	3.96	.07965	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



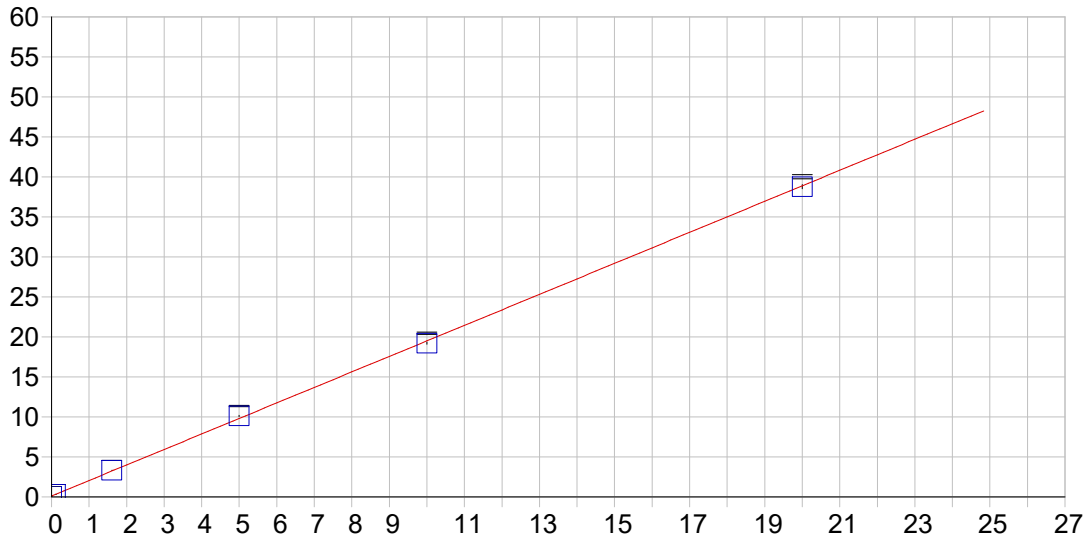
Al 396.152 { 85}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000315	Re-Slope:	1.000000
A1 (Gain):	0.082206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999757	Status:	OK.
Std Error of Est:	0.000137		
Predicted MDL:	0.015461		
Predicted MQL:	0.051538		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00031	.001	1
S1	.10000	.10940	.009	9.40	.00996	.000	1
S3	5.0000	5.1619	.162	3.24	.43329	.004	1
S4	10.000	9.7586	-.241	-2.41	.81979	.005	1
S5	20.000	19.967	-.033	-.164	1.6763	.007	1
S2	1.6000	1.7024	.102	6.40	.14303	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



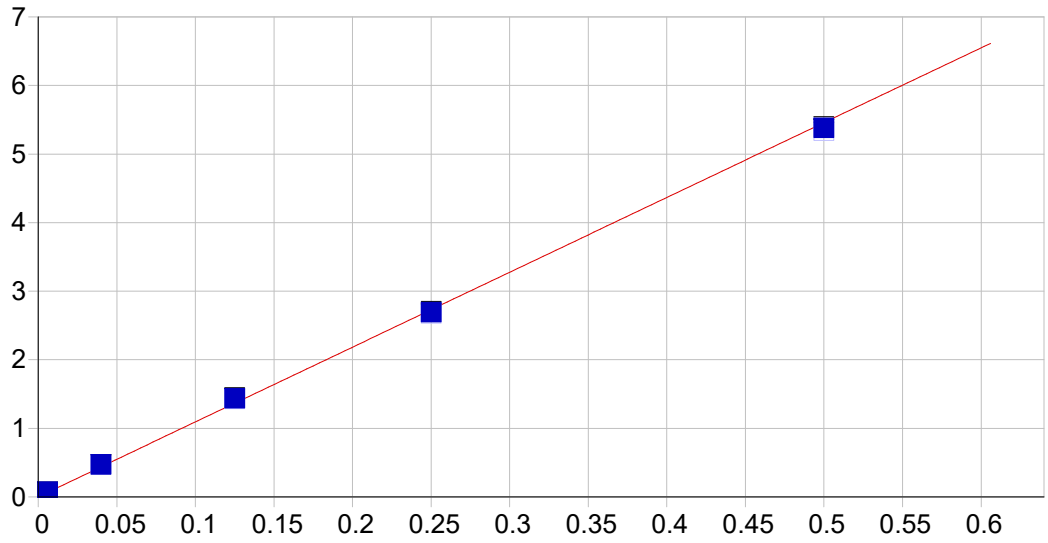
Ba 493.409 { 68}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.114574	Re-Slope:	1.000000
A1 (Gain):	1.938651	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999873	Status:	OK.
Std Error of Est:	0.002289		
Predicted MDL:	0.002014		
Predicted MQL:	0.006713		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.11456	.001	1
S1	.10000	.10055	.001	.546	.30950	.004	1
S3	5.0000	5.1581	.158	3.16	10.114	.084	1
S4	10.000	9.8481	-.152	-1.52	19.207	.136	1
S5	20.000	19.939	-.061	-.303	38.770	.264	1
S2	1.6000	1.6538	.054	3.37	3.3208	.005	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



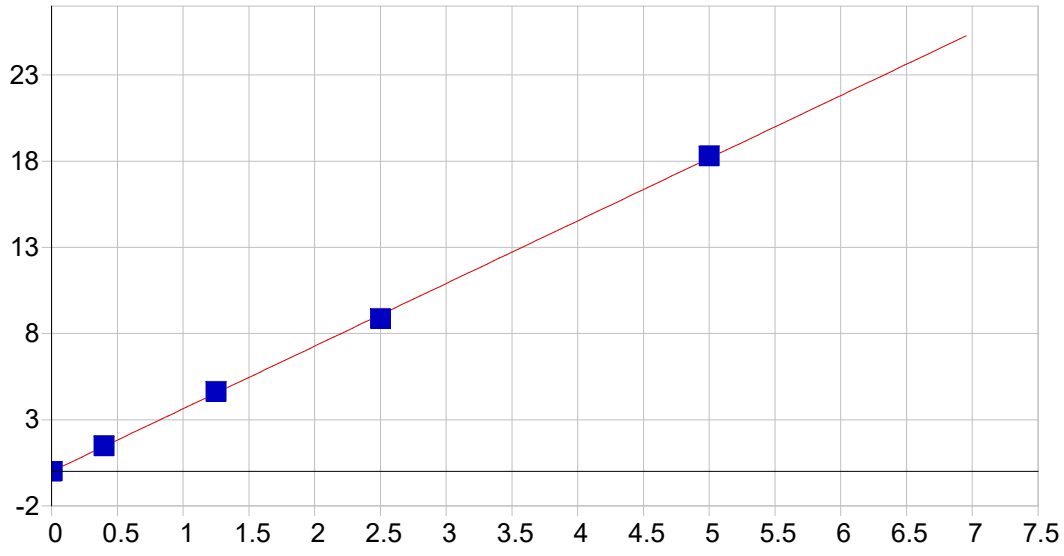
Be 234.861 {144}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001849	Re-Slope:	1.000000
A1 (Gain):	10.913108	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999553	Status:	OK.
Std Error of Est:	0.000933		
Predicted MDL:	0.000066		
Predicted MQL:	0.000218		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00184	.001	1
S1	.00600	.00661	.001	10.1	.07321	.000	1
S3	.12500	.13171	.007	5.37	1.4290	.008	1
S4	.25000	.24663	-.003	-1.35	2.6729	.013	1
S5	.50000	.49292	-.007	-1.42	5.3402	.020	1
S2	.04000	.04312	.003	7.81	.46920	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



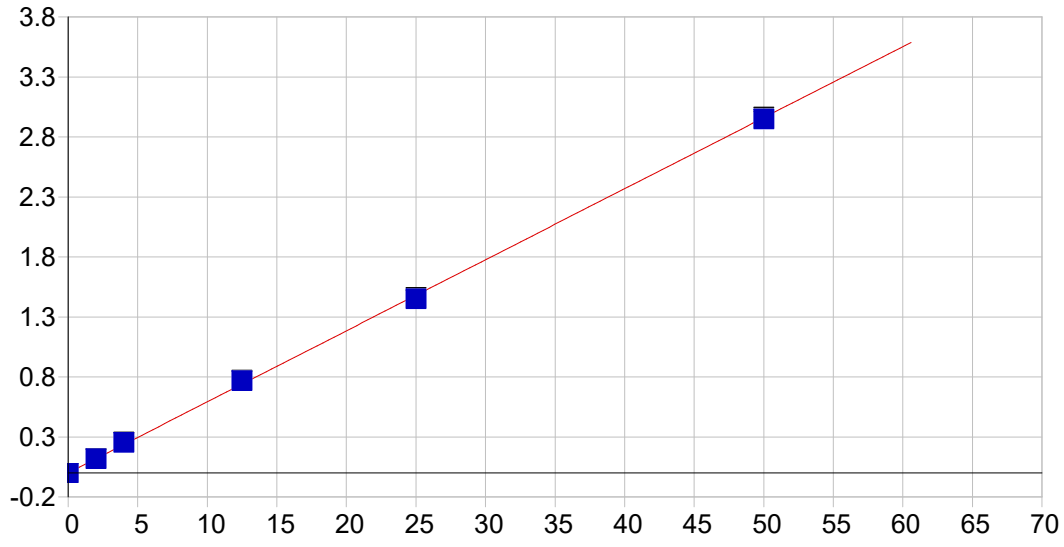
Cd 226.502 {449}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000031	Re-Slope:	1.000000
A1 (Gain):	3.634976	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000512		
Predicted MDL:	0.000092		
Predicted MQL:	0.000308		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.00600	.00631	.000	5.22	.02307	.000	1
S3	1.2500	1.2739	.024	1.91	4.6346	.004	1
S4	2.5000	2.4394	-.061	-2.42	8.8749	.013	1
S5	5.0000	5.0309	.031	.619	18.303	.001	1
S2	.40000	.40542	.005	1.35	1.4750	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



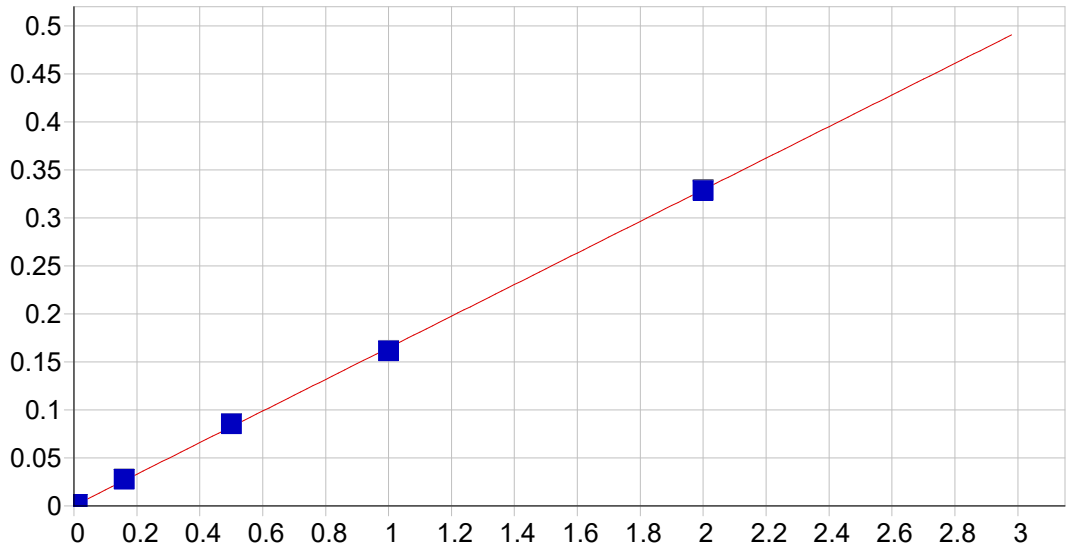
Ca 373.690 { 90}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000043	Re-Slope:	1.000000
A1 (Gain):	0.059207	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999744	Status:	OK.
Std Error of Est:	0.000708		
Predicted MDL:	0.016636		
Predicted MQL:	0.055453		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.00004	.000	1
S2	4.0000	4.2715	.271	6.79	.25258	.003	1
S3	12.500	12.971	.471	3.77	.76688	.005	1
S4	25.000	24.492	-.508	-2.03	1.4479	.011	1
S5	50.000	49.795	-.205	-.411	2.9437	.016	1
S1	2.0000	1.9714	-.029	-1.43	.11672	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



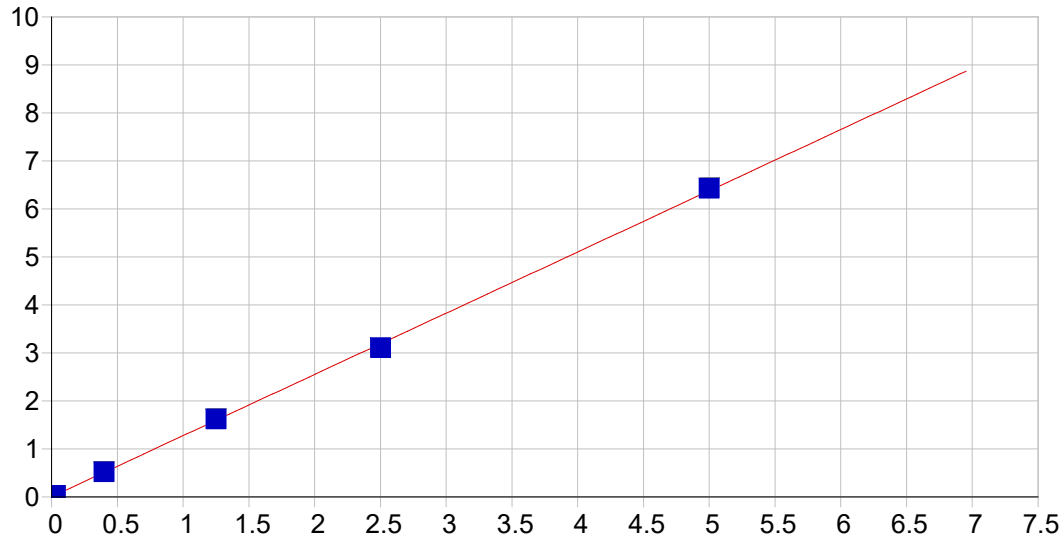
Cr 267.716 {126}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000095	Re-Slope:	1.000000
A1 (Gain):	0.164604	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999801	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.000490		
Predicted MQL:	0.001633		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00010	.000	1
S1	.01000	.00953	-.000	-4.66	.00167	.000	1
S3	.50000	.51835	.018	3.67	.08553	.000	1
S4	1.0000	.97997	-.020	-2.00	.16163	.000	1
S5	2.0000	1.9946	-.005	-.270	.32886	.000	1
S2	.16000	.16756	.008	4.72	.02771	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



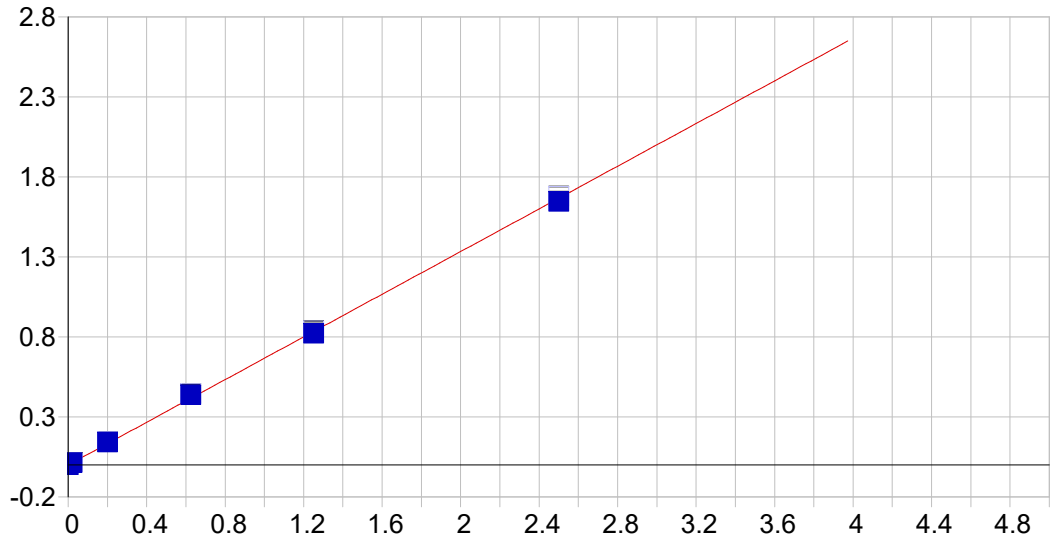
Co 228.616 {448}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000552	Re-Slope:	1.000000
A1 (Gain):	1.275520	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999858	Status:	OK.
Std Error of Est:	0.000438		
Predicted MDL:	0.000232		
Predicted MQL:	0.000774		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00055	.000	1
S1	.03000	.02899	-.001	-3.37	.03742	.000	1
S3	1.2500	1.2714	.021	1.71	1.6257	.002	1
S4	2.5000	2.4330	-.067	-2.68	3.1109	.006	1
S5	5.0000	5.0399	.040	.798	6.4430	.005	1
S2	.40000	.40675	.007	1.69	.52048	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



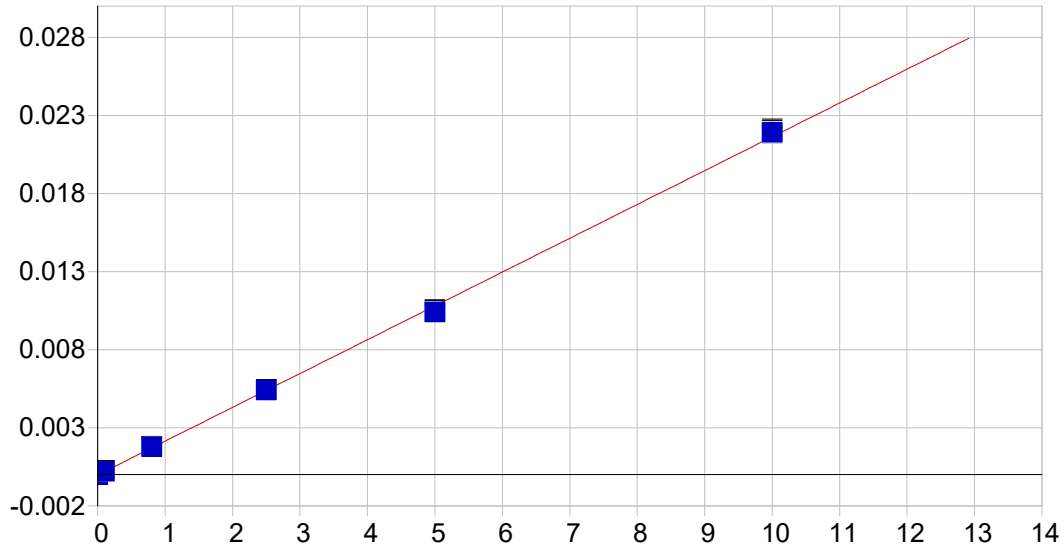
Cu 224.700 {450}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000290	Re-Slope:	1.000000
A1 (Gain):	0.666837	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999614	Status:	OK.
Std Error of Est:	0.000221		
Predicted MDL:	0.000520		
Predicted MQL:	0.001733		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00029	.000	1
S1	.02000	.02253	.003	12.7	.01497	.000	1
S3	.62500	.65671	.032	5.07	.44558	.001	1
S4	1.2500	1.2328	-.017	-1.38	.83767	.002	1
S5	2.5000	2.4681	-.032	-1.28	1.6773	.002	1
S2	.20000	.21488	.015	7.44	.14554	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



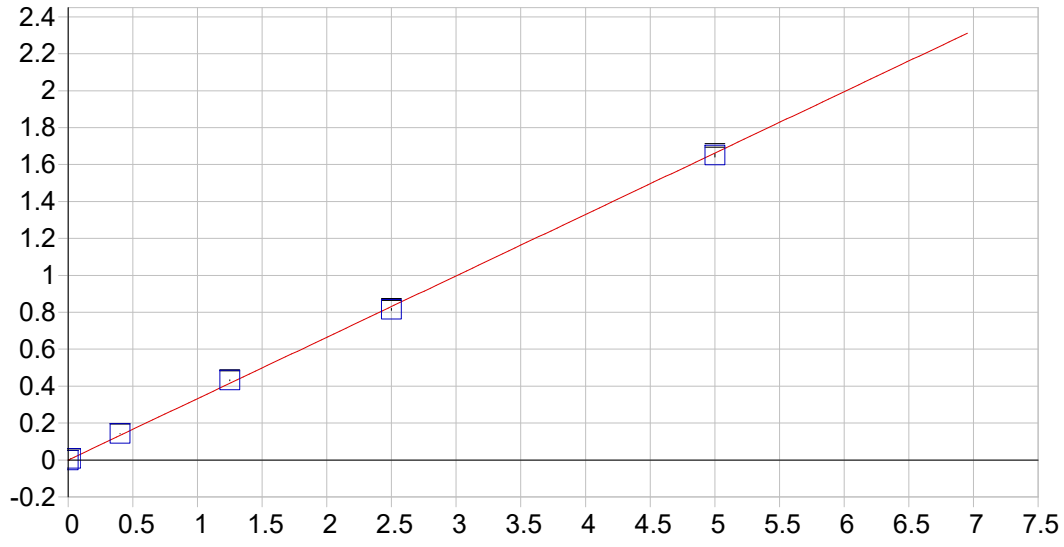
Fe 240.488 {140}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000021	Re-Slope:	1.000000
A1 (Gain):	0.002165	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999720	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.011825		
Predicted MQL:	0.039418		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00002	.000	1
S1	.10000	.10580	.006	5.80	.00021	.000	1
S3	2.5000	2.5112	.011	.450	.00539	.000	1
S4	5.0000	4.8186	-.181	-3.63	.01037	.000	1
S5	10.000	10.129	.129	1.29	.02182	.000	1
S2	.80000	.83551	.036	4.44	.00178	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



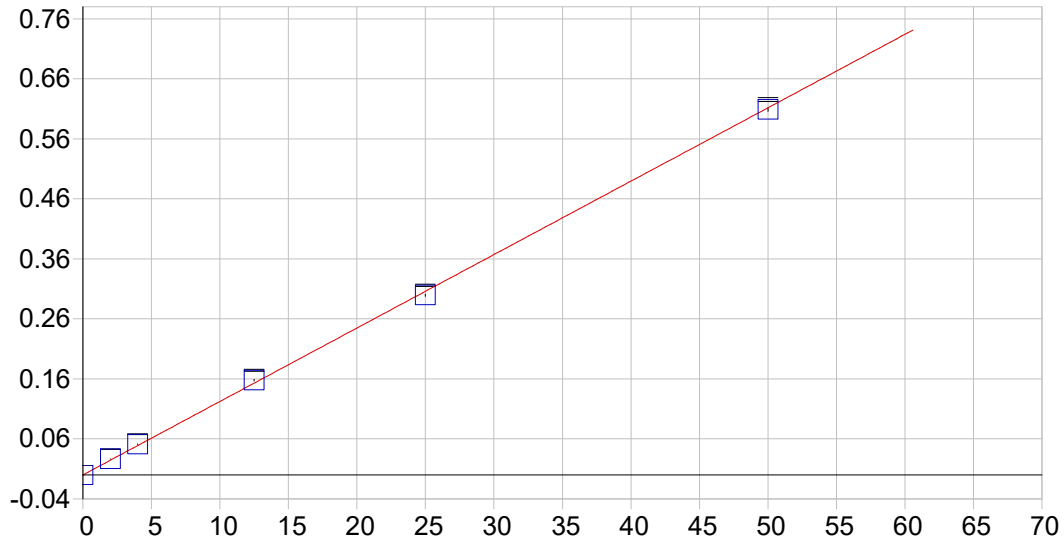
Mn 257.610 {131}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000070	Re-Slope:	1.000000
A1 (Gain):	0.332435	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999700	Status:	OK.
Std Error of Est:	0.000135		
Predicted MDL:	0.000947		
Predicted MQL:	0.003156		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00007	.000	1
S1	.02000	.02201	.002	10.1	.00725	.000	1
S3	1.2500	1.3007	.051	4.05	.43232	.003	1
S4	2.5000	2.4526	-.047	-1.90	.81525	.005	1
S5	5.0000	4.9657	-.034	-.685	1.6507	.009	1
S2	.40000	.42902	.029	7.25	.14255	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



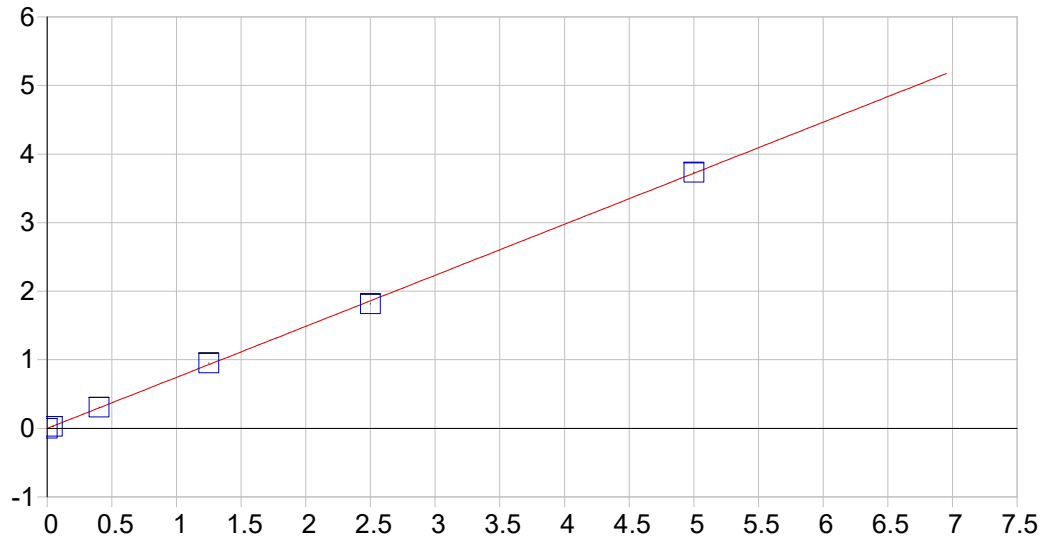
Mg 279.079 {121}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000020	Re-Slope:	1.000000
A1 (Gain):	0.012235	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999750	Status:	OK.
Std Error of Est:	0.000145		
Predicted MDL:	0.035409		
Predicted MQL:	0.118031		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00027	-.000	.000	-.00002	.000	1
S2	4.0000	4.1864	.186	4.66	.05120	.001	1
S3	12.500	12.899	.399	3.20	.15780	.002	1
S4	25.000	24.472	-.528	-2.11	.29939	.002	1
S5	50.000	49.780	-.220	-.440	.60901	.003	1
S1	2.0000	2.1621	.162	8.11	.02643	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



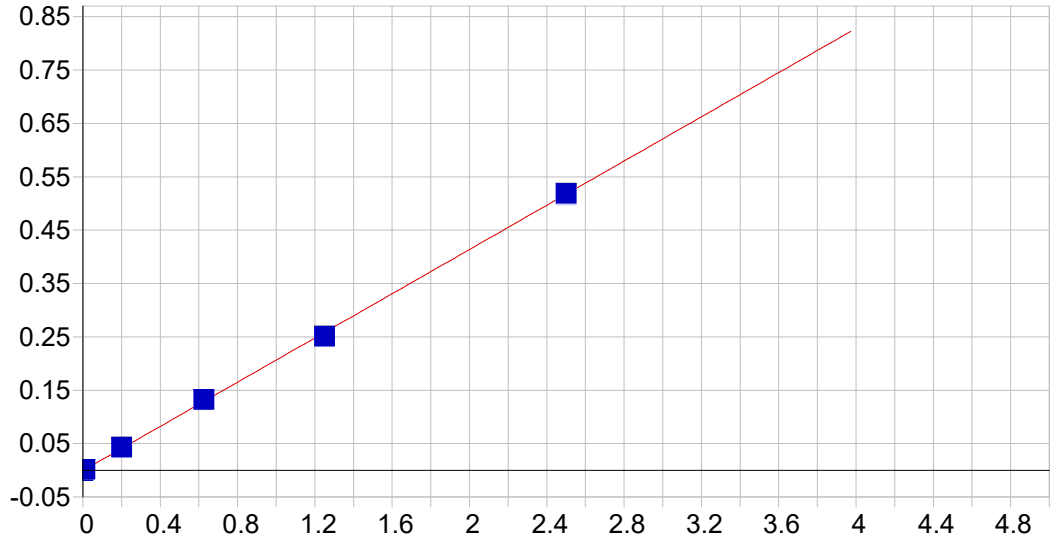
Ni 231.604 {446}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000392	Re-Slope:	1.000000
A1 (Gain):	0.744200	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999844	Status:	OK.
Std Error of Est:	0.000308		
Predicted MDL:	0.000392		
Predicted MQL:	0.001307		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00039	.000	1
S1	.04000	.03843	-.002	-3.92	.02821	.000	1
S3	1.2500	1.2800	.030	2.40	.95215	.002	1
S4	2.5000	2.4391	-.061	-2.44	1.8148	.003	1
S5	5.0000	5.0179	.018	.357	3.7339	.005	1
S2	.40000	.41468	.015	3.67	.30821	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



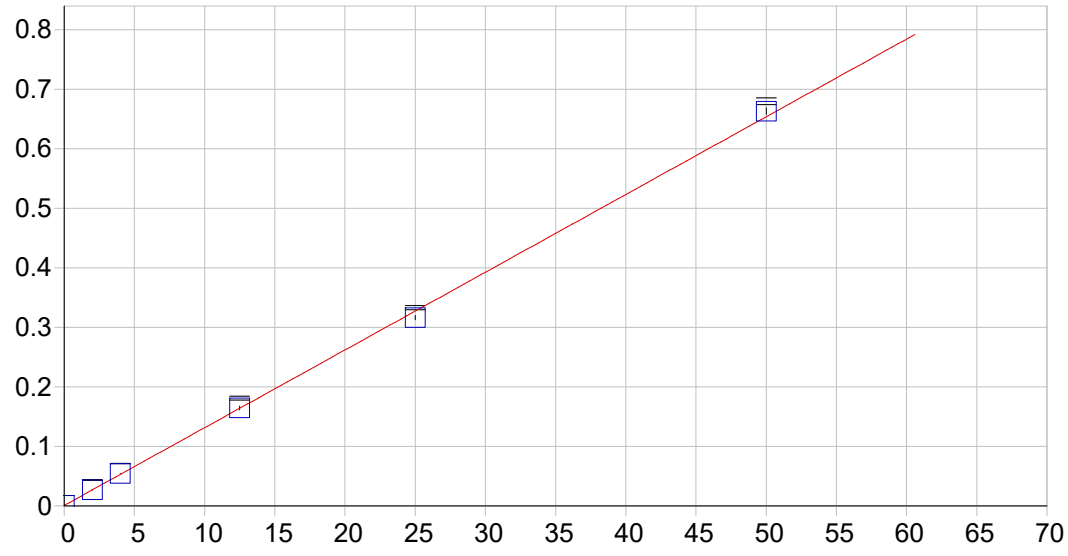
Ag 328.068 {103}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000814	Re-Slope:	1.000000
A1 (Gain):	0.207249	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999768	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.000643		
Predicted MQL:	0.002145		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00081	.000	1
S1	.01000	.01046	.000	4.60	.00134	.000	1
S3	.62500	.64232	.017	2.77	.13163	.000	1
S4	1.2500	1.2156	-.034	-2.75	.24976	.000	1
S5	2.5000	2.5053	.005	.211	.51569	.001	1
S2	.20000	.21139	.011	5.69	.04278	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



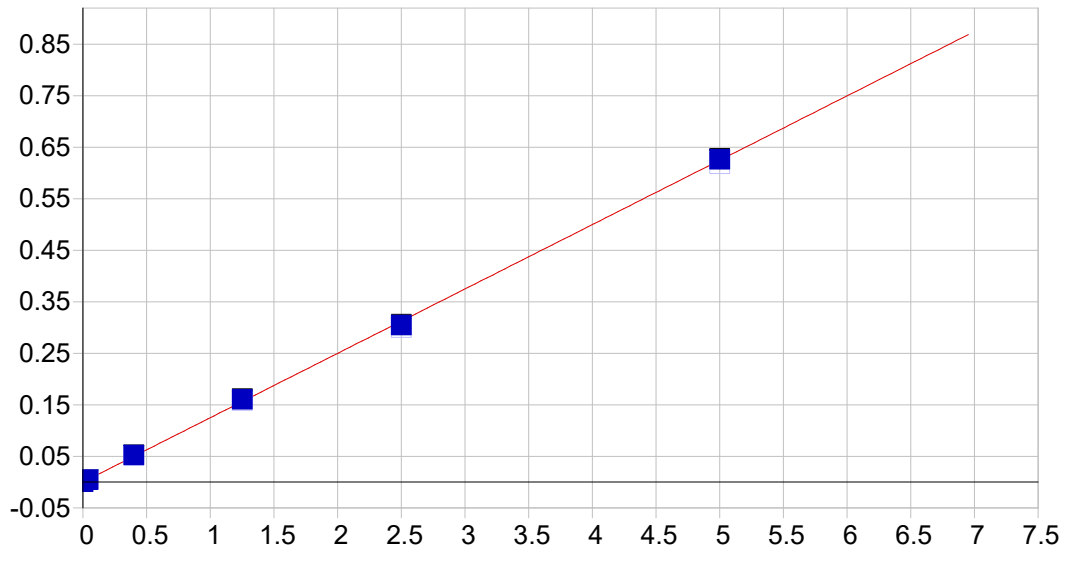
Na 589.592 { 57}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000819	Re-Slope:	1.000000
A1 (Gain):	0.013062	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999776	Status:	OK.
Std Error of Est:	0.000146		
Predicted MDL:	0.015341		
Predicted MQL:	0.051136		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00082	.000	1
S2	4.0000	4.1123	.112	2.81	.05453	.000	1
S3	12.500	12.527	.027	.216	.16444	.003	1
S4	25.000	24.155	-.845	-3.38	.31633	.003	1
S5	50.000	50.711	.711	1.42	.66318	.006	1
S1	2.0000	1.9940	-.006	-.299	.02686	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



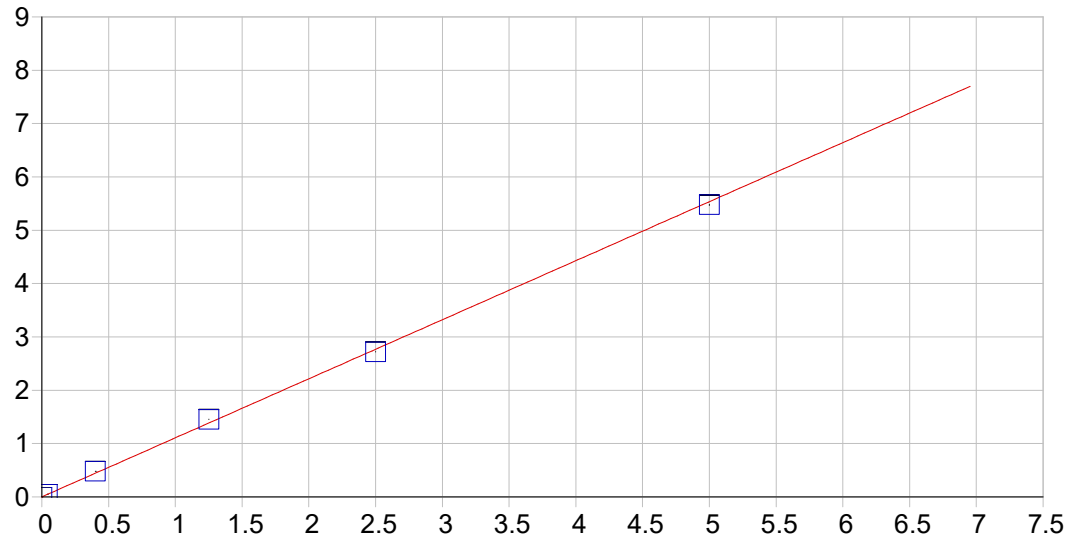
V 292.402 {115}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000147	Re-Slope:	1.000000
A1 (Gain):	0.124913	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999800	Status:	OK.
Std Error of Est:	0.000058		
Predicted MDL:	0.004301		
Predicted MQL:	0.014337		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00015	.000	1
S1	.04000	.03840	-.002	-4.00	.00476	.001	1
S3	1.2500	1.2838	.034	2.70	.15827	.001	1
S4	2.5000	2.4349	-.065	-2.60	.29982	.002	1
S5	5.0000	5.0143	.014	.286	.61754	.002	1
S2	.40000	.41860	.019	4.65	.05172	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



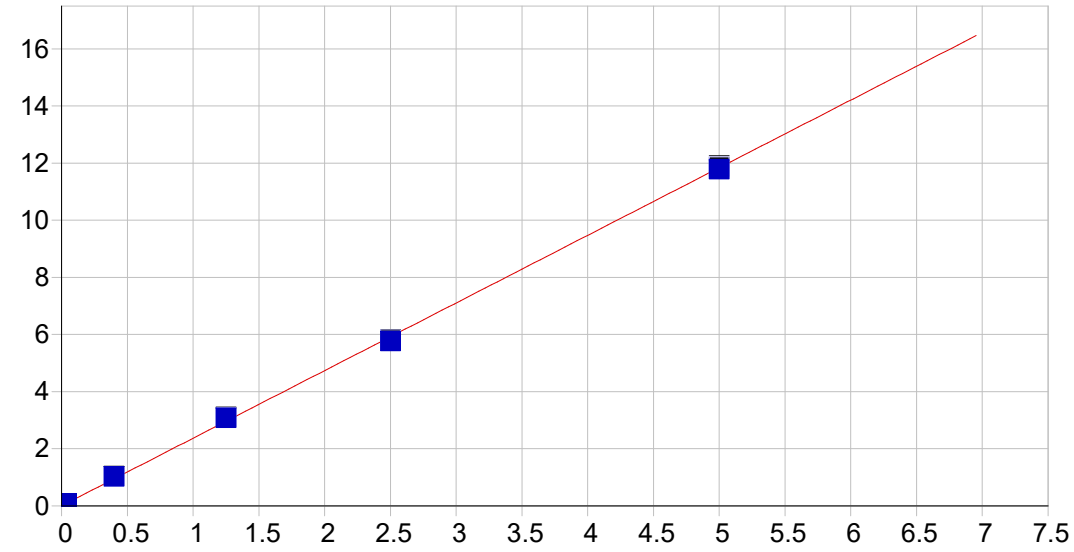
Zn 206.200 {464}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000546	Re-Slope:	1.000000
A1 (Gain):	1.107104	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999588	Status:	OK.
Std Error of Est:	0.000746		
Predicted MDL:	0.000186		
Predicted MQL:	0.000621		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00054	.000	1
S1	.04000	.04199	.002	4.97	.04703	.000	1
S3	1.2500	1.3120	.062	4.96	1.4531	.003	1
S4	2.5000	2.4555	-.044	-1.78	2.7191	.004	1
S5	5.0000	4.9458	-.054	-1.08	5.4760	.007	1
S2	.40000	.43470	.035	8.67	.48180	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



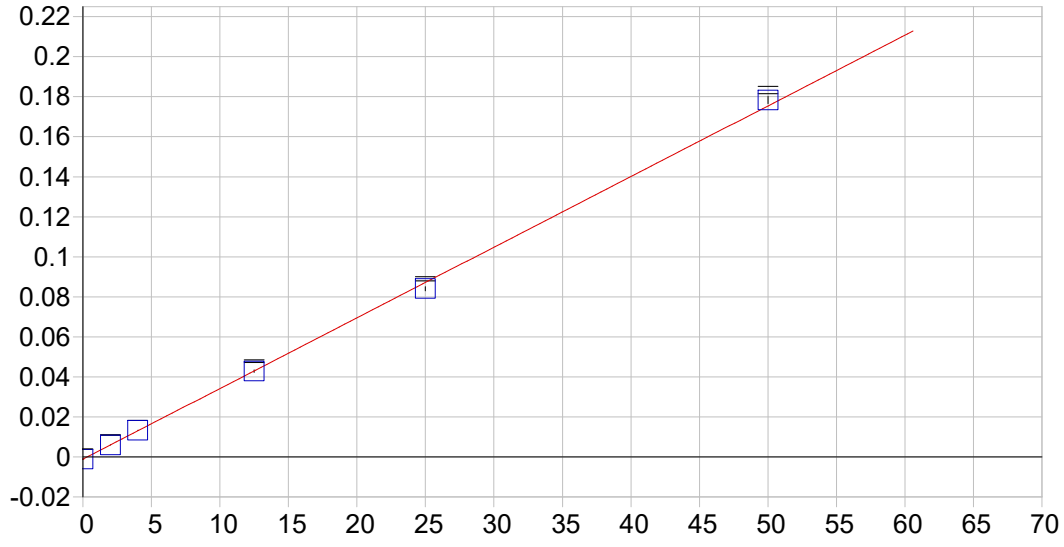
Zn 213.856 {158}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002504	Re-Slope:	1.000000
A1 (Gain):	2.367723	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999640	Status:	OK.
Std Error of Est:	0.001502		
Predicted MDL:	0.000276		
Predicted MQL:	0.000922		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00249	.000	1
S1	.04000	.04219	.002	5.47	.10310	.001	1
S3	1.2500	1.3011	.051	4.09	3.1051	.014	1
S4	2.5000	2.4363	-.064	-2.55	5.8148	.014	1
S5	5.0000	4.9771	-.023	-.457	11.875	.032	1
S2	.40000	.43330	.033	8.33	1.0355	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



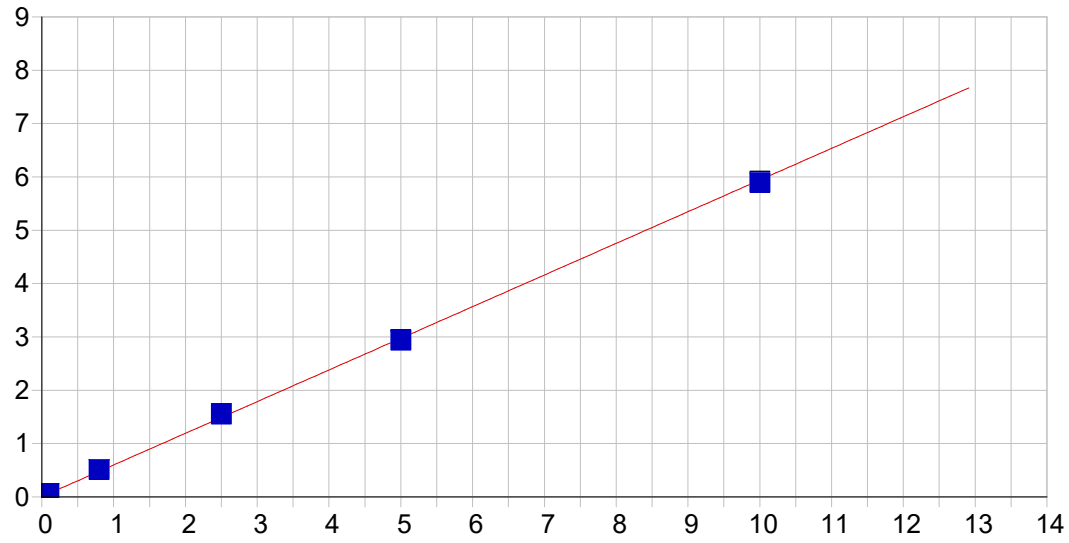
K 766.490 { 44}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001143	Re-Slope:	1.000000
A1 (Gain):	0.003531	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999753	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.069644		
Predicted MQL:	0.232145		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00114	.000	1
S2	4.0000	4.0799	.080	2.00	.01326	.000	1
S3	12.500	12.458	-.042	-.333	.04285	.001	1
S4	25.000	24.124	-.876	-3.51	.08404	.001	1
S5	50.000	50.829	.829	1.66	.17834	.002	1
S1	2.0000	2.0093	.009	.464	.00595	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



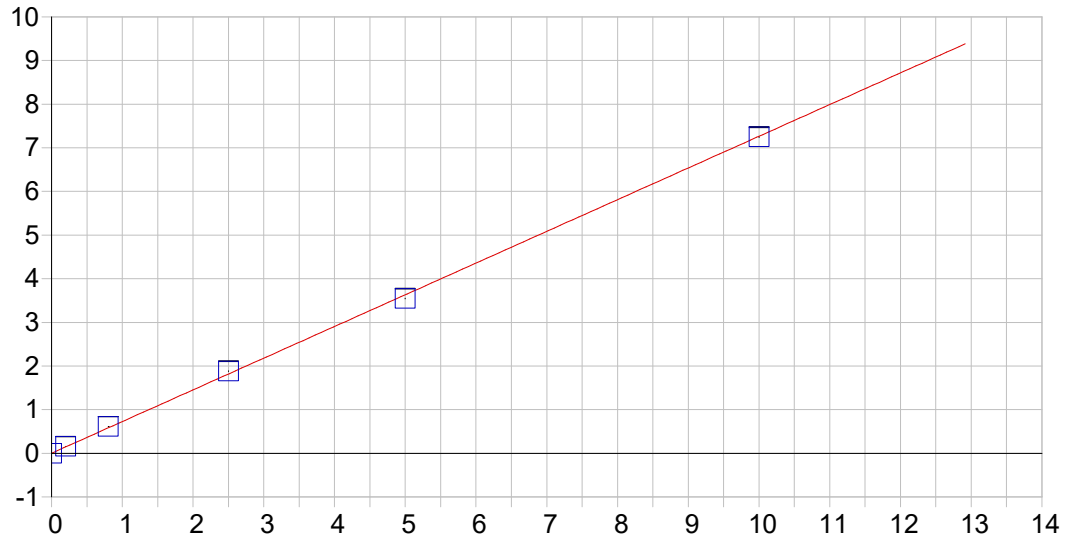
B 249.678 {135}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005980	Re-Slope:	1.000000
A1 (Gain):	0.593539	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999762	Status:	OK.
Std Error of Est:	0.000680		
Predicted MDL:	0.001245		
Predicted MQL:	0.004151		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00597	.000	1
S1	.10000	.10741	.007	7.41	.06955	.001	1
S3	2.5000	2.5961	.096	3.84	1.5476	.013	1
S4	5.0000	4.9299	-.070	-1.40	2.9336	.013	1
S5	10.000	9.9187	-.081	-.813	5.8962	.025	1
S2	.80000	.84792	.048	5.99	.50949	.001	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



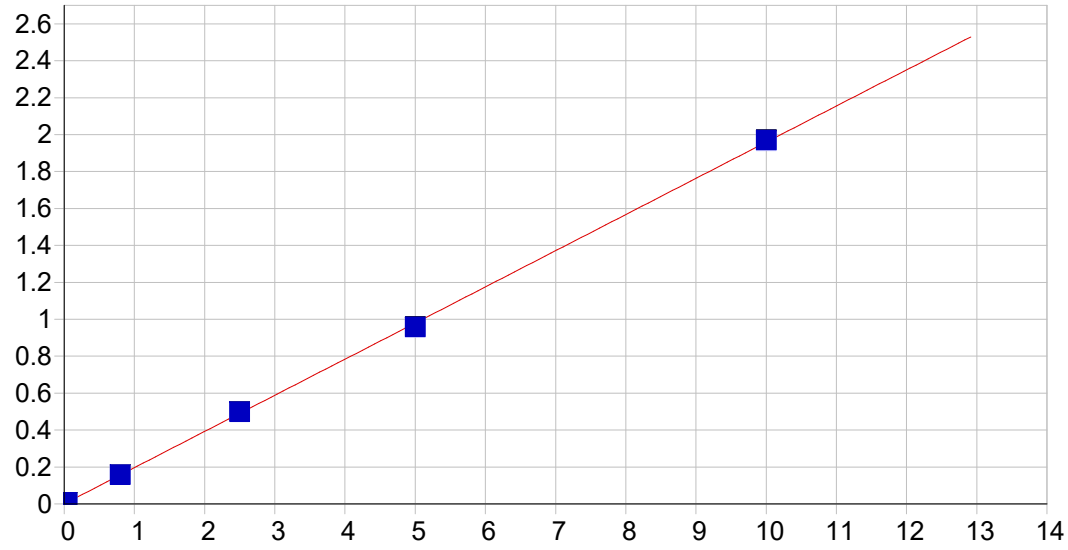
Mo 202.030 {467}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000040	Re-Slope:	1.000000
A1 (Gain):	0.726445	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999752	Status:	OK.
Std Error of Est:	0.001204		
Predicted MDL:	0.000298		
Predicted MQL:	0.000992		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	-.00006	.000	1
S1	.20000	.21365	.014	6.82	.15516	.000	1
S3	2.5000	2.5888	.089	3.55	1.8806	.005	1
S4	5.0000	4.8792	-.121	-2.42	3.5444	.008	1
S5	10.000	9.9773	-.023	-.227	7.2479	.012	1
S2	.80000	.84109	.041	5.14	.61096	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



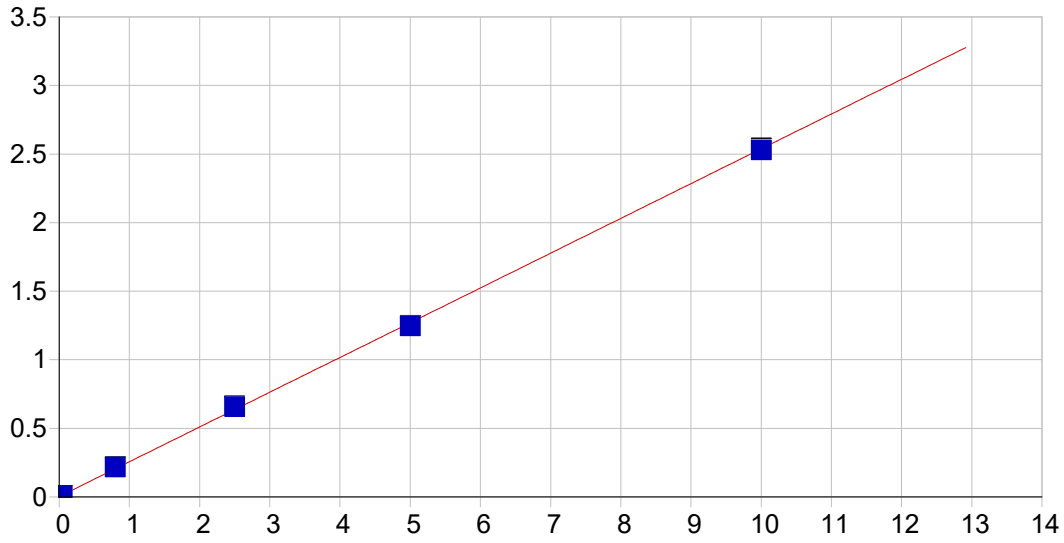
Sn 189.989 {478}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000470	Re-Slope:	1.000000
A1 (Gain):	0.195827	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999894	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.000727		
Predicted MQL:	0.002424		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00047	.000	1
S1	.04000	.03722	-.003	-6.95	.00774	.000	1
S3	2.5000	2.5462	.046	1.85	.49776	.001	1
S4	5.0000	4.8901	-.110	-2.20	.95545	.001	1
S5	10.000	10.059	.059	.595	1.9651	.002	1
S2	.80000	.80706	.007	.883	.15809	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



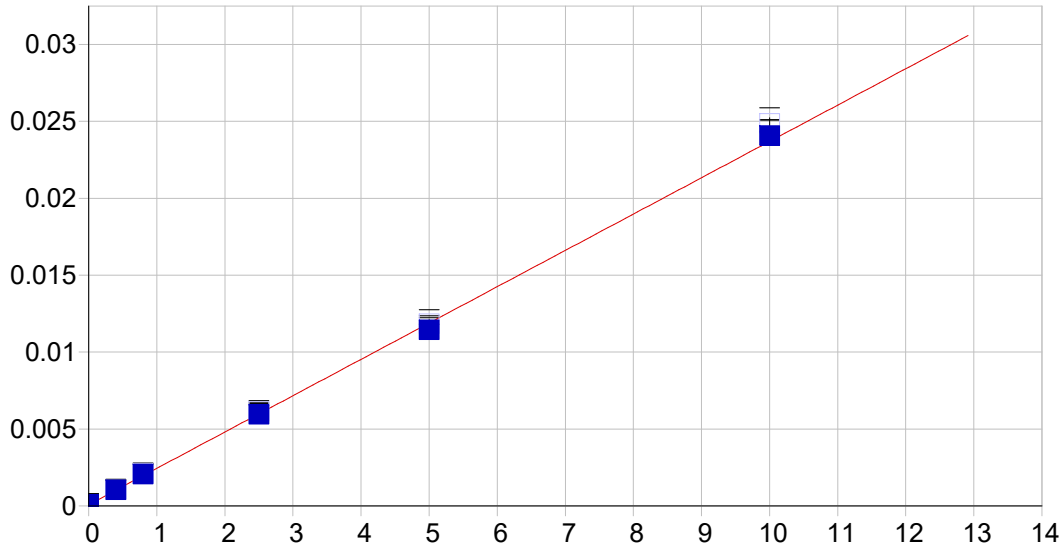
Ti 336.121 {100}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002658	Re-Slope:	1.000000
A1 (Gain):	0.253526	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999787	Status:	OK.
Std Error of Est:	0.000173		
Predicted MDL:	0.002487		
Predicted MQL:	0.008291		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00266	.001	1
S1	.04000	.04229	.002	5.73	.01338	.000	1
S3	2.5000	2.5855	.085	3.42	.65839	.005	1
S4	5.0000	4.8996	-.100	-2.01	1.2453	.006	1
S5	10.000	9.9667	-.033	-.333	2.5305	.013	1
S2	.80000	.84588	.046	5.74	.21719	.002	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



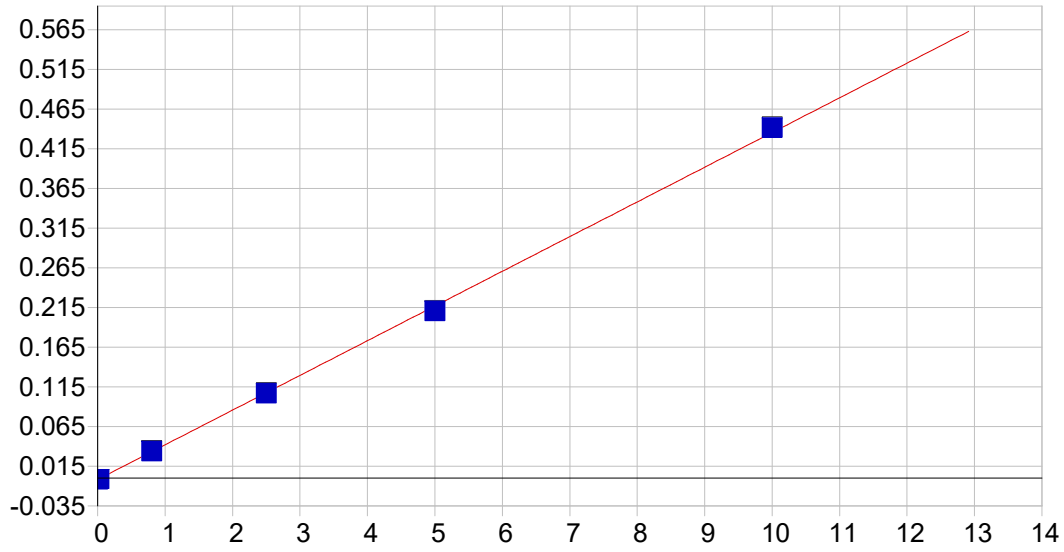
Si 288.158 {117}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000079	Re-Slope:	1.000000
A1 (Gain):	0.002362	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999705	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.019762		
Predicted MQL:	0.065874		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00008	.000	1
S1	.40000	.40587	.006	1.47	.00104	.000	1
S3	2.5000	2.4848	-.015	-.609	.00615	.000	1
S4	5.0000	4.8130	-.187	-3.74	.01185	.000	1
S5	10.000	10.154	.154	1.54	.02486	.000	1
S2	.80000	.84225	.042	5.28	.00213	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



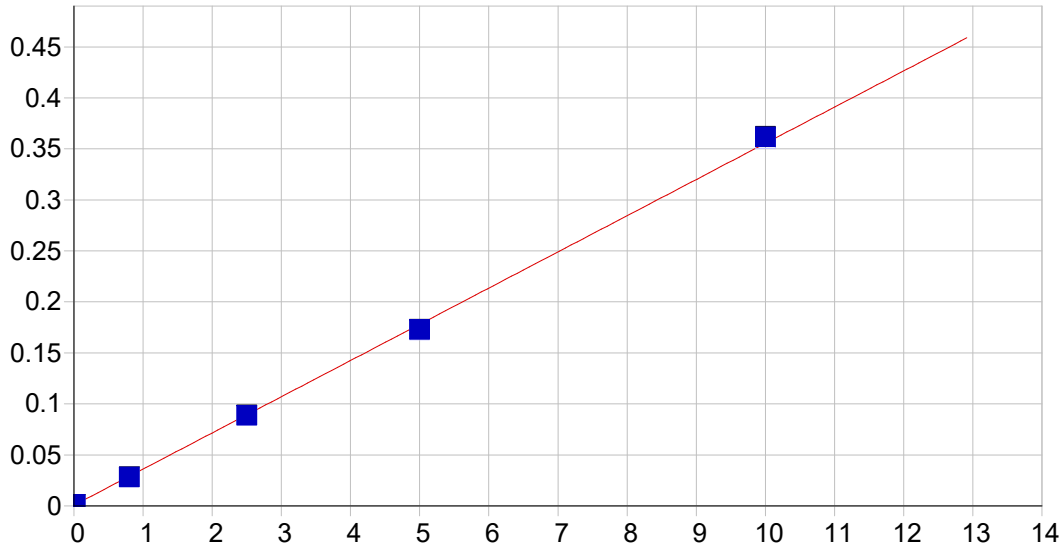
P 177.495 {490}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001722	Re-Slope:	1.000000
A1 (Gain):	0.043734	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999795	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.002443		
Predicted MQL:	0.008142		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00172	.000	1
S1	.02000	.01555	-.004	-22.2	-.00104	.000	1
S3	2.5000	2.4876	-.012	-.496	.10713	.000	1
S4	5.0000	4.8572	-.143	-2.86	.21083	.001	1
S5	10.000	10.142	.142	1.42	.44206	.001	1
S2	.80000	.81805	.018	2.26	.03407	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



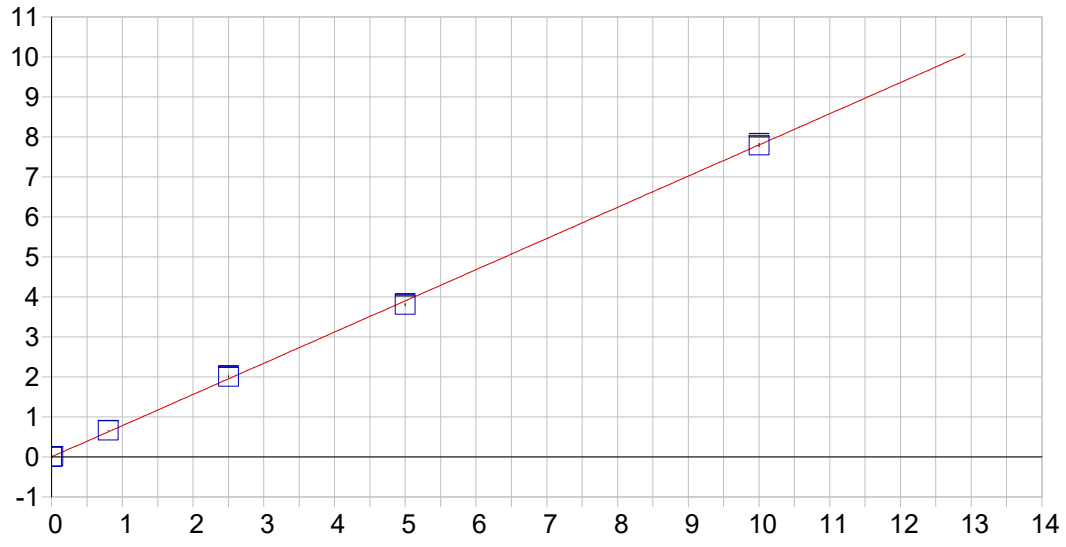
S 182.034 {485}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000594	Re-Slope:	1.000000
A1 (Gain):	0.035486	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999783	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.003616		
Predicted MQL:	0.012055		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00059	.000	1
S1	.02000	.02212	.002	10.6	.00133	.000	1
S3	2.5000	2.4872	-.013	-.514	.08843	.000	1
S4	5.0000	4.8567	-.143	-2.87	.17210	.000	1
S5	10.000	10.173	.173	1.73	.35993	.001	1
S2	.80000	.78071	-.019	-2.41	.02816	.000	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



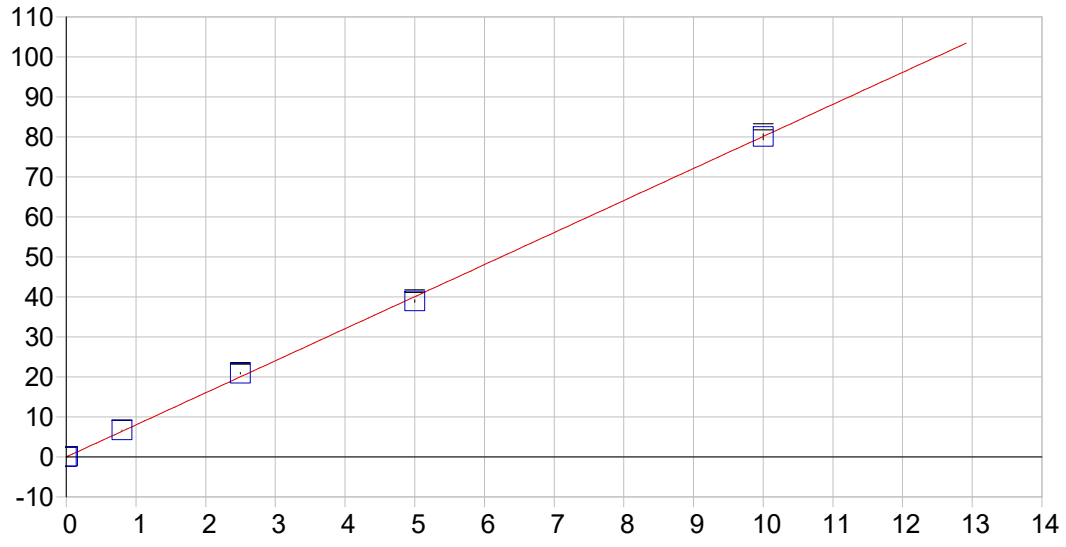
Li 670.784 { 50}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001847	Re-Slope:	1.000000
A1 (Gain):	0.779770	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999773	Status:	OK.
Std Error of Est:	0.000389		
Predicted MDL:	0.003203		
Predicted MQL:	0.010676		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00184	.002	1
S5	10.000	9.9943	-.006	-.057	7.7951	.042	1
S4	5.0000	4.8794	-.121	-2.41	3.8067	.029	1
S3	2.5000	2.5768	.077	3.07	2.0112	.020	1
S1	.02000	.02234	.002	11.7	.01927	.002	1
S2	.80000	.84707	.047	5.88	.66237	.004	1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



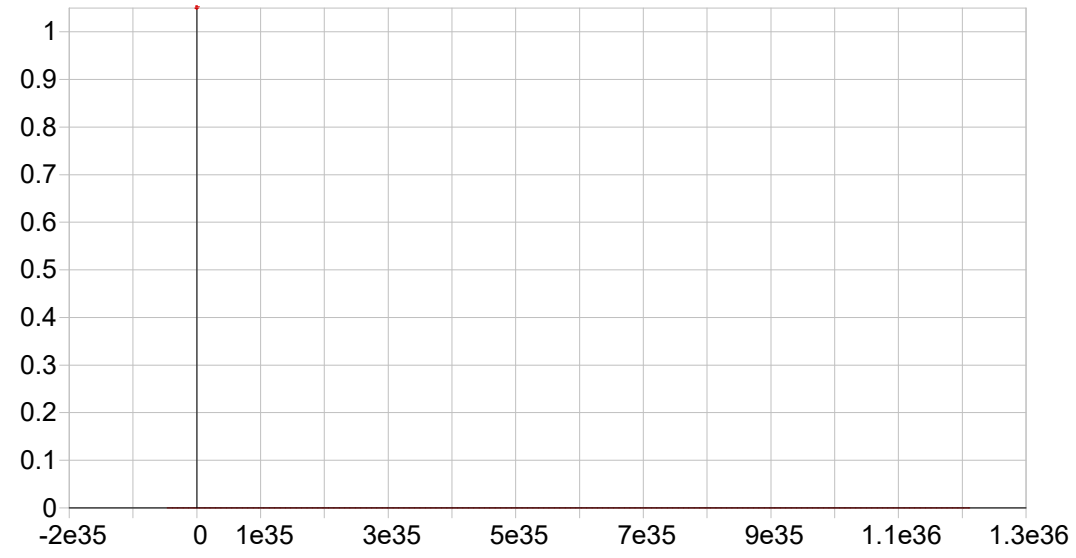
Sr 407.771 { 83}

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000707	Re-Slope:	1.000000
A1 (Gain):	8.011454	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999718	Status:	OK.
Std Error of Est:	0.004461		
Predicted MDL:	0.000146		
Predicted MQL:	0.000486		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00072	.000	1
S1	.02000	.02019	.000	.971	.16108	.001	1
S3	2.5000	2.6098	.110	4.39	20.907	.209	1
S4	5.0000	4.8617	-.138	-2.77	38.949	.302	1
S5	10.000	9.9915	-.008	-.085	80.046	.750	1
S2	.80000	.83677	.037	4.60	6.7030	.053	1

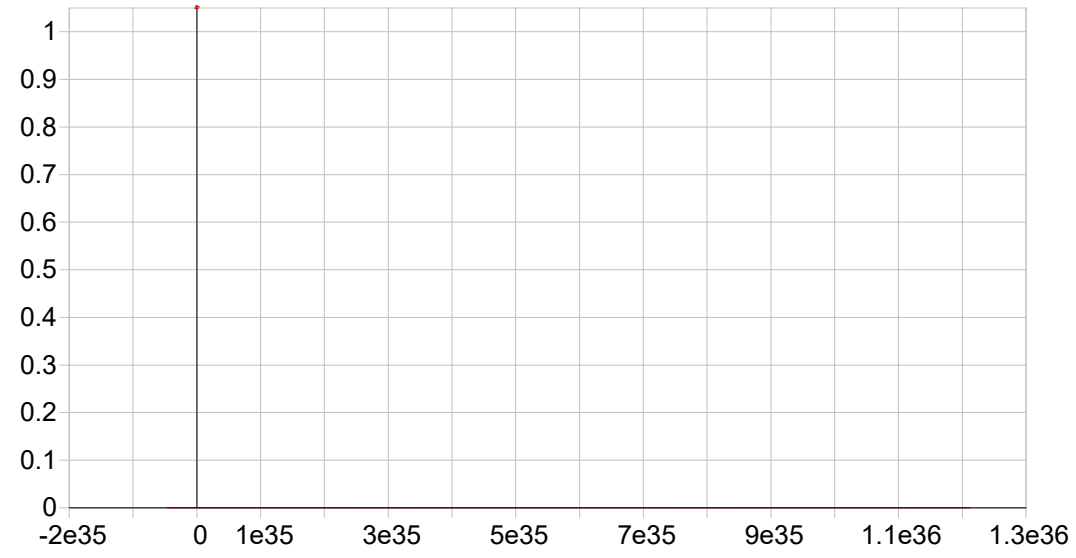
Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



Y 224.306 {450}*

Date of Fit:	1/20/2023 12:36:20	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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



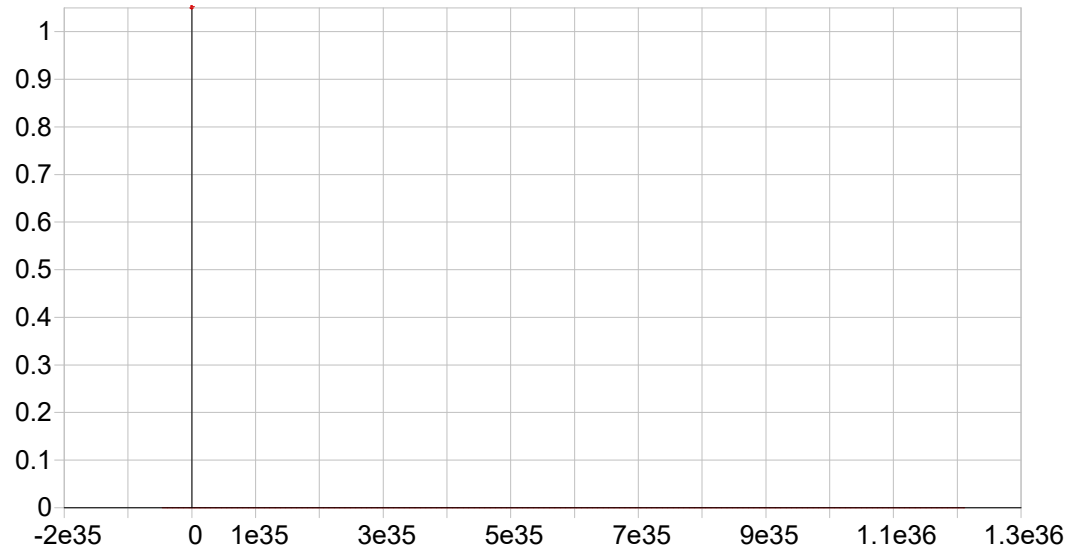
Y 360.073 { 94}*

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

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

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

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



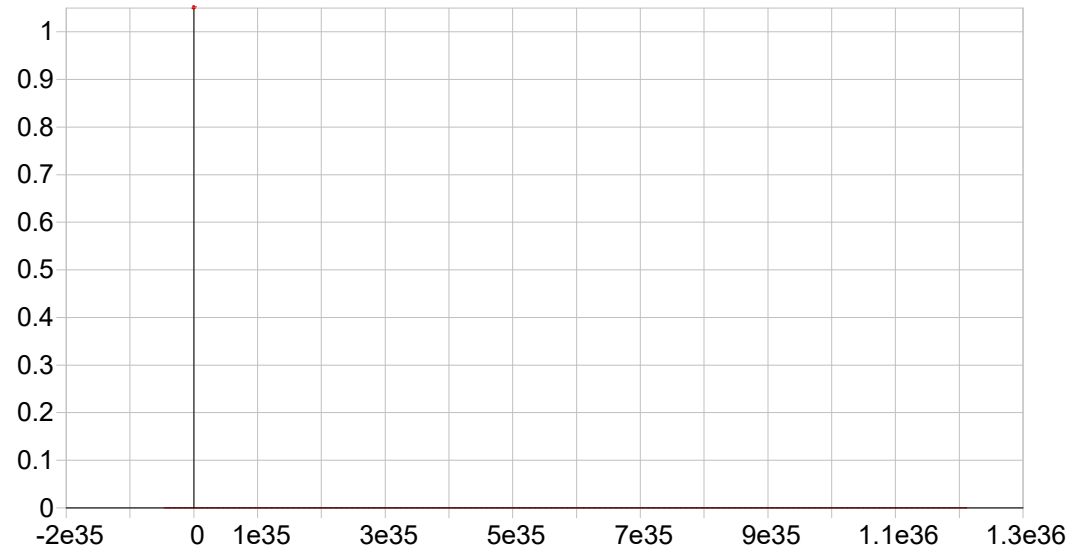
Y 371.030 { 91}*

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

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

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

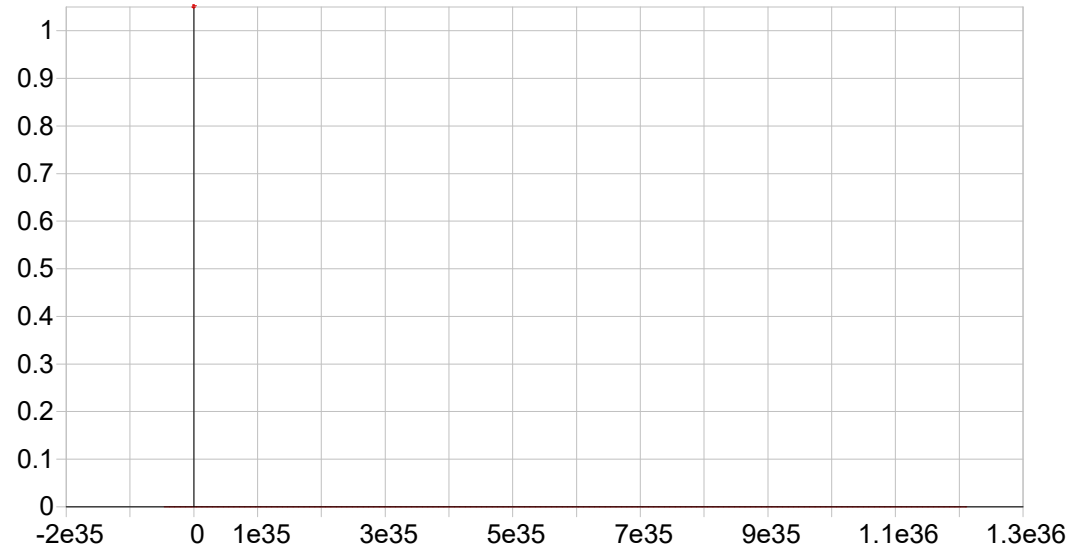
Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

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

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

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S0 Acquired: 1/20/2023 12:15:36 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00008**	**.00006**	**.00020**	**.00017**	**.00051**	**.00031**	**.11456**	**.00184**
Stddev	.00014	.00008	.00016	.00015	.00015	.00102	.00077	.00071
%RSD	170.24	133.32	82.624	88.236	28.230	325.19	.67409	38.445
#1	.00006	-.00000	.00038	.00024	.00057	.00079	.11379	.00189
#2	-.00009	.00015	.00007	-.00000	.00035	.00101	.11456	.00251
#3	-.00022	.00004	.00015	.00028	.00062	-.00086	.11534	.00110

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00003**	**.00004**	**.00010**	**.00055**	**-.00029**	**-.00002**	**-.00007**	**-.00002**
Stddev	.00038	.00050	.00007	.00004	.00008	.00001	.00021	.00017
%RSD	1303.8	1417.1	72.670	8.0745	28.864	61.873	300.83	741.44
#1	.00043	.00035	.00007	.00053	-.00039	-.00003	-.00032	-.00013
#2	-.00002	.00029	.00017	.00053	-.00022	-.00001	.00003	-.00012
#3	-.00033	-.00054	.00004	.00060	-.00027	-.00002	.00007	.00018

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00039**	**-.00081**	**.00082**	**.00015**	**.00249**	**-.00114**	**.00597**	**-.00006**
Stddev	.00011	.00007	.00024	.00048	.00017	.00011	.00035	.00012
%RSD	27.550	8.6580	29.309	328.07	6.9736	9.9801	5.8510	210.59
#1	-.00039	-.00079	.00055	.00062	.00258	-.00124	.00624	-.00020
#2	-.00050	-.00089	.00088	-.00035	.00260	-.00102	.00609	.00002
#3	-.00028	-.00076	.00102	.00017	.00229	-.00118	.00558	.00001

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00047**	**.00266**	**.00008**	**-.00172**	**.00059**	**.00184**	**-.00072**
Stddev	.00004	.00071	.00007	.00006	.00012	.00217	.00023
%RSD	8.2446	26.857	83.288	3.4423	20.420	117.70	31.596
#1	.00051	.00261	.00004	-.00179	.00062	-.00047	-.00055
#2	.00043	.00339	.00004	-.00170	.00070	.00217	-.00063
#3	.00048	.00197	.00016	-.00168	.00046	.00384	-.00098

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S0 Acquired: 1/20/2023 12:15:36 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4038.1	67491.	5240.5	3590.3	4293.6
Stddev	9.9	142.	17.6	6.9	13.2
%RSD	.24426	.21018	.33559	.19142	.30708
#1	4027.0	67404.	5220.2	3588.2	4282.4
#2	4041.6	67415.	5249.4	3584.7	4290.2
#3	4045.7	67655.	5251.9	3598.0	4308.1

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S1 Acquired: 1/20/2023 12:19:35 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00093**	**.00306**	**.00273**	**.00099**	**.00519**	**.00996**	**.30950**	**.07321**
Stddev	.00011	.00012	.00022	.00003	.00017	.00037	.00355	.00043
%RSD	11.493	3.9046	7.8881	2.7184	3.2788	3.7325	1.1457	.58762
#1	.00082	.00293	.00283	.00102	.00527	.01038	.30915	.07285
#2	.00104	.00309	.00287	.00098	.00530	.00967	.31320	.07369
#3	.00093	.00316	.00248	.00097	.00499	.00983	.30613	.07311

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02307**	**.11672**	**.00167**	**.03742**	**.01497**	**.00021**	**.00725**	**.02643**
Stddev	.00015	.00131	.00005	.00019	.00038	.00004	.00015	.00016
%RSD	.65519	1.1198	2.8829	.51376	2.5288	17.853	2.0122	.60078
#1	.02301	.11527	.00167	.03740	.01493	.00023	.00723	.02643
#2	.02296	.11709	.00172	.03724	.01536	.00017	.00740	.02628
#3	.02324	.11780	.00162	.03762	.01461	.00022	.00711	.02659

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.02821**	**.00134**	**.02686**	**.00476**	**.10310**	**.00595**	**.06955**	**.15516**
Stddev	.00029	.00005	.00030	.00076	.00147	.00012	.00083	.00036
%RSD	1.0431	3.9287	1.1222	16.027	1.4212	2.0847	1.1942	.23024
#1	.02822	.00129	.02652	.00396	.10172	.00583	.07025	.15555
#2	.02791	.00133	.02697	.00486	.10294	.00595	.06863	.15485
#3	.02850	.00139	.02710	.00547	.10464	.00608	.06976	.15509

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00774**	**.01338**	**.00104**	**-.00104**	**.00133**	**.01927**	**.16108**
Stddev	.00008	.00042	.00004	.00006	.00004	.00234	.00086
%RSD	.99609	3.1201	4.0686	5.9969	2.9531	12.166	.53491
#1	.00767	.01292	.00103	-.00106	.00133	.01658	.16045
#2	.00772	.01349	.00100	-.00109	.00129	.02087	.16206
#3	.00782	.01373	.00109	-.00097	.00137	.02036	.16072

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S1 Acquired: 1/20/2023 12:19:35 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4071.9	66045.	5300.7	3537.4	4315.3
Stddev	3.8	228.	23.7	16.5	6.6
%RSD	.09255	.34470	.44736	.46669	.15230
#1	4067.7	65844.	5283.0	3519.3	4309.3
#2	4075.0	65998.	5327.6	3541.2	4322.3
#3	4073.0	66292.	5291.4	3551.6	4314.4

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S2 Acquired: 1/20/2023 12:23:33 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.04013**	**.06189**	**.17969**	**.03293**	**.07965**	**.14303**	**3.3208**	**.46920**
Stddev	.00022	.00039	.00020	.00008	.00005	.00128	.0050	.00101
%RSD	.56034	.62228	.10886	.24865	.06583	.89474	.15088	.21432
#1	.04039	.06148	.17949	.03301	.07959	.14232	3.3156	.46829
#2	.03996	.06224	.17968	.03294	.07969	.14226	3.3256	.46903
#3	.04006	.06195	.17989	.03284	.07967	.14450	3.3212	.47028

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.4750**	**.25258**	**.02771**	**.52048**	**.14554**	**.00178**	**.14255**	**.05120**
Stddev	.0011	.00291	.00007	.00046	.00034	.00003	.00066	.00058
%RSD	.07280	1.1537	.25143	.08765	.23319	1.4616	.46012	1.1324
#1	1.4746	.25052	.02766	.52053	.14515	.00175	.14183	.05064
#2	1.4741	.25131	.02779	.52001	.14574	.00180	.14310	.05180
#3	1.4762	.25591	.02768	.52091	.14573	.00179	.14273	.05115

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.30821**	**.04278**	**.05453**	**.05172**	**1.0355**	**.01326**	**.50949**	**.61096**
Stddev	.00027	.00016	.00041	.00017	.0013	.00008	.00126	.00029
%RSD	.08740	.38055	.74447	.32761	.12881	.59543	.24824	.04815
#1	.30793	.04297	.05412	.05162	1.0364	.01335	.51080	.61096
#2	.30846	.04270	.05453	.05163	1.0339	.01321	.50941	.61067
#3	.30824	.04268	.05494	.05191	1.0361	.01323	.50827	.61126

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.15809**	**.21719**	**.00213**	**.03407**	**.02816**	**.66237**	**6.7030**
Stddev	.00013	.00238	.00002	.00013	.00017	.00388	.0528
%RSD	.07965	1.0978	.74519	.38059	.58680	.58631	.78826
#1	.15812	.21444	.00211	.03416	.02831	.65836	6.6429
#2	.15796	.21867	.00214	.03392	.02799	.66611	6.7240
#3	.15820	.21846	.00214	.03414	.02819	.66265	6.7421

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S2 Acquired: 1/20/2023 12:23:33 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4045.1	66400.	5344.2	3569.1	4210.3
Stddev	2.5	115.	18.3	9.9	1.3
%RSD	.06137	.17331	.34197	.27845	.03108
#1	4044.7	66526.	5358.4	3575.5	4211.1
#2	4042.9	66375.	5323.6	3574.2	4208.8
#3	4047.8	66300.	5350.6	3557.7	4211.0

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S3 Acquired: 1/20/2023 12:27:21 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.12583**	**.19363**	**.56382**	**.10296**	**.24646**	**.43329**	**10.114**	**1.4290**
Stddev	.00020	.00047	.00087	.00014	.00036	.00368	.084	.0084
%RSD	.15992	.24511	.15440	.13385	.14460	.85041	.82577	.58933
#1	.12562	.19325	.56284	.10303	.24621	.42904	10.024	1.4364
#2	.12583	.19347	.56450	.10281	.24687	.43519	10.131	1.4308
#3	.12603	.19416	.56412	.10306	.24630	.43563	10.188	1.4198

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.6346**	**.76688**	**.08553**	**1.6257**	**.44558**	**.00539**	**.43232**	**.15780**
Stddev	.0045	.00492	.00006	.0020	.00072	.00004	.00281	.00181
%RSD	.09638	.64126	.07033	.12050	.16216	.79798	.64899	1.1491
#1	4.6309	.76121	.08546	1.6250	.44534	.00535	.42910	.15592
#2	4.6333	.77002	.08557	1.6242	.44500	.00540	.43363	.15793
#3	4.6396	.76940	.08556	1.6279	.44639	.00544	.43423	.15954

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.95215**	**.13163**	**.16444**	**.15827**	**3.1051**	**.04285**	**1.5476**	**1.8806**
Stddev	.00201	.00030	.00324	.00137	.0137	.00063	.0127	.0052
%RSD	.21134	.22978	1.9727	.86322	.43984	1.4623	.82207	.27633
#1	.95001	.13166	.16105	.15697	3.1187	.04216	1.5591	1.8749
#2	.95242	.13191	.16474	.15813	3.1053	.04300	1.5499	1.8816
#3	.95401	.13131	.16752	.15970	3.0914	.04338	1.5339	1.8852

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.49776**	**.65839**	**.00615**	**.10713**	**.08843**	**2.0112**	**20.907**
Stddev	.00083	.00461	.00005	.00022	.00022	.0202	.209
%RSD	.16626	.70033	.89138	.20203	.24779	1.0063	.99807
#1	.49709	.65323	.00611	.10694	.08849	1.9878	20.678
#2	.49750	.65984	.00612	.10708	.08819	2.0218	20.959
#3	.49868	.66210	.00621	.10737	.08862	2.0239	21.086

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S3 Acquired: 1/20/2023 12:27:21 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4003.9	66457.	5361.8	3573.2	4070.8
Stddev	6.0	159.	30.3	13.8	6.2
%RSD	.14984	.23867	.56497	.38671	.15146
#1	3997.5	66586.	5334.4	3558.8	4064.3
#2	4009.4	66506.	5356.6	3574.6	4076.6
#3	4004.9	66280.	5394.4	3586.4	4071.6

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S4 Acquired: 1/20/2023 12:31:03 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.23950	.36770	1.0716	.19594	.46752	.81979	19.207	2.6729
Stddev	.00050	.00018	.0024	.00034	.00070	.00469	.136	.0126
%RSD	.20899	.04887	.22443	.17523	.14966	.57199	.70968	.46965
#1	.23922	.36764	1.0706	.19587	.46695	.81447	19.088	2.6839
#2	.23920	.36756	1.0698	.19564	.46730	.82330	19.177	2.6755
#3	.24007	.36790	1.0743	.19632	.46830	.82160	19.355	2.6592

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.8749	1.4479	.16163	3.1109	.83767	.01037	.81525	.29939
Stddev	.0129	.0114	.00023	.0056	.00201	.00015	.00536	.00195
%RSD	.14575	.78553	.14047	.18156	.24048	1.4328	.65760	.65272
#1	8.8679	1.4367	.16149	3.1057	.83552	.01023	.80985	.29714
#2	8.8670	1.4475	.16151	3.1101	.83797	.01035	.81532	.30036
#3	8.8898	1.4594	.16189	3.1169	.83952	.01053	.82057	.30067

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.8148	.24976	.31633	.29982	5.8148	.08404	2.9336	3.5444
Stddev	.0031	.00004	.00348	.00185	.0142	.00098	.0130	.0077
%RSD	.16895	.01488	1.1003	.61586	.24456	1.1678	.44415	.21623
#1	1.8121	.24980	.31266	.29788	5.8176	.08309	2.9457	3.5388
#2	1.8142	.24975	.31674	.30002	5.8275	.08399	2.9351	3.5414
#3	1.8181	.24972	.31958	.30156	5.7995	.08505	2.9198	3.5532

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.95545	1.2453	.01185	.21083	.17210	3.8067	38.949
Stddev	.00129	.0057	.00027	.00051	.00023	.0291	.302
%RSD	.13450	.45504	2.2382	.24031	.13155	.76391	.77539
#1	.95504	1.2389	.01158	.21053	.17184	3.7804	38.600
#2	.95442	1.2475	.01185	.21054	.17223	3.8017	39.131
#3	.95689	1.2496	.01211	.21141	.17223	3.8379	39.115

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S4 Acquired: 1/20/2023 12:31:03 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3964.6	65460.	5361.1	3553.4	3951.9
Stddev	7.8	110.	21.3	9.7	7.7
%RSD	.19567	.16812	.39732	.27234	.19558
#1	3960.6	65508.	5337.2	3551.7	3947.5
#2	3973.5	65538.	5368.0	3544.6	3960.9
#3	3959.7	65334.	5378.1	3563.8	3947.4

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S5 Acquired: 1/20/2023 12:34:52 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.49022	.74876	2.2046	.39496	.94950	1.6763	38.770	5.3402
Stddev	.00035	.00027	.0025	.00074	.00132	.0074	.264	.0202
%RSD	.07148	.03572	.11299	.18851	.13918	.43927	.68036	.37805
#1	.48982	.74890	2.2022	.39459	.94905	1.6678	38.738	5.3568
#2	.49035	.74845	2.2044	.39448	.94846	1.6795	38.524	5.3460
#3	.49049	.74892	2.2072	.39582	.95098	1.6814	39.049	5.3177

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	18.303	2.9437	.32886	6.4430	1.6773	.02182	1.6507	.60901
Stddev	.001	.0162	.00041	.0049	.0022	.00022	.0094	.00315
%RSD	.00759	.55098	.12417	.07638	.13090	.98913	.56689	.51720
#1	18.304	2.9341	.32848	6.4389	1.6763	.02162	1.6427	.60583
#2	18.303	2.9345	.32883	6.4417	1.6758	.02179	1.6484	.60909
#3	18.301	2.9624	.32929	6.4485	1.6798	.02205	1.6610	.61213

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.7339	.51569	.66318	.61754	11.875	.17834	5.8962	7.2479
Stddev	.0050	.00064	.00569	.00182	.032	.00185	.0249	.0123
%RSD	.13350	.12492	.85844	.29520	.27284	1.0397	.42149	.17012
#1	3.7294	.51524	.65801	.61544	11.840	.17655	5.9090	7.2427
#2	3.7330	.51643	.66226	.61872	11.879	.17821	5.9119	7.2390
#3	3.7392	.51541	.66928	.61846	11.905	.18026	5.8675	7.2620

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.9651	2.5305	.02486	.44206	.35993	7.7951	80.046
Stddev	.0017	.0128	.00038	.00067	.00074	.0420	.750
%RSD	.08855	.50591	1.5416	.15102	.20636	.53929	.93730
#1	1.9632	2.5202	.02452	.44143	.35914	7.7659	79.650
#2	1.9656	2.5264	.02479	.44199	.36006	7.7762	79.577
#3	1.9666	2.5448	.02527	.44276	.36061	7.8433	80.911

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: S5 Acquired: 1/20/2023 12:34:52 Type: Cal
Method: NON EPA-6010-200.7(v1697) Mode: IR Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3893.5	63362.	5367.9	3433.3	3796.7
Stddev	8.5	45.	25.0	5.4	8.0
%RSD	.21918	.07131	.46508	.15730	.21119
#1	3884.6	63349.	5341.7	3432.0	3787.4
#2	3901.6	63412.	5370.6	3439.2	3801.0
#3	3894.4	63325.	5391.4	3428.7	3801.6

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICV01 Acquired: 1/20/2023 12:38:50 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.036659**	**1.041375**	**1.016853**	**1.040652**	**.9989390**	**2.527717**
Stddev	.003570	.001451	.001296	.002182	.0012053	.019488
%RSD	.3443557	.1393313	.1274064	.2097080	.1206567	.7709656
#1	1.039240	1.042184	1.015395	1.038298	.9995658	2.508400
#2	1.032585	1.039700	1.017872	1.041050	.9997018	2.547371
#3	1.038152	1.042242	1.017292	1.042609	.9975495	2.527380

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5050267**	**.5118491**	**.5091066**	**9.871332**	**.5237892**	**.5022139**
Stddev	.0024142	.0006372	.0003149	.078950	.0006480	.0009620
%RSD	.4780330	.1244909	.0618588	.7997882	.1237110	.1915508
#1	.5045928	.5122571	.5094470	9.790685	.5242724	.5029696
#2	.5076284	.5111149	.5088256	9.874845	.5240423	.5011310
#3	.5028588	.5121755	.5090473	9.948467	.5230528	.5025411

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5245764**	**10.12665**	**.5136240**	**5.905296**	**.5058580**	**.2547407**
Stddev	.0010325	.06238	.0049379	.089686	.0005948	.0004357
%RSD	.1968346	.6160182	.9613767	1.518731	.1175726	.1710435
#1	.5252397	10.05624	.5081194	5.816248	.5064135	.2552273
#2	.5233868	10.14866	.5150888	5.904033	.5052305	.2546077
#3	.5251029	10.17504	.5176637	5.995606	.5059300	.2543869

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.973829**	**.4932013**	**1.023889**	**9.935655**	**2.539897**	**2.575237**
Stddev	.097946	.0025763	.003341	.127335	.004826	.003448
%RSD	.9820275	.5223729	.3262737	1.281596	.1900065	.1339076
#1	9.861828	.4902996	1.025984	9.788784	2.543151	2.578090
#2	10.04344	.4952202	1.020036	10.01508	2.534352	2.571405
#3	10.01622	.4940842	1.025645	10.00311	2.542187	2.576216

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICV01 Acquired: 1/20/2023 12:38:50 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.481892	2.551812	2.482314	F -.004984	F .6038378	F .0002305
Stddev	.002600	.018313	.036633	.001040	.0026402	.0010501
%RSD	.1047741	.7176337	1.475744	20.86266	.4372376	455.5604
#1	2.484781	2.542340	2.443414	-.003788	.6050694	-.000105
#2	2.479740	2.540176	2.487376	-.005490	.6008068	.001407
#3	2.481154	2.572921	2.516153	-.005675	.6056371	-.000611

Elem	Sr4077
Units	ppm
Avg	F .0017599
Stddev	.0002439
%RSD	13.85948
#1	.0019796
#2	.0018027
#3	.0014974

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4069.021	65452.64	5529.297	3576.246	4201.516
Stddev	10.020	243.29	22.576	5.421	9.362
%RSD	.2462452	.3717063	.4082910	.1515939	.2228176
#1	4062.202	65234.11	5503.516	3571.596	4192.346
#2	4080.525	65409.04	5538.850	3574.940	4211.058
#3	4064.337	65714.79	5545.526	3582.201	4201.144

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICB01 Acquired: 1/20/2023 12:43:18 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005282	.0008628	-.002229	-.002807	.0014853	-.000888	.0025874
Stddev	.0003275	.0023502	.000710	.004865	.0016651	.004603	.0017898
%RSD	61.99771	272.3794	31.83496	173.3282	112.1082	518.5170	69.17469
#1	.0006695	-.000469	-.002599	-.004647	.0031044	.004166	.0045265
#2	.0001538	-.000518	-.002677	.002710	.0015737	-.001987	.0022370
#3	.0007613	.003576	-.001411	-.006483	-.000222	-.004842	.0009987

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000487	.0000899	-.016581	-.000277	.0000181	.0002373	-.002033
Stddev	.0000065	.0000296	.002485	.000281	.0000843	.0002920	.015271
%RSD	13.35407	32.95759	14.98586	101.5703	466.2848	123.0808	751.0518
#1	.0000480	.0000595	-.015050	-.000602	-.000008	.0002142	.004420
#2	.0000556	.0001187	-.019448	-.000111	.000112	-.000043	-.019472
#3	.0000426	.0000915	-.015245	-.000118	-.000050	.000540	.008952

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000177	-.027099	.0001941	.0003858	-.004709	-.002639	-.000118
Stddev	.000680	.018766	.0003597	.0003153	.013815	.003914	.000314
%RSD	384.6102	69.25134	185.2968	81.70682	293.3948	148.3011	266.9374
#1	.000297	-.042628	.0004934	.0005545	-.005512	-.002494	.000092
#2	.000128	-.032423	.0002940	.0000221	-.018104	-.006624	-.000479
#3	-.000955	-.006246	-.000205	.0005809	.009490	.001200	.000033

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.070212	.0175529	.0054347	-.000631	.0007033	.0107696	-.003565
Stddev	.072155	.0008931	.0014235	.000149	.0025750	.0119881	.000495
%RSD	102.7664	5.087794	26.19315	23.60005	366.1335	111.3141	13.87547
#1	.012058	.0179217	.0070420	-.000748	.0000939	.0034657	-.003877
#2	-.122748	.0182026	.0049291	-.000463	-.001512	.0042380	-.003824
#3	-.099947	.0165345	.0043330	-.000680	.003528	.0246050	-.002995

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICB01 Acquired: 1/20/2023 12:43:18 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0004253	-.000477	-.000008
Stddev	.0028212	.003038	.000083
%RSD	663.2930	637.2162	1075.479
#1	.0034873	-.003922	.000068
#2	-.002069	.000674	-.000097
#3	-.000142	.001818	.000005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4035.382	65413.53	5318.220	3559.629	4262.456
Stddev	6.921	296.44	53.885	16.204	2.492
%RSD	.1715039	.4531853	1.013210	.4552069	.0584540
#1	4027.614	65271.90	5256.134	3547.253	4259.810
#2	4040.890	65214.47	5345.715	3553.664	4262.800
#3	4037.642	65754.23	5352.810	3577.969	4264.757

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSA01 Acquired: 1/20/2023 13:26:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004950**	**-.007434**	**-.003734**	**-.017693**	**.0022046**	**257.0872**
Stddev	.002014	.001998	.000796	.004191	.0018597	.5314
%RSD	40.69235	26.87555	21.32609	23.68890	84.35377	.2066814
#1	-.004175	-.005134	-.002909	-.012933	.0036546	256.7479
#2	-.003438	-.008427	-.004498	-.019317	.0001079	257.6996
#3	-.007237	-.008741	-.003796	-.020829	.0028513	256.8143

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019823**	**.0006778**	**.0001487**	**249.8115**	**.0551436**	**.0012444**
Stddev	.0016254	.0000308	.0001560	.6857	.0006724	.0000662
%RSD	81.99551	4.541004	104.9244	.2744855	1.219274	5.322173
#1	.0032546	.0006956	.0002838	249.4308	.0554519	.0012298
#2	.0025413	.0006956	.0001842	250.6031	.0543724	.0013168
#3	.0001512	.0006423	-.000022	249.4007	.0556066	.0011868

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002552**	**107.8172**	**.0101776**	**257.1867**	**.0034403**	**.0020855**
Stddev	.000361	.0494	.0004143	.6596	.0002047	.0003980
%RSD	14.15927	.0457724	4.071074	.2564850	5.950109	19.08336
#1	-.002911	107.8675	.0100197	256.4571	.0036295	.0016326
#2	-.002557	107.7688	.0106476	257.7410	.0032230	.0022447
#3	-.002188	107.8152	.0098653	257.3621	.0034685	.0023793

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0087359**	**-.000772**	**-.000518**	**-.136449**	**-.097531**	**.0007654**
Stddev	.0209742	.003843	.000317	.027598	.001871	.0003182
%RSD	240.0928	497.8262	61.06312	20.22610	1.918427	41.57274
#1	-.012868	-.000584	-.000876	-.135404	-.096413	.0008734
#2	.010057	-.004706	-.000274	-.109387	-.099691	.0010155
#3	.029018	.002974	-.000405	-.164554	-.096489	.0004072

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSA01 Acquired: 1/20/2023 13:26:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002130**	**-.002270**	**-.018833**	**-.002354**	**.0016615**	**.0142190**
Stddev	.001017	.000613	.005539	.001349	.0012767	.0009677
%RSD	47.72801	27.01385	29.40835	57.30441	76.84042	6.805387
#1	-.001004	-.001676	-.014612	-.003713	.0017189	.0131451
#2	-.002981	-.002233	-.016784	-.002332	.0029086	.0144889
#3	-.002406	-.002901	-.025105	-.001016	.0003571	.0150231

Elem	Sr4077
Units	ppm
Avg	F **.1041307**
Stddev	.0002368
%RSD	.2273749
#1	.1038578
#2	.1042535
#3	.1042809

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3767.479**	**61019.71**	**5394.884**	**3288.483**	**3530.119**
Stddev	11.330	300.50	34.240	15.906	11.959
%RSD	.3007204	.4924594	.6346715	.4836909	.3387781
#1	3765.495	60703.21	5371.151	3270.704	3531.065
#2	3779.669	61054.80	5379.365	3293.381	3541.577
#3	3757.272	61301.12	5434.135	3301.365	3517.715

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSAB01 Acquired: 1/20/2023 13:30:36 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1018216**	**.0930900**	**.0448261**	**.0382259**	**.5974383**	**244.9471**
Stddev	.0064193	.0027322	.0030294	.0039188	.0037414	2.0036
%RSD	6.304511	2.935045	6.758138	10.25175	.6262315	.8179734
#1	.0978372	.0950844	.0471069	.0345755	.5958439	242.7913
#2	.0984006	.0899757	.0459825	.0377353	.5947583	245.2976
#3	.1092268	.0942098	.0413888	.0423670	.6017127	246.7523

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5183934**	**.4900913**	**1.027522**	**238.2352**	**.5451254**	**.4941481**
Stddev	.0024995	.0023744	.005471	2.2994	.0400567	.0027343
%RSD	.4821582	.4844743	.5324682	.9651693	7.348155	.5533374
#1	.5155244	.4878030	1.031724	235.7701	.5056920	.4956555
#2	.5195557	.4899276	1.021335	238.6135	.5439067	.4909918
#3	.5201001	.4925432	1.029505	240.3219	.5857775	.4957969

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4798401**	**102.2076**	**.5022391**	**245.7387**	**1.001419**	**.2116988**
Stddev	.0032513	7.6486	.0051023	2.1697	.005192	.0157781
%RSD	.6775818	7.483434	1.015910	.8829217	.5185030	7.453072
#1	.4831478	94.7633	.4963687	243.4521	1.004052	.1965745
#2	.4766482	101.8140	.5047410	245.9955	.995438	.2104641
#3	.4797244	110.0454	.5056075	247.7686	1.004768	.2280580

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0188130**	**.4884210**	**1.044044**	**-.120677**	**.9579646**	**1.067657**
Stddev	.0130380	.0006380	.078334	.059195	.0130352	.005583
%RSD	69.30306	.1306228	7.502925	49.05229	1.360717	.5229631
#1	.0072796	.4876849	.968605	-.103894	.9459194	1.070905
#2	.0161997	.4888142	1.038545	-.071686	.9561706	1.061210
#3	.0329598	.4887640	1.124982	-.186451	.9718039	1.070856

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSAB01 Acquired: 1/20/2023 13:30:36 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.112698	1.071903	1.049300	F -.001598	F .0058958	F .0119451
Stddev	.005153	.007744	.072860	.000841	.0031047	.0027324
%RSD	.4631028	.7224806	6.943681	52.66514	52.66043	22.87441
#1	1.114193	1.063590	.974653	-.002245	.0071122	.0103184
#2	1.106963	1.073205	1.053015	-.001902	.0082081	.0150997
#3	1.116939	1.078913	1.120230	-.000646	.0023670	.0104173

Elem	Sr4077
Units	ppm
Avg	F .0986555
Stddev	.0010271
%RSD	1.041140
#1	.0974925
#2	.0990358
#3	.0994383

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3799.917	61303.88	5370.244	3286.922	3562.176
Stddev	13.023	4065.10	8.619	221.597	13.318
%RSD	.3427071	6.631062	.1605016	6.741781	.3738828
#1	3791.305	65330.77	5360.943	3501.197	3553.403
#2	3814.898	61379.25	5371.826	3300.905	3577.501
#3	3793.547	57201.62	5377.963	3058.665	3555.625

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSADLX20 Acquired: 1/20/2023 13:34:22 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002200**	**-.000803**	**-.000399**	**-.001044**	**-.000821**	**13.35362**	**.0188463**
Stddev	.000895	.001486	.000767	.004845	.001885	.20060	.0228141
%RSD	40.66549	185.1751	192.1726	464.1027	229.5483	1.502244	121.0538
#1	-.003116	.000624	-.000724	-.003141	-.002647	13.50270	.0439073
#2	-.001329	-.000689	-.000950	-.004487	-.000934	13.43262	.0133474
#3	-.002154	-.002342	.000477	.004496	.001118	13.12555	-.000716

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001334**	**.0000006**	**13.31523**	**.0022651**	**.0001151**	**.0001526**	**5.303489**
Stddev	.0000199	.0000742	.17251	.0001540	.0003105	.0003277	.088082
%RSD	14.95047	11906.36	1.295551	6.798605	269.6989	214.7801	1.660835
#1	.0001561	.0000587	13.45324	.0023545	-.000169	-.000103	5.355589
#2	.0001253	-.000083	13.37063	.0023536	.000447	.000522	5.201790
#3	.0001187	.000026	13.12183	.0020873	.000067	.000038	5.353087

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0110161**	**13.47174**	**.0003782**	**.0008433**	**-.017136**	**-.002638**	**.0001541**
Stddev	.0102190	.18238	.0004189	.0001844	.010868	.004895	.0002417
%RSD	92.76454	1.353777	110.7630	21.86393	63.42488	185.5789	156.8237
#1	.0224807	13.54645	.0001728	.0010530	-.027477	-.000546	.0003841
#2	.0077026	13.60490	.0008601	.0007061	-.018124	.000864	.0001761
#3	.0028649	13.26387	.0001016	.0007710	-.005807	-.008231	-.000098

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.023583**	**-.004185**	**.0007759**	**-.000753**	**.0008575**	**.0019282**	**-.004072**
Stddev	.036668	.000763	.0000458	.000453	.0011853	.0097439	.000929
%RSD	155.4894	18.22723	5.899453	60.13088	138.2262	505.3268	22.82591
#1	-.024035	-.004965	.0008283	-.000892	.0006401	.0048127	-.003571
#2	.013310	-.004149	.0007434	-.001121	-.000204	-.008932	-.005145
#3	-.060023	-.003440	.0007562	-.000247	.002137	.009904	-.003501

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSADLX20 Acquired: 1/20/2023 13:34:22 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0031919	.0009882	.0053613
Stddev	.0044410	.0026238	.0001203
%RSD	139.1325	265.5106	2.244139
#1	.0041433	.0037405	.0054950
#2	.0070801	-.001485	.0053273
#3	-.001648	.000709	.0052617

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4091.265	69271.57	5548.026	3670.563	4152.188
Stddev	8.215	903.42	88.033	41.859	3.306
%RSD	.2008024	1.304173	1.586748	1.140385	.0796130
#1	4083.551	68987.31	5487.069	3651.174	4151.086
#2	4099.903	70282.94	5508.056	3718.600	4155.903
#3	4090.340	68544.47	5648.953	3641.914	4149.574

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSABDLX20 Acquired: 1/20/2023 13:38:24 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043090	.0051067	.0009972	.0008705	.0298720	12.78146	.0235021
Stddev	.0007136	.0009912	.0006783	.0016767	.0019300	.03583	.0011846
%RSD	16.56095	19.41075	68.02828	192.6031	6.460893	.2802889	5.040265
#1	.0035658	.0042370	.0003740	.0020296	.0305489	12.74940	.0224220
#2	.0043723	.0061860	.0017197	.0016341	.0313723	12.77485	.0247690
#3	.0049888	.0048972	.0008978	-.001052	.0276947	12.82013	.0233153

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0260305	.0522414	12.71663	.0272205	.0247490	.0262277	4.915885
Stddev	.0001863	.0000425	.01620	.0005068	.0001877	.0006674	.006470
%RSD	.7158595	.0813063	.1273881	1.861782	.7582449	2.544817	.1316227
#1	.0262105	.0522698	12.73418	.0272768	.0245998	.0266498	4.922783
#2	.0258384	.0521925	12.71346	.0276967	.0249597	.0254582	4.914922
#3	.0260426	.0522617	12.70225	.0266878	.0246874	.0265751	4.909950

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0268134	12.91098	.0512785	.0110594	-.009065	.0217011	.0516065
Stddev	.0006607	.10130	.0002043	.0003989	.008260	.0016094	.0006188
%RSD	2.463927	.7846414	.3984026	3.606912	91.11347	7.416421	1.199144
#1	.0265549	12.79400	.0510512	.0106786	-.014525	.0229070	.0508919
#2	.0263211	12.96866	.0514468	.0114742	-.013108	.0223229	.0519697
#3	.0275643	12.97027	.0513375	.0110254	.000437	.0198736	.0519577

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.030511	.0531793	.0571920	.0545502	.0573887	.0410678	-.004512
Stddev	.027924	.0017223	.0001681	.0004488	.0013846	.0048707	.002646
%RSD	91.52151	3.238672	.2939046	.8227137	2.412735	11.86022	58.65268
#1	-.038205	.0532938	.0571076	.0545182	.0559706	.0452305	-.006568
#2	-.053782	.0514026	.0573856	.0541183	.0574582	.0357111	-.001526
#3	.000453	.0548414	.0570829	.0550141	.0587373	.0422619	-.005440

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: ICSABDLX20 Acquired: 1/20/2023 13:38:24 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0544560	.0050081	.0050884
Stddev	.0039340	.0014245	.0000366
%RSD	7.224253	28.44308	.7200639
#1	.0499206	.0048746	.0051199
#2	.0569457	.0036552	.0050970
#3	.0565016	.0064947	.0050482

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4120.893	70026.52	5452.657	3687.887	4200.670
Stddev	3.716	380.69	33.771	23.283	2.234
%RSD	.0901789	.5436329	.6193432	.6313273	.0531791
#1	4123.417	69835.27	5422.741	3668.538	4202.941
#2	4122.636	69779.37	5445.952	3681.396	4200.593
#3	4116.626	70464.91	5489.276	3713.726	4198.476

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV01 Acquired: 1/20/2023 13:42:22 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.066785**	**5.070628**	**4.939514**	**5.015450**	**4.952000**	**9.846298**	**10.61950**
Stddev	.008183	.009471	.006655	.008329	.006993	.053715	.06108
%RSD	.1615116	.1867860	.1347312	.1660568	.1412179	.5455398	.5751434
#1	5.058104	5.064658	4.938223	5.008304	4.945133	9.784630	10.54914
#2	5.067893	5.065677	4.933600	5.013450	4.951754	9.882890	10.65051
#3	5.074358	5.081548	4.946721	5.024597	4.959113	9.871373	10.65886

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2377576**	**2.490066**	**25.08919**	**.9643541**	**2.442035**	**1.232690**	**5.091291**
Stddev	.0025055	.001662	.14422	.0014733	.001823	.001974	.064420
%RSD	1.053797	.0667402	.5748316	.1527802	.0746402	.1600987	1.265303
#1	.2405915	2.488994	24.92304	.9657755	2.441557	1.231232	5.017052
#2	.2368449	2.489224	25.16245	.9628338	2.440498	1.231903	5.132465
#3	.2358365	2.491981	25.18207	.9644530	2.444049	1.234936	5.124355

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.524446**	**24.39770**	**2.499890**	**1.208237**	**24.22905**	**2.529515**	**2.505176**
Stddev	.019908	.22431	.000526	.001631	.34737	.020309	.004925
%RSD	.7886279	.9193944	.0210259	.1349907	1.433695	.8028696	.1966011
#1	2.502669	24.14802	2.499340	1.210090	23.83573	2.507018	2.510799
#2	2.528956	24.46287	2.499941	1.207021	24.35761	2.546496	2.503099
#3	2.541713	24.58221	2.500388	1.207598	24.49381	2.535031	2.501629

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.26925**	**4.899987**	**4.971741**	**4.997302**	**5.012126**	**4.788504**	**5.006281**
Stddev	.36189	.042202	.010994	.006497	.027669	.119061	.002403
%RSD	1.432132	.8612597	.2211266	.1300128	.5520485	2.486397	.0480022
#1	24.85614	4.948525	4.959332	4.996861	4.981642	4.665798	5.007096
#2	25.42131	4.879472	4.975628	4.991036	5.019082	4.796164	5.003576
#3	25.53030	4.871966	4.980264	5.004008	5.035653	4.903550	5.008171

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV01 Acquired: 1/20/2023 13:42:22 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.000399**	**5.007552**	**4.901889**
Stddev	.010798	.032280	.026154
%RSD	.2159510	.6446332	.5335522
#1	4.993335	4.970582	4.881413
#2	4.995032	5.021919	4.931352
#3	5.012829	5.030155	4.892903

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4043.439**	**67546.28**	**5565.454**	**3569.431**	**3981.033**
Stddev	2.226	164.68	60.745	16.350	4.699
%RSD	.0550455	.2438031	1.091465	.4580565	.1180410
#1	4041.238	67380.46	5497.543	3552.567	3975.694
#2	4045.688	67548.58	5584.210	3570.512	3984.542
#3	4043.391	67709.79	5614.609	3585.214	3982.862

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: LLCCV01 Acquired: 1/20/2023 13:46:10 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: LLCCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0205743**	**.0420203**	**.0117343**	**.0192479**	**.0521075**	**.1052397**
Stddev	.0011089	.0005663	.0008885	.0015586	.0020993	.0202681
%RSD	5.389688	1.347559	7.572149	8.097686	4.028779	19.25898
#1	.0209663	.0425450	.0125128	.0176916	.0536699	.0824326
#2	.0214340	.0414201	.0107663	.0192433	.0529314	.1211900
#3	.0193227	.0420960	.0119239	.0208088	.0497212	.1120965

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1023003**	**.0062846**	**.0066020**	**1.996472**	**.0097379**	**.0293296**
Stddev	.0024242	.0000639	.0000484	.020474	.0001611	.0002274
%RSD	2.369724	1.016398	.7338333	1.025525	1.654162	.7751809
#1	.0997584	.0062326	.0066409	1.980072	.0097454	.0290678
#2	.1025558	.0063559	.0066174	1.989924	.0098951	.0294771
#3	.1045866	.0062653	.0065477	2.019419	.0095732	.0294439

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0224133**	**.1121563**	**.0215349**	**2.133202**	**.0399157**	**.0118117**
Stddev	.0003895	.0036814	.0006237	.010759	.0005314	.0002964
%RSD	1.737792	3.282364	2.895989	.5043396	1.331323	2.509682
#1	.0223542	.1096520	.0218647	2.130466	.0400987	.0114990
#2	.0228290	.1104338	.0208156	2.124077	.0403313	.0120886
#3	.0220567	.1163832	.0219244	2.145065	.0393169	.0118474

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.989099**	**.0362837**	**.0430119**	**2.071298**	**.1150067**	**.2225134**
Stddev	.009334	.0020855	.0001898	.025477	.0002109	.0020443
%RSD	.4692352	5.747662	.4413068	1.229994	.1833769	.9187503
#1	1.978541	.0344366	.0432237	2.087874	.1150186	.2248372
#2	1.996254	.0358692	.0429548	2.041962	.1147901	.2217107
#3	1.992502	.0385453	.0428572	2.084057	.1152114	.2209922

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: LLCCV01 Acquired: 1/20/2023 13:46:10 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: LLCCV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0384693	.0419380	.3899168	F .0122420	.0191125	.0202087
Stddev	.0004960	.0017966	.0179699	.0017346	.0004637	.0023829
%RSD	1.289268	4.284010	4.608656	14.16886	2.426024	11.79162
#1	.0387113	.0427385	.3810970	.0140036	.0186488	.0182939
#2	.0378988	.0431952	.4105925	.0121866	.0195762	.0194548
#3	.0387979	.0398803	.3780609	.0105358	.0191126	.0228774

Elem	Sr4077
Units	ppm
Avg	.0206967
Stddev	.0001842
%RSD	.8899638
#1	.0204883
#2	.0208376
#3	.0207642

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4130.267	67359.82	5538.654	3589.921	4299.237
Stddev	11.437	183.71	26.808	16.315	9.237
%RSD	.2769134	.2727331	.4840076	.4544700	.2148541
#1	4117.249	67149.70	5558.452	3573.701	4290.389
#2	4138.700	67439.64	5549.362	3589.731	4298.503
#3	4134.853	67490.13	5508.147	3606.330	4308.820

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB01 Acquired: 1/20/2023 13:50:10 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001071**	**.0001105**	**-.000116**	**-.001563**	**-.001008**	**.0121420**	**-.004770**
Stddev	.002325	.0006018	.002320	.002777	.002153	.0128833	.001662
%RSD	217.1435	544.5475	1995.258	177.7231	213.6687	106.1054	34.85274
#1	-.002633	-.000221	-.002794	-.004004	.000985	.0255828	-.006380
#2	-.002180	-.000253	.001188	-.002143	-.003291	.0109431	-.003060
#3	.001601	.000805	.001257	.001459	-.000717	-.000100	-.004868

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000027**	**.0000460**	**.0036547**	**-.000437**	**-.000091**	**-.000066**	**-.001961**
Stddev	.0000600	.0000831	.0125607	.000170	.000171	.000374	.001187
%RSD	2217.233	180.4950	343.6866	38.79840	187.8048	562.7005	60.53245
#1	.0000091	-.000001	.0041669	-.000394	-.000179	.000264	-.001292
#2	-.000060	-.000003	.0159515	-.000624	-.000201	.000009	-.001261
#3	.000059	.000142	-.009154	-.000293	.000106	-.000472	-.003332

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000568**	**-.023909**	**.0002692**	**.0011429**	**-.020269**	**.0000396**	**-.000197**
Stddev	.0006355	.034920	.0000751	.0001686	.008379	.0042533	.000098
%RSD	1117.970	146.0541	27.90040	14.75451	41.33980	10732.27	50.00566
#1	.0001713	-.016907	.0001889	.0013329	-.029720	.0041381	-.000099
#2	.0006274	.006980	.0002809	.0010111	-.017340	-.004353	-.000296
#3	-.000628	-.061800	.0003377	.0010846	-.013748	.000334	-.000195

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.034093**	**.0054758**	**.0009789**	**-.000692**	**.0006909**	**.0064862**	**-.003726**
Stddev	.010799	.0012863	.0002744	.000155	.0013800	.0170222	.002086
%RSD	31.67430	23.48976	28.03614	22.37314	199.7328	262.4376	55.99506
#1	-.021771	.0056773	.0012940	-.000739	.0014421	.0210411	-.005454
#2	-.038599	.0066495	.0008500	-.000818	.0015324	.0106485	-.001408
#3	-.041910	.0041007	.0007925	-.000519	-.000902	-.012231	-.004315

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB01 Acquired: 1/20/2023 13:50:10 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000397	-.001642	-.000019
Stddev	.004278	.000933	.000055
%RSD	1078.018	56.81420	296.0322
#1	-.004849	-.000570	-.000034
#2	-.000023	-.002272	-.000064
#3	.003682	-.002085	.000042

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4165.784	69157.42	5561.631	3656.874	4395.897
Stddev	2.021	95.07	23.453	8.417	1.614
%RSD	.0485115	.1374703	.4216948	.2301620	.0367111
#1	4167.799	69083.13	5576.374	3649.975	4397.740
#2	4163.757	69124.57	5534.586	3654.394	4395.219
#3	4165.797	69264.56	5573.933	3666.252	4394.734

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1175-02 Acquired: 1/20/2023 13:54:14 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000598**	**.0001765**	**-.000359**	**-.001892**	**-.000919**	**.0870527**	**.0761829**
Stddev	.001166	.0008986	.000377	.004488	.000550	.0085075	.0023654
%RSD	194.8740	509.1935	105.0218	237.1887	59.85998	9.772775	3.104940
#1	-.000014	.0009961	.000048	.003284	-.000475	.0772813	.0788121
#2	.000160	.0003179	-.000697	-.004261	-.000748	.0910624	.0742273
#3	-.001940	-.000784	-.000428	-.004699	-.001534	.0928143	.0755094

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000172**	**.0007673**	**4.024603**	**.0001378**	**.0006709**	**.0009746**	**.0534820**
Stddev	.0000253	.0000619	.015141	.0002933	.0002110	.0001566	.0112934
%RSD	147.2388	8.065015	.3762022	212.7710	31.44661	16.06927	21.11626
#1	-.000007	.0008286	4.016496	.0003494	.0009039	.0008025	.0562839
#2	.000015	.0007048	4.015242	-.000197	.0004928	.0010126	.0631107
#3	.000043	.0007684	4.042071	.000261	.0006160	.0011088	.0410514

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0243466**	**1.342372**	**.0008017**	**.0012108**	**311.5041**	**-.002760**	**.0944720**
Stddev	.0006528	.041845	.0001187	.0001561	1.6223	.000907	.0009799
%RSD	2.681432	3.117234	14.80719	12.88844	.5207860	32.87692	1.037223
#1	.0241561	1.295022	.0006742	.0013705	309.6861	-.001918	.0955069
#2	.0250735	1.374382	.0009091	.0012032	312.8043	-.002640	.0943505
#3	.0238101	1.357713	.0008218	.0010587	312.0218	-.003721	.0935585

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4661106**	**.0282338**	**.0001683**	**-.000376**	**.0007802**	**.1357483**	**-.000877**
Stddev	.0676214	.0010658	.0001680	.000053	.0026125	.0277091	.001348
%RSD	14.50758	3.775053	99.79780	14.20708	334.8564	20.41216	153.6734
#1	.4061166	.0294106	.0003599	-.000316	-.002148	.1089951	-.000470
#2	.4528273	.0273332	.0000989	-.000393	.001616	.1643235	-.002382
#3	.5393880	.0279577	.0000462	-.000419	.002873	.1339262	.000220

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1175-02 Acquired: 1/20/2023 13:54:14 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4190626	-.001281	.0135095
Stddev	.0039414	.000355	.0001472
%RSD	.9405307	27.69087	1.089919
#1	.4233594	-.001542	.0136793
#2	.4156150	-.001425	.0134327
#3	.4182135	-.000877	.0134166

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4096.486	66538.03	5688.544	3592.225	3950.802
Stddev	23.040	325.67	61.024	18.706	27.153
%RSD	.5624211	.4894521	1.072758	.5207489	.6872700
#1	4070.021	66173.13	5618.105	3571.104	3919.449
#2	4107.372	66641.78	5725.394	3598.867	3966.633
#3	4112.065	66799.19	5722.135	3606.704	3966.324

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1175-11 Acquired: 1/20/2023 13:58:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002754**	**.0010155**	**.0000377**	**-.001423**	**-.001263**	**.2455798**	**.1430783**
Stddev	.001533	.0011256	.0016302	.002877	.000586	.0057904	.0014807
%RSD	55.66836	110.8480	4321.043	202.1353	46.43295	2.357842	1.034874
#1	-.001294	.0014906	-.001844	-.003817	-.000842	.2458387	.1437135
#2	-.002616	.0018256	.000925	-.002222	-.001013	.2396643	.1413860
#3	-.004351	-.000270	.001032	.001769	-.001932	.2512364	.1441353

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001186**	**.0001930**	**10.51901**	**.0006611**	**.0007945**	**.0012112**	**.0237055**
Stddev	.0000785	.0000781	.03397	.0002183	.0001562	.0002739	.0057502
%RSD	66.17748	40.43713	.3229221	33.01662	19.66449	22.61362	24.25674
#1	.0000369	.0001417	10.48004	.0008442	.0006891	.0012326	.0266101
#2	.0001256	.0002829	10.53463	.0007197	.0009740	.0009273	.0274242
#3	.0001934	.0001545	10.54237	.0004195	.0007206	.0014738	.0170825

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0350159**	**2.758798**	**.0016410**	**.0010812**	**258.4857**	**-.001159**	**.1478567**
Stddev	.0009214	.018066	.0003668	.0004295	1.8432	.002282	.0005491
%RSD	2.631371	.6548350	22.35243	39.72830	.7130814	196.9453	.3713818
#1	.0346866	2.740170	.0020610	.0013683	256.4101	.000857	.1482617
#2	.0360567	2.776243	.0014789	.0005874	259.1155	-.003636	.1472317
#3	.0343045	2.759980	.0013832	.0012878	259.9314	-.000697	.1480767

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8566670**	**.0541561**	**.0001199**	**-.001095**	**-.000808**	**.3520136**	**-.002414**
Stddev	.0245651	.0007218	.0000349	.000662	.001327	.0157348	.000740
%RSD	2.867517	1.332879	29.08208	60.46013	164.1409	4.469952	30.65544
#1	.8808852	.0549866	.0001245	-.001271	-.000091	.3562648	-.002168
#2	.8317692	.0538022	.0001522	-.001652	-.002340	.3345899	-.001827
#3	.8573466	.0536795	.0000830	-.000363	.000006	.3651861	-.003245

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1175-11 Acquired: 1/20/2023 13:58:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.004061	-.002603	.0189462
Stddev	.001593	.000648	.0000101
%RSD	.1586660	24.87476	.0535359
#1	1.005273	-.001915	.0189562
#2	1.002257	-.003201	.0189359
#3	1.004655	-.002694	.0189463

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4212.387	70914.97	5839.341	3793.394	3996.945
Stddev	7.446	40.09	24.229	6.639	10.279
%RSD	.1767630	.0565360	.4149327	.1750203	.2571658
#1	4204.428	70872.32	5815.980	3788.262	3986.297
#2	4213.551	70951.88	5837.690	3800.892	3997.729
#3	4219.183	70920.71	5864.354	3791.027	4006.810

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150302BL Acquired: 1/20/2023 14:02:19 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PBW Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001401**	**-.000541**	**-.000818**	**-.004461**	**.0002166**	**.0114496**	**-.006342**
Stddev	.001683	.001454	.001872	.001599	.0014562	.0096285	.002139
%RSD	120.1347	268.7099	228.7258	35.83834	672.1813	84.09498	33.73594
#1	-.002298	.000427	-.001625	-.004470	.0001076	.0093364	-.007476
#2	.000541	-.002213	.001321	-.002857	-.001182	.0030532	-.007675
#3	-.002446	.000162	-.002151	-.006055	.001724	.0219593	-.003874

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000038**	**.0000791**	**-.001451**	**-.000212**	**-.000078**	**-.000305**	**.0014576**
Stddev	.000012	.0000135	.012505	.000317	.000255	.000654	.0047303
%RSD	31.42141	17.07366	861.6151	149.5477	326.6618	214.4799	324.5255
#1	-.000052	.0000702	.012462	-.000570	-.000236	-.000567	.0003898
#2	-.000032	.0000725	-.011752	-.000100	.000216	-.000788	-.002648
#3	-.000031	.0000947	-.005063	.000034	-.000215	.000440	.006631

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004225**	**-.015879**	**-.000097**	**.0011216**	**.0508497**	**-.005052**	**.0000563**
Stddev	.0008154	.025224	.000144	.0004821	.0094182	.005937	.0000674
%RSD	192.9838	158.8549	148.4598	42.98647	18.52173	117.5228	119.8045
#1	-.000132	.003794	-.000072	.0009348	.0418602	.000415	.0001284
#2	.000041	-.044316	-.000252	.0007608	.0500440	-.004203	.0000455
#3	.001359	-.007114	.000033	.0016692	.0606449	-.011367	-.000005

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0753468**	**-.000835**	**-.000090**	**-.000832**	**-.001548**	**-.000128**	**-.004844**
Stddev	.0137492	.001391	.000109	.000655	.002789	.008997	.002476
%RSD	18.24793	166.6274	120.4247	78.66886	180.2130	7032.853	51.10985
#1	.0870513	-.002052	-.000033	-.000556	-.004728	-.001801	-.007584
#2	.0602050	-.001135	-.000215	-.000361	.000483	-.008171	-.004179
#3	.0787842	.000682	-.000022	-.001580	-.000399	.009588	-.002769

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150302BL Acquired: 1/20/2023 14:02:19 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PBW Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000194	-.002285	-.000057
Stddev	.004004	.001669	.000042
%RSD	2065.006	73.05014	74.36281
#1	.001997	-.002858	-.000096
#2	.002237	-.000405	-.000061
#3	-.004815	-.003593	-.000012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4148.093	70498.95	5772.445	3763.561	4371.724
Stddev	94.728	83.14	159.371	9.462	99.305
%RSD	2.283645	.1179355	2.760894	.2514236	2.271539
#1	4038.722	70479.71	5645.533	3758.200	4257.360
#2	4201.432	70427.11	5951.310	3757.996	4436.132
#3	4204.125	70590.03	5720.491	3774.487	4421.680

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150302BS Acquired: 1/20/2023 14:06:18 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: LCSW Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8285129**	**2.089189**	**.9929732**	**2.050887**	**.7906958**	**2.063480**
Stddev	.0023063	.009604	.0036220	.006374	.0019709	.029290
%RSD	.2783676	.4597007	.3647683	.3108026	.2492615	1.419454
#1	.8307334	2.079830	.9897290	2.049947	.7897609	2.032186
#2	.8261295	2.088715	.9923092	2.045034	.7893664	2.068020
#3	.8286759	2.099021	.9968813	2.057679	.7929602	2.090236

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2031145**	**.1943441**	**.1989641**	**1.002499**	**.3968239**	**.1923585**
Stddev	.0012253	.0007242	.0008703	.011390	.0006305	.0009493
%RSD	.6032683	.3726373	.4374252	1.136206	.1588935	.4934989
#1	.2017130	.1936153	.1981675	.993503	.3970141	.1916983
#2	.2036476	.1950636	.1988318	.998687	.3973374	.1919308
#3	.2039831	.1943535	.1998930	1.015306	.3961201	.1934464

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3086885**	**3.102934**	**.2025301**	**2.002020**	**.4986020**	**.0738226**
Stddev	.0007158	.027840	.0008966	.023138	.0017292	.0001869
%RSD	.2318907	.8972104	.4426977	1.155756	.3467999	.2531275
#1	.3086777	3.092734	.2015004	1.976417	.4972742	.0736799
#2	.3079782	3.081632	.2031381	2.021436	.4979745	.0737538
#3	.3094097	3.134435	.2029517	2.008208	.5005573	.0740341

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.950749**	**.3066172**	**.2161297**	**10.06717**	**.2971745**	**.3980624**
Stddev	.032716	.0030426	.0007878	.07497	.0004440	.0015624
%RSD	1.108749	.9923192	.3644852	.7447042	.1493991	.3925000
#1	2.926733	.3096337	.2152200	9.98703	.2966717	.3973307
#2	2.937503	.3035491	.2165807	10.07890	.2975126	.3970002
#3	2.988011	.3066689	.2165882	10.13559	.2973392	.3998564

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150302BS Acquired: 1/20/2023 14:06:18 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: LCSW Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6823541	.1984265	.8889410	5.843309	F 6.269859	.2070405
Stddev	.0022145	.0014882	.0144528	.026092	.020222	.0015174
%RSD	.3245381	.7499877	1.625849	.4465233	.3225308	.7329117
#1	.6798347	.2001366	.8981733	5.822206	6.248812	.2056091
#2	.6832353	.1977170	.8722850	5.835240	6.271623	.2068811
#3	.6839924	.1974258	.8963647	5.872483	6.289141	.2086314

Elem	Sr4077
Units	ppm
Avg	.2080445
Stddev	.0012789
%RSD	.6147249
#1	.2067901
#2	.2079967
#3	.2093466

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4181.581	68418.04	5589.138	3688.946	4300.210
Stddev	5.910	276.77	12.654	7.649	12.922
%RSD	.1413296	.4045318	.2264033	.2073391	.3005079
#1	4182.927	68102.17	5583.373	3681.277	4314.258
#2	4186.702	68618.06	5580.394	3696.575	4297.542
#3	4175.115	68533.90	5603.648	3688.985	4288.829

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01 Acquired: 1/20/2023 14:10:03 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059659	-.000027	.0000378	-.002459	.0004612	.6608009
Stddev	.0021043	.002481	.0020210	.002937	.0006751	.0084607
%RSD	35.27225	9220.488	5344.794	119.4544	146.3773	1.280375
#1	.0039323	.000731	.0020251	-.004641	.0000535	.6578536
#2	.0058310	.001987	.0001038	.000881	.0012405	.6542079
#3	.0081345	-.002799	-.002015	-.003616	.0000896	.6703410

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6445053	.0000243	.0001019	185.3214	.1273926	.0408291
Stddev	.0049384	.0000419	.0001223	1.2555	.0006921	.0000868
%RSD	.7662243	172.1911	120.0745	.6774598	.5432471	.2126930
#1	.6391843	.0000508	-.000038	184.0271	.1266032	.0407293
#2	.6453901	.0000461	.000187	185.4030	.1278952	.0408707
#3	.6489414	-.000024	.000158	186.5340	.1276793	.0408874

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006743	1.892897	.3647962	91.59085	.0715474	.0012101
Stddev	.0004440	.019927	.0037123	.46409	.0002197	.0006710
%RSD	65.84490	1.052743	1.017635	.5066981	.3070623	55.44995
#1	.0002253	1.869962	.3608245	91.34667	.0713510	.0004461
#2	.0006846	1.902748	.3653857	91.29983	.0717846	.0014808
#3	.0011131	1.905980	.3681785	92.12605	.0715065	.0017036

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2296.102	.0694804	.0096240	305.6446	5.069787	.0081517
Stddev	2.609	.0025654	.0005721	1.0079	.015569	.0003102
%RSD	.1136258	3.692308	5.944423	.3297516	.3070884	3.805229
#1	2298.167	.0715596	.0099372	304.5643	5.052429	.0084927
#2	2293.170	.0666135	.0099711	305.8099	5.082516	.0078863
#3	2296.970	.0702682	.0089637	306.5597	5.074416	.0080760

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01 Acquired: 1/20/2023 14:10:03 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0481058	.0333657	F 15.19218	.7471403	F 59.15649	.1173281
Stddev	.0005164	.0002500	.03970	.0045469	.03732	.0017745
%RSD	1.073510	.7491858	.2612980	.6085728	.0630891	1.512434
#1	.0483895	.0334727	15.14825	.7475466	59.18529	.1155496
#2	.0475097	.0335444	15.20281	.7514704	59.11433	.1190986
#3	.0484181	.0330801	15.22548	.7424039	59.16986	.1173361

Elem	Sr4077
Units	ppm
Avg	1.282331
Stddev	.006632
%RSD	.5172179
#1	1.274932
#2	1.284317
#3	1.287743

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3716.576	59396.25	5535.279	3320.275	3288.668
Stddev	6.043	81.86	15.988	14.037	3.200
%RSD	.1625850	.1378253	.2888298	.4227588	.0972982
#1	3710.043	59340.29	5536.194	3304.923	3286.521
#2	3717.721	59490.20	5550.789	3323.449	3287.137
#3	3721.964	59358.24	5518.853	3332.453	3292.346

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01DUP Acquired: 1/20/2023 14:14:06 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044746**	**-.001527**	**.0019220**	**-.001623**	**.0036245**	**.6472728**
Stddev	.0024038	.001571	.0006446	.001194	.0014160	.0162559
%RSD	53.72016	102.8966	33.54032	73.52731	39.06777	2.511449
#1	.0063631	-.003176	.0024037	-.000454	.0019959	.6484289
#2	.0052920	-.001356	.0021726	-.001576	.0045645	.6304696
#3	.0017687	-.000048	.0011897	-.002840	.0043130	.6629198

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6413544**	**.0000476**	**.0000830**	**185.1235**	**.1280600**	**.0409507**
Stddev	.0032747	.0000146	.0000868	.8291	.0001707	.0002137
%RSD	.5105838	30.62454	104.4847	.4478716	.1332663	.5219660
#1	.6376384	.0000357	.0000550	184.2106	.1281970	.0411138
#2	.6426068	.0000433	.0000137	185.3302	.1281142	.0407087
#3	.6438181	.0000639	.0001803	185.8297	.1278689	.0410296

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008967**	**1.892652**	**.3638724**	**91.69176**	**.0712988**	**.0013129**
Stddev	.0003365	.009503	.0018774	.35187	.0003347	.0003517
%RSD	37.52006	.5020900	.5159598	.3837523	.4694969	26.78623
#1	.0005447	1.886324	.3625068	91.28887	.0711252	.0015607
#2	.0009304	1.903580	.3660134	91.84773	.0710865	.0009104
#3	.0012150	1.888053	.3630971	91.93869	.0716847	.0014677

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2210.557**	**.0680004**	**.0090825**	**301.5687**	**5.107200**	**.0076956**
Stddev	17.336	.0011641	.0000565	1.4425	.027380	.0001541
%RSD	.7842340	1.711872	.6223807	.4783401	.5361068	2.002212
#1	2193.519	.0681132	.0090387	300.3991	5.103017	.0076548
#2	2228.176	.0667840	.0090625	303.1806	5.082152	.0075660
#3	2209.975	.0691040	.0091463	301.1264	5.136431	.0078660

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01DUP Acquired: 1/20/2023 14:14:06 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0481154	.0344354	F 15.15703	.7483233	F 59.47656	.1192290
Stddev	.0009904	.0017062	.13121	.0026737	.05940	.0016380
%RSD	2.058298	4.954686	.8656818	.3572945	.0998783	1.373850
#1	.0476620	.0359172	15.00693	.7461287	59.40903	.1193773
#2	.0474329	.0325701	15.24991	.7475399	59.52074	.1175218
#3	.0492513	.0348188	15.21426	.7513011	59.49991	.1207878

Elem	Sr4077
Units	ppm
Avg	1.288629
Stddev	.006669
%RSD	.5175233
#1	1.281793
#2	1.288976
#3	1.295118

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3695.308	59476.11	5493.801	3336.349	3272.477
Stddev	6.286	214.85	12.647	18.080	8.457
%RSD	.1701057	.3612344	.2302079	.5419177	.2584241
#1	3689.748	59711.19	5499.460	3355.466	3263.749
#2	3702.128	59289.93	5502.630	3319.525	3280.634
#3	3694.047	59427.21	5479.312	3334.056	3273.047

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01LX5 Acquired: 1/20/2023 14:18:09 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001603**	**-.000247**	**-.001090**	**-.003454**	**.0001265**	**.1209073**	**.1150395**
Stddev	.001660	.000573	.001702	.005320	.0009958	.0067754	.0020860
%RSD	103.5374	231.5127	156.0769	154.0503	787.1521	5.603809	1.813312
#1	.000310	-.000168	-.002443	.001295	.0012055	.1254026	.1140122
#2	-.002464	.000281	.000820	-.009203	-.000757	.1242050	.1136664
#3	-.002654	-.000856	-.001648	-.002453	-.000069	.1131143	.1174400

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000279**	**.0000060**	**34.99305**	**.0231396**	**.0076145**	**.0000181**	**.3411170**
Stddev	.0000320	.0000400	.22214	.0005883	.0000256	.0001026	.0054301
%RSD	114.8310	664.8013	.6348111	2.542283	.3359770	565.7198	1.591859
#1	.0000138	-.000038	34.73656	.0238110	.0075850	-.000089	.3364000
#2	.0000053	.000040	35.12296	.0227143	.0076311	.000115	.3470530
#3	.0000645	.000016	35.11964	.0228935	.0076274	.000028	.3398981

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0684421**	**17.14644**	**.0132335**	**.0008449**	**408.7246**	**.0069223**	**.0013345**
Stddev	.0009400	.12720	.0001958	.0001583	3.5423	.0033358	.0001839
%RSD	1.373479	.7418682	1.479320	18.73444	.8666626	48.18935	13.77803
#1	.0675206	17.00403	.0133489	.0007015	404.8065	.0094092	.0015405
#2	.0684062	17.18651	.0130075	.0008184	411.7006	.0082264	.0011869
#3	.0693996	17.24879	.0133443	.0010147	409.6666	.0031315	.0012762

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.32595**	**1.039518**	**.0015689**	**.0075694**	**.0081553**	**2.587816**	**.1208929**
Stddev	.64645	.008890	.0002493	.0005452	.0018642	.026669	.0018912
%RSD	1.284523	.8551727	15.88716	7.202841	22.85880	1.030574	1.564368
#1	49.63548	1.049604	.0016216	.0072302	.0060220	2.562695	.1230040
#2	50.42554	1.036129	.0012976	.0072797	.0094712	2.584951	.1203213
#3	50.91682	1.032822	.0017877	.0081983	.0089727	2.615802	.1193535

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01LX5 Acquired: 1/20/2023 14:18:09 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	9.996046	.0249536	.2414475
Stddev	.011068	.0004887	.0021035
%RSD	.1107259	1.958500	.8712188
#1	10.00724	.0244277	.2391086
#2	9.99579	.0250393	.2420496
#3	9.98511	.0253938	.2431844

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3953.221	64911.80	5573.693	3568.455	3737.349
Stddev	4.565	183.36	22.080	2.955	1.747
%RSD	.1154741	.2824776	.3961478	.0828147	.0467482
#1	3947.964	65117.88	5558.064	3568.659	3738.411
#2	3955.516	64766.68	5564.063	3571.304	3735.333
#3	3956.182	64850.85	5598.953	3565.404	3738.304

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MS Acquired: 1/20/2023 14:22:16 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8540641**	**1.932964**	**.9992140**	**2.007414**	**.7846454**	**2.567954**
Stddev	.0091506	.018974	.0109853	.017037	.0080003	.005498
%RSD	1.071424	.9815764	1.099392	.8486870	1.019608	.2140877
#1	.8544727	1.919533	.9888317	1.995527	.7793644	2.562286
#2	.8447161	1.924689	.9980938	1.999783	.7807217	2.568313
#3	.8630037	1.954669	1.010716	2.026932	.7938500	2.573264

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8127860**	**.1809414**	**.2057507**	**179.3595**	**.5004909**	**.2364973**
Stddev	.0026943	.0007612	.0023426	.8373	.0031950	.0027852
%RSD	.3314876	.4206969	1.138550	.4668150	.6383777	1.177697
#1	.8096992	.1813198	.2039068	178.4348	.5014318	.2344821
#2	.8146652	.1814392	.2049586	180.0662	.5031098	.2353343
#3	.8139937	.1800651	.2083866	179.5776	.4969311	.2396755

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2706585**	**4.998404**	**.5946429**	**90.08369**	**.5673400**	**.0759047**
Stddev	.0032861	.055194	.0027819	.43808	.0070196	.0007802
%RSD	1.214102	1.104242	.4678225	.4863030	1.237276	1.027883
#1	.2682041	4.939902	.5914540	89.64614	.5627459	.0763999
#2	.2693797	5.049553	.5959029	90.52230	.5638537	.0763088
#3	.2743917	5.005759	.5965718	90.08262	.5754202	.0750053

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2118.854**	**.3614026**	**.2193213**	**299.0714**	**5.126274**	**.3838851**
Stddev	25.592	.0078213	.0017950	2.4731	.029274	.0051403
%RSD	1.207837	2.164139	.8184244	.8269224	.5710613	1.339021
#1	2100.148	.3575885	.2203970	296.9493	5.156741	.3800009
#2	2148.020	.3562201	.2203178	301.7873	5.123721	.3819402
#3	2108.395	.3703991	.2172492	298.4776	5.098360	.3897140

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MS Acquired: 1/20/2023 14:22:16 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7707892	.2227303	F 15.95755	7.868062	F 56.49513	.3134622
Stddev	.0098125	.0020903	.23716	.086475	.64902	.0011351
%RSD	1.273043	.9384801	1.486221	1.099061	1.148805	.3621121
#1	.7618791	.2221999	15.69345	7.813902	56.03733	.3129503
#2	.7691828	.2250347	16.15234	7.822493	56.21017	.3147630
#3	.7813058	.2209564	16.02686	7.967791	57.23788	.3126731

Elem	Sr4077
Units	ppm
Avg	1.445759
Stddev	.006458
%RSD	.4467113
#1	1.438552
#2	1.451021
#3	1.447706

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3731.193	60871.05	5609.813	3386.543	3311.907
Stddev	40.028	354.73	20.893	32.668	32.567
%RSD	1.072795	.5827529	.3724400	.9646269	.9833372
#1	3762.305	60879.29	5588.774	3376.724	3340.103
#2	3745.240	60512.28	5610.106	3359.912	3319.358
#3	3686.035	61221.59	5630.558	3422.994	3276.260

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MSD Acquired: 1/20/2023 14:26:08 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8681987**	**1.946299**	**1.008922**	**2.022242**	**.7902606**	**2.583202**
Stddev	.0021924	.003401	.001628	.002971	.0005880	.018802
%RSD	.2525225	.1747672	.1613507	.1468942	.0744111	.7278654
#1	.8674672	1.946780	1.008224	2.018866	.7898701	2.566618
#2	.8664657	1.949434	1.010782	2.023406	.7899749	2.603629
#3	.8706634	1.942682	1.007759	2.024454	.7909369	2.579359

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8166630**	**.1817280**	**.2071120**	**179.7350**	**.5093453**	**.2377311**
Stddev	.0047168	.0020431	.0004913	1.2561	.0007832	.0001963
%RSD	.5775672	1.124242	.2372237	.6988686	.1537620	.0825778
#1	.8112406	.1827336	.2075824	178.4877	.5100397	.2375799
#2	.8198170	.1830734	.2071514	180.9997	.5084964	.2376605
#3	.8189315	.1793771	.2066021	179.7176	.5094999	.2379530

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2722467**	**5.140707**	**.5972288**	**90.09710**	**.5714559**	**.0776871**
Stddev	.0008028	.029258	.0028520	.79379	.0011324	.0006999
%RSD	.2948769	.5691407	.4775433	.8810437	.1981516	.9009162
#1	.2731436	5.107365	.5979497	89.36350	.5727068	.0784128
#2	.2715956	5.152657	.5996512	90.93980	.5711603	.0776323
#3	.2720008	5.162098	.5940855	89.98800	.5705007	.0770162

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2162.004**	**.3636046**	**.2251552**	**307.4321**	**5.166985**	**.3851617**
Stddev	22.349	.0043225	.0005789	1.9623	.050416	.0007119
%RSD	1.033701	1.188787	.2570975	.6382784	.9757379	.1848285
#1	2143.696	.3599902	.2258211	305.4242	5.182802	.3855351
#2	2186.908	.3624309	.2248723	307.5268	5.207596	.3856092
#3	2155.407	.3683927	.2247722	309.3453	5.110557	.3843408

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MSD Acquired: 1/20/2023 14:26:08 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7769089	.2226281	F 16.50364	7.978400	F 57.37917	.3130038
Stddev	.0020681	.0067542	.28558	.008119	.16860	.0046026
%RSD	.2661890	3.033871	1.730430	.1017569	.2938313	1.470476
#1	.7788567	.2154121	16.18156	7.987450	57.57359	.3079891
#2	.7771313	.2287987	16.60340	7.971758	57.27314	.3139867
#3	.7747386	.2236734	16.72596	7.975992	57.29079	.3170356

Elem	Sr4077
Units	ppm
Avg	1.453482
Stddev	.011812
%RSD	.8126723
#1	1.440736
#2	1.464059
#3	1.455652

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3713.565	59105.94	5593.146	3316.324	3290.996
Stddev	4.663	7.16	50.944	5.521	2.383
%RSD	.1255767	.0121186	.9108338	.1664905	.0724206
#1	3710.436	59100.43	5576.300	3319.810	3289.760
#2	3711.335	59103.35	5552.759	3309.958	3289.484
#3	3718.925	59114.03	5650.380	3319.203	3293.743

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01A Acquired: 1/20/2023 14:30:00 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA11676 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8899968**	**1.998891**	**1.035612**	**2.082786**	**.8145477**	**2.655301**
Stddev	.0067168	.011506	.007217	.013746	.0098407	.039243
%RSD	.7546997	.5756027	.6968889	.6599738	1.208123	1.477895
#1	.8831154	1.987903	1.027280	2.067411	.8050116	2.616831
#2	.8903391	1.997918	1.039647	2.087059	.8139644	2.653798
#3	.8965359	2.010852	1.039909	2.093888	.8246671	2.695273

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8211179**	**.1889488**	**.2128010**	**180.4415**	**.5185895**	**.2431438**
Stddev	.0055486	.0008028	.0014348	1.3781	.0005806	.0017000
%RSD	.6757362	.4248702	.6742300	.7637364	.1119588	.6991596
#1	.8160793	.1881772	.2112119	178.8568	.5179371	.2414555
#2	.8202099	.1897795	.2131900	181.1086	.5190495	.2431209
#3	.8270645	.1888895	.2140012	181.3591	.5187818	.2448552

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2800001**	**5.156918**	**.5421278**	**90.99795**	**.5856447**	**.0795273**
Stddev	.0023038	.045212	.0053680	.74934	.0041940	.0008523
%RSD	.8227867	.8767252	.9901656	.8234678	.7161407	1.071768
#1	.2775327	5.123456	.5366778	90.13748	.5811157	.0794592
#2	.2803726	5.138945	.5422959	91.50691	.5864238	.0804116
#3	.2820949	5.208353	.5474098	91.34947	.5893945	.0787110

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2096.531**	**.3753890**	**.2270492**	**302.2493**	**5.224016**	**.3970555**
Stddev	5.782	.0034364	.0005020	1.7174	.023186	.0030428
%RSD	.2757832	.9154275	.2211031	.5682151	.4438331	.7663315
#1	2098.735	.3714682	.2272219	300.3352	5.206913	.3940076
#2	2100.886	.3778784	.2264837	302.7571	5.250406	.3970657
#3	2089.971	.3768202	.2274422	303.6556	5.214728	.4000931

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01A Acquired: 1/20/2023 14:30:00 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA11676 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7969188	.2289124	F 16.46812	8.152890	F 57.30367	.3194446
Stddev	.0064039	.0004741	.21406	.053444	.45632	.0036634
%RSD	.8035874	.2071040	1.299865	.6555227	.7963148	1.146800
#1	.7902608	.2284841	16.22121	8.094957	56.81332	.3176320
#2	.7974613	.2288314	16.58158	8.163441	57.38184	.3170408
#3	.8030342	.2294218	16.60156	8.200272	57.71586	.3236609

Elem	Sr4077
Units	ppm
Avg	1.471592
Stddev	.012917
%RSD	.8777328
#1	1.456871
#2	1.481029
#3	1.476877

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3712.575	59363.97	5517.744	3330.905	3290.582
Stddev	18.173	94.71	18.194	9.606	16.032
%RSD	.4894866	.1595388	.3297353	.2884005	.4872195
#1	3731.675	59344.25	5515.413	3322.721	3308.017
#2	3710.552	59280.68	5500.828	3328.512	3287.255
#3	3695.499	59466.99	5536.991	3341.482	3276.475

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV02 Acquired: 1/20/2023 14:37:53 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV19982 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.374035**	**5.390557**	**5.170682**	**5.248710**	**5.270836**	**10.49929**	**10.86270**
Stddev	.012763	.010784	.008558	.023184	.011983	.04731	.03624
%RSD	.2375014	.2000457	.1655113	.4417163	.2273409	.4505941	.3336454
#1	5.386262	5.394652	5.175235	5.265144	5.275061	10.44500	10.82133
#2	5.360796	5.378326	5.176001	5.222191	5.257313	10.52117	10.87794
#3	5.375048	5.398694	5.160810	5.258795	5.280134	10.53169	10.88884

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2447632**	**2.612705**	**25.98747**	**1.029471**	**2.555360**	**1.294076**	**5.365182**
Stddev	.0017428	.000741	.13017	.000741	.001994	.004067	.054515
%RSD	.7120468	.0283545	.5009027	.0719924	.0780162	.3142452	1.016084
#1	.2467424	2.612931	25.84364	1.028808	2.557583	1.294249	5.305894
#2	.2434583	2.611878	26.02156	1.030271	2.553729	1.289926	5.376507
#3	.2440889	2.613307	26.09720	1.029335	2.554770	1.298054	5.413145

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.571822**	**25.67405**	**2.619499**	**1.288330**	**25.14225**	**2.656322**	**2.697884**
Stddev	.011741	.10897	.002518	.002428	.24218	.003959	.013076
%RSD	.4565422	.4244259	.0961351	.1884326	.9632233	.1490494	.4846838
#1	2.558663	25.58895	2.622382	1.286818	24.86399	2.651864	2.706572
#2	2.575575	25.63635	2.617726	1.287041	25.30546	2.657673	2.682845
#3	2.581228	25.79687	2.618390	1.291130	25.25730	2.659429	2.704234

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.72813**	**5.029961**	**5.283592**	**5.283987**	**5.177254**	**5.266938**	**5.361886**
Stddev	.28555	.025634	.010620	.003044	.027900	.087011	.009623
%RSD	1.068354	.5096272	.2009945	.0576008	.5388923	1.652019	.1794694
#1	26.41345	5.057496	5.280236	5.286235	5.146627	5.166473	5.359566
#2	26.80017	5.006788	5.275055	5.280523	5.183916	5.316184	5.353636
#3	26.97076	5.025597	5.295484	5.285201	5.201220	5.318157	5.372457

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV02 Acquired: 1/20/2023 14:37:53 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV19982 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.228914	5.160848	5.351069
Stddev	.012408	.025370	.061232
%RSD	.2373008	.4915935	1.144287
#1	5.217675	5.131562	5.281797
#2	5.226839	5.176132	5.373439
#3	5.242229	5.174849	5.397969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4090.249	67510.24	5703.983	3649.536	4029.898
Stddev	2.192	244.35	34.255	11.603	3.196
%RSD	.0535923	.3619422	.6005534	.3179202	.0793045
#1	4088.440	67450.43	5667.543	3636.216	4027.847
#2	4092.687	67301.36	5708.876	3657.448	4028.267
#3	4089.621	67778.95	5735.528	3654.942	4033.581

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB02 Acquired: 1/20/2023 14:41:41 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB19982 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009839	-.000865	-.000566	-.003441	-.002742	-.003302
Stddev	.0010869	.000565	.000318	.000883	.000516	.006457
%RSD	110.4673	65.38827	56.17142	25.66079	18.83391	195.5582
#1	-.000244	-.000365	-.000500	-.003202	-.002565	-.000278
#2	.001821	-.001479	-.000286	-.004419	-.003324	.001089
#3	.001375	-.000751	-.000911	-.002702	-.002338	-.010715

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.042389	-.000095	.0000028	-.005370	-.000637	-.000293
Stddev	.000142	.000016	.0000307	.005128	.000033	.000056
%RSD	.3353509	17.26923	1090.850	95.49641	5.225208	19.05466
#1	-.042227	-.000090	-.000003	-.010584	-.000600	-.000355
#2	-.042443	-.000114	-.000024	-.000332	-.000666	-.000276
#3	-.042496	-.000083	.000036	-.005194	-.000645	-.000247

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003328	.0079104	.0002845	-.009480	.0003294	.0008645
Stddev	.0001886	.0022961	.0001554	.003732	.0000665	.0000951
%RSD	56.67031	29.02643	54.60822	39.36714	20.19940	11.00607
#1	.0003426	.0105509	.0001423	-.007343	.0002637	.0009118
#2	.0001395	.0067980	.0002609	-.013789	.0003968	.0007550
#3	.0005163	.0063825	.0004504	-.007307	.0003277	.0009267

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0685890	-.001141	-.000673	.2983598	-.001060	.0032766
Stddev	.0016025	.001601	.000057	.0134159	.000563	.0007334
%RSD	2.336403	140.2349	8.396220	4.496565	53.09646	22.38404
#1	.0682645	-.001798	-.000709	.3019906	-.000644	.0040616
#2	.0703289	-.002309	-.000608	.3095868	-.000836	.0031594
#3	.0671736	.000683	-.000703	.2835022	-.001700	.0026088

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB02 Acquired: 1/20/2023 14:41:41 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB19982 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001971	-.000444	-.005563	-.004311	F -.012666	-.002634
Stddev	.000060	.000743	.006811	.000976	.000657	.000567
%RSD	3.029171	167.2663	122.4289	22.62841	5.185203	21.50958
#1	-.002033	.000038	-.006574	-.004233	-.013392	-.003207
#2	-.001913	-.000071	-.011813	-.003377	-.012113	-.002074
#3	-.001966	-.001299	.001697	-.005324	-.012493	-.002621

Elem	Sr4077
Units	ppm
Avg	.0000127
Stddev	.0000325
%RSD	256.2567
#1	.0000483
#2	.0000051
#3	-.000015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	13193.22	220591.1	13672.45	11886.54	15003.00
Stddev	155.90	642.8	417.66	44.30	175.57
%RSD	1.181645	.2914143	3.054792	.3727233	1.170236
#1	13066.69	221329.3	13198.14	11924.75	14859.33
#2	13145.59	220154.7	13834.01	11837.97	14950.97
#3	13367.38	220289.3	13985.20	11896.89	15198.71

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1192-01 Acquired: 1/20/2023 14:45:43 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CELL-A-POOL- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002663**	**.0018364**	**.0056057**	**-.001013**	**-.001234**	**.2717078**	**-.001668**
Stddev	.000848	.0015494	.0010714	.001887	.000648	.0069877	.000962
%RSD	31.83963	84.37504	19.11345	186.3245	52.53168	2.571757	57.68781
#1	-.002915	.0008374	.0046525	-.000355	-.000753	.2788165	-.000562
#2	-.001717	.0010504	.0053991	.000457	-.000978	.2648478	-.002313
#3	-.003356	.0036212	.0067653	-.003140	-.001971	.2714593	-.002128

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000029**	**.0000108**	**.2676154**	**.0008077**	**-.000012**	**.0911694**	**.0350683**
Stddev	.000013	.0001116	.0124380	.0001659	.000128	.0001939	.0028724
%RSD	45.75680	1032.500	4.647698	20.54453	1075.838	.2126686	8.190997
#1	-.000044	.0000326	.2723507	.0008650	.000061	.0913730	.0322829
#2	-.000020	.0001099	.2535053	.0006207	.000063	.0909869	.0380205
#3	-.000023	-.000110	.2769903	.0009374	-.000160	.0911485	.0349014

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0055434**	**.0753164**	**.0029498**	**.0014069**	**.4182941**	**-.004370**	**.1508628**
Stddev	.0011117	.0095386	.0001837	.0003362	.0073260	.003500	.0012626
%RSD	20.05360	12.66469	6.229419	23.89885	1.751387	80.09066	.8369242
#1	.0066989	.0735094	.0027900	.0017350	.4249332	-.002791	.1520085
#2	.0044815	.0856292	.0029088	.0010631	.4195145	-.001938	.1510707
#3	.0054500	.0668105	.0031506	.0014224	.4104346	-.008381	.1495091

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1018386**	**.0090553**	**.0034401**	**-.001014**	**.0012949**	**.2350092**	**.0098862**
Stddev	.0281360	.0003913	.0007930	.000355	.0019606	.0137892	.0014787
%RSD	27.62806	4.320939	23.05231	34.99466	151.4081	5.867517	14.95758
#1	.0952828	.0086499	.0043237	-.000614	-.000966	.2465878	.0105456
#2	.1326738	.0090853	.0032065	-.001292	.002521	.2386852	.0081925
#3	.0775593	.0094308	.0027901	-.001135	.002330	.2197545	.0109205

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1192-01 Acquired: 1/20/2023 14:45:43 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CELL-A-POOL- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0338674	-.001794	.0008060
Stddev	.0011856	.001319	.0001655
%RSD	3.500603	73.56234	20.53612
#1	.0344599	-.001429	.0009907
#2	.0346400	-.003257	.0007560
#3	.0325024	-.000695	.0006712

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4355.238	71022.43	5837.044	3863.030	4625.181
Stddev	7.941	398.46	16.377	20.804	5.607
%RSD	.1823380	.5610302	.2805641	.5385469	.1212267
#1	4348.121	70581.40	5819.001	3840.927	4624.142
#2	4363.804	71129.45	5850.968	3865.930	4631.234
#3	4353.789	71356.45	5841.163	3882.231	4620.166

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1192-02 Acquired: 1/20/2023 14:49:43 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CELL-B/C-POO Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001877**	**-.001017**	**.0031215**	**-.000341**	**-.001185**	**.1523804**	**.0006677**
Stddev	.001112	.001579	.0005229	.000639	.002068	.0019990	.0000468
%RSD	59.22924	155.3216	16.75280	187.3087	174.5762	1.311843	7.009058
#1	-.000964	-.002623	.0032976	-.000963	-.000440	.1504619	.0006320
#2	-.003115	.000533	.0025333	-.000375	-.003522	.1544512	.0007207
#3	-.001552	-.000960	.0035337	.000314	.000408	.1522281	.0006505

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000044**	**.0000934**	**.3056175**	**.0008612**	**.0001548**	**.0377036**	**.0509260**
Stddev	.000068	.0000155	.0066805	.0001144	.0000108	.0007910	.0047094
%RSD	152.3806	16.57781	2.185903	13.28606	6.974144	2.097961	9.247488
#1	.000028	.0000993	.3036798	.0008854	.0001560	.0372817	.0460138
#2	-.000106	.0001051	.3001200	.0007366	.0001649	.0372130	.0554023
#3	-.000056	.0000758	.3130526	.0009616	.0001434	.0386162	.0513618

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0105856**	**.0639731**	**.0054731**	**.0011019**	**.2577668**	**-.004334**	**.1627526**
Stddev	.0009230	.0458209	.0002037	.0004697	.0071396	.005583	.0050204
%RSD	8.719008	71.62526	3.721732	42.62913	2.769795	128.8265	3.084673
#1	.0105726	.0549889	.0052411	.0010828	.2540391	-.003878	.1685040
#2	.0115150	.1136208	.0055558	.0006420	.2659987	.001007	.1605051
#3	.0096693	.0233098	.0056225	.0015809	.2532626	-.010132	.1592486

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1291076**	**.0094677**	**.0010260**	**-.001292**	**-.001238**	**.1100018**	**.0215135**
Stddev	.0334348	.0006556	.0003394	.000179	.000499	.0192935	.0007588
%RSD	25.89683	6.924390	33.07872	13.87469	40.27538	17.53930	3.526979
#1	.0961689	.0100287	.0010448	-.001202	-.001803	.1296413	.0210055
#2	.1281365	.0096274	.0013556	-.001498	-.000861	.1092902	.0211494
#3	.1630173	.0087471	.0006776	-.001176	-.001049	.0910738	.0223857

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1192-02 Acquired: 1/20/2023 14:49:43 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CELL-B/C-POO Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0479627	-.006444	.0009331
Stddev	.0023780	.001146	.0000158
%RSD	4.958022	17.78918	1.698060
#1	.0468294	-.005636	.0009475
#2	.0463633	-.007756	.0009358
#3	.0506953	-.005939	.0009161

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4297.887	70130.05	5785.175	3795.144	4518.585
Stddev	8.843	1864.46	33.288	109.112	15.609
%RSD	.2057632	2.658579	.5754080	2.875054	.3454327
#1	4293.077	67986.43	5748.621	3670.430	4511.711
#2	4308.093	71028.93	5793.156	3842.000	4536.451
#3	4292.492	71374.78	5813.747	3873.002	4507.593

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1192-03 Acquired: 1/20/2023 14:53:40 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CELL-D-POOL- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000721**	**.0005525**	**-.001190**	**.0000188**	**.0033055**	**.0729444**	**-.004858**
Stddev	.001472	.0020115	.002062	.0017755	.0023820	.0149805	.001480
%RSD	204.0898	364.0889	173.2535	9458.950	72.06022	20.53689	30.47004
#1	.000970	.0028363	.001111	.0020449	.0042806	.0573542	-.003573
#2	-.001709	-.000956	-.001810	-.001265	.0050453	.0872298	-.006477
#3	-.001424	-.000223	-.002872	-.000723	.0005907	.0742491	-.004525

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000051**	**.0000250**	**.0845899**	**.0000121**	**.0000413**	**.0045172**	**.1047109**
Stddev	.000009	.0000755	.0020865	.0001906	.0002028	.0003722	.0039765
%RSD	17.93807	302.0944	2.466640	1582.491	490.8561	8.239424	3.797572
#1	-.000049	.0000126	.0861291	-.000205	.0001108	.0045346	.1091908
#2	-.000061	.0001059	.0822150	.000150	.0002002	.0041366	.1033428
#3	-.000043	-.000044	.0854255	.000092	-.000187	.0048804	.1015991

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0068032**	**.0270621**	**.0010951**	**.0006931**	**2.712654**	**-.002179**	**.0328943**
Stddev	.0005159	.0279062	.0002255	.0003654	.026702	.003056	.0003251
%RSD	7.583521	103.1191	20.58987	52.71359	.9843403	140.2318	.9882948
#1	.0066629	.0279844	.0008414	.0007336	2.695455	-.000300	.0325260
#2	.0073748	-.001294	.0011712	.0003092	2.743415	-.005705	.0331414
#3	.0063719	.054496	.0012726	.0010365	2.699091	-.000533	.0330154

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4184949**	**.0308752**	**.0006411**	**-.001295**	**.0069802**	**1.903668**	**.0071619**
Stddev	.0606502	.0007691	.0002221	.000025	.0009129	.004951	.0010710
%RSD	14.49246	2.490997	34.64735	1.926584	13.07893	.2600525	14.95420
#1	.4865863	.0316721	.0007838	-.001313	.0065518	1.900496	.0083312
#2	.3702677	.0301373	.0007543	-.001266	.0080286	1.909373	.0062286
#3	.3986306	.0308161	.0003852	-.001306	.0063603	1.901136	.0069258

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1192-03 Acquired: 1/20/2023 14:53:40 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CELL-D-POOL- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0167876	-.001131	.0003132
Stddev	.0022909	.002260	.0000869
%RSD	13.64613	199.8831	27.76030
#1	.0186636	-.003512	.0002489
#2	.0174647	.000985	.0004121
#3	.0142345	-.000865	.0002785

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4237.109	73567.07	5914.185	3941.608	4513.265
Stddev	99.192	413.13	14.024	9.281	106.331
%RSD	2.341039	.5615729	.2371196	.2354559	2.355963
#1	4197.178	73808.49	5929.171	3941.476	4477.112
#2	4164.105	73090.04	5912.006	3932.393	4429.725
#3	4350.043	73802.69	5901.379	3950.954	4632.959

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1203-01DLX10 Acquired: 1/20/2023 14:57:41 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004226**	**.0009163**	**-.001502**	**-.004544**	**-.001645**	**.0170968**	**.2082646**
Stddev	.002444	.0011234	.000417	.003641	.000900	.0020277	.0020491
%RSD	57.83599	122.6019	27.74222	80.13641	54.69418	11.85994	.9838689
#1	-.005837	.0020674	-.001946	-.002929	-.000609	.0184373	.2060261
#2	-.005427	.0008588	-.001443	-.008713	-.002231	.0180891	.2087202
#3	-.001414	-.000177	-.001119	-.001990	-.002096	.0147641	.2100475

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000465**	**.0000469**	**19.27121**	**.0166830**	**.0033367**	**-.000190**	**2.055699**
Stddev	.0000130	.0000734	.12851	.0007148	.0002000	.000243	.013261
%RSD	27.95410	156.4797	.6668609	4.284653	5.993509	128.0703	.6450638
#1	.0000484	.0001165	19.12435	.0163085	.0033739	-.000039	2.059474
#2	.0000326	.0000541	19.32622	.0162333	.0035155	-.000470	2.040960
#3	.0000584	-.000030	19.36305	.0175073	.0031208	-.000060	2.066662

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1091110**	**8.553788**	**.0069660**	**.0006610**	**192.2870**	**.0074006**	**.0028022**
Stddev	.0010872	.157275	.0001686	.0006469	.9738	.0026629	.0002375
%RSD	.9963716	1.838663	2.419930	97.85501	.5064207	35.98283	8.474799
#1	.1078868	8.393388	.0070062	.0012049	193.3253	.0086798	.0029076
#2	.1094825	8.707740	.0067809	-.000054	192.1415	.0091825	.0029688
#3	.1099637	8.560235	.0071108	.000832	191.3941	.0043394	.0025303

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.34975**	**.4894719**	**.0009258**	**.0177144**	**.0177010**	**2.954403**	**.5099582**
Stddev	.05046	.0019946	.0002190	.0012651	.0009885	.014768	.0042136
%RSD	.2257787	.4074962	23.65108	7.141502	5.584125	.4998533	.8262616
#1	22.32638	.4886578	.0006898	.0162543	.0188381	2.955255	.5081143
#2	22.31521	.4880131	.0011223	.0184825	.0172184	2.939227	.5147794
#3	22.40766	.4917448	.0009651	.0184065	.0170466	2.968726	.5069808

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1203-01DLX10 Acquired: 1/20/2023 14:57:41 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.753568	.0102069	.1354804
Stddev	.007086	.0018440	.0005835
%RSD	.2573313	18.06628	.4306940
#1	2.747749	.0104967	.1348963
#2	2.761459	.0118887	.1360633
#3	2.751498	.0082351	.1354818

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4035.860	64483.71	5589.222	3553.220	3927.931
Stddev	7.581	408.06	4.746	30.694	6.763
%RSD	.1878524	.6328130	.0849089	.8638453	.1721658
#1	4029.937	64014.33	5594.699	3517.985	3921.526
#2	4044.404	64682.72	5586.356	3574.162	3927.265
#3	4033.239	64754.09	5586.609	3567.512	3935.002

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1186-03DLX10 Acquired: 1/20/2023 15:01:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TWP04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000825**	**.0003781**	**.0018150**	**-.002798**	**.0001604**	**.0606605**
Stddev	.001983	.0016235	.0008061	.001315	.0010716	.0123698
%RSD	240.3492	429.3595	44.41495	46.99957	667.9453	20.39178
#1	-.002739	.0022309	.0009438	-.004316	-.000104	.0748535
#2	.001221	-.000796	.0025344	-.002032	.001339	.0549538
#3	-.000958	-.000301	.0019668	-.002045	-.000754	.0521743

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043185**	**.0000356**	**.0000649**	**37.78162**	**-.000785**	**-.000084**
Stddev	.0011466	.0000206	.0000078	.25697	.000509	.000273
%RSD	26.55212	58.04380	12.02727	.6801511	64.82430	324.4384
#1	.0044542	.0000276	.0000710	37.54473	-.000712	.000230
#2	.0053912	.0000201	.0000561	37.74532	-.000316	-.000266
#3	.0031100	.0000590	.0000675	38.05481	-.001325	-.000216

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006319**	**.0653045**	**.0350375**	**107.4321**	**.0006598**	**.0011785**
Stddev	.0001970	.0063743	.0007293	.8206	.0005141	.0004673
%RSD	31.17405	9.760922	2.081555	.7638146	77.92488	39.65461
#1	.0008045	.0580778	.0342925	106.6511	.0002958	.0009606
#2	.0004173	.0677079	.0350699	107.3579	.0004356	.0008599
#3	.0006740	.0701276	.0357500	108.2872	.0012479	.0017149

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**891.4697**	**-.004134**	**.0037624**	**37.23705**	**.3391436**	**.0006930**
Stddev	10.6047	.003864	.0001309	.50784	.0031513	.0001781
%RSD	1.189570	93.46229	3.480057	1.363790	.9291794	25.69754
#1	879.2446	.000327	.0038999	36.72074	.3417659	.0005619
#2	898.1902	-.006441	.0036392	37.25444	.3400173	.0008957
#3	896.9741	-.006289	.0037482	37.73596	.3356477	.0006213

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1186-03DLX10 Acquired: 1/20/2023 15:01:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TWP04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002282	.0010662	.7560404	.0819903	F 83.48745	.0171773
Stddev	.000488	.0010401	.0239673	.0030080	.36616	.0056415
%RSD	21.37286	97.54615	3.170103	3.668724	.4385804	32.84298
#1	-.002175	-.000052	.7285098	.0822173	83.16651	.0115538
#2	-.002815	.001245	.7722509	.0788753	83.40954	.0171412
#3	-.001857	.002005	.7673605	.0848784	83.88629	.0228367

Elem	Sr4077
Units	ppm
Avg	.6436807
Stddev	.0043758
%RSD	.6798084
#1	.6391362
#2	.6440405
#3	.6478655

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3824.690	61077.27	5492.467	3380.248	3553.363
Stddev	5.787	56.82	24.693	2.100	1.487
%RSD	.1513120	.0930237	.4495801	.0621236	.0418569
#1	3823.765	61138.82	5467.183	3378.425	3552.291
#2	3830.883	61026.82	5493.695	3379.774	3555.061
#3	3819.420	61066.18	5516.523	3382.544	3552.736

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150344BL Acquired: 1/20/2023 15:09:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150344BL Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002353**	**-.001642**	**-.000417**	**-.002689**	**.0007318**	**.0146782**	**-.005475**
Stddev	.000613	.000687	.001419	.001189	.0011160	.0163910	.000573
%RSD	26.04935	41.84108	339.9987	44.24063	152.5044	111.6687	10.46535
#1	-.001645	-.001951	.000206	-.003877	.0000613	.0231499	-.005138
#2	-.002708	-.000855	-.002041	-.002690	.0001140	.0250997	-.005151
#3	-.002706	-.002121	.000583	-.001498	.0020200	-.004215	-.006137

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000017**	**.0000800**	**.0111651**	**-.000315**	**-.000125**	**.0002098**	**.0094612**
Stddev	.000043	.0000423	.0104458	.000571	.000026	.0001673	.0089977
%RSD	256.0938	52.87270	93.55737	181.1810	20.79140	79.75304	95.10083
#1	-.000005	.0001255	.0179506	-.000085	-.000097	.0003650	.0166871
#2	.000019	.0000728	.0164085	.000105	-.000130	.0002319	-.000617
#3	-.000065	.0000418	-.000864	-.000966	-.000147	.0000325	.012313

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000134**	**-.015720**	**.0001779**	**.0007380**	**.5564337**	**-.002943**	**-.000153**
Stddev	.001256	.002882	.0002868	.0003143	.1039264	.003302	.000305
%RSD	939.8918	18.33475	161.1421	42.58764	18.67723	112.1929	199.1832
#1	.001012	-.013214	.0003145	.0010710	.4427044	-.000138	-.000501
#2	-.001476	-.018870	-.000152	.0004464	.5801331	-.006583	-.000028
#3	.000063	-.015078	.000371	.0006967	.6464635	-.002109	.000070

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2750839**	**-.000522**	**.0000117**	**-.000795**	**.0012451**	**.0223697**	**-.003611**
Stddev	.0703015	.000330	.0000746	.000279	.0016230	.0072967	.002351
%RSD	25.55639	63.22824	638.9790	35.05894	130.3468	32.61876	65.09447
#1	.2185177	-.000884	-.000066	-.000487	-.000437	.0282223	-.002867
#2	.2529437	-.000239	.000019	-.001030	.001371	.0246925	-.006244
#3	.3537902	-.000442	.000082	-.000868	.002801	.0141943	-.001723

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150344BL Acquired: 1/20/2023 15:09:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150344BL Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0015320	.0020971	-.000047
Stddev	.0003048	.0019162	.000091
%RSD	19.89492	91.37269	193.8773
#1	.0012143	-.000047	.000058
#2	.0015595	.003642	-.000091
#3	.0018220	.002697	-.000108

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4133.253	70195.75	5777.875	3781.616	4364.432
Stddev	181.151	261.34	16.068	12.190	184.363
%RSD	4.382779	.3723003	.2780870	.3223575	4.224216
#1	4243.863	70183.26	5764.965	3773.779	4474.243
#2	4231.701	69940.88	5772.791	3775.409	4467.470
#3	3924.195	70463.11	5795.870	3795.661	4151.584

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01 Acquired: 1/20/2023 15:17:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061997	-.004899	.1240617	-.015832	.0036333	57.53012	.2914761
Stddev	.0029412	.001915	.0012178	.004796	.0009476	.61703	.0060634
%RSD	47.44074	39.08727	.9816251	30.29539	26.07993	1.072526	2.080241
#1	.0074977	-.004938	.1247809	-.020843	.0031521	56.84214	.2860166
#2	.0082686	-.006793	.1226556	-.015369	.0030230	57.71374	.2904098
#3	.0028328	-.002965	.1247486	-.011284	.0047250	58.03450	.2980020

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032909	.0004116	14.33186	.2090865	.0720128	.6246685	137.8776
Stddev	.0000070	.0001946	.13438	.0027378	.0002792	.0015478	1.3387
%RSD	.2119842	47.28312	.9376175	1.309421	.3877811	.2477706	.9709215
#1	.0032989	.0005119	14.17670	.2104156	.0722891	.6232967	138.0468
#2	.0032861	.0001873	14.40861	.2109060	.0720186	.6243623	139.1236
#3	.0032877	.0005357	14.41028	.2059378	.0717307	.6263465	136.4623

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.062410	23.09359	.1401132	.0060113	2.153721	.2581337	.3080541
Stddev	.020169	.28518	.0002617	.0001680	.035001	.0030157	.0031039
%RSD	.9779434	1.234893	.1867551	2.794760	1.625132	1.168276	1.007566
#1	2.040705	22.77099	.1404054	.0060950	2.159193	.2546648	.3099918
#2	2.065950	23.19762	.1400338	.0058179	2.185663	.2601322	.3096965
#3	2.080575	23.31214	.1399004	.0061210	2.116306	.2596040	.3044742

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.168744	-.085135	.0042291	.0175644	3.667304	1.182506	1.697197
Stddev	.047138	.002709	.0001311	.0008930	.044353	.015018	.003640
%RSD	1.487606	3.181994	3.100602	5.083957	1.209425	1.270030	.2144777
#1	3.117824	-.084069	.0041841	.0184482	3.620390	1.171991	1.698259
#2	3.210859	-.083122	.0043768	.0175825	3.672970	1.175821	1.700188
#3	3.177550	-.088215	.0041264	.0166626	3.708552	1.199706	1.693144

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01 Acquired: 1/20/2023 15:17:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.800630	.0713340	.0619642
Stddev	.003641	.0024035	.0006580
%RSD	.2021862	3.369404	1.061852
#1	1.801752	.0687723	.0612238
#2	1.803578	.0716901	.0621870
#3	1.796561	.0735397	.0624818

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4566.566	75314.57	6317.200	4158.479	4317.382
Stddev	4.452	1007.36	36.668	68.439	8.261
%RSD	.0974905	1.337539	.5804497	1.645778	.1913443
#1	4570.240	74690.71	6357.597	4121.731	4313.411
#2	4561.615	74776.28	6307.983	4116.262	4311.856
#3	4567.844	76476.72	6286.020	4237.443	4326.879

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01DUP Acquired: 1/20/2023 15:21:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0084489**	**-.004668**	**.1224514**	**-.015838**	**.0070319**	**57.74071**	**.2951216**
Stddev	.0025239	.000905	.0020153	.003718	.0020188	.53133	.0030732
%RSD	29.87218	19.39142	1.645769	23.47538	28.70935	.9201947	1.041338
#1	.0077374	-.004304	.1205296	-.011664	.0076633	57.22275	.2922474
#2	.0112521	-.004002	.1222760	-.017057	.0047729	58.28446	.2983611
#3	.0063571	-.005698	.1245487	-.018794	.0086596	57.71491	.2947562

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032407**	**-.000047**	**14.39863**	**.2188950**	**.0719961**	**.6097467**	**142.0810**
Stddev	.0001124	.000354	.11832	.0090038	.0000958	.0011076	4.7986
%RSD	3.467168	760.4410	.8217229	4.113314	.1330215	.1816479	3.377387
#1	.0033230	-.000195	14.26334	.2258893	.0719167	.6085259	144.6729
#2	.0032863	.000358	14.48271	.2087361	.0721024	.6106873	136.5438
#3	.0031127	-.000303	14.44986	.2220596	.0719692	.6100268	145.0264

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.059899**	**23.13708**	**.1392004**	**.0058084**	**2.192665**	**.2608650**	**.3153907**
Stddev	.019465	.19218	.0002482	.0001003	.064815	.0040283	.0122341
%RSD	.9449645	.8305954	.1783304	1.727139	2.955998	1.544210	3.879014
#1	2.040272	22.97803	.1392453	.0058147	2.228006	.2571687	.3247409
#2	2.079198	23.35061	.1389327	.0057052	2.117861	.2651586	.3015449
#3	2.060228	23.08259	.1394231	.0059055	2.232129	.2602676	.3198864

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.207111**	**-.084949**	**.0045611**	**.0169460**	**3.683873**	**1.189851**	**1.666106**
Stddev	.117987	.008128	.0003657	.0004637	.038273	.062264	.007782
%RSD	3.678933	9.568393	8.018373	2.736322	1.038921	5.232920	.4670637
#1	3.254013	-.080574	.0042763	.0169753	3.643628	1.244544	1.674735
#2	3.072884	-.094328	.0044336	.0173943	3.719808	1.122091	1.663963
#3	3.294435	-.079946	.0049736	.0164683	3.688182	1.202918	1.659620

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01DUP Acquired: 1/20/2023 15:21:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.789179	.0699012	.0619684
Stddev	.010395	.0005588	.0004989
%RSD	.5810090	.7994864	.8050486
#1	1.783204	.0700411	.0614897
#2	1.801182	.0703768	.0624852
#3	1.783151	.0692857	.0619302

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4545.863	72979.96	6274.005	4024.819	4317.778
Stddev	10.124	2723.44	50.745	142.387	9.097
%RSD	.2227072	3.731762	.8088085	3.537735	.2106834
#1	4545.616	71128.15	6304.646	3937.724	4322.375
#2	4556.108	76107.05	6215.431	4189.135	4323.659
#3	4535.864	71704.68	6301.937	3947.598	4307.300

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150344BS Acquired: 1/20/2023 15:25:29 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150344BS Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7915072	1.984963	.9518348	1.989859	.7673398	1.900679
Stddev	.0024782	.004521	.0039450	.010320	.0020762	.032808
%RSD	.3131012	.2277399	.4144666	.5186435	.2705741	1.726145
#1	.7889013	1.989453	.9549800	1.995353	.7692798	1.881518
#2	.7938341	1.985025	.9531160	1.996270	.7675896	1.881956
#3	.7917862	1.980412	.9474084	1.977954	.7651499	1.938562

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1897994	.1827135	.1912905	.9570575	.3827866	.1850710
Stddev	.0008871	.0006358	.0006010	.0083061	.0013678	.0005309
%RSD	.4673660	.3479778	.3141917	.8678765	.3573343	.2868803
#1	.1888119	.1819979	.1916855	.9499990	.3834074	.1854245
#2	.1905288	.1832133	.1915872	.9662103	.3812184	.1853281
#3	.1900574	.1829293	.1905988	.9549633	.3837339	.1844605

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2952762	3.021471	.1895242	1.838488	.4747785	.0718883
Stddev	.0015968	.028706	.0015633	.028816	.0008442	.0006794
%RSD	.5407678	.9500590	.8248403	1.567369	.1778130	.9451245
#1	.2954505	2.992044	.1877678	1.811964	.4750382	.0715761
#2	.2967787	3.049397	.1907631	1.834353	.4754623	.0726677
#3	.2935994	3.022972	.1900417	1.869148	.4738349	.0714209

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.999987	.2819487	.2017734	9.789920	.2715213	.3839307
Stddev	.047349	.0060086	.0005352	.056195	.0013846	.0004818
%RSD	1.578294	2.131114	.2652325	.5740099	.5099234	.1254946
#1	2.956113	.2750728	.2023722	9.758480	.2731194	.3840193
#2	2.993672	.2845831	.2013418	9.756482	.2707623	.3843621
#3	3.050176	.2861901	.2016062	9.854799	.2706824	.3834108

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150344BS Acquired: 1/20/2023 15:25:29 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150344BS Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6585715**	**.1906688**	**.9001220**	**5.592943**	F **-.001038**	**.1932059**
Stddev	.0027367	.0017773	.0143899	.013590	.001742	.0025216
%RSD	.4155479	.9321360	1.598660	.2429760	167.8543	1.305139
#1	.6584652	.1886812	.9009887	5.597030	-.002371	.1903763
#2	.6613598	.1921052	.9140589	5.604020	-.001676	.1940263
#3	.6558896	.1912199	.8853183	5.577779	.000933	.1952152

Elem	Sr4077
Units	ppm
Avg	**.1981559**
Stddev	.0018303
%RSD	.9236639
#1	.1961278
#2	.1986551
#3	.1996848

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4142.082**	**67614.86**	**5746.959**	**3686.198**	**4260.662**
Stddev	22.164	103.10	24.659	13.196	23.565
%RSD	.5351022	.1524838	.4290776	.3579795	.5530893
#1	4127.028	67506.90	5765.644	3672.384	4241.193
#2	4131.683	67712.30	5719.010	3687.537	4253.932
#3	4167.533	67625.37	5756.224	3698.673	4286.860

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV03 Acquired: 1/20/2023 15:29:17 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.272755**	**5.297473**	**5.111353**	**5.203366**	**5.212398**	**10.07066**	**10.47718**
Stddev	.228902	.227058	.218494	.216889	.224094	.10413	.09454
%RSD	4.341225	4.286156	4.274689	4.168238	4.299241	1.034008	.9023295
#1	5.145535	5.167663	4.992854	5.088893	5.091122	9.97720	10.40398
#2	5.135722	5.165103	4.977709	5.067696	5.075079	10.18291	10.58391
#3	5.537007	5.559653	5.363497	5.453508	5.470993	10.05188	10.44365

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2348879**	**2.574125**	**25.07763**	**.9937708**	**2.537520**	**1.282188**	**5.214306**
Stddev	.0007070	.110473	.17876	.0012262	.108530	.054343	.032175
%RSD	.3009844	4.291669	.7128236	.1233862	4.277002	4.238342	.6170438
#1	.2349450	2.512008	24.90339	.9937126	2.477348	1.252597	5.189109
#2	.2355646	2.508693	25.26059	.9950251	2.472405	1.249060	5.250548
#3	.2341541	2.701674	25.06893	.9925748	2.662807	1.344905	5.203260

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.483115**	**24.54280**	**2.584859**	**1.238543**	**25.09749**	**2.562562**	**2.571284**
Stddev	.021654	.24028	.112447	.001002	.19824	.021739	.008877
%RSD	.8720602	.9790223	4.350213	.0809003	.7898787	.8483194	.3452381
#1	2.464055	24.29465	2.522711	1.237436	24.87902	2.542569	2.565373
#2	2.506661	24.77435	2.517204	1.238807	25.26591	2.585703	2.581491
#3	2.478629	24.55941	2.714663	1.239387	25.14753	2.559413	2.566987

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.92843**	**4.789165**	**5.205644**	**5.192692**	**5.000469**	**5.028356**	**5.216074**
Stddev	.15570	.010784	.226402	.224451	.037728	.059832	.240297
%RSD	.6004988	.2251816	4.349172	4.322449	.7544936	1.189894	4.606859
#1	25.74988	4.793882	5.075736	5.066049	4.972355	4.967099	5.077880
#2	26.03588	4.796786	5.074128	5.060183	5.043346	5.031316	5.076797
#3	25.99954	4.776825	5.467070	5.451844	4.985704	5.086653	5.493544

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV03 Acquired: 1/20/2023 15:29:17 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.157992**	**4.940736**	**5.210422**
Stddev	.225195	.044798	.061065
%RSD	4.365937	.9067111	1.171969
#1	5.044822	4.906145	5.140885
#2	5.011827	4.991341	5.235076
#3	5.417325	4.924724	5.255305

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4018.122**	**67813.21**	**5795.510**	**3670.605**	**3964.874**
Stddev	147.841	223.37	39.117	18.189	147.907
%RSD	3.679362	.3293836	.6749504	.4955248	3.730445
#1	4097.840	67819.01	5792.404	3682.677	4045.396
#2	4108.995	67587.00	5758.039	3649.686	4055.050
#3	3847.532	68033.62	5836.088	3679.454	3794.177

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB03 Acquired: 1/20/2023 15:33:04 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000718**	**.0016963**	**-.001276**	**-.002114**	**.0014260**	**.0112488**	**-.001454**
Stddev	.001261	.0006696	.000737	.002028	.0011776	.0057685	.000729
%RSD	175.5663	39.47523	57.80639	95.95447	82.58065	51.28150	50.11257
#1	-.000832	.0011016	-.001232	-.004147	.0001351	.0077473	-.000635
#2	-.001917	.0015658	-.002034	-.000091	.0017014	.0080922	-.002031
#3	.000596	.0024216	-.000561	-.002103	.0024415	.0179067	-.001695

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000153**	**.0000613**	**.0027073**	**-.000012**	**-.000069**	**-.000410**	**-.004936**
Stddev	.0000500	.0000628	.0070029	.000438	.000109	.000369	.003972
%RSD	326.4772	102.4725	258.6734	3639.961	158.9143	89.79114	80.45819
#1	-.000042	-.000002	-.004470	.000455	-.000193	-.000835	-.008072
#2	.000036	.000063	.003069	-.000413	.000015	-.000219	-.006266
#3	.000051	.000123	.009522	-.000079	-.000029	-.000177	-.000470

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002939**	**-.027636**	**.0001559**	**.0008063**	**.1441927**	**-.001525**	**.0000720**
Stddev	.0005702	.040141	.0002096	.0006936	.0295362	.000668	.0002123
%RSD	193.9841	145.2475	134.4075	86.02552	20.48383	43.78490	294.8905
#1	.0006143	.008656	-.000086	.0015137	.1121491	-.002131	.0003029
#2	.0006318	-.020814	.000277	.0007777	.1501006	-.000809	.0000278
#3	-.000364	-.070752	.000277	.0001274	.1703285	-.001636	-.000115

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0805883**	**.0082249**	**.0072201**	**-.000260**	**-.001241**	**.0030618**	**-.004517**
Stddev	.0487072	.0014465	.0024480	.000363	.001609	.0026719	.001688
%RSD	60.43954	17.58722	33.90605	139.9536	129.6768	87.26492	37.36647
#1	.0640568	.0097729	.0099678	.000149	-.001429	.0061393	-.005595
#2	.1354096	.0079943	.0064209	-.000382	-.002747	.0017120	-.002572
#3	.0422984	.0069075	.0052715	-.000546	.000454	.0013341	-.005384

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB03 Acquired: 1/20/2023 15:33:04 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003071	.0041719	.0001944
Stddev	.004830	.0014613	.0001539
%RSD	157.2566	35.02705	79.12720
#1	.001943	.0027801	.0003010
#2	-.007693	.0040417	.0002642
#3	-.003463	.0056940	.0000181

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4177.768	68575.01	5619.691	3726.661	4425.540
Stddev	10.614	272.21	5.459	9.308	11.815
%RSD	.2540570	.3969570	.0971472	.2497748	.2669659
#1	4179.490	68879.98	5624.018	3736.042	4429.794
#2	4187.415	68488.44	5613.558	3726.513	4434.639
#3	4166.398	68356.61	5621.498	3717.427	4412.188

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01LX5 Acquired: 1/20/2023 15:37:06 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041482**	**-.000230**	**.0234017**	**-.006296**	**.0020516**	**11.51632**	**.0595451**
Stddev	.0012676	.000767	.0021480	.003199	.0007667	.10712	.0008555
%RSD	30.55761	333.5863	9.178680	50.80259	37.36802	.9301529	1.436758
#1	.0039306	.000632	.0217252	-.002603	.0015429	11.40249	.0603264
#2	.0030035	-.000834	.0226570	-.008169	.0016786	11.53135	.0586309
#3	.0055106	-.000488	.0258229	-.008117	.0029334	11.61514	.0596780

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007556**	**.0000091**	**2.817999**	**.0416883**	**.0139734**	**.1282833**	**26.57815**
Stddev	.0000315	.0000851	.011739	.0003254	.0007845	.0058202	.23723
%RSD	4.167091	936.4967	.4165716	.7804802	5.614221	4.536954	.8925923
#1	.0007563	-.000070	2.808078	.0420574	.0136513	.1249998	26.38766
#2	.0007237	-.000001	2.814962	.0414431	.0134013	.1248469	26.50291
#3	.0007867	.000099	2.830959	.0415644	.0148677	.1350033	26.84388

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4092141**	**4.534184**	**.0268897**	**.0014003**	**.4996246**	**.0486777**	**.0589383**
Stddev	.0040209	.042816	.0013375	.0004789	.0294163	.0003510	.0004872
%RSD	.9825780	.9442888	4.973894	34.19886	5.887678	.7211346	.8266019
#1	.4052360	4.498386	.0259472	.0009280	.4737330	.0483487	.0591797
#2	.4091299	4.522552	.0263014	.0013874	.4935301	.0490472	.0583776
#3	.4132764	4.581613	.0284205	.0018855	.5316108	.0486371	.0592577

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6292528**	**-.017420**	**.0018222**	**.0025243**	**.7273312**	**.2185766**	**.3062762**
Stddev	.0611619	.001139	.0000954	.0006755	.0083204	.0208594	.0139928
%RSD	9.719773	6.540953	5.235344	26.75796	1.143968	9.543275	4.568692
#1	.6097551	-.017258	.0017770	.0023410	.7184402	.1954845	.2960172
#2	.5802168	-.018632	.0017577	.0032725	.7286235	.2360537	.3005953
#3	.6977866	-.016371	.0019318	.0019595	.7349299	.2241917	.3222160

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01LX5 Acquired: 1/20/2023 15:37:06 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3346247	.0142275	.0123612
Stddev	.0187869	.0007610	.0000526
%RSD	5.614331	5.348730	.4259575
#1	.3236700	.0133644	.0123011
#2	.3238865	.0148019	.0123829
#3	.3563176	.0145160	.0123995

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4101.900	68901.22	5581.162	3777.197	4143.229
Stddev	149.096	200.70	4.307	12.513	157.774
%RSD	3.634809	.2912900	.0771719	.3312869	3.808005
#1	4184.329	68798.80	5585.914	3763.412	4230.291
#2	4191.582	69132.46	5577.515	3787.839	4238.291
#3	3929.790	68772.38	5580.058	3780.341	3961.105

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01MS Acquired: 1/20/2023 15:41:04 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6833187**	**1.910600**	**1.170674**	**1.626082**	**.6510406**	**153.9317**
Stddev	.0004702	.007376	.003126	.004518	.0009235	1.6415
%RSD	.0688132	.3860396	.2669837	.2778253	.1418429	1.066350
#1	.6831011	1.903837	1.170147	1.625040	.6504040	152.0502
#2	.6838583	1.909499	1.167846	1.622176	.6506181	155.0703
#3	.6829967	1.918464	1.174030	1.631030	.6520998	154.6747

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.100078**	**.1687366**	**.2034481**	**47.36381**	**.8630536**	**.4298552**
Stddev	.011726	.0007761	.0008374	.42367	.0025270	.0020916
%RSD	1.065892	.4599383	.4116207	.8945108	.2927955	.4865868
#1	1.086890	.1682479	.2033652	46.90280	.8657727	.4287735
#2	1.109326	.1696315	.2026553	47.73610	.8607773	.4285261
#3	1.104019	.1683305	.2043240	47.45253	.8626107	.4322662

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7835030**	**310.7618**	**4.307419**	**48.66651**	**.8885941**	**.0702365**
Stddev	.0020485	1.1118	.039823	.45460	.0041214	.0002123
%RSD	.2614550	.3577706	.9245173	.9341035	.4638174	.3022084
#1	.7844418	309.6820	4.264127	48.14393	.8903628	.0699973
#2	.7811533	310.7004	4.342490	48.97069	.8838835	.0704022
#3	.7849138	311.9031	4.315639	48.88491	.8915360	.0703102

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.732706**	**.9654838**	**.7467316**	**15.04929**	**-.002837**	**.3229429**
Stddev	.049698	.0056900	.0019853	.11016	.002266	.0013589
%RSD	.7381637	.5893362	.2658686	.7319814	79.86469	.4207899
#1	6.682850	.9591765	.7486161	14.98033	-.003949	.3222576
#2	6.733022	.9702308	.7469198	14.99120	-.004332	.3220630
#3	6.782246	.9670442	.7446588	15.17633	-.000230	.3245079

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01MS Acquired: 1/20/2023 15:41:04 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7439933	F 10.31133	4.935043	F 11.15970	6.660958	.2779171
Stddev	.0042957	.10144	.071794	.03149	.047266	.0042093
%RSD	.5773875	.9837894	1.454774	.2821449	.7095948	1.514578
#1	.7425453	10.19420	4.900545	11.13562	6.641080	.2731990
#2	.7406088	10.37002	4.887010	11.14815	6.626879	.2812873
#3	.7488260	10.36978	5.017574	11.19533	6.714917	.2792651

Elem	Sr4077
Units	ppm
Avg	.3966805
Stddev	.0047685
%RSD	1.202095
#1	.3911958
#2	.3998433
#3	.3990025

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4816.741	79286.16	6576.549	4379.733	3923.797
Stddev	5.558	417.02	37.571	22.494	8.097
%RSD	.1153977	.5259629	.5712804	.5135881	.2063454
#1	4816.863	78817.83	6580.544	4356.180	3925.110
#2	4822.238	79423.35	6537.140	4382.028	3931.157
#3	4811.123	79617.29	6611.962	4400.992	3915.125

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01MSD Acquired: 1/20/2023 15:44:42 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6776027**	**1.894322**	**1.157879**	**1.611634**	**.6444325**	**154.6440**
Stddev	.0021671	.003591	.001534	.002725	.0012827	.9448
%RSD	.3198160	.1895518	.1325244	.1690947	.1990395	.6109705
#1	.6785147	1.890586	1.157529	1.614183	.6450962	153.7073
#2	.6791648	1.894634	1.156550	1.611957	.6429540	155.5968
#3	.6751287	1.897747	1.159559	1.608761	.6452474	154.6278

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.090977**	**.1680422**	**.2000814**	**49.93948**	**.8882308**	**.4435692**
Stddev	.009197	.0006433	.0004855	.31058	.0009846	.0010627
%RSD	.8430429	.3827932	.2426567	.6219077	.1108520	.2395844
#1	1.080872	.1687830	.2002183	49.61484	.8890614	.4426851
#2	1.098859	.1677179	.1995421	50.23377	.8871432	.4432742
#3	1.093201	.1676257	.2004837	49.96982	.8884879	.4447482

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7725690**	**326.4228**	**4.459727**	**47.11621**	**.8813148**	**.0732595**
Stddev	.0014521	3.2366	.032573	.28023	.0008410	.0004866
%RSD	.1879529	.9915297	.7303896	.5947715	.0954311	.6642449
#1	.7734575	322.7026	4.422644	46.79271	.8814594	.0729070
#2	.7708933	328.5917	4.483715	47.28437	.8804108	.0738147
#3	.7733562	327.9741	4.472822	47.27155	.8820741	.0730567

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.977530**	**.9758625**	**.7674719**	**15.68801**	**.0237918**	**.3225090**
Stddev	.065538	.0097772	.0026578	.21662	.0096692	.0014896
%RSD	.9392690	1.001902	.3463110	1.380810	40.64085	.4618640
#1	6.904171	.9673842	.7704898	15.44415	.0127282	.3219923
#2	7.030304	.9865578	.7654798	15.85816	.0306238	.3213467
#3	6.998113	.9736454	.7664462	15.76171	.0280233	.3241881

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01MSD Acquired: 1/20/2023 15:44:42 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7333354	F 10.40587	5.182731	F 10.98917	6.572711	.2738057
Stddev	.0014885	.08152	.036037	.02176	.023981	.0031920
%RSD	.2029714	.7833626	.6953303	.1980381	.3648623	1.165805
#1	.7316813	10.31528	5.141940	10.96807	6.579371	.2701235
#2	.7337581	10.47331	5.196000	10.98790	6.546104	.2757896
#3	.7345668	10.42900	5.210253	11.01154	6.592659	.2755040

Elem	Sr4077
Units	ppm
Avg	.4139879
Stddev	.0020281
%RSD	.4898860
#1	.4120539
#2	.4160985
#3	.4138114

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4848.497	76804.25	6654.068	4275.312	3964.308
Stddev	12.307	67.54	22.360	5.934	11.783
%RSD	.2538277	.0879385	.3360338	.1388031	.2972214
#1	4857.807	76844.13	6633.180	4274.336	3973.478
#2	4853.140	76726.27	6651.368	4269.926	3968.426
#3	4834.544	76842.35	6677.655	4281.674	3951.018

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01A Acquired: 1/20/2023 15:48:20 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7910258**	**2.044859**	**1.127322**	**1.987989**	**.7407765**	**59.59690**	**.4862060**
Stddev	.0080226	.012812	.004996	.010985	.0073444	3.38207	.0314128
%RSD	1.014197	.6265492	.4432068	.5525583	.9914497	5.674916	6.460807
#1	.7852980	2.033370	1.121825	1.981853	.7362305	63.22465	.5194176
#2	.7875846	2.042532	1.128553	1.981443	.7368495	59.03522	.4822301
#3	.8001949	2.058675	1.131588	2.000671	.7492496	56.53083	.4569705

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1937238**	**.2031591**	**15.32147**	**.5994915**	**.2662328**	**.8980691**	**143.8560**
Stddev	.0107686	.0012962	.82130	.0085633	.0015192	.0067049	2.7282
%RSD	5.558730	.6380152	5.360428	1.428426	.5706261	.7465871	1.896491
#1	.2049772	.2018567	16.19097	.6093556	.2650687	.8944138	146.9666
#2	.1926776	.2031718	15.21460	.5939636	.2656785	.8939861	141.8690
#3	.1835164	.2044489	14.55884	.5951554	.2679514	.9058072	142.7324

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.264686**	**25.17277**	**.6350571**	**.0754292**	**5.057309**	**.5458506**	**.5091950**
Stddev	.133520	1.40209	.0047432	.0013188	.073597	.0278012	.0065591
%RSD	5.895726	5.569856	.7468969	1.748340	1.455258	5.093179	1.288128
#1	2.406241	26.68094	.6322643	.0766854	5.140940	.5742198	.5166849
#2	2.246814	24.92849	.6323732	.0755464	5.002423	.5446773	.5044770
#3	2.141002	23.90887	.6405337	.0740557	5.028563	.5186546	.5064228

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.02527**	**.2049011**	**.3734796**	**.7216514**	**3.871499**	**2.111694**	**7.697571**
Stddev	.26069	.0052901	.0033544	.0053022	.228628	.058737	.036675
%RSD	2.001455	2.581786	.8981417	.7347256	5.905413	2.781530	.4764526
#1	13.30884	.2107988	.3705661	.7171857	4.119985	2.178165	7.673760
#2	12.79600	.2005745	.3727260	.7202570	3.824468	2.066785	7.679147
#3	12.97098	.2033300	.3771467	.7275113	3.670043	2.090131	7.739806

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1198-01A Acquired: 1/20/2023 15:48:20 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PL-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.763282	.2608979	.2572234
Stddev	.004630	.0158872	.0141347
%RSD	.2625730	6.089423	5.495094
#1	1.759621	.2789190	.2725694
#2	1.761738	.2548595	.2543633
#3	1.768486	.2489153	.2447375

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4471.083	70607.06	6036.483	3953.166	4211.589
Stddev	25.642	880.22	305.153	43.714	26.650
%RSD	.5735117	1.246646	5.055151	1.105798	.6327822
#1	4493.825	69662.80	5715.438	3906.256	4235.877
#2	4476.132	71404.87	6071.243	3992.762	4215.809
#3	4443.292	70753.51	6322.768	3960.480	4183.080

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1215-01 Acquired: 1/20/2023 15:52:01 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BU-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0204322	-.005564	.0545413	-.010304	.0043556	33.33598	.0965963
Stddev	.0003158	.001944	.0012344	.003796	.0018270	.79550	.0044646
%RSD	1.545689	34.94465	2.263288	36.84160	41.94561	2.386303	4.621940
#1	.0207066	-.004390	.0546182	-.006658	.0039420	33.56628	.0997985
#2	.0200869	-.007809	.0557355	-.010019	.0063540	33.99093	.0984942
#3	.0205030	-.004494	.0532702	-.014234	.0027709	32.45075	.0914963

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021341	-.000061	22.18413	.0877733	.0174509	.0373378	84.66715
Stddev	.0000468	.000052	.56280	.0002653	.0001368	.0005124	.95881
%RSD	2.193617	86.01129	2.536937	.3022954	.7839158	1.372348	1.132448
#1	.0021548	-.000079	22.33500	.0880632	.0173756	.0368988	85.61985
#2	.0021670	-.000101	22.65612	.0875424	.0176088	.0379008	84.67925
#3	.0020805	-.000002	21.56128	.0877144	.0173683	.0372137	83.70234

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4451094	5.100909	.0257260	.0020248	.5014056	.1040164	.0947168
Stddev	.0130602	.103934	.0004217	.0003955	.0184519	.0026702	.0005450
%RSD	2.934155	2.037550	1.639194	19.53420	3.680038	2.567140	.5753546
#1	.4500951	5.138068	.0261410	.0024773	.5211919	.1069164	.0951642
#2	.4549424	5.181156	.0252979	.0018522	.4983573	.1034735	.0941099
#3	.4302908	4.983504	.0257392	.0017449	.4846677	.1016594	.0948763

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.219010	-.092061	.0044997	.0021051	.5761364	1.237813	1.088269
Stddev	.078852	.002699	.0000299	.0004907	.0132102	.058171	.005034
%RSD	3.553474	2.932244	.6633174	23.30707	2.292895	4.699509	.4625511
#1	2.263123	-.091711	.0044801	.0023492	.5795331	1.282397	1.093771
#2	2.265932	-.094918	.0045340	.0024259	.5873166	1.259030	1.087141
#3	2.127974	-.089553	.0044850	.0015403	.5615596	1.172011	1.083895

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1215-01 Acquired: 1/20/2023 15:52:01 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BU-02-011823 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.808809	.0140640	.0860399
Stddev	.009459	.0021395	.0018726
%RSD	.1967022	15.21246	2.176441
#1	4.819576	.0142443	.0865002
#2	4.801835	.0161076	.0876394
#3	4.805016	.0118401	.0839800

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4490.140	71661.29	6062.551	3986.126	4426.337
Stddev	15.592	612.22	144.696	41.508	13.043
%RSD	.3472485	.8543213	2.386713	1.041320	.2946738
#1	4497.840	70987.72	6013.573	3938.285	4425.058
#2	4472.196	71812.23	5948.702	4007.529	4413.980
#3	4500.383	72183.92	6225.380	4012.565	4439.972

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-01 Acquired: 1/20/2023 15:55:54 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: MH-8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104003**	**-.001884**	**.0381945**	**-.011158**	**.0028309**	**41.78007**	**.2428830**
Stddev	.0017024	.001386	.0008400	.001043	.0015187	3.98537	.0289319
%RSD	16.36910	73.57412	2.199379	9.348752	53.64654	9.538927	11.91186
#1	.0106772	-.002884	.0391561	-.012324	.0019766	38.79289	.2223877
#2	.0085763	-.000302	.0378236	-.010837	.0045843	46.30529	.2759782
#3	.0119472	-.002465	.0376037	-.010312	.0019318	40.24204	.2302831

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039101**	**-.000047**	**14.75452**	**.0991937**	**.0380503**	**.0831574**	**69.15177**
Stddev	.0003166	.000036	1.36435	.0005459	.0003215	.0003108	1.23690
%RSD	8.096045	76.98469	9.247031	.5503221	.8450717	.3737956	1.788677
#1	.0036923	-.000039	13.72979	.0985656	.0382102	.0829339	68.09223
#2	.0042732	-.000087	16.30318	.0994616	.0376801	.0830260	70.51097
#3	.0037647	-.000016	14.23058	.0995538	.0382605	.0835124	68.85210

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.764263**	**20.10990**	**.0643671**	**.0026950**	**1.859491**	**.1845240**	**.1515122**
Stddev	.167715	1.89860	.0001648	.0004864	.032713	.0186079	.0002640
%RSD	9.506220	9.441115	.2560714	18.04852	1.759219	10.08427	.1742304
#1	1.639156	18.71446	.0641906	.0022321	1.828957	.1684209	.1515914
#2	1.954838	22.27195	.0643938	.0032019	1.894016	.2048951	.1517276
#3	1.698796	19.34330	.0645170	.0026510	1.855502	.1802559	.1512177

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.010368**	**-.091521**	**.0009485**	**.0088301**	**2.487338**	**1.522081**	**3.011815**
Stddev	.052161	.011268	.0001604	.0002086	.232684	.044876	.006002
%RSD	1.041056	12.31238	16.91056	2.362654	9.354758	2.948329	.1992760
#1	4.972542	-.083064	.0009014	.0086488	2.310751	1.564947	3.012619
#2	5.069872	-.104313	.0011272	.0087834	2.751002	1.525861	3.017375
#3	4.988691	-.087185	.0008170	.0090581	2.400262	1.475434	3.005452

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-01 Acquired: 1/20/2023 15:55:54 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: MH-8 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2924277	.0613158	.0573095
Stddev	.0039484	.0082962	.0053709
%RSD	1.350213	13.53036	9.371797
#1	.2890857	.0570046	.0532748
#2	.2914131	.0708801	.0634058
#3	.2967844	.0560628	.0552479

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4652.769	75982.72	5876.421	4187.370	4293.873
Stddev	4.108	249.07	438.205	14.366	2.684
%RSD	.0882911	.3277957	7.457012	.3430889	.0625157
#1	4650.226	75939.38	6192.664	4180.178	4291.727
#2	4657.508	75758.17	5376.223	4178.020	4293.008
#3	4650.573	76250.62	6060.377	4203.912	4296.883

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-04 Acquired: 1/20/2023 15:59:44 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TP-G Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0112965**	**-.001755**	**.0601450**	**-.012225**	**.0019666**	**46.76176**	**.1671132**
Stddev	.0037717	.001703	.0018803	.000694	.0011349	.57215	.0027614
%RSD	33.38773	97.05676	3.126207	5.673425	57.71090	1.223542	1.652385
#1	.0147801	-.002823	.0623141	-.013023	.0032422	46.10320	.1639705
#2	.0118184	.000209	.0591410	-.011883	.0010687	47.04543	.1691509
#3	.0072911	-.002651	.0589799	-.011769	.0015888	47.13664	.1682183

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041348**	**.0005141**	**11.74176**	**.1087281**	**.0366592**	**.1063914**	**70.55715**
Stddev	.0001070	.0002669	.11497	.0001978	.0004476	.0008443	.57870
%RSD	2.588344	51.91431	.9791781	.1819419	1.220903	.7935558	.8201838
#1	.0041805	.0007841	11.61056	.1088744	.0371759	.1073662	69.88899
#2	.0042114	.0005076	11.78984	.1085030	.0364100	.1059134	70.88297
#3	.0040125	.0002505	11.82489	.1088067	.0363916	.1058945	70.89947

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6490567**	**16.66160**	**.0786933**	**.0029170**	**5.996211**	**.1754134**	**.1486449**
Stddev	.0089193	.28456	.0007149	.0001823	.023336	.0044800	.0007787
%RSD	1.374197	1.707871	.9084826	6.248201	.3891829	2.553967	.5238758
#1	.6389111	16.34287	.0790096	.0027971	5.970791	.1715772	.1490571
#2	.6525951	16.75183	.0778747	.0028272	6.016664	.1803370	.1491308
#3	.6556638	16.89011	.0791954	.0031268	6.001179	.1743261	.1477467

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.920101**	**-.081285**	**.0009751**	**.0092419**	**2.612773**	**1.844766**	**3.043022**
Stddev	.042938	.002086	.0000394	.0013202	.026445	.032752	.014462
%RSD	.8727017	2.566306	4.042980	14.28528	1.012145	1.775378	.4752646
#1	4.905091	-.078878	.0010037	.0081761	2.582251	1.835432	3.059433
#2	4.968528	-.082435	.0009915	.0088308	2.628814	1.881171	3.032141
#3	4.886683	-.082544	.0009302	.0107188	2.627256	1.817694	3.037490

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-04 Acquired: 1/20/2023 15:59:44 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TP-G Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5790071	.0441601	.0295081
Stddev	.0023429	.0010120	.0004256
%RSD	.4046346	2.291665	1.442252
#1	.5812323	.0434562	.0290185
#2	.5765621	.0437043	.0297163
#3	.5792270	.0453199	.0297894

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4634.700	76589.42	6328.219	4256.915	4153.897
Stddev	29.075	102.36	40.804	11.578	36.060
%RSD	.6273223	.1336500	.6447873	.2719807	.8681080
#1	4604.537	76700.17	6374.596	4252.392	4117.539
#2	4662.547	76569.82	6312.225	4248.282	4189.652
#3	4637.016	76498.28	6297.835	4270.072	4154.500

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-02 Acquired: 1/20/2023 16:03:36 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011723- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0272347	-.010310	.3310897	-.020019	.0060455	113.1064	.6499901
Stddev	.0031087	.001671	.0016236	.002123	.0020586	.5698	.0005879
%RSD	11.41429	16.20933	.4903816	10.60375	34.05181	.5038165	.0904402
#1	.0292784	-.009283	.3294784	-.018397	.0077121	112.4604	.6493113
#2	.0287685	-.009408	.3327253	-.019238	.0066801	113.3211	.6503298
#3	.0236572	-.012238	.3310653	-.022421	.0037443	113.5377	.6503292

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069945	.0010003	24.92928	.2611975	.1012849	.1964484	196.6649
Stddev	.0000304	.0000759	.11780	.0011597	.0001729	.0008536	.5847
%RSD	.4349235	7.589185	.4725205	.4440034	.1706970	.4345001	.2972857
#1	.0070001	.0010875	24.87794	.2600144	.1010907	.1961987	196.4834
#2	.0069617	.0009488	24.84587	.2612457	.1013421	.1973990	196.1926
#3	.0070218	.0009646	25.06403	.2623323	.1014220	.1957475	197.3188

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.891231	41.77507	.2415508	.0055392	5.033867	.2609342	.4571222
Stddev	.023886	.25496	.0006618	.0003017	.038513	.0043031	.0019161
%RSD	.4054562	.6103255	.2739852	5.446412	.7650837	1.649098	.4191731
#1	5.867645	41.50720	.2417998	.0057855	5.021767	.2570472	.4549170
#2	5.890640	41.80321	.2420520	.0056294	5.002856	.2601975	.4580686
#3	5.915407	42.01480	.2408006	.0052027	5.076977	.2655581	.4583810

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.83513	-.190879	.0060968	.0344026	3.504480	6.898745	6.894096
Stddev	.07693	.002458	.0001313	.0009046	.015616	.038843	.012922
%RSD	.6499737	1.287719	2.153905	2.629558	.4456048	.5630432	.1874312
#1	11.83117	-.188386	.0060983	.0350373	3.488328	6.896624	6.893493
#2	11.76026	-.193301	.0059647	.0333667	3.505612	6.861006	6.907308
#3	11.91396	-.190949	.0062274	.0348036	3.519499	6.938605	6.881486

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-02 Acquired: 1/20/2023 16:03:36 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011723- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.125641	.1296135	.1657754
Stddev	.003534	.0013869	.0013942
%RSD	.3139908	1.070017	.8409867
#1	1.122905	.1280158	.1641948
#2	1.124386	.1303184	.1663018
#3	1.129631	.1305064	.1668298

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4730.031	74862.31	6383.447	4182.838	4080.083
Stddev	3.495	130.34	9.651	14.130	4.405
%RSD	.0738948	.1741129	.1511939	.3377981	.1079613
#1	4726.057	74792.74	6393.996	4199.153	4081.270
#2	4731.406	75012.68	6381.285	4174.730	4075.207
#3	4732.630	74781.52	6375.060	4174.631	4083.774

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-05 Acquired: 1/20/2023 16:07:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011723- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0086452**	**-.005358**	**.0781330**	**-.011647**	**.0020684**	**43.42720**	**.2600954**
Stddev	.0019593	.001643	.0014628	.002013	.0010236	.22930	.0030093
%RSD	22.66388	30.66926	1.872133	17.28505	49.48604	.5280187	1.157002
#1	.0085124	-.007196	.0791460	-.010977	.0011792	43.68203	.2634816
#2	.0067556	-.004031	.0764560	-.010054	.0031872	43.23752	.2590778
#3	.0106675	-.004846	.0787970	-.013909	.0018386	43.36205	.2577269

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0034036**	**-.000003**	**18.12412**	**.1233428**	**.0442720**	**.1526180**	**107.5279**
Stddev	.0000210	.000148	.15701	.0005311	.0004950	.0006645	1.2291
%RSD	.6171606	4300.868	.8662842	.4305682	1.118104	.4353712	1.143071
#1	.0034198	-.000029	18.30037	.1239119	.0448148	.1533121	107.9063
#2	.0033799	-.000137	18.07278	.1232560	.0441555	.1519878	108.5234
#3	.0034112	.000156	17.99921	.1228605	.0438456	.1525541	106.1541

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.782499**	**33.42198**	**.1067550**	**.0026228**	**2.314692**	**.1452369**	**.2444504**
Stddev	.016260	.16781	.0005872	.0003734	.011727	.0019572	.0003960
%RSD	.5843698	.5021013	.5500441	14.23726	.5066163	1.347568	.1619809
#1	2.799506	33.61404	.1073712	.0030178	2.323901	.1462057	.2441206
#2	2.780886	33.30369	.1062020	.0025750	2.318683	.1429843	.2443411
#3	2.767106	33.34821	.1066918	.0022756	2.301490	.1465207	.2448896

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.673598**	**-.114942**	**.0040682**	**.0074627**	**1.730747**	**1.468005**	**4.573046**
Stddev	.061817	.003261	.0002285	.0003966	.010276	.028892	.026306
%RSD	.7127087	2.836987	5.616180	5.313744	.5937443	1.968111	.5752385
#1	8.714865	-.117611	.0043259	.0078894	1.742509	1.475588	4.603300
#2	8.703406	-.111308	.0038904	.0073933	1.723510	1.492350	4.555577
#3	8.602525	-.115908	.0039884	.0071055	1.726221	1.436078	4.560259

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-05 Acquired: 1/20/2023 16:07:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011723- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.167556	.0688965	.0746795
Stddev	.007864	.0026882	.0004420
%RSD	.3628213	3.901853	.5918144
#1	2.176398	.0703288	.0749651
#2	2.161342	.0657954	.0741704
#3	2.164927	.0705653	.0749031

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4590.421	73287.66	6150.692	4091.740	4169.922
Stddev	23.370	378.05	50.415	15.865	23.466
%RSD	.5091124	.5158432	.8196619	.3877351	.5627334
#1	4564.917	72947.09	6095.987	4073.621	4142.908
#2	4595.537	73221.45	6195.284	4098.462	4181.608
#3	4610.810	73694.44	6160.805	4103.137	4185.249

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-08 Acquired: 1/20/2023 16:11:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011723- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0147912**	**-.004553**	**.1301789**	**-.012733**	**.0031136**	**64.82306**	**.4115412**
Stddev	.0020172	.002198	.0017193	.005466	.0006580	1.31602	.0085465
%RSD	13.63796	48.27396	1.320708	42.93151	21.13480	2.030174	2.076702
#1	.0164494	-.004909	.1288473	-.009444	.0024787	63.36455	.4029785
#2	.0153787	-.006551	.1295695	-.009712	.0030695	65.18288	.4115738
#3	.0125454	-.002199	.1321198	-.019043	.0037926	65.92174	.4200714

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040440**	**-.000235**	**12.27719**	**.1262120**	**.0550781**	**.1328127**	**110.3554**
Stddev	.0000462	.000108	.24617	.0003104	.0002457	.0009809	.6317
%RSD	1.143311	46.06972	2.005126	.2459711	.4460444	.7385316	.5724300
#1	.0040805	-.000152	12.00353	.1258670	.0553543	.1339029	109.6294
#2	.0040596	-.000196	12.34743	.1264687	.0548838	.1320019	110.6580
#3	.0039920	-.000357	12.48060	.1263004	.0549963	.1325332	110.7790

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.284797**	**23.85843**	**.1318074**	**.0035027**	**2.774420**	**.1378063**	**.2410211**
Stddev	.052784	.49330	.0002112	.0005036	.021666	.0065752	.0005986
%RSD	1.606904	2.067624	.1602429	14.37860	.7809253	4.771298	.2483562
#1	3.226718	23.29391	.1319916	.0034757	2.751243	.1302329	.2416649
#2	3.297828	24.07487	.1318537	.0030131	2.794166	.1411296	.2404814
#3	3.329845	24.20651	.1315769	.0040193	2.777851	.1420564	.2409171

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.525123**	**-.110621**	**.0052583**	**.0105929**	**1.968136**	**1.806780**	**3.289765**
Stddev	.078988	.002060	.0002445	.0004477	.038543	.012276	.004923
%RSD	.9265330	1.862432	4.650435	4.226274	1.958343	.6794388	.1496313
#1	8.435580	-.109101	.0053840	.0103151	1.926235	1.820140	3.295432
#2	8.554871	-.109795	.0054145	.0111093	1.976093	1.795998	3.286549
#3	8.584917	-.112966	.0049765	.0103542	2.002079	1.804200	3.287314

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-08 Acquired: 1/20/2023 16:11:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011723- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6303195	.0700945	.0827788
Stddev	.0049979	.0016306	.0018030
%RSD	.7929106	2.326238	2.178048
#1	.6255120	.0688682	.0807175
#2	.6299584	.0694703	.0835561
#3	.6354882	.0719449	.0840627

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4566.665	72545.07	6211.763	4043.362	4229.022
Stddev	5.417	126.71	80.631	9.669	7.854
%RSD	.1186146	.1746621	1.298044	.2391340	.1857177
#1	4561.559	72658.30	6301.118	4035.308	4222.980
#2	4572.347	72408.21	6189.739	4054.085	4237.900
#3	4566.088	72568.70	6144.432	4040.693	4226.185

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV04 Acquired: 1/20/2023 16:15:02 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV19988 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.294796**	**5.317014**	**5.144604**	**5.218166**	**5.239450**	**10.04599**	**10.30576**
Stddev	.341054	.347663	.343183	.344991	.347314	.03588	.04160
%RSD	6.441313	6.538693	6.670736	6.611354	6.628820	.3571344	.4036652
#1	5.100698	5.133974	4.961930	5.030684	5.056580	10.08689	10.34503
#2	5.688598	5.717956	5.540485	5.616302	5.639989	10.03124	10.31008
#3	5.095091	5.099112	4.931396	5.007510	5.021780	10.01983	10.26217

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2377590**	**2.593717**	**24.88093**	**.9974879**	**2.562792**	**1.289578**	**5.178190**
Stddev	.0022433	.175173	.06234	.0027618	.174122	.085502	.030798
%RSD	.9435185	6.753753	.2505486	.2768745	6.794229	6.630206	.5947559
#1	.2403404	2.501085	24.94683	.9944693	2.470133	1.242514	5.165833
#2	.2362819	2.795758	24.87306	.9998880	2.763650	1.388272	5.213247
#3	.2366548	2.484309	24.82289	.9981063	2.454592	1.237949	5.155489

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.456755**	**24.57278**	**2.604532**	**1.246409**	**25.31434**	**2.534044**	**2.582124**
Stddev	.009295	.11032	.175728	.001654	.15637	.014717	.010946
%RSD	.3783378	.4489481	6.747009	.1327153	.6177001	.5807516	.4238982
#1	2.457103	24.66401	2.511291	1.248319	25.13535	2.550537	2.575187
#2	2.465871	24.60416	2.807229	1.245427	25.38328	2.522252	2.576444
#3	2.447291	24.45017	2.495075	1.245482	25.42440	2.529343	2.594742

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.84523**	**4.847063**	**5.243626**	**5.220501**	**4.956269**	**5.060362**	**5.230562**
Stddev	.12968	.043348	.346539	.347127	.017105	.060439	.353562
%RSD	.5017597	.8943209	6.608758	6.649304	.3451140	1.194365	6.759547
#1	25.69643	4.897086	5.049008	5.038963	4.967208	4.995636	5.043593
#2	25.90510	4.823574	5.643725	5.620753	4.965042	5.115326	5.638352
#3	25.93416	4.820528	5.038145	5.001786	4.936558	5.070124	5.009739

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV04 Acquired: 1/20/2023 16:15:02 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV19988 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.177233**	**4.933276**	**5.126003**
Stddev	.369872	.020340	.048914
%RSD	7.144193	.4123076	.9542393
#1	4.969419	4.952887	5.072804
#2	5.604273	4.934661	5.169035
#3	4.958006	4.912278	5.136169

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4053.762**	**67120.63**	**5757.067**	**3669.035**	**4002.653**
Stddev	224.474	193.72	55.070	5.049	228.684
%RSD	5.537428	.2886077	.9565598	.1375996	5.713322
#1	4157.663	67133.31	5696.826	3674.850	4105.719
#2	3796.161	66920.88	5769.556	3666.476	3740.574
#3	4207.463	67307.69	5804.820	3665.778	4161.666

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB04 Acquired: 1/20/2023 16:18:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB19988 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003028**	**-.000122**	**.0002021**	**-.001896**	**-.000352**	**.0152838**	**-.005248**
Stddev	.003275	.000331	.0009835	.002852	.000936	.0060985	.001030
%RSD	108.1810	270.7357	486.5330	150.4254	266.1200	39.90174	19.62359
#1	-.006693	-.000503	.0011557	-.005184	.000048	.0198643	-.006436
#2	-.002002	.000102	.0002596	-.000083	-.001421	.0176257	-.004601
#3	-.000388	.000034	-.000809	-.000422	.000318	.0083615	-.004708

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000347**	**-.000003**	**.0048175**	**-.000936**	**-.000028**	**-.000114**	**.0041105**
Stddev	.0000408	.000053	.0062372	.000441	.000381	.000648	.0088728
%RSD	117.4812	2005.580	129.4711	47.07038	1339.476	567.8133	215.8566
#1	.0000260	-.000055	-.000449	-.001174	.000350	-.000769	.0058309
#2	-.000001	-.000004	.003196	-.000428	-.000023	.000528	.0119971
#3	.000079	.000051	.011705	-.001207	-.000411	-.000101	-.005496

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004087**	**-.033299**	**.0000971**	**.0008988**	**.0270722**	**-.005051**	**-.000021**
Stddev	.0003001	.015774	.0001922	.0002843	.0243627	.001111	.000148
%RSD	73.43002	47.37070	197.8287	31.63308	89.99161	21.98722	702.0889
#1	.0007304	-.043448	.0001609	.0005933	-.000405	-.005574	-.000177
#2	.0003595	-.015126	.0002493	.0009474	.035584	-.005804	-.000002
#3	.0001362	-.041322	-.000119	.0011557	.046037	-.003776	.000116

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0422074**	**.0050971**	**.0071620**	**-.000127**	**.0008008**	**.0082259**	**-.005519**
Stddev	.0618049	.0009156	.0021357	.000249	.0015092	.0121123	.001885
%RSD	146.4312	17.96312	29.81985	195.9711	188.4721	147.2457	34.15357
#1	.0067411	.0060495	.0094915	.000158	-.000887	.0190594	-.006457
#2	.0063081	.0050183	.0066982	-.000239	.002021	.0104696	-.006752
#3	.1135731	.0042234	.0052964	-.000301	.001268	-.004851	-.003349

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB04 Acquired: 1/20/2023 16:18:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB19988 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.004005**	**-.000210**	**-.000007**
Stddev	.004991	.001269	.000075
%RSD	124.6060	605.5170	1132.776
#1	-.009731	-.001313	.000078
#2	-.001708	-.000494	-.000066
#3	-.000577	.001178	-.000032

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4219.980**	**68672.80**	**5836.812**	**3766.090**	**4364.568**
Stddev	28.607	165.17	26.576	19.071	31.311
%RSD	.6778977	.2405170	.4553112	.5063794	.7173964
#1	4251.526	68486.81	5810.608	3746.054	4400.626
#2	4195.721	68729.22	5863.744	3784.021	4344.238
#3	4212.693	68802.37	5836.083	3768.196	4348.841

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150319BL Acquired: 1/20/2023 16:22:52 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002278	-.001596	.0002461	-.004249	-.000787	.0032283	-.004689
Stddev	.0022169	.000804	.0012216	.002346	.000318	.0103588	.001835
%RSD	973.2650	50.35386	496.4830	55.19889	40.46736	320.8758	39.13424
#1	.0026144	-.002505	-.000178	-.003772	-.001084	.0136098	-.003104
#2	-.000164	-.001305	-.000707	-.006797	-.000826	.0031828	-.004264
#3	-.001767	-.000978	.001623	-.002179	-.000451	-.007108	-.006699

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000031	.0000215	.0087359	-.000709	-.000181	-.000030	.0060963
Stddev	.000035	.0000792	.0099652	.000546	.000132	.000002	.0072291
%RSD	111.5479	368.4411	114.0722	77.07824	73.00690	8.252239	118.5828
#1	-.000067	.0001122	.0186752	-.000083	-.000333	-.000030	-.001799
#2	-.000030	-.000014	-.001255	-.001092	-.000112	-.000032	.007696
#3	.000003	-.000034	.008788	-.000951	-.000097	-.000027	.012392

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004683	-.023364	.0002527	.0012352	.0334674	-.003866	.0000544
Stddev	.0001724	.026042	.0004134	.0002482	.0028015	.000939	.0002223
%RSD	36.81484	111.4624	163.6122	20.09812	8.370745	24.28603	408.5064
#1	.0003142	.000804	.0003870	.0014731	.0366954	-.003170	.0002323
#2	.0004362	-.050943	.0005823	.0012546	.0320358	-.004934	-.000195
#3	.0006545	-.019952	-.000211	.0009778	.0316710	-.003494	.000126

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0501501	.0000049	.0011142	-.000410	-.000144	.0118008	-.002970
Stddev	.0403356	.0009368	.0003248	.000341	.001416	.0137521	.000403
%RSD	80.42978	19195.63	29.14887	83.27213	984.1385	116.5350	13.56569
#1	.0036363	.0010827	.0010636	-.000487	-.000010	-.000547	-.003022
#2	.0754840	-.000455	.0014613	-.000037	-.001622	.009327	-.002544
#3	.0713300	-.000613	.0008177	-.000706	.001200	.026622	-.003344

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150319BL Acquired: 1/20/2023 16:22:52 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.004374	.0001726	-.000006
Stddev	.002767	.0017047	.000063
%RSD	63.26528	987.7391	1069.650
#1	-.001445	-.001008	-.000065
#2	-.004731	-.000601	-.000013
#3	-.006944	.002127	.000060

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4244.347	68293.80	5763.549	3744.240	4453.486
Stddev	3.345	112.58	87.881	15.801	3.417
%RSD	.0788154	.1648520	1.524767	.4220090	.0767172
#1	4242.888	68231.32	5692.747	3739.631	4455.456
#2	4248.174	68226.31	5735.996	3731.255	4449.541
#3	4241.979	68423.76	5861.905	3761.832	4455.461

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150319BS Acquired: 1/20/2023 16:26:53 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7599377**	**1.926901**	**.9247119**	**1.905456**	**.7407380**	**1.882926**
Stddev	.0027870	.002597	.0023643	.006109	.0007701	.047969
%RSD	.3667385	.1347894	.2556766	.3205834	.1039579	2.547604
#1	.7631469	1.929485	.9219890	1.910829	.7411564	1.924321
#2	.7585410	1.924290	.9259031	1.898812	.7412083	1.894101
#3	.7581253	1.926928	.9262437	1.906727	.7398493	1.830355

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1858539**	**.1838147**	**.1852926**	**.9256205**	**.3766124**	**.1800756**
Stddev	.0066884	.0038457	.0003119	.0276046	.0004949	.0004683
%RSD	3.598760	2.092170	.1683103	2.982280	.1313955	.2600833
#1	.1931113	.1878225	.1849364	.9492317	.3760411	.1797909
#2	.1845124	.1834667	.1854254	.9323592	.3768850	.1798198
#3	.1799378	.1801548	.1855162	.8952704	.3769109	.1806161

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2866055**	**2.825972**	**.1847633**	**1.850417**	**.4604673**	**.0690595**
Stddev	.0006514	.010930	.0021242	.066060	.0003630	.0006010
%RSD	.2272670	.3867753	1.149672	3.570006	.0788341	.8702545
#1	.2865684	2.837808	.1861451	1.926096	.4603417	.0693120
#2	.2859735	2.816259	.1858275	1.804301	.4601837	.0694931
#3	.2872746	2.823849	.1823174	1.820855	.4608764	.0683735

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.778783**	**.2799883**	**.1952773**	**9.254998**	**.2742595**	**.3758035**
Stddev	.030015	.0087582	.0007536	.042096	.0071503	.0006316
%RSD	1.080156	3.128058	.3859110	.4548453	2.607137	.1680539
#1	2.745054	.2882035	.1948423	9.286231	.2810875	.3753874
#2	2.802550	.2809885	.1948422	9.271636	.2748658	.3765302
#3	2.788746	.2707729	.1961475	9.207125	.2668254	.3754929

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150319BS Acquired: 1/20/2023 16:26:53 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6394541	.1854820	.8584504	5.352822	F -.005116	.1886064
Stddev	.0010975	.0053958	.0031688	.004752	.003067	.0069680
%RSD	.1716271	2.909073	.3691277	.0887665	59.95280	3.694480
#1	.6388298	.1912450	.8619056	5.355973	-.006542	.1952712
#2	.6388111	.1846514	.8577655	5.355137	-.001595	.1891776
#3	.6407213	.1805497	.8556801	5.347357	-.007211	.1813703

Elem	Sr4077
Units	ppm
Avg	.1956266
Stddev	.0046129
%RSD	2.358010
#1	.1996184
#2	.1966848
#3	.1905765

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4232.742	68800.47	5659.462	3767.893	4389.547
Stddev	4.091	211.72	139.549	4.354	3.504
%RSD	.0966538	.3077265	2.465770	.1155444	.0798228
#1	4228.930	68556.37	5519.468	3764.650	4385.649
#2	4237.065	68910.83	5660.358	3772.841	4392.434
#3	4232.232	68934.20	5798.562	3766.187	4390.559

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150329TB Acquired: 1/20/2023 16:30:40 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002919	.0000710	-.001515	.0025240	-.002826	.0093654
Stddev	.000813	.0009187	.000872	.0019575	.001593	.0058988
%RSD	27.83532	1294.773	57.52378	77.55594	56.37151	62.98490
#1	-.003289	.0010310	-.001942	.0004916	-.003954	.0055862
#2	-.003482	-.000800	-.002092	.0026835	-.001004	.0063475
#3	-.001988	-.000018	-.000513	.0043968	-.003521	.0161626

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005762	-.000032	-.000012	.0119988	.0084008	.0000867
Stddev	.000180	.000015	.000058	.0048582	.0002601	.0000953
%RSD	3.125156	48.84910	493.6931	40.48905	3.095876	109.8221
#1	-.005735	-.000021	.000050	.0082353	.0084242	.0001615
#2	-.005597	-.000049	-.000066	.0174832	.0086483	.0001193
#3	-.005954	-.000024	-.000020	.0102779	.0081297	-.000021

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005353	.0322855	.0004265	.0029983	.0015955	.0005271
Stddev	.0001567	.0035743	.0006656	.0105157	.0001415	.0004829
%RSD	29.27031	11.07082	156.0667	350.7263	8.868352	91.62327
#1	.0004665	.0295869	.0008683	.0026075	.0017255	.0008953
#2	.0004247	.0309305	.0007501	-.007317	.0016162	.0007056
#3	.0007146	.0363392	-.000339	.013704	.0014448	-.000020

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 393.8377	-.003551	.0014349	.0725395	.0240943	.0003883
Stddev	3.5651	.001935	.0000681	.0661175	.0003340	.0004408
%RSD	.9052252	54.49358	4.745743	91.14688	1.386212	113.5192
#1	390.1105	-.003419	.0014160	.1353327	.0244600	.0002667
#2	397.2149	-.001685	.0015105	.0787500	.0238055	.0008772
#3	394.1877	-.005548	.0013783	.0035359	.0240174	.0000211

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150329TB Acquired: 1/20/2023 16:30:40 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000793	.0005824	.0372199	-.004621	.0139272	-.002567
Stddev	.000936	.0015012	.0053263	.001175	.0049022	.003300
%RSD	118.1082	257.7428	14.31028	25.42656	35.19856	128.5483
#1	.000204	.0006509	.0393234	-.004250	.0106566	-.006162
#2	-.000929	.0020482	.0311631	-.005938	.0195636	.000323
#3	-.001654	-.000952	.0411731	-.003677	.0115614	-.001862

Elem	Sr4077
Units	ppm
Avg	.0000187
Stddev	.0000312
%RSD	166.4291
#1	.0000384
#2	-.000017
#3	.000035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4191.434	67039.94	5935.460	3710.912	4046.672
Stddev	26.103	124.15	25.508	6.609	26.294
%RSD	.6227766	.1851847	.4297595	.1780975	.6497759
#1	4161.805	66899.42	5906.448	3704.470	4018.095
#2	4211.042	67085.61	5954.373	3710.588	4069.844
#3	4201.456	67134.77	5945.557	3717.677	4052.077

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150307TB Acquired: 1/20/2023 16:34:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001019**	**.0009920**	**-.001489**	**-.004160**	**-.002270**	**.0078599**
Stddev	.000504	.0008634	.001759	.001492	.000812	.0052948
%RSD	49.48820	87.02850	118.1690	35.85989	35.78971	67.36415
#1	-.000538	.0019717	-.001666	-.004260	-.002506	.0052889
#2	-.000977	.0003423	-.003153	-.005599	-.001365	.0043416
#3	-.001544	.0006621	.000352	-.002621	-.002938	.0139493

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005875**	**-.000006**	**.0000430**	**.0051331**	**.0005605**	**.0000182**
Stddev	.001420	.000000	.0000744	.0048856	.0002131	.0001737
%RSD	24.17766	7.853563	173.1407	95.17714	38.02801	953.5548
#1	-.005625	-.000006	.0001276	.0037457	.0005725	.0002187
#2	-.004595	-.000006	-.000012	.0105624	.0003416	-.000079
#3	-.007403	-.000005	.000013	.0010914	.0007673	-.000085

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001613**	**.0069568**	**.0008958**	**-.024477**	**.0008419**	**.0008374**
Stddev	.0002675	.0092873	.0004606	.018076	.0003335	.0003812
%RSD	165.8253	133.4996	51.42075	73.84667	39.61262	45.51840
#1	.0001140	.0061011	.0004530	-.024103	.0004577	.0011365
#2	-.000079	.0166423	.0013724	-.006592	.0010566	.0009675
#3	.000449	-.001873	.0008620	-.042737	.0010115	.0004082

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **343.3644**	**-.003616**	**.0017833**	**.0129460**	**-.001896**	**.0001540**
Stddev	3.8782	.001246	.0001958	.0472589	.000514	.0001352
%RSD	1.129466	34.46973	10.98207	365.0472	27.12739	87.79192
#1	338.9978	-.002299	.0016641	.0675158	-.001324	.0000143
#2	344.6874	-.003772	.0016765	-.014283	-.002044	.0002842
#3	346.4079	-.004776	.0020093	-.014395	-.002321	.0001635

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150307TB Acquired: 1/20/2023 16:34:49 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000835	.0005358	.0097353	.0003238	.0110898	.0003866
Stddev	.001067	.0020010	.0132964	.0005776	.0007414	.0020175
%RSD	127.7423	373.4270	136.5800	178.3941	6.684995	521.8736
#1	-.001217	.0014111	.0247056	-.000169	.0117015	-.000692
#2	.000370	.0019500	-.000701	.000959	.0102653	-.000863
#3	-.001659	-.001754	.005201	.000181	.0113026	.002714

Elem	Sr4077
Units	ppm
Avg	-.000022
Stddev	.000114
%RSD	519.4796
#1	.000030
#2	.000057
#3	-.000152

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4248.980	68089.23	5913.608	3808.832	4106.254
Stddev	28.718	311.24	58.657	24.089	23.039
%RSD	.6758695	.4571042	.9918989	.6324508	.5610778
#1	4224.609	68107.81	5856.854	3800.897	4091.473
#2	4241.692	68390.76	5909.972	3835.888	4094.489
#3	4280.639	67769.12	5973.999	3789.711	4132.801

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02 Acquired: 1/20/2023 16:38:57 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002455**	**-.001213**	**.0001209**	**-.002501**	**-.000321**	**.2473230**	**.1141421**
Stddev	.002050	.000703	.0001346	.002597	.000439	.0130155	.0028493
%RSD	83.52152	57.95950	111.3323	103.8271	136.5238	5.262558	2.496278
#1	-.000299	-.001458	.0001663	-.000383	-.000320	.2580113	.1137062
#2	-.004379	-.001760	.0002270	-.005398	-.000761	.2328288	.1171843
#3	-.002685	-.000420	-.000031	-.001722	.000117	.2511289	.1115359

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003127**	**-.000059**	**7.056176**	**.1349563**	**.0028814**	**.0059381**	**5.320522**
Stddev	.0000134	.000078	.015810	.0003624	.0002705	.0001266	.039496
%RSD	4.286630	130.8317	.2240658	.2685125	9.388551	2.131730	.7423317
#1	.0003195	-.000041	7.074060	.1350666	.0025794	.0058156	5.278872
#2	.0002973	-.000145	7.050414	.1345516	.0029634	.0060684	5.325257
#3	.0003214	.000008	7.044055	.1352507	.0031015	.0059303	5.357436

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1230151**	**1.709276**	**.0115989**	**.0007755**	**353.3709**	**-.001931**	**.0460932**
Stddev	.0007608	.045143	.0002278	.0003970	5.0502	.001261	.0008485
%RSD	.6184785	2.641089	1.963553	51.19439	1.429150	65.27301	1.840879
#1	.1238840	1.657790	.0114072	.0007516	347.8200	-.002310	.0454729
#2	.1224683	1.727954	.0118507	.0003910	354.5987	-.000525	.0457465
#3	.1226930	1.742082	.0115389	.0011839	357.6940	-.002959	.0470601

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5576344**	**.0088020**	**.0034104**	**-.000819**	**.0083605**	**.6618030**	**.0061690**
Stddev	.0365995	.0012704	.0002077	.000459	.0009543	.0091480	.0019113
%RSD	6.563352	14.43357	6.090993	56.10759	11.41455	1.382284	30.98187
#1	.5169014	.0096622	.0035920	-.000301	.0094623	.6540222	.0068607
#2	.5682469	.0094009	.0034552	-.000978	.0077961	.6718805	.0040082
#3	.5877549	.0073428	.0031839	-.001178	.0078231	.6595063	.0076382

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02 Acquired: 1/20/2023 16:38:57 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6684681	.0001402	.0549803
Stddev	.0058799	.0022473	.0002013
%RSD	.8796124	1603.217	.3660694
#1	.6679152	.0027336	.0549058
#2	.6628842	-.001081	.0548270
#3	.6746050	-.001232	.0552083

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4290.064	68362.78	6106.420	3811.793	4140.039
Stddev	17.533	218.29	72.237	12.699	11.098
%RSD	.4086809	.3193132	1.182975	.3331496	.2680741
#1	4291.450	68310.41	6023.047	3816.878	4143.976
#2	4271.880	68602.49	6145.884	3821.161	4127.509
#3	4306.863	68175.43	6150.329	3797.339	4148.633

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02DUP Acquired: 1/20/2023 16:43:05 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002007**	**-.000180**	**.0004138**	**-.001030**	**-.000287**	**.2796469**	**.1152408**
Stddev	.001616	.000820	.0013606	.006808	.001246	.0066225	.0013443
%RSD	80.52253	455.4477	328.8053	660.8330	434.0652	2.368167	1.166484
#1	-.001507	.000032	-.000494	.004912	.000257	.2721493	.1140317
#2	-.000700	.000513	-.000243	.000456	.000594	.2820930	.1166883
#3	-.003814	-.001085	.001978	-.008459	-.001712	.2846984	.1150022

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003427**	**.0000197**	**7.107843**	**.1265143**	**.0030365**	**.0063640**	**5.197960**
Stddev	.0000767	.0000661	.032007	.0006418	.0002024	.0002825	.014357
%RSD	22.39567	336.2903	.4503027	.5073204	6.666905	4.439434	.2762021
#1	.0003953	-.000002	7.109017	.1272404	.0032017	.0066813	5.188909
#2	.0002546	.000094	7.075265	.1262796	.0028107	.0061397	5.190457
#3	.0003781	-.000033	7.139246	.1260228	.0030971	.0062711	5.214514

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1251877**	**1.734767**	**.0114018**	**.0010936**	**345.4603**	**-.002270**	**.0458063**
Stddev	.0001172	.026045	.0005613	.0004416	1.3697	.002521	.0006991
%RSD	.0936082	1.501333	4.923180	40.38019	.3964796	111.0234	1.526119
#1	.1252684	1.718048	.0114317	.0007973	345.6618	-.001304	.0466122
#2	.1252414	1.721476	.0119476	.0008823	346.7180	-.000376	.0454425
#3	.1250533	1.764775	.0108261	.0016011	344.0010	-.005131	.0453642

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5999412**	**.0081493**	**.0033618**	**-.000462**	**.0089439**	**.6408999**	**.0044024**
Stddev	.0319195	.0001688	.0002137	.000333	.0007713	.0195131	.0019622
%RSD	5.320437	2.071593	6.357460	72.03721	8.623594	3.044646	44.57046
#1	.6220440	.0083436	.0035596	-.000128	.0096751	.6382015	.0060223
#2	.5633466	.0080664	.0033906	-.000794	.0090186	.6616217	.0049644
#3	.6144330	.0080380	.0031351	-.000464	.0081380	.6228763	.0022206

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02DUP Acquired: 1/20/2023 16:43:05 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6687477	-.000321	.0553361
Stddev	.0077335	.001515	.0002214
%RSD	1.156408	472.0385	.4001531
#1	.6773416	-.000111	.0553221
#2	.6665520	.001079	.0551220
#3	.6623496	-.001930	.0555642

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4211.701	69213.30	6006.266	3851.641	4054.054
Stddev	15.314	283.82	23.533	16.600	17.901
%RSD	.3636120	.4100609	.3918079	.4309765	.4415563
#1	4196.634	69046.94	5980.320	3847.938	4039.136
#2	4211.219	69051.94	6026.231	3837.205	4049.121
#3	4227.251	69541.01	6012.248	3869.779	4073.904

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02LX5 Acquired: 1/20/2023 16:55:46 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000828**	**.0004845**	**.0000089**	**.0003285**	**-.000549**	**.0489233**	**.0211183**
Stddev	.001742	.0016971	.0007250	.0017197	.001031	.0056167	.0008010
%RSD	210.3178	350.2658	8125.233	523.4516	187.9696	11.48064	3.793017
#1	.000650	.0017615	-.000757	.0019474	.000035	.0468733	.0217858
#2	-.000387	-.001441	.000099	-.001477	.000058	.0552770	.0202300
#3	-.002748	.001133	.000684	.000515	-.001739	.0446195	.0213392

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001026**	**.0000772**	**1.412916**	**.0253867**	**.0005292**	**.0009446**	**1.000601**
Stddev	.0000509	.0000822	.024011	.0001394	.0001020	.0003848	.015784
%RSD	49.63692	106.5403	1.699398	.5489835	19.27773	40.73219	1.577478
#1	.0001306	.0001693	1.385564	.0255465	.0004474	.0007928	1.014224
#2	.0001333	.0000114	1.422668	.0252907	.0006435	.0006589	.983304
#3	.0000438	.0000508	1.430517	.0253228	.0004968	.0013821	1.004277

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0255065**	**.3381961**	**.0025757**	**.0007872**	**67.74089**	**-.001227**	**.0094320**
Stddev	.0001263	.0131116	.0003103	.0005366	.23438	.001167	.0001682
%RSD	.4950039	3.876907	12.04716	68.16908	.3459990	95.12650	1.782876
#1	.0254465	.3300186	.0023667	.0002063	67.49117	-.002462	.0093515
#2	.0256516	.3312503	.0024282	.0012644	67.95611	-.001073	.0093192
#3	.0254214	.3533192	.0029323	.0008908	67.77540	-.000144	.0096253

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0615038**	**-.002227**	**.0007197**	**-.001197**	**.0035973**	**.1226884**	**-.001471**
Stddev	.0191699	.001130	.0001583	.000405	.0003094	.0024155	.001539
%RSD	31.16863	50.75551	21.99184	33.87340	8.600643	1.968817	104.6394
#1	.0497232	-.001931	.0005733	-.001024	.0038385	.1232442	.000282
#2	.0511645	-.003476	.0008876	-.000907	.0032485	.1200434	-.002095
#3	.0836236	-.001274	.0006983	-.001660	.0037050	.1247775	-.002600

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02LX5 Acquired: 1/20/2023 16:55:46 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1210997	.0013154	.0109701
Stddev	.0024441	.0024764	.0000795
%RSD	2.018229	188.2584	.7242084
#1	.1195242	.0025603	.0109075
#2	.1198596	.0029223	.0110595
#3	.1239152	-.001536	.0109433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4330.030	68895.95	5781.546	3811.002	4354.074
Stddev	16.220	467.69	22.722	19.491	12.902
%RSD	.3745915	.6788390	.3930172	.5114494	.2963312
#1	4330.638	68422.45	5758.573	3788.736	4352.168
#2	4345.938	68907.79	5782.057	3819.289	4367.824
#3	4313.515	69357.61	5804.009	3824.980	4342.231

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02MS Acquired: 1/20/2023 16:59:48 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7910626	1.929230	.9731969	1.916212	.7453281	2.182981	.3064778
Stddev	.0022596	.003699	.0018702	.010136	.0021467	.011061	.0016875
%RSD	.2856414	.1917163	.1921685	.5289362	.2880280	.5066831	.5505940
#1	.7932591	1.926049	.9740507	1.910797	.7435072	2.176291	.3054734
#2	.7911839	1.933289	.9744877	1.927905	.7447819	2.195748	.3084259
#3	.7887448	1.928352	.9710522	1.909934	.7476952	2.176904	.3055339

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1749177	.1988648	8.068572	.3838000	.1942908	.2857531	7.433418
Stddev	.0027118	.0003116	.015930	.0002124	.0005506	.0011810	.110656
%RSD	1.550334	.1567029	.1974302	.0553346	.2833821	.4132844	1.488631
#1	.1778047	.1990345	8.051681	.3835729	.1946492	.2865509	7.346073
#2	.1745241	.1990547	8.070707	.3839936	.1945664	.2863120	7.396326
#3	.1724241	.1985051	8.083326	.3838337	.1936569	.2843964	7.557855

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3046874	3.555683	.4896040	.0691258	342.1810	.2851402	.2441394
Stddev	.0022758	.031032	.0004460	.0000768	3.4533	.0045102	.0014232
%RSD	.7469428	.8727477	.0910967	.1111299	1.009217	1.581733	.5829424
#1	.3056323	3.523950	.4900013	.0690639	338.3721	.2799685	.2430167
#2	.3063385	3.557134	.4896891	.0691016	343.0633	.2871957	.2436614
#3	.3020913	3.585964	.4891216	.0692118	345.1076	.2882565	.2457400

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.51220	.2682966	.3827835	.6910449	.2002546	1.819448	6.104082
Stddev	.14497	.0038526	.0008842	.0022021	.0022785	.011619	.023602
%RSD	1.379024	1.435938	.2309881	.3186662	1.137785	.6386107	.3866642
#1	10.35147	.2720804	.3832726	.6911304	.2008660	1.807448	6.097861
#2	10.55208	.2684307	.3833152	.6932031	.2021650	1.820250	6.130172
#3	10.63305	.2643788	.3817629	.6888013	.1977328	1.830645	6.084214

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02MS Acquired: 1/20/2023 16:59:48 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3546005	.1876170	.2523872
Stddev	.0025097	.0014294	.0010503
%RSD	.7077480	.7618510	.4161407
#1	.3562907	.1876928	.2511766
#2	.3557940	.1861513	.2529299
#3	.3517168	.1890070	.2530551

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4208.392	68619.04	5961.943	3788.637	4017.001
Stddev	27.025	156.44	76.721	6.580	20.152
%RSD	.6421764	.2279792	1.286847	.1736689	.5016603
#1	4191.516	68773.65	5887.817	3795.137	4003.802
#2	4194.099	68622.64	5956.993	3788.793	4007.004
#3	4239.563	68460.83	6041.019	3781.980	4040.197

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02MSD Acquired: 1/20/2023 17:03:42 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7755212	1.884905	.9492389	1.865610	.7293862	2.178498	.3038313
Stddev	.0041193	.005958	.0009372	.007899	.0019913	.009827	.0012454
%RSD	.5311637	.3161089	.0987333	.4233895	.2730176	.4511096	.4098826
#1	.7797732	1.891121	.9502195	1.864703	.7309027	2.167435	.3051907
#2	.7715488	1.884352	.9483521	1.873923	.7301249	2.186216	.3035577
#3	.7752417	1.879243	.9491450	1.858204	.7271311	2.181843	.3027455

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1771453	.1939233	8.035080	.3806177	.1898278	.2799166	7.407052
Stddev	.0013458	.0007742	.023341	.0001392	.0006868	.0013382	.088989
%RSD	.7597015	.3992505	.2904915	.0365625	.3618158	.4780612	1.201410
#1	.1786045	.1947291	8.012724	.3806168	.1906171	.2807873	7.315449
#2	.1768785	.1938559	8.059295	.3804791	.1895009	.2805867	7.493173
#3	.1759530	.1931850	8.033221	.3807574	.1893656	.2783757	7.412535

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3019181	3.555449	.4772190	.0692475	343.9790	.2806314	.2435819
Stddev	.0015082	.025448	.0019861	.0003235	3.0741	.0069034	.0007048
%RSD	.4995340	.7157463	.4161737	.4672249	.8936827	2.459963	.2893511
#1	.3002470	3.564637	.4794043	.0691348	340.5159	.2736073	.2430776
#2	.3031781	3.575027	.4767287	.0696123	345.0357	.2874075	.2443872
#3	.3023293	3.526683	.4755241	.0689953	346.3853	.2808795	.2432807

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.51261	.2708740	.3761609	.6737404	.1977709	1.792816	5.909815
Stddev	.07442	.0027916	.0015283	.0026288	.0037500	.024218	.018503
%RSD	.7079442	1.030584	.4062841	.3901738	1.896149	1.350820	.3130965
#1	10.42752	.2731816	.3771058	.6747800	.1987660	1.784869	5.930023
#2	10.56556	.2716695	.3769791	.6756904	.2009230	1.820009	5.905721
#3	10.54475	.2677711	.3743977	.6707509	.1936236	1.773570	5.893702

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02MSD Acquired: 1/20/2023 17:03:42 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3447573	.1863594	.2498778
Stddev	.0037714	.0031371	.0005717
%RSD	1.093941	1.683379	.2287966
#1	.3467642	.1858797	.2492210
#2	.3404067	.1897088	.2502633
#3	.3471009	.1834898	.2501492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4299.873	68025.45	5925.245	3787.889	4121.505
Stddev	14.337	102.79	46.853	8.635	16.696
%RSD	.3334375	.1511081	.7907366	.2279538	.4050842
#1	4283.318	68079.93	5874.665	3795.811	4102.545
#2	4308.032	67906.89	5933.906	3778.685	4134.008
#3	4308.268	68089.54	5967.163	3789.170	4127.961

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CRI01 Acquired: 1/20/2023 17:07:37 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0201698**	**.0398228**	**.0112881**	**.0172140**	**.0504329**	**.1099163**	**.0943870**
Stddev	.0023343	.0025444	.0009533	.0025611	.0012534	.0055240	.0024296
%RSD	11.57314	6.389403	8.445461	14.87781	2.485370	5.025621	2.574075
#1	.0191024	.0378674	.0110984	.0198117	.0490048	.1037098	.0971491
#2	.0228470	.0389013	.0104439	.0171389	.0513507	.1142938	.0934319
#3	.0185601	.0426996	.0123220	.0146913	.0509432	.1117452	.0925802

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061692**	**.0064034**	**1.913075**	**.0096747**	**.0290680**	**.0223424**	**.1070248**
Stddev	.0000781	.0001414	.012230	.0002274	.0007755	.0004270	.0048910
%RSD	1.265476	2.207723	.6393102	2.350472	2.667903	1.911338	4.569933
#1	.0062491	.0063314	1.918960	.0094379	.0285039	.0221270	.1018491
#2	.0060932	.0063125	1.899015	.0098913	.0287478	.0220659	.1076555
#3	.0061652	.0065663	1.921251	.0096951	.0299523	.0228342	.1115699

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0199436**	**2.063746**	**.0392395**	**.0113089**	**2.144867**	**.0368424**	**.0420525**
Stddev	.0009590	.030023	.0011073	.0002121	.020784	.0028089	.0002100
%RSD	4.808429	1.454783	2.822009	1.875548	.9690310	7.624049	.4993053
#1	.0203060	2.093994	.0389368	.0114370	2.121778	.0372273	.0420062
#2	.0206686	2.063291	.0383150	.0110641	2.150739	.0338609	.0422817
#3	.0188563	2.033953	.0404667	.0114257	2.162083	.0394390	.0418695

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.059819**	**.0955637**	**.2148617**	**.0380846**	**.0392953**	**.3988582**	**.0168647**
Stddev	.019126	.0008782	.0054193	.0003663	.0013818	.0162864	.0024664
%RSD	.9285272	.9190143	2.522235	.9619279	3.516403	4.083266	14.62487
#1	2.060426	.0959950	.2116746	.0376799	.0407031	.4080508	.0180955
#2	2.040397	.0945532	.2117914	.0383935	.0392417	.3800538	.0140251
#3	2.078635	.0961428	.2211190	.0381804	.0379411	.4084700	.0184735

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CRI01 Acquired: 1/20/2023 17:07:37 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0169260	.0202878	.0207747
Stddev	.0018281	.0013188	.0000754
%RSD	10.80069	6.500388	.3630962
#1	.0188205	.0189398	.0207965
#2	.0167851	.0215753	.0206908
#3	.0151724	.0203482	.0208368

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4257.460	68882.42	5780.516	3806.173	4444.741
Stddev	87.878	242.22	31.866	12.135	89.557
%RSD	2.064103	.3516358	.5512677	.3188111	2.014894
#1	4304.162	68676.03	5744.787	3800.075	4490.639
#2	4312.128	68822.15	5790.763	3798.298	4502.045
#3	4156.091	69149.08	5805.998	3820.148	4341.540

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV05 Acquired: 1/20/2023 17:11:38 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.019973**	**5.042546**	**4.895909**	**4.933655**	**4.965808**	**9.973369**	**10.08479**
Stddev	.009898	.013075	.006511	.008316	.006393	.032013	.03607
%RSD	.1971638	.2592879	.1329785	.1685477	.1287435	.3209852	.3576492
#1	5.024987	5.028581	4.889826	4.939015	4.973087	9.936435	10.04540
#2	5.026361	5.044558	4.902775	4.937874	4.963235	9.993156	10.09276
#3	5.008572	5.054498	4.895125	4.924076	4.961103	9.990516	10.11621

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2358084**	**2.462773**	**24.55699**	**.9798520**	**2.430011**	**1.226615**	**5.130688**
Stddev	.0015207	.000616	.04827	.0036477	.002056	.002643	.051224
%RSD	.6448993	.0250309	.1965540	.3722699	.0845879	.2155002	.9983875
#1	.2375612	2.462125	24.50318	.9756442	2.428791	1.228402	5.075848
#2	.2348404	2.463352	24.57133	.9821179	2.432384	1.227863	5.138916
#3	.2350238	2.462842	24.59647	.9817940	2.428858	1.223578	5.177300

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.420015**	**24.30314**	**2.467287**	**1.220017**	**24.61954**	**2.484092**	**2.532844**
Stddev	.009608	.10529	.001360	.003009	.27521	.007603	.011559
%RSD	.3970402	.4332554	.0551104	.2466274	1.117868	.3060859	.4563781
#1	2.408930	24.18586	2.468532	1.216543	24.30612	2.475351	2.520045
#2	2.425139	24.33400	2.467493	1.221737	24.73074	2.489173	2.542523
#3	2.425975	24.38956	2.465836	1.221771	24.82175	2.487752	2.535964

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.05921**	**4.761780**	**4.967382**	**4.967967**	**4.866014**	**4.881100**	**5.017031**
Stddev	.33398	.019725	.003753	.005480	.025875	.081660	.004998
%RSD	1.332774	.4142416	.0755593	.1103032	.5317533	1.672989	.0996260
#1	24.68631	4.783524	4.970514	4.964075	4.839618	4.789235	5.015198
#2	25.16050	4.756781	4.968411	4.965592	4.867088	4.908617	5.022687
#3	25.33082	4.745035	4.963221	4.974233	4.891335	4.945447	5.013209

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV05 Acquired: 1/20/2023 17:11:38 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.906616**	**4.836680**	**5.040853**
Stddev	.005519	.025314	.018192
%RSD	.1124785	.5233791	.3608990
#1	4.906699	4.807948	5.019871
#2	4.912093	4.846388	5.050463
#3	4.901056	4.855702	5.052226

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4184.010**	**67844.20**	**5750.869**	**3730.219**	**4128.075**
Stddev	12.541	38.38	41.216	8.716	4.397
%RSD	.2997247	.0565662	.7166866	.2336551	.1065047
#1	4173.390	67887.22	5704.801	3731.219	4124.212
#2	4180.795	67813.49	5763.556	3721.046	4127.154
#3	4197.845	67831.90	5784.250	3738.392	4132.859

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB05 Acquired: 1/20/2023 17:15:25 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002054**	**.0012580**	**-.001825**	**-.000955**	**-.000379**	**.0130083**	**-.004761**
Stddev	.001855	.0023489	.000317	.004300	.002005	.0083104	.001377
%RSD	90.32807	186.7174	17.35695	450.0909	529.4672	63.88506	28.92057
#1	-.003680	.0029973	-.002179	.002201	.000760	.0225535	-.004483
#2	-.002450	-.001414	-.001727	.000786	-.002693	.0090895	-.006256
#3	-.000033	.002191	-.001569	-.005853	.000797	.0073819	-.003544

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000002**	**.0000595**	**.0070305**	**-.000223**	**-.000109**	**-.000161**	**-.004590**
Stddev	.000059	.0000306	.0073633	.000326	.000161	.000222	.004670
%RSD	3056.687	51.44390	104.7333	146.5444	148.1644	137.7000	101.7245
#1	-.000060	.0000268	.0013811	-.000430	-.000041	-.000417	-.009888
#2	-.000004	.0000874	.0153580	.000153	-.000292	-.000036	-.001070
#3	.000058	.0000645	.0043524	-.000391	.000008	-.000030	-.002814

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002582**	**-.009192**	**-.000067**	**.0010222**	**.0571513**	**-.002927**	**-.000043**
Stddev	.0007747	.012264	.000193	.0008081	.0143629	.001281	.000108
%RSD	299.9812	133.4195	288.6263	79.05296	25.13135	43.77584	253.1541
#1	-.000282	.004409	.000156	.0019138	.0428926	-.002731	-.000027
#2	.001146	-.019408	-.000169	.0003379	.0569450	-.004295	-.000158
#3	-.000089	-.012577	-.000189	.0008151	.0716162	-.001755	.000057

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0843051**	**.0050130**	**.0073920**	**-.000379**	**.0018247**	**.0247955**	**-.003812**
Stddev	.0179083	.0007322	.0018600	.000515	.0028462	.0102030	.002021
%RSD	21.24227	14.60590	25.16301	136.1032	155.9831	41.14875	53.02718
#1	.0742523	.0058530	.0094845	.000172	.0038512	.0294197	-.004458
#2	.1049812	.0046764	.0067648	-.000849	.0030522	.0318675	-.005432
#3	.0736818	.0045096	.0059266	-.000459	-.001429	.0130991	-.001547

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB05 Acquired: 1/20/2023 17:15:25 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003267	-.001650	.0000941
Stddev	.002185	.000685	.0001770
%RSD	66.89544	41.54658	188.1652
#1	-.002979	-.001192	.0002938
#2	-.005582	-.001319	.0000320
#3	-.001240	-.002438	-.000044

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4271.382	69900.64	5798.725	3818.901	4466.326
Stddev	34.006	89.07	14.999	4.374	34.857
%RSD	.7961461	.1274308	.2586567	.1145365	.7804493
#1	4232.992	69910.06	5800.639	3822.233	4427.448
#2	4283.433	69984.63	5812.675	3813.948	4476.743
#3	4297.722	69807.22	5782.861	3820.521	4494.787

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02A Acquired: 1/20/2023 17:27:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8030189**	**1.961673**	**.9859609**	**1.952619**	**.7506550**	**2.178996**	**.3208237**
Stddev	.0161853	.033655	.0200119	.031534	.0129928	.028099	.0035749
%RSD	2.015553	1.715626	2.029680	1.614945	1.730866	1.289523	1.114286
#1	.7996539	1.946129	.9774213	1.933397	.7466403	2.157526	.3198771
#2	.8206221	2.000290	1.008826	1.989012	.7651813	2.168664	.3178174
#3	.7887806	1.938599	.971636	1.935449	.7401432	2.210798	.3247767

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1765034**	**.2014620**	**8.207181**	**.5135539**	**.1969205**	**.2884163**	**8.585026**
Stddev	.0015821	.0041300	.007968	.0174033	.0042472	.0060634	.252174
%RSD	.8963384	2.049992	.0970840	3.388796	2.156816	2.102299	2.937375
#1	.1769709	.1997019	8.213931	.5226459	.1949510	.2861857	8.647166
#2	.1747403	.2061804	8.198392	.4934877	.2017949	.2952791	8.307591
#3	.1777990	.1985036	8.209220	.5245281	.1940155	.2837843	8.800322

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3194736**	**3.630439**	**.5057533**	**.0703891**	**354.1728**	**.2972097**	**.2454121**
Stddev	.0007250	.017806	.0101848	.0027706	7.3763	.0066376	.0094112
%RSD	.2269205	.4904724	2.013780	3.936116	2.082686	2.233292	3.834840
#1	.3187461	3.637503	.5012062	.0717048	355.5361	.2900565	.2497516
#2	.3201960	3.610184	.5174195	.0672058	346.2100	.3031698	.2346141
#3	.3194786	3.643629	.4986341	.0722568	360.7724	.2984029	.2518706

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.06476**	**.2748796**	**.3890606**	**.6966212**	**.1995838**	**1.624037**	**6.142226**
Stddev	.35050	.0024693	.0071973	.0141572	.0028354	.040297	.131813
%RSD	3.167686	.8983213	1.849928	2.032260	1.420668	2.481282	2.146008
#1	11.20948	.2764648	.3860077	.6925444	.1998545	1.616709	6.081651
#2	10.66507	.2720345	.3972812	.7123694	.1966227	1.587907	6.293437
#3	11.31972	.2761396	.3838929	.6849497	.2022741	1.667495	6.051590

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1180-02A Acquired: 1/20/2023 17:27:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6738400	.1953002	.2512233
Stddev	.0126180	.0044416	.0007002
%RSD	1.872548	2.274243	.2787261
#1	.6683602	.1902444	.2504222
#2	.6882715	.1985745	.2515293
#3	.6648884	.1970817	.2517185

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4219.410	68717.74	6045.049	3765.238	4034.442
Stddev	68.307	1962.53	18.973	106.948	72.908
%RSD	1.618870	2.855934	.3138570	2.840410	1.807144
#1	4232.532	67759.71	6044.277	3709.712	4048.183
#2	4145.494	70975.28	6064.396	3888.529	3955.641
#3	4280.204	67418.22	6026.474	3697.473	4099.502

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05 Acquired: 1/20/2023 17:32:51 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006749	.0004883	.0010834	-.000772	-.000952	.0978419	.0557590
Stddev	.0001996	.0010445	.0018197	.003391	.001599	.0037403	.0008865
%RSD	29.57141	213.9290	167.9614	439.5348	167.9076	3.822773	1.589886
#1	.0005693	.0016538	-.000253	-.000353	.000889	.1003195	.0555305
#2	.0005503	-.000363	.000347	-.004353	-.001986	.0935395	.0550092
#3	.0009051	.000174	.003156	.002391	-.001760	.0996667	.0567374

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002867	.0000592	1.463134	.0007679	.0029449	.0018665	2.635978
Stddev	.0000086	.0001028	.005371	.0004360	.0000786	.0001575	.035294
%RSD	3.005011	173.6320	.3670920	56.77232	2.669441	8.436973	1.338946
#1	.0002962	.0000312	1.458950	.0011348	.0028814	.0019270	2.595280
#2	.0002793	-.000027	1.469191	.0002860	.0030328	.0016877	2.658179
#3	.0002846	.000173	1.461262	.0008831	.0029205	.0019847	2.654475

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1065000	.3989115	.0015890	.0008338	170.8943	-.003301	.0176250
Stddev	.0004855	.0272500	.0000672	.0005280	1.4791	.001667	.0003359
%RSD	.4558642	6.831080	4.226352	63.32164	.8654826	50.49645	1.905888
#1	.1060108	.4035229	.0016460	.0005729	169.2467	-.003362	.0173560
#2	.1069817	.4235615	.0015150	.0014414	172.1075	-.004938	.0180015
#3	.1065073	.3696500	.0016060	.0004871	171.3287	-.001605	.0175174

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2191177	.0015202	.0002114	-.000945	.0023083	.2181127	.0025130
Stddev	.0480080	.0004259	.0001959	.000589	.0010917	.0133667	.0012387
%RSD	21.90967	28.01618	92.63801	62.27484	47.29661	6.128351	49.28945
#1	.1655908	.0010852	.0001260	-.001095	.0015325	.2188282	.0036134
#2	.2333947	.0019363	.0000728	-.000296	.0035567	.2044026	.0027541
#3	.2583678	.0015392	.0004355	-.001445	.0018357	.2311073	.0011715

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05 Acquired: 1/20/2023 17:32:51 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0701220	.0002374	.0087882
Stddev	.0020065	.0006880	.0000433
%RSD	2.861411	289.8527	.4924509
#1	.0699580	.0008740	.0088020
#2	.0682025	-.000493	.0088229
#3	.0722054	.000331	.0087397

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4301.918	70605.91	5974.012	3825.353	4231.469
Stddev	45.690	227.11	35.104	9.891	48.267
%RSD	1.062080	.3216532	.5876104	.2585717	1.140670
#1	4346.930	70611.65	5933.506	3823.779	4278.801
#2	4255.579	70375.99	5992.944	3816.344	4182.318
#3	4303.246	70830.09	5995.586	3835.938	4233.287

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05DUP Acquired: 1/20/2023 17:36:52 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000225**	**.0004809**	**.0009323**	**-.001512**	**-.002303**	**.1019612**	**.0568291**
Stddev	.002093	.0022377	.0006305	.002200	.001601	.0048445	.0012272
%RSD	931.8132	465.2900	67.62767	145.5064	69.55322	4.751352	2.159438
#1	-.002531	-.001205	.0015514	-.003248	-.000462	.0999367	.0562100
#2	.000306	.003020	.0002909	.000962	-.003377	.1074896	.0582425
#3	.001552	-.000372	.0009547	-.002250	-.003069	.0984574	.0560347

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002717**	**-.000039**	**1.478205**	**.0006823**	**.0028146**	**.0018368**	**2.651725**
Stddev	.0000129	.000057	.027514	.0001155	.0000567	.0002941	.023602
%RSD	4.729557	145.1549	1.861341	16.92585	2.014444	16.00878	.8900537
#1	.0002846	-.000060	1.446649	.0008086	.0028631	.0016406	2.624631
#2	.0002716	.000025	1.490792	.0006564	.0027523	.0021750	2.667821
#3	.0002588	-.000082	1.497176	.0005820	.0028283	.0016950	2.662722

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1079910**	**.3881983**	**.0015143**	**.0011077**	**169.0356**	**-.003594**	**.0176282**
Stddev	.0009761	.0139139	.0001246	.0001369	1.8799	.002533	.0003309
%RSD	.9039057	3.584212	8.228833	12.35658	1.112127	70.48594	1.876873
#1	.1070210	.3744592	.0013857	.0011220	166.8683	-.004324	.0177213
#2	.1079790	.4022806	.0016345	.0012369	170.2248	-.005683	.0179025
#3	.1089731	.3878552	.0015229	.0009642	170.0137	-.000776	.0172607

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2572953**	**.0012148**	**.0000379**	**-.001583**	**.0003396**	**.2102342**	**.0028796**
Stddev	.0633460	.0017217	.0002268	.000446	.0009233	.0034550	.0019318
%RSD	24.61997	141.7311	599.1328	28.17413	271.9005	1.643390	67.08301
#1	.2024021	.0010142	-.000203	-.001170	.0007877	.2102968	.0008753
#2	.2428759	-.000398	.000070	-.002056	-.000722	.2067483	.0047296
#3	.3266080	.003028	.000247	-.001524	.000953	.2136574	.0030340

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05DUP Acquired: 1/20/2023 17:36:52 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0733826	.0027222	.0087495
Stddev	.0040235	.0013883	.0001373
%RSD	5.482914	50.99913	1.569479
#1	.0703946	.0012833	.0087516
#2	.0779576	.0040536	.0086110
#3	.0717958	.0028296	.0088857

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4328.835	71435.75	5987.863	3863.704	4236.795
Stddev	29.028	261.62	35.731	19.805	27.154
%RSD	.6705674	.3662327	.5967260	.5125931	.6408986
#1	4359.979	71627.85	5954.424	3860.170	4266.754
#2	4323.992	71137.78	5983.653	3845.905	4229.824
#3	4302.533	71541.61	6025.513	3885.039	4213.806

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05LX5 Acquired: 1/20/2023 17:40:53 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001533**	**-.001781**	**-.000103**	**-.002607**	**.0000057**	**.0213352**	**.0046374**
Stddev	.000710	.001107	.000836	.004261	.0019923	.0106078	.0007889
%RSD	46.34399	62.13169	812.4821	163.4299	35172.87	49.71972	17.01242
#1	-.002000	-.002995	.000617	.001383	-.001774	.0315716	.0049073
#2	-.001884	-.001520	.000093	-.007094	-.000366	.0220428	.0052560
#3	-.000715	-.000829	-.001019	-.002110	.002158	.0103914	.0037490

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000443**	**.0000064**	**.2844440**	**-.000604**	**.0003574**	**.0005619**	**.5101501**
Stddev	.0000155	.0000112	.0153766	.000274	.0002035	.0004455	.0158044
%RSD	35.02769	173.8505	5.405845	45.31405	56.91689	79.29650	3.097982
#1	.0000609	-.000003	.2972118	-.000750	.0004917	.0000521	.4934234
#2	.0000302	.000019	.2673747	-.000288	.0001234	.0007564	.5121934
#3	.0000418	.000003	.2887455	-.000773	.0004573	.0008770	.5248334

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0213945**	**.0599405**	**.0003509**	**.0009452**	**32.52791**	**-.002395**	**.0035535**
Stddev	.0003160	.0145516	.0003418	.0005268	.33872	.001030	.0001026
%RSD	1.476773	24.27666	97.42135	55.73362	1.041312	43.01814	2.888416
#1	.0214163	.0590096	.0005222	.0007123	32.13681	-.001212	.0034453
#2	.0210682	.0458768	-.000043	.0015483	32.71955	-.002879	.0035657
#3	.0216990	.0749352	.000573	.0005750	32.72735	-.003093	.0036495

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0452713**	**-.002257**	**-.000082**	**-.001317**	**.0003715**	**.0569957**	**-.003805**
Stddev	.0675763	.001111	.000013	.000761	.0003371	.0184293	.001772
%RSD	149.2696	49.21361	15.94619	57.80366	90.73283	32.33450	46.57226
#1	-.032758	-.003333	-.000078	-.001735	.0000643	.0485022	-.001771
#2	.084606	-.002325	-.000097	-.000438	.0003181	.0443447	-.004629
#3	.083966	-.001114	-.000071	-.001777	.0007321	.0781402	-.005015

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05LX5 Acquired: 1/20/2023 17:40:53 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0113095	.0010240	.0016565
Stddev	.0038751	.0014131	.0000199
%RSD	34.26413	137.9936	1.201822
#1	.0068707	.0017079	.0016769
#2	.0130400	.0019651	.0016371
#3	.0140179	-.000601	.0016553

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4338.728	71587.16	6012.917	3869.785	4368.883
Stddev	3.980	95.66	27.041	9.990	8.150
%RSD	.0917249	.1336330	.4497183	.2581432	.1865402
#1	4343.309	71679.27	6007.528	3859.197	4378.044
#2	4336.742	71488.30	5988.975	3871.114	4366.167
#3	4336.131	71593.92	6042.246	3879.044	4362.439

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05MS Acquired: 1/20/2023 17:44:54 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8215786	2.008544	.9942193	2.005128	.7711396	2.036057	.2627864
Stddev	.0029958	.003435	.0032932	.002555	.0024480	.016503	.0004653
%RSD	.3646371	.1710171	.3312336	.1274159	.3174506	.8105504	.1770532
#1	.8187711	2.004683	.9914317	2.006904	.7709945	2.054619	.2633195
#2	.8212322	2.011261	.9933731	2.002200	.7736570	2.023043	.2625775
#3	.8247326	2.009687	.9978529	2.006280	.7687674	2.030508	.2624622

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1802069	.2028093	2.474462	.3811068	.1965757	.2909177	5.741243
Stddev	.0017092	.0001492	.001838	.0007525	.0009579	.0002065	.048193
%RSD	.9484844	.0735836	.0742863	.1974585	.4872702	.0709913	.8394092
#1	.1818322	.2026783	2.472763	.3805649	.1976461	.2909521	5.685597
#2	.1803640	.2029718	2.474211	.3819660	.1957995	.2906962	5.768674
#3	.1784246	.2027779	2.476413	.3807895	.1962814	.2911049	5.769458

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3050252	2.318682	.5007586	.0702185	173.0095	.2996451	.2190899
Stddev	.0009705	.017544	.0004509	.0002356	1.3441	.0036810	.0010119
%RSD	.3181631	.7566565	.0900405	.3355521	.7769196	1.228438	.4618576
#1	.3050610	2.334334	.5007607	.0701087	171.5200	.2981622	.2184701
#2	.3059773	2.321994	.5003067	.0704890	173.3764	.3038362	.2202576
#3	.3040373	2.299717	.5012085	.0700578	174.1321	.2969369	.2185419

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.39815	.2781247	.3927716	.7045406	.1986627	1.113190	6.061121
Stddev	.11202	.0034600	.0003498	.0020068	.0017811	.006554	.003687
%RSD	1.077322	1.244032	.0890661	.2848421	.8965636	.5887768	.0608230
#1	10.29064	.2813761	.3931686	.7064152	.2004653	1.116100	6.065329
#2	10.38960	.2785096	.3925087	.7024236	.1986191	1.105685	6.058464
#3	10.51420	.2744884	.3926374	.7047829	.1969038	1.117785	6.059568

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05MS Acquired: 1/20/2023 17:44:54 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0710431	.2006349	.2075990
Stddev	.0033938	.0009491	.0007517
%RSD	4.777106	.4730218	.3621003
#1	.0742223	.2016955	.2080640
#2	.0674692	.1998657	.2080013
#3	.0714378	.2003436	.2067317

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4237.445	70454.48	5932.080	3791.571	4108.556
Stddev	4.573	238.87	63.030	12.938	4.748
%RSD	.1079144	.3390379	1.062528	.3412315	.1155569
#1	4239.053	70580.82	5883.799	3788.718	4105.640
#2	4240.998	70178.97	5909.056	3780.297	4114.034
#3	4232.286	70603.63	6003.385	3805.697	4105.994

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05MSD Acquired: 1/20/2023 17:48:41 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8030981	1.964388	.9690271	1.951749	.7474858	1.975074	.2539442
Stddev	.0045940	.003073	.0042669	.002288	.0044733	.024422	.0019251
%RSD	.5720338	.1564544	.4403226	.1172306	.5984436	1.236527	.7580633
#1	.8079927	1.963028	.9668908	1.953811	.7467747	1.949121	.2523169
#2	.7988796	1.962230	.9662503	1.949287	.7434107	1.978496	.2560693
#3	.8024220	1.967907	.9739401	1.952147	.7522720	1.997605	.2534466

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1746582	.1975633	2.394636	.3716057	.1913485	.2834767	5.609876
Stddev	.0004853	.0002160	.008211	.0012430	.0005233	.0001515	.038068
%RSD	.2778828	.1093284	.3428752	.3344916	.2734598	.0534454	.6785949
#1	.1751641	.1973686	2.385325	.3728849	.1910972	.2836431	5.588980
#2	.1746140	.1975258	2.397744	.3715298	.1909984	.2833468	5.586832
#3	.1741964	.1977956	2.400839	.3704024	.1919500	.2834401	5.653816

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2953049	2.206129	.4877715	.0685564	168.7082	.2948483	.2126573
Stddev	.0014115	.053738	.0006087	.0006049	1.2626	.0015794	.0005003
%RSD	.4779696	2.435870	.1247854	.8823674	.7484027	.5356554	.2352371
#1	.2938520	2.165054	.4878260	.0681662	167.5522	.2956228	.2121361
#2	.2966709	2.186387	.4871374	.0692532	168.5168	.2930311	.2127021
#3	.2953917	2.266946	.4883511	.0682496	170.0556	.2958909	.2131336

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.16698	.2698885	.3822604	.6868270	.1920339	1.112809	5.889431
Stddev	.07035	.0007677	.0008650	.0006556	.0023095	.021015	.016108
%RSD	.6919764	.2844356	.2262858	.0954482	1.202672	1.888434	.2735143
#1	10.16849	.2703466	.3826890	.6873678	.1893677	1.090371	5.875349
#2	10.09588	.2703167	.3812648	.6860979	.1934196	1.116025	5.885948
#3	10.23656	.2690023	.3828274	.6870154	.1933143	1.132029	5.906996

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05MSD Acquired: 1/20/2023 17:48:41 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0685749	.1943500	.2017881
Stddev	.0031913	.0017764	.0007774
%RSD	4.653729	.9139957	.3852750
#1	.0702656	.1931949	.2009154
#2	.0648940	.1934597	.2020422
#3	.0705651	.1963955	.2024066

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4333.481	71690.94	6067.684	3861.677	4199.829
Stddev	8.311	127.60	27.128	.811	4.710
%RSD	.1917922	.1779825	.4470921	.0209916	.1121433
#1	4324.560	71591.76	6037.099	3862.218	4194.551
#2	4341.006	71834.89	6077.117	3860.745	4203.603
#3	4334.876	71646.18	6088.837	3862.068	4201.333

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05A Acquired: 1/20/2023 17:52:27 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8323886**	**2.026151**	**.9997729**	**2.017043**	**.7744103**	**1.991979**	**.2596080**
Stddev	.0234921	.055197	.0277415	.050556	.0217451	.015505	.0017628
%RSD	2.822250	2.724250	2.774784	2.506467	2.807960	.7783814	.6790387
#1	.8171386	1.987486	.9821902	1.981559	.7588117	1.979203	.2616112
#2	.8205852	2.001603	.9853753	1.994639	.7651695	1.987504	.2589191
#3	.8594418	2.089364	1.031753	2.074930	.7992497	2.009229	.2582936

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1742374**	**.2038637**	**2.417670**	**.3749692**	**.1963998**	**.2919825**	**5.726086**
Stddev	.0009443	.0057904	.004853	.0006401	.0056844	.0093390	.054573
%RSD	.5419528	2.840343	.2007199	.1706965	2.894325	3.198470	.9530523
#1	.1753205	.2001725	2.422933	.3743166	.1928649	.2854916	5.664090
#2	.1738051	.2008811	2.416706	.3749952	.1933777	.2877702	5.766860
#3	.1735867	.2105374	2.413372	.3755959	.2029570	.3026857	5.747307

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3007012**	**2.245188**	**.5032603**	**.0689292**	**169.3521**	**.2949092**	**.2135401**
Stddev	.0012651	.024063	.0144089	.0004788	1.4971	.0042693	.0004265
%RSD	.4207041	1.071759	2.863119	.6946557	.8840378	1.447654	.1997267
#1	.2992416	2.259268	.4935724	.0690195	167.6288	.2900074	.2139917
#2	.3013822	2.217404	.4963899	.0684117	170.0963	.2969059	.2131442
#3	.3014799	2.258893	.5198186	.0693566	170.3315	.2978142	.2134843

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.25302**	**.2692884**	**.3933417**	**.7097191**	**.1955583**	**1.102667**	**6.116143**
Stddev	.15345	.0020620	.0115564	.0213306	.0020866	.024823	.174676
%RSD	1.496653	.7657068	2.938002	3.005500	1.067009	2.251149	2.855979
#1	10.07603	.2716189	.3857905	.6956850	.1941881	1.131238	6.011758
#2	10.34890	.2677011	.3875893	.6992069	.1979598	1.086406	6.018871
#3	10.33413	.2685450	.4066454	.7342655	.1945271	1.090355	6.317799

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1220-05A Acquired: 1/20/2023 17:52:27 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0694678	.1943298	.2045444
Stddev	.0024802	.0007882	.0006786
%RSD	3.570362	.4056103	.3317797
#1	.0671198	.1944302	.2038523
#2	.0692217	.1950630	.2045721
#3	.0720620	.1934962	.2052087

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4203.025	71905.87	6064.656	3865.657	4067.122
Stddev	111.450	245.88	11.486	8.310	103.799
%RSD	2.651649	.3419470	.1893900	.2149621	2.552149
#1	4272.947	72177.99	6054.167	3874.851	4129.296
#2	4261.628	71699.65	6062.870	3863.441	4124.775
#3	4074.501	71839.98	6076.930	3858.681	3947.293

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01DLX10 Acquired: 1/20/2023 17:56:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000848**	**.0012731**	**-.000476**	**.0009216**	**.0014079**	**.0808542**	**.0552695**
Stddev	.000287	.0014081	.001206	.0034726	.0003951	.0065205	.0008778
%RSD	33.82446	110.6080	253.1432	376.8191	28.05995	8.064530	1.588173
#1	-.000825	.0000254	-.001868	.0027987	.0010919	.0879857	.0562086
#2	-.000573	.0009939	.000174	.0030516	.0018509	.0793795	.0551302
#3	-.001146	.0027998	.000265	-.003086	.0012810	.0751973	.0544697

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001924**	**.0001925**	**17.72529**	**.0117194**	**.0037997**	**.0004448**	**.1738096**
Stddev	.0000456	.0000765	.07919	.0004999	.0002496	.0003439	.0123994
%RSD	23.70762	39.71771	.4467784	4.266006	6.569118	77.31548	7.133882
#1	.0001401	.0002595	17.80618	.0118994	.0035178	.0005343	.1594933
#2	.0002129	.0002088	17.64791	.0111543	.0039928	.0007351	.1808026
#3	.0002242	.0001092	17.72179	.0121044	.0038884	.0000650	.1811329

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0347852**	**8.597714**	**.0072587**	**.0009152**	**213.9757**	**.0065225**	**.0007318**
Stddev	.0001420	.026664	.0003552	.0001680	1.6388	.0009539	.0001704
%RSD	.4081967	.3101241	4.892976	18.35373	.7658688	14.62448	23.28460
#1	.0347197	8.570599	.0068631	.0008707	212.2999	.0057762	.0006055
#2	.0349482	8.598639	.0073631	.0007740	215.5747	.0075972	.0009256
#3	.0346879	8.623902	.0075500	.0011010	214.0525	.0061941	.0006642

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.01613**	**.5310051**	**.0012341**	**.0035135**	**.0023776**	**1.250678**	**.0602252**
Stddev	.15917	.0075334	.0000956	.0006696	.0017637	.019792	.0007094
%RSD	.6362871	1.418705	7.743910	19.05687	74.17995	1.582477	1.177948
#1	24.83811	.5391985	.0013440	.0039924	.0042512	1.229890	.0609573
#2	25.14473	.5243779	.0011704	.0027484	.0007495	1.269295	.0595409
#3	25.06555	.5294389	.0011880	.0037998	.0021322	1.252849	.0601774

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01DLX10 Acquired: 1/20/2023 17:56:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.861303**	**.0133795**	**.1196169**
Stddev	.011328	.0022378	.0003271
%RSD	.2330200	16.72528	.2734675
#1	4.864916	.0126083	.1199070
#2	4.848609	.0159009	.1192623
#3	4.870383	.0116294	.1196814

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4251.374**	**69031.92**	**5812.204**	**3761.354**	**4085.145**
Stddev	.615	325.03	89.358	13.236	1.383
%RSD	.0144660	.4708414	1.537416	.3518864	.0338562
#1	4251.593	68771.40	5709.095	3752.744	4086.665
#2	4251.850	68928.20	5867.112	3754.724	4084.811
#3	4250.679	69396.15	5860.405	3776.595	4083.960

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: LR CHECK 2 Acquired: 1/20/2023 18:04:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040239	-.012826	263.6373	-.101018	-.008689	-.083758	107.8890
Stddev	.0019707	.002122	2.8651	.002407	.002776	.033378	2.6099
%RSD	48.97548	16.54065	1.086748	2.382910	31.95164	39.85028	2.419030
#1	.0026299	-.014522	261.6731	-.102892	-.011203	-.045588	105.2034
#2	.0062786	-.010447	266.9249	-.098304	-.005709	-.107466	108.0477
#3	.0031633	-.013509	262.3141	-.101859	-.009155	-.098219	110.4159

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021626	-.000596	.5005666	.0065915	-.016134	262.6134	.2601491
Stddev	.0000696	.000087	.0072068	.0000604	.000274	2.6050	.0306733
%RSD	3.218366	14.65012	1.439725	.9168110	1.700927	.9919459	11.79066
#1	.0021290	-.000681	.5048803	.0065545	-.016035	261.5752	.2893919
#2	.0021161	-.000601	.4922468	.0066612	-.016444	265.5773	.2628336
#3	.0022426	-.000507	.5045726	.0065587	-.015922	260.6875	.2282217

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.58104	.1790248	50.52427	.0101649	.7387942	-.010358	34.89453
Stddev	.33510	.0155988	.53005	.0002015	.0164391	.001043	.07227
%RSD	.7194012	8.713194	1.049093	1.982282	2.225122	10.06919	.2071151
#1	46.31274	.1842491	50.18301	.0103250	.7199796	-.011263	34.91757
#2	46.47372	.1913409	51.13491	.0099386	.7460213	-.009217	34.95246
#3	46.95665	.1614844	50.25489	.0102310	.7503816	-.010592	34.81354

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7535702	.0002404	-.003133	.0003391	-.043216	.0197634	-2.07944
Stddev	.0865881	.0016276	.000189	.0003660	.002259	.0135429	.01967
%RSD	11.49038	676.9447	6.034074	107.9461	5.226758	68.52500	.9459076
#1	.6569937	.0009302	-.003201	.0005933	-.044413	.0287689	-2.07728
#2	.8242690	.0014095	-.002919	.0005044	-.040611	.0041888	-2.10011
#3	.7794479	-.001618	-.003278	-.000080	-.044625	.0263325	-2.06095

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: LR CHECK 2 Acquired: 1/20/2023 18:04:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0550209	.0014232	.0030657
Stddev	.0067327	.0015273	.0000335
%RSD	12.23667	107.3120	1.091941
#1	.0560176	.0029863	.0030318
#2	.0611997	.0013490	.0030987
#3	.0478454	-.000066	.0030666

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4111.533	73828.49	6112.829	3791.477	4243.713
Stddev	44.946	267.16	63.993	12.734	42.676
%RSD	1.093170	.3618671	1.046861	.3358476	1.005622
#1	4140.725	73958.78	6113.234	3785.600	4272.932
#2	4059.775	73521.19	6176.618	3782.744	4194.739
#3	4134.099	74005.52	6048.634	3806.088	4263.468

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: LR CHECK 1 Acquired: 1/20/2023 18:42:09 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.035955**	**-.094260**	**-.052610**	**-.090943**	**.0199581**	**1903.286**	**.0117800**
Stddev	.003639	.003420	.004222	.004541	.0028398	22.176	.0031948
%RSD	10.12160	3.628663	8.025572	4.993315	14.22902	1.165164	27.12093
#1	-.031756	-.091078	-.051808	-.091178	.0166959	1877.678	.0153104
#2	-.038196	-.093825	-.048847	-.095363	.0218778	1916.031	.0090878
#3	-.037914	-.097877	-.057176	-.086290	.0213006	1916.147	.0109418

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049493**	**.0205389**	**1849.410**	**.0383850**	**.0121461**	**-.103773**	**901.2058**
Stddev	.0000975	.0007221	20.629	.0001879	.0003376	.001216	1.5108
%RSD	1.969529	3.515784	1.115431	.4896464	2.779877	1.171414	.1676425
#1	.0049288	.0204110	1825.672	.0383350	.0121700	-.103094	900.5499
#2	.0050554	.0198894	1862.994	.0385929	.0117972	-.105176	902.9337
#3	.0048637	.0213165	1859.564	.0382271	.0124712	-.103048	900.1337

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.015053**	**1804.881**	**.0183232**	**.0309268**	**1623.749**	**.0113122**	**.0386653**
Stddev	.001352	5.235	.0004951	.0008676	13.682	.0030818	.0008658
%RSD	8.981449	.2900611	2.702127	2.805391	.8426329	27.24360	2.239194
#1	-.016368	1800.435	.0177678	.0300025	1637.052	.0139523	.0392238
#2	-.013666	1803.556	.0184835	.0310544	1624.479	.0120585	.0376679
#3	-.015126	1810.651	.0187183	.0317236	1609.717	.0079257	.0391042

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**950.2737**	**^ *****	**-.000751**	**.0060163**	**-.046321**	**-.092129**	**.0580197**
Stddev	6.4388	-----	.000252	.0005960	.002446	.025103	.0048005
%RSD	.6775748	-----	33.50826	9.907400	5.281426	27.24720	8.274001
#1	956.0338	^ -----	-.001012	.0059091	-.044889	-.111037	.0527836
#2	951.4647	^ -----	-.000510	.0054810	-.044927	-.101701	.0590619
#3	943.3225	^ -----	-.000730	.0066586	-.049145	-.063648	.0622135

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: LR CHECK 1 Acquired: 1/20/2023 18:42:09 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.065003	.1143278	.0248605
Stddev	.009556	.0015273	.0001049
%RSD	14.70105	1.335908	.4220632
#1	-.061856	.1138284	.0248250
#2	-.057417	.1160423	.0249786
#3	-.075735	.1131127	.0247780

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3316.877	54345.64	5194.262	2967.195	2735.460
Stddev	6.319	26.79	8.148	6.327	4.320
%RSD	.1905077	.0492949	.1568644	.2132437	.1579397
#1	3313.701	54367.03	5200.160	2968.606	2732.611
#2	3324.153	54315.59	5197.662	2972.698	2740.431
#3	3312.775	54354.30	5184.965	2960.282	2733.339

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV06 Acquired: 1/20/2023 18:47:25 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.190547**	**5.185142**	**4.907215**	**5.073310**	**4.999392**	**10.04676**	**10.95865**
Stddev	.021733	.004944	.004428	.015558	.012150	.03198	.02558
%RSD	.4187036	.0953482	.0902432	.3066585	.2430327	.3182895	.2334470
#1	5.210188	5.180083	4.904212	5.091216	5.006347	10.08297	10.92918
#2	5.167199	5.185383	4.905133	5.063103	4.985362	10.03490	10.97168
#3	5.194254	5.189962	4.912301	5.065612	5.006466	10.02241	10.97510

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2291440**	**2.478585**	**25.20496**	**.9646053**	**2.382235**	**1.209235**	**5.373668**
Stddev	.0007866	.003264	.06856	.0014188	.002559	.003163	.016822
%RSD	.3432996	.1316792	.2719961	.1470878	.1074137	.2615726	.3130377
#1	.2299858	2.476299	25.13342	.9630840	2.379774	1.212477	5.366706
#2	.2284275	2.477133	25.21135	.9658924	2.382049	1.206157	5.361446
#3	.2290187	2.482323	25.27009	.9648396	2.384881	1.209072	5.392854

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.528876**	**24.64634**	**2.512867**	**1.224437**	**23.66634**	**2.582786**	**2.575031**
Stddev	.011995	.11997	.002711	.001320	.20976	.011975	.001364
%RSD	.4743314	.4867491	.1078866	.1077972	.8863320	.4636503	.0529577
#1	2.517226	24.55185	2.511621	1.223786	23.42706	2.570184	2.576432
#2	2.528213	24.60585	2.511003	1.225956	23.75338	2.594016	2.574955
#3	2.541189	24.78131	2.515977	1.223569	23.81856	2.584156	2.573707

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.93513**	**4.884967**	**4.972325**	**4.976269**	**5.063918**	**4.766808**	**4.974202**
Stddev	.35925	.007119	.010999	.006045	.011020	.073848	.011057
%RSD	1.333762	.1457366	.2211996	.1214754	.2176081	1.549214	.2222896
#1	26.52296	4.892496	4.978227	4.971344	5.053343	4.715783	4.971132
#2	27.10060	4.878345	4.959635	4.974448	5.063077	4.733153	4.965004
#3	27.18182	4.884059	4.979113	4.983015	5.075334	4.851489	4.986470

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV06 Acquired: 1/20/2023 18:47:25 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.980615	5.057631	5.133672
Stddev	.007695	.015070	.031044
%RSD	.1545065	.2979569	.6047198
#1	4.985739	5.042237	5.110640
#2	4.971766	5.058301	5.168976
#3	4.984340	5.072354	5.121398

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4207.480	68945.41	5741.145	3704.342	4116.634
Stddev	11.668	63.42	19.317	10.803	7.868
%RSD	.2773066	.0919813	.3364672	.2916324	.1911185
#1	4196.247	68893.44	5721.536	3692.273	4115.108
#2	4206.654	69016.07	5760.156	3707.643	4109.642
#3	4219.538	68926.73	5741.743	3713.109	4125.153

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB06 Acquired: 1/20/2023 18:51:12 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001367**	**.0014521**	**-.000799**	**-.001205**	**.0015156**	**.0084760**	**-.006452**
Stddev	.001083	.0019465	.002039	.002193	.0011522	.0016842	.000454
%RSD	79.21837	134.0450	255.1267	181.9707	76.01979	19.87024	7.034037
#1	-.000603	.0014447	.000986	-.003264	.0012594	.0089552	-.005953
#2	-.000892	.0034023	-.000363	.001100	.0027743	.0098687	-.006563
#3	-.002607	-.000491	-.003021	-.001451	.0005131	.0066041	-.006841

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000184**	**.0000482**	**.0067963**	**-.000420**	**.0000953**	**-.000319**	**.0141548**
Stddev	.0000431	.0000456	.0164946	.000203	.0002347	.000369	.0051551
%RSD	234.9184	94.50158	242.6979	48.33692	246.2282	115.5644	36.41938
#1	.0000681	.0000131	.0034265	-.000654	.0000521	-.000424	.0120441
#2	-.000004	.0000318	-.007753	-.000293	-.000115	.000091	.0103901
#3	-.000009	.0000997	.024716	-.000313	.000349	-.000623	.0200303

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000381**	**-.004867**	**.0001380**	**.0017513**	**.7110495**	**-.001203**	**-.000182**
Stddev	.000691	.008223	.0001427	.0001456	.0963141	.000616	.000030
%RSD	181.2089	168.9710	103.4632	8.312979	13.54535	51.22856	16.62446
#1	.000393	-.014340	-.000016	.0016542	.6104857	-.001884	-.000201
#2	-.000935	.000439	.000163	.0016809	.7202021	-.000684	-.000147
#3	-.000602	-.000700	.000267	.0019187	.8024605	-.001041	-.000198

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8520284**	**.0051773**	**.0061774**	**-.000734**	**.0012599**	**.0053171**	**-.004116**
Stddev	.1413453	.0004240	.0020763	.000554	.0010979	.0077235	.001756
%RSD	16.58927	8.189012	33.61219	75.39862	87.14165	145.2585	42.66750
#1	.7245919	.0051894	.0085054	-.000513	.0012672	.0131912	-.002136
#2	.8274379	.0055951	.0055098	-.000325	.0023541	.0050065	-.005484
#3	1.004056	.0047474	.0045169	-.001364	.0001584	-.002246	-.004728

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB06 Acquired: 1/20/2023 18:51:12 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.005334	.0074854	.0000572
Stddev	.001309	.0029638	.0000919
%RSD	24.53261	39.59392	160.6667
#1	-.004563	.0070590	.0001633
#2	-.004594	.0047580	.0000016
#3	-.006845	.0106394	.0000067

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4294.609	70037.89	5742.046	3776.254	4459.084
Stddev	11.132	168.98	32.151	5.689	17.070
%RSD	.2591975	.2412680	.5599225	.1506453	.3828067
#1	4303.646	70217.80	5735.674	3777.198	4474.270
#2	4298.005	70013.32	5713.558	3770.153	4462.373
#3	4282.175	69882.53	5776.905	3781.412	4440.609

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01DUPDLX10 Acquired: 1/20/2023 18:55:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001240**	**.0028616**	**-.000198**	**-.000092**	**.0000793**	**.0713051**	**.0576573**
Stddev	.001558	.0012252	.000758	.002806	.0018362	.0010423	.0016074
%RSD	125.6281	42.81562	382.7881	3048.619	2315.687	1.461792	2.787845
#1	-.001059	.0017401	-.000809	-.003319	-.001476	.0701783	.0558504
#2	-.002880	.0041693	-.000435	.001270	-.000391	.0715019	.0581933
#3	.000220	.0026755	.000650	.001772	.002105	.0722349	.0589282

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001829**	**.0002678**	**18.21950**	**.0119219**	**.0036270**	**-.000045**	**.1725241**
Stddev	.0000165	.0000595	.07516	.0004255	.0003514	.000418	.0092023
%RSD	9.041781	22.20805	.4125304	3.569168	9.688053	919.4064	5.333909
#1	.0001638	.0003364	18.15629	.0115915	.0032432	-.000528	.1803425
#2	.0001922	.0002348	18.30261	.0117720	.0037048	.000211	.1748468
#3	.0001928	.0002321	18.19962	.0124020	.0039329	.000180	.1623830

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0368972**	**8.791152**	**.0069691**	**.0018379**	**209.6907**	**.0030453**	**.0008747**
Stddev	.0001441	.076411	.0003989	.0003294	.9672	.0058267	.0001148
%RSD	.3905312	.8691803	5.723092	17.92315	.4612530	191.3326	13.12393
#1	.0370359	8.719304	.0069494	.0016285	208.5986	.0002923	.0007567
#2	.0369074	8.871427	.0065804	.0016677	210.0343	.0097385	.0008816
#3	.0367483	8.782723	.0073774	.0022176	210.4392	-.000895	.0009860

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.00876**	**.5402033**	**.0018785**	**.0034722**	**.0012545**	**1.273784**	**.0589687**
Stddev	.19616	.0046486	.0002564	.0004871	.0024043	.013674	.0042130
%RSD	.7542225	.8605252	13.64661	14.02943	191.6604	1.073460	7.144429
#1	25.78348	.5446033	.0020752	.0035611	.0016882	1.259667	.0592024
#2	26.14186	.5406658	.0019719	.0029468	-.001337	1.274717	.0546437
#3	26.10093	.5353407	.0015886	.0039088	.003412	1.286967	.0630599

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01DUPDLX10 Acquired: 1/20/2023 18:55:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.909203**	**.0119514**	**.1250291**
Stddev	.048447	.0022822	.0009136
%RSD	.9868510	19.09545	.7307297
#1	4.876514	.0145150	.1239875
#2	4.886232	.0101413	.1256946
#3	4.964862	.0111979	.1254053

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4180.088**	**68225.60**	**5772.978**	**3724.929**	**4029.548**
Stddev	27.503	57.84	38.604	11.979	27.256
%RSD	.6579610	.0847758	.6686964	.3215866	.6764038
#1	4198.488	68219.35	5747.724	3712.583	4049.911
#2	4193.305	68171.14	5753.794	3725.704	4040.150
#3	4148.471	68286.31	5817.416	3736.503	3998.585

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01LDLX50 Acquired: 1/20/2023 18:59:12 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000300**	**.0021140**	**-.000579**	**-.001707**	**-.000420**	**.0196374**	**.0049531**
Stddev	.001070	.0007630	.000693	.004049	.002388	.0107967	.0032455
%RSD	356.0536	36.09321	119.5441	237.1947	567.9335	54.98046	65.52317
#1	.000885	.0026954	-.001114	-.001326	-.003146	.0313029	.0036393
#2	-.000592	.0023965	.000203	-.005934	.000582	.0176135	.0025706
#3	-.001195	.0012500	-.000828	.002138	.001302	.0099959	.0086496

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000698**	**.0000480**	**3.712548**	**.0016766**	**.0008789**	**-.000180**	**.0346303**
Stddev	.0000156	.0000178	.236055	.0003389	.0000228	.000145	.0025347
%RSD	22.41615	37.02085	6.358295	20.21370	2.590047	80.92448	7.319436
#1	.0000825	.0000275	3.553513	.0013164	.0008803	-.000065	.0338841
#2	.0000745	.0000578	3.600356	.0019892	.0008554	-.000130	.0374543
#3	.0000523	.0000587	3.983776	.0017241	.0009009	-.000343	.0325524

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0074284**	**1.781779**	**.0014967**	**.0014069**	**42.05717**	**-.000827**	**.0004957**
Stddev	.0007310	.132358	.0003545	.0002337	.18193	.004999	.0000972
%RSD	9.841093	7.428433	23.68424	16.61093	.4325792	604.7266	19.61714
#1	.0077332	1.709215	.0018229	.0013765	41.97211	.002322	.0003891
#2	.0065943	1.701572	.0015475	.0016542	41.93334	.001790	.0005795
#3	.0079577	1.934549	.0011195	.0011898	42.26605	-.006591	.0005183

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.401828**	**.1089235**	**.0003733**	**.0003518**	**.0028063**	**.2572656**	**.0076245**
Stddev	.103378	.0057541	.0001106	.0005166	.0008924	.0114118	.0011240
%RSD	1.913753	5.282662	29.62093	146.8361	31.80082	4.435826	14.74150
#1	5.367874	.1054583	.0003605	.0000708	.0019453	.2681854	.0065151
#2	5.319698	.1057466	.0002697	.0009480	.0027463	.2454183	.0087625
#3	5.517912	.1155656	.0004897	.0000367	.0037271	.2581931	.0075959

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01LDLX50 Acquired: 1/20/2023 18:59:12 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9388312	.0056170	.0255343
Stddev	.0112925	.0022108	.0015672
%RSD	1.202827	39.35922	6.137433
#1	.9511185	.0036326	.0244492
#2	.9289076	.0080000	.0248226
#3	.9364675	.0052184	.0273310

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4222.966	70089.57	5751.412	3799.047	4235.028
Stddev	43.807	256.92	313.086	11.625	43.414
%RSD	1.037363	.3665549	5.443642	.3060024	1.025122
#1	4172.388	69792.94	5936.750	3786.988	4185.257
#2	4247.559	70234.18	5927.555	3810.183	4254.725
#3	4248.951	70241.59	5389.930	3799.970	4265.102

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MSDLX10 Acquired: 1/20/2023 19:03:12 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0788784	.1891929	.0905259	.1898913	.0714310	.2379264	.0733388
Stddev	.0010150	.0021401	.0012032	.0020940	.0003923	.0048257	.0016187
%RSD	1.286776	1.131184	1.329103	1.102740	.5492274	2.028218	2.207139
#1	.0789854	.1886502	.0908211	.1904250	.0712325	.2363990	.0750912
#2	.0778142	.1915521	.0915540	.1916669	.0718829	.2340493	.0718996
#3	.0798357	.1873764	.0892026	.1875821	.0711776	.2433310	.0730257

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163709	.0188118	17.56779	.0462755	.0209987	.0266805	.4596958
Stddev	.0001218	.0001032	.13935	.0006971	.0001154	.0002238	.0028519
%RSD	.7441721	.5485070	.7931985	1.506445	.5493558	.8389320	.6203993
#1	.0164618	.0187124	17.72757	.0455937	.0208993	.0268733	.4566261
#2	.0164185	.0189184	17.47146	.0469870	.0211252	.0264350	.4601979
#3	.0162325	.0188045	17.50434	.0462457	.0209715	.0267332	.4622633

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0590100	8.575143	.0525622	.0078829	202.3940	.0325436	.0201632
Stddev	.0015608	.080492	.0001841	.0000445	.5083	.0018405	.0001064
%RSD	2.645032	.9386615	.3502342	.5639039	.2511667	5.655593	.5278940
#1	.0601767	8.668086	.0526882	.0078335	201.9448	.0327008	.0200664
#2	.0572370	8.528977	.0523509	.0078956	202.2913	.0306295	.0202772
#3	.0596163	8.528366	.0526475	.0079197	202.9458	.0343004	.0201461

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.78371	.5243116	.0366268	.0662301	.0217660	1.303364	.6347678
Stddev	.09570	.0071073	.0003248	.0019521	.0003811	.007525	.0024084
%RSD	.3711478	1.355546	.8868648	2.947524	1.751099	.5773797	.3794079
#1	25.75882	.5324454	.0366012	.0667664	.0221524	1.303664	.6354368
#2	25.70291	.5211905	.0369637	.0678581	.0213903	1.310734	.6367709
#3	25.88939	.5192990	.0363156	.0640659	.0217554	1.295693	.6320956

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MSDLX10 Acquired: 1/20/2023 19:03:12 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.637333	.0336003	.1393611
Stddev	.020188	.0005391	.0009312
%RSD	.4353266	1.604318	.6681841
#1	4.634294	.0331133	.1404168
#2	4.658867	.0341795	.1386565
#3	4.618836	.0335082	.1390101

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4200.906	69427.89	5868.374	3765.389	4051.977
Stddev	22.603	60.40	65.483	6.030	23.460
%RSD	.5380513	.0869917	1.115856	.1601561	.5789726
#1	4205.697	69497.43	5793.964	3759.823	4055.718
#2	4176.291	69397.74	5893.942	3764.547	4026.871
#3	4220.729	69388.51	5917.215	3771.796	4073.341

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MSDDLX10 Acquired: 1/20/2023 19:07:09 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0788186	.1902085	.0929957	.1892165	.0726548	.2512182	.0744109
Stddev	.0021634	.0021362	.0012867	.0023389	.0016123	.0074098	.0000363
%RSD	2.744725	1.123088	1.383589	1.236075	2.219057	2.949531	.0487877
#1	.0810158	.1882140	.0918315	.1899728	.0708353	.2522269	.0743694
#2	.0766908	.1899488	.0927784	.1910837	.0732233	.2580719	.0744365
#3	.0787493	.1924627	.0943772	.1865931	.0739058	.2433557	.0744269

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170657	.0191140	17.61131	.0475106	.0214204	.0268027	.4682407
Stddev	.0000980	.0000802	.12396	.0003156	.0001411	.0002968	.0050950
%RSD	.5742591	.4196316	.7038385	.6641605	.6586603	1.107224	1.088110
#1	.0170912	.0190228	17.52251	.0478492	.0214322	.0270490	.4669010
#2	.0169575	.0191459	17.55849	.0472248	.0212739	.0268858	.4738716
#3	.0171485	.0191734	17.75292	.0474578	.0215553	.0264732	.4639494

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0592629	8.662742	.0538655	.0079358	207.6999	.0328923	.0204230
Stddev	.0009951	.135908	.0007620	.0006394	.9095	.0023168	.0001478
%RSD	1.679220	1.568876	1.414584	8.056512	.4379079	7.043679	.7237842
#1	.0585851	8.540861	.0540051	.0075373	206.6780	.0303762	.0205916
#2	.0587982	8.638070	.0530434	.0075968	208.4206	.0333631	.0203159
#3	.0604054	8.809296	.0545480	.0086732	208.0012	.0349376	.0203614

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.20611	.5464971	.0371509	.0670666	.0221364	1.324949	.6479929
Stddev	.22159	.0051030	.0001433	.0005187	.0011735	.038434	.0042809
%RSD	.8455595	.9337716	.3856868	.7733880	5.301198	2.900796	.6606394
#1	25.96504	.5473778	.0372155	.0669434	.0214708	1.286879	.6454674
#2	26.25236	.5410110	.0372506	.0666206	.0214471	1.324232	.6455757
#3	26.40091	.5511025	.0369867	.0676357	.0234914	1.363737	.6529357

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01MSDDLX10 Acquired: 1/20/2023 19:07:09 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: WEEKLY-OUTFA Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.721953**	**.0332087**	**.1395707**
Stddev	.022691	.0018130	.0005624
%RSD	.4805497	5.459420	.4029458
#1	4.701972	.0312242	.1391864
#2	4.717265	.0336237	.1393095
#3	4.746622	.0347783	.1402162

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4207.688**	**67781.87**	**5794.144**	**3734.418**	**4056.708**
Stddev	6.300	235.93	34.936	5.749	8.419
%RSD	.1497179	.3480759	.6029480	.1539548	.2075230
#1	4202.426	67543.58	5755.908	3732.439	4053.738
#2	4214.669	67786.65	5824.397	3729.919	4066.209
#3	4205.968	68015.38	5802.126	3740.895	4050.177

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01ADLX10 Acquired: 1/20/2023 19:11:07 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA11676 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0844632	.2054607	.0991548	.2064082	.0771555	.2690049	.0790541
Stddev	.0023523	.0030609	.0004988	.0020683	.0004756	.0030859	.0010692
%RSD	2.784970	1.489785	.5030898	1.002056	.6163907	1.147166	1.352466
#1	.0855722	.2036422	.0993038	.2055197	.0775403	.2724742	.0778210
#2	.0860559	.2037452	.0995621	.2049326	.0766238	.2679743	.0796175
#3	.0817614	.2089946	.0985984	.2087723	.0773025	.2665661	.0797237

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0181365	.0205340	18.37134	.0499565	.0230470	.0289918	.4961806
Stddev	.0000380	.0000331	.01471	.0001692	.0000364	.0006759	.0132630
%RSD	.2097421	.1612443	.0800808	.3387744	.1578775	2.331451	2.673022
#1	.0181437	.0204968	18.37199	.0497637	.0230845	.0282223	.5068356
#2	.0181705	.0205449	18.38572	.0500255	.0230118	.0292634	.4813262
#3	.0180954	.0205603	18.35632	.0500804	.0230448	.0294897	.5003800

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0559646	9.100159	.0570077	.0087695	213.0805	.0370485	.0213096
Stddev	.0003099	.004704	.0001670	.0005762	.8472	.0008693	.0002193
%RSD	.5538140	.0516955	.2928928	6.570990	.3975873	2.346422	1.029085
#1	.0557561	9.096725	.0568390	.0089298	212.7829	.0378362	.0215628
#2	.0558169	9.098231	.0570111	.0092485	212.4222	.0361158	.0211839
#3	.0563207	9.105521	.0571729	.0081300	214.0363	.0371935	.0211820

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.84149	.5679775	.0400701	.0727477	.0233456	1.368826	.6938343
Stddev	.10811	.0011172	.0001596	.0009708	.0015460	.027452	.0008025
%RSD	.4027693	.1966993	.3984141	1.334472	6.622275	2.005540	.1156566
#1	26.75958	.5691153	.0398881	.0718164	.0244926	1.341130	.6931558
#2	26.80086	.5679351	.0401865	.0726731	.0215875	1.369321	.6936270
#3	26.96402	.5668821	.0401357	.0737537	.0239568	1.396028	.6947201

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1121-01ADLX10 Acquired: 1/20/2023 19:11:07 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA11676 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.946515**	**.0376980**	**.1464531**
Stddev	.017802	.0022736	.0002446
%RSD	.3598909	6.031101	.1669797
#1	4.926797	.0380532	.1463088
#2	4.961406	.0397731	.1463151
#3	4.951341	.0352677	.1467355

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4169.657**	**68509.02**	**5750.945**	**3727.496**	**4005.506**
Stddev	9.983	269.46	33.020	9.298	5.901
%RSD	.2394269	.3933170	.5741599	.2494318	.1473340
#1	4178.877	68269.76	5716.008	3719.456	4012.012
#2	4159.055	68800.91	5755.189	3725.354	4000.498
#3	4171.040	68456.40	5781.637	3737.678	4004.006

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-11 Acquired: 1/20/2023 19:19:11 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011823- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033053	-.003695	.0344773	-.007365	.0025679	30.24202	.3335515
Stddev	.0013869	.001036	.0001321	.001835	.0020461	.30885	.0045857
%RSD	41.96049	28.03081	.3831248	24.91844	79.67901	1.021271	1.374796
#1	.0017612	-.004115	.0346231	-.008057	.0019341	30.39401	.3377155
#2	.0044453	-.002515	.0343656	-.008754	.0009137	29.88663	.3286368
#3	.0037094	-.004454	.0344431	-.005284	.0048559	30.44544	.3343021

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027346	.0002544	10.10489	.1228905	.0308034	.0779444	77.90743
Stddev	.0000340	.0001453	.08296	.0011588	.0003131	.0004018	.83029
%RSD	1.242359	57.10534	.8209738	.9429932	1.016510	.5154516	1.065741
#1	.0027664	.0003821	10.15127	.1216063	.0304967	.0774836	76.95032
#2	.0027387	.0000964	10.00911	.1238582	.0307909	.0782214	78.33770
#3	.0026988	.0002846	10.15429	.1232072	.0311226	.0781281	78.43428

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.225413	15.05760	.0959691	.0052064	2.812402	.1090191	.1227076
Stddev	.016791	.12758	.0006276	.0001947	.063119	.0005930	.0017735
%RSD	.7545314	.8472776	.6539580	3.739698	2.244315	.5439718	1.445333
#1	2.238725	15.03644	.0952989	.0051456	2.744466	.1084441	.1207613
#2	2.206549	14.94193	.0960655	.0050493	2.823510	.1096287	.1242325
#3	2.230966	15.19444	.0965430	.0054242	2.869230	.1089846	.1231291

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.925941	-.090850	.0070728	.0057175	1.363987	1.091452	2.068892
Stddev	.054565	.003370	.0002985	.0002043	.012938	.037024	.012360
%RSD	.7878413	3.709517	4.219881	3.572639	.9485426	3.392182	.5974306
#1	6.863838	-.094537	.0067818	.0054817	1.368941	1.050311	2.058915
#2	6.947789	-.087929	.0070583	.0058337	1.349304	1.122089	2.065043
#3	6.966198	-.090084	.0073782	.0058373	1.373716	1.101956	2.082719

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-11 Acquired: 1/20/2023 19:19:11 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011823- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2124984	.0347702	.0550692
Stddev	.0067304	.0013591	.0006308
%RSD	3.167278	3.908672	1.145465
#1	.2200069	.0362046	.0554291
#2	.2070077	.0346042	.0543408
#3	.2104807	.0335017	.0554376

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4804.740	78681.33	6428.003	4284.110	4549.269
Stddev	22.075	881.25	53.737	49.825	24.080
%RSD	.4594512	1.120019	.8359827	1.163009	.5293182
#1	4819.796	79684.03	6385.293	4338.624	4570.148
#2	4815.025	78029.88	6488.340	4240.925	4554.732
#3	4779.398	78330.08	6410.377	4272.782	4522.926

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-14 Acquired: 1/20/2023 19:23:03 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011823- Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0095310**	**-.003011**	**.0420670**	**-.010905**	**.0007108**	**29.52219**	**.4337306**
Stddev	.0037016	.002552	.0021343	.004062	.0006573	.23957	.0024297
%RSD	38.83783	84.76317	5.073659	37.24721	92.47415	.8114947	.5601945
#1	.0135162	-.005671	.0402660	-.009678	.0013016	29.25782	.4309632
#2	.0062002	-.000583	.0415105	-.007598	.0008279	29.58383	.4347142
#3	.0088767	-.002778	.0444244	-.015439	.0000028	29.72492	.4355143

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026706**	**.0006341**	**39.58137**	**.0726936**	**.0379525**	**.0766917**	**79.45221**
Stddev	.0000792	.0004372	.20946	.0000439	.0026823	.0056025	.79179
%RSD	2.965504	68.95284	.5291871	.0604390	7.067471	7.305168	.9965647
#1	.0025888	.0004402	39.35480	.0727346	.0364616	.0733134	78.95508
#2	.0026762	.0003273	39.62134	.0726472	.0363470	.0736030	79.03625
#3	.0027469	.0011347	39.76796	.0726990	.0410490	.0831587	80.36529

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.610162**	**30.14334**	**.1722281**	**.0061933**	**3.613289**	**.0884223**	**.1690912**
Stddev	.012407	.23963	.0093973	.0002220	.052003	.0015264	.0006069
%RSD	.3436794	.7949624	5.456296	3.584666	1.439211	1.726224	.3589502
#1	3.597907	29.87144	.1670996	.0064016	3.571895	.0901633	.1684412
#2	3.609861	30.32371	.1665109	.0059597	3.596314	.0873141	.1691894
#3	3.622717	30.23488	.1830738	.0062185	3.671658	.0877896	.1696431

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.803257**	**-.083745**	**.0010104**	**.0052628**	**1.578511**	**1.105807**	**2.873042**
Stddev	.072762	.002646	.0000998	.0011322	.007244	.015515	.171354
%RSD	.9324621	3.159161	9.877297	21.51371	.4589249	1.403013	5.964184
#1	7.742525	-.085208	.0011134	.0042307	1.571097	1.101503	2.765510
#2	7.783343	-.085337	.0009141	.0050838	1.578864	1.092898	2.782969
#3	7.883903	-.080691	.0010036	.0064738	1.585572	1.123019	3.070647

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1214-14 Acquired: 1/20/2023 19:23:03 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TJRC-011823- Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4802059	.0507098	.1070972
Stddev	.0260351	.0011214	.0012237
%RSD	5.421653	2.211485	1.142637
#1	.4604293	.0494151	.1056891
#2	.4704858	.0513352	.1076987
#3	.5097027	.0513792	.1079037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4562.457	76307.71	6409.230	4169.536	4270.089
Stddev	215.665	238.90	14.755	11.864	208.498
%RSD	4.726937	.3130801	.2302094	.2845478	4.882767
#1	4681.914	76374.34	6412.757	4183.235	4389.537
#2	4691.961	76506.23	6393.031	4162.827	4391.392
#3	4313.497	76042.57	6421.901	4162.547	4029.338

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1217-01 Acquired: 1/20/2023 19:26:54 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BORING-4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236106	-.017700	.1308767	-.015899	.0051006	87.41038	.5725132
Stddev	.0010277	.003159	.0009600	.001804	.0015327	2.76261	.0177748
%RSD	4.352754	17.84974	.7335110	11.34373	30.04923	3.160501	3.104703
#1	.0247765	-.021187	.1311856	-.017913	.0068199	84.22040	.5521783
#2	.0232189	-.015027	.1316443	-.015351	.0046046	89.01093	.5850914
#3	.0228363	-.016885	.1298003	-.014433	.0038774	88.99981	.5802700

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062743	.0029924	21.00686	.1602621	.1068831	.1933864	232.8405
Stddev	.0001474	.0004632	.54396	.0007462	.0006773	.0020099	2.6697
%RSD	2.349034	15.48055	2.589461	.4656391	.6337153	1.039327	1.146570
#1	.0061290	.0035044	20.37878	.1609919	.1071681	.1957040	229.8582
#2	.0064237	.0026022	21.32637	.1602941	.1061098	.1921206	235.0075
#3	.0062703	.0028705	21.31544	.1595004	.1073713	.1923346	233.6556

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.437224	33.95294	.2226666	.0121828	1.035581	.3101240	.4455999
Stddev	.114380	1.03105	.0007529	.0005800	.023002	.0079849	.0011225
%RSD	2.577731	3.036698	.3381075	4.760435	2.221182	2.574735	.2519012
#1	4.305328	32.76280	.2221823	.0117562	1.010736	.3009899	.4467938
#2	4.497236	34.57529	.2222835	.0119491	1.056136	.3136028	.4454398
#3	4.509109	34.52072	.2235339	.0128432	1.039872	.3157793	.4445660

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.571991	-.239685	.0049025	.0088514	2.291682	.9734378	4.473092
Stddev	.036653	.008145	.0000354	.0006393	.061770	.0152837	.011750
%RSD	.6578023	3.398011	.7223255	7.222673	2.695402	1.570074	.2626782
#1	5.530449	-.230600	.0049226	.0091948	2.220438	.9581553	4.485491
#2	5.599770	-.242124	.0049232	.0081138	2.330259	.9734354	4.462123
#3	5.585756	-.246332	.0048616	.0092456	2.324351	.9887227	4.471662

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1217-01 Acquired: 1/20/2023 19:26:54 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BORING-4 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2153309	.1422632	.1060482
Stddev	.0007832	.0030530	.0037032
%RSD	.3637245	2.146037	3.492040
#1	.2157801	.1387518	.1017731
#2	.2144266	.1442903	.1081042
#3	.2157861	.1437474	.1082672

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5080.971	82936.75	7165.191	4555.713	4282.338
Stddev	10.722	169.22	134.967	10.912	7.671
%RSD	.2110132	.2040399	1.883647	.2395341	.1791317
#1	5071.879	82986.05	7320.739	4551.971	4277.307
#2	5092.794	82748.35	7095.772	4547.165	4291.167
#3	5078.239	83075.84	7079.063	4568.005	4278.541

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1217-14 Acquired: 1/20/2023 19:30:42 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BORING-2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0314262**	**-.016125**	**.0959025**	**-.019120**	**.0048210**	**84.11841**	**.4660043**
Stddev	.0024333	.001721	.0026558	.002342	.0011629	.42931	.0039621
%RSD	7.742844	10.67123	2.769242	12.24814	24.12052	.5103662	.8502190
#1	.0335963	-.014141	.0934549	-.017427	.0035077	83.75695	.4638246
#2	.0287956	-.017018	.0955264	-.018140	.0057197	84.59294	.4705777
#3	.0318867	-.017216	.0987263	-.021792	.0052356	84.00534	.4636108

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0059163**	**.0024914**	**18.50903**	**.1599827**	**.1019831**	**.1698531**	**219.6160**
Stddev	.0001401	.0011645	.11875	.0119508	.0004107	.0032622	12.3151
%RSD	2.368675	46.74197	.6416017	7.470050	.4026803	1.920588	5.607552
#1	.0060769	.0012908	18.57479	.1729783	.1020349	.1664619	233.0307
#2	.0058191	.0025672	18.58035	.1575043	.1023655	.1701287	216.9946
#3	.0058529	.0036162	18.37194	.1494654	.1015490	.1729688	208.8227

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.071233**	**38.28166**	**.2036824**	**.0114975**	**1.111831**	**.2634066**	**.4527267**
Stddev	.031023	.20341	.0003007	.0002330	.066178	.0021465	.0352815
%RSD	.7620089	.5313484	.1476106	2.026899	5.952146	.8148933	7.793113
#1	4.058465	38.07825	.2038463	.0117303	1.185363	.2610457	.4917730
#2	4.106602	38.48507	.2033354	.0112642	1.093073	.2639333	.4432694
#3	4.048631	38.28166	.2038654	.0114980	1.057057	.2652406	.4231375

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.371393**	**-.237700**	**.0023420**	**.0090200**	**2.253681**	**1.443470**	**4.697703**
Stddev	.303935	.009507	.0002317	.0005667	.015598	.100340	.015097
%RSD	4.770300	3.999395	9.894571	6.282455	.6921332	6.951288	.3213699
#1	6.687887	-.226750	.0026013	.0094265	2.245130	1.555854	4.698390
#2	6.344486	-.242503	.0021553	.0092608	2.271685	1.411681	4.682275
#3	6.081807	-.243847	.0022693	.0083727	2.244229	1.362876	4.712445

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1217-14 Acquired: 1/20/2023 19:30:42 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BORING-2 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1285606	.1488387	.1153091
Stddev	.0026251	.0018472	.0005045
%RSD	2.041895	1.241111	.4375520
#1	.1315694	.1469618	.1148001
#2	.1273750	.1488995	.1158091
#3	.1267375	.1506548	.1153182

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5145.070	82362.78	7117.803	4497.762	4365.278
Stddev	9.122	4994.40	50.087	271.386	8.002
%RSD	.1773038	6.063901	.7036830	6.033795	.1833039
#1	5150.256	76901.09	7085.597	4201.743	4370.807
#2	5150.416	83490.06	7092.302	4556.721	4368.925
#3	5134.536	86697.19	7175.508	4734.821	4356.103

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV07 Acquired: 1/20/2023 19:44:47 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.060529**	**5.056655**	**4.751686**	**4.948239**	**4.888431**	**9.636866**	**10.59616**
Stddev	.012213	.014987	.015641	.020106	.014365	.050510	.00994
%RSD	.2413340	.2963874	.3291683	.4063231	.2938512	.5241367	.0938229
#1	5.047906	5.043048	4.735502	4.930983	4.873996	9.578799	10.59259
#2	5.061394	5.054198	4.752836	4.943416	4.888573	9.670642	10.60740
#3	5.072285	5.072718	4.766720	4.970317	4.902724	9.661157	10.58851

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2505604**	**2.398297**	**24.20519**	**.9350547**	**2.299485**	**1.168150**	**5.215423**
Stddev	.0005668	.009154	.14339	.0037253	.007109	.003150	.019960
%RSD	.2261982	.3816951	.5923924	.3984081	.3091570	.2696155	.3827079
#1	.2500241	2.388336	24.03978	.9386204	2.291755	1.164859	5.238076
#2	.2511534	2.400215	24.29422	.9311880	2.300959	1.168455	5.200417
#3	.2505039	2.406340	24.28157	.9353556	2.305741	1.171136	5.207777

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.435372**	**23.69250**	**2.437478**	**1.182881**	**23.26361**	**2.507772**	**2.491712**
Stddev	.005832	.17853	.007756	.002898	.02166	.011979	.010686
%RSD	.2394754	.7535379	.3182028	.2450301	.0931273	.4776564	.4288790
#1	2.429031	23.49073	2.428855	1.185893	23.28797	2.495206	2.500574
#2	2.440507	23.82999	2.439694	1.182639	23.24652	2.509048	2.479844
#3	2.436577	23.75677	2.443885	1.180112	23.25632	2.519061	2.494717

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.49605**	**4.617682**	**4.827500**	**4.815444**	**4.878044**	**4.681417**	**4.803512**
Stddev	.07025	.009990	.017943	.014849	.012101	.027652	.016098
%RSD	.2755437	.2163400	.3716791	.3083522	.2480775	.5906843	.3351319
#1	25.57708	4.607026	4.809591	4.799298	4.865688	4.654938	4.790983
#2	25.45211	4.626836	4.827432	4.818523	4.889873	4.679203	4.797884
#3	25.45897	4.619185	4.845477	4.828512	4.878572	4.710109	4.821668

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV07 Acquired: 1/20/2023 19:44:47 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.830949**	**4.830887**	**4.995151**
Stddev	.009227	.011551	.057324
%RSD	.1910074	.2391139	1.147593
#1	4.820959	4.818649	4.930344
#2	4.839152	4.841601	5.015889
#3	4.832737	4.832410	5.039220

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4320.242**	**71154.93**	**6066.453**	**3836.484**	**4225.943**
Stddev	14.858	254.05	8.978	18.227	15.295
%RSD	.3439056	.3570442	.1479979	.4750880	.3619234
#1	4334.316	70864.48	6069.514	3815.485	4241.652
#2	4321.701	71335.80	6056.345	3848.197	4225.078
#3	4304.708	71264.52	6073.501	3845.772	4211.099

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB07 Acquired: 1/20/2023 19:48:34 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001420**	**.0012896**	**-.001287**	**-.000412**	**-.000635**	**.0035422**	**-.007321**
Stddev	.001612	.0028016	.000679	.003420	.002465	.0033676	.003116
%RSD	113.5395	217.2383	52.78590	830.1346	388.0102	95.07181	42.56877
#1	-.001055	.0044768	-.002014	-.000007	-.000247	-.000231	-.006188
#2	-.003183	.0001756	-.000670	.002787	.001613	.004613	-.004929
#3	-.000021	-.000784	-.001176	-.004016	-.003271	.006244	-.010845

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000065**	**.0000657**	**.0017529**	**-.000846**	**-.000138**	**.0004536**	**-.001466**
Stddev	.0000325	.0000656	.0069075	.000224	.000147	.0000800	.006943
%RSD	502.7003	99.89531	394.0582	26.43593	107.1681	17.64499	473.7051
#1	.0000440	.0001413	-.004986	-.000588	-.000180	.0005056	.003647
#2	-.000012	.0000327	.008817	-.000963	.000026	.0004939	-.009370
#3	-.000013	.0000231	.001428	-.000986	-.000259	.0003614	.001326

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000171**	**-.014544**	**.0000488**	**.0020039**	**.1848638**	**-.002384**	**.0000131**
Stddev	.000586	.010043	.0002529	.0001900	.0247772	.001432	.0003368
%RSD	341.8565	69.05586	518.2628	9.482070	13.40294	60.07487	2579.429
#1	.000497	-.013427	.0001171	.0018883	.1565126	-.003016	-.000153
#2	-.000597	-.005106	.0002606	.0019002	.1957130	-.003392	.000401
#3	-.000414	-.025099	-.000231	.0022232	.2023659	-.000745	-.000209

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2026194**	**.0121133**	**.0074622**	**-.000789**	**.0007978**	**.0155818**	**-.003168**
Stddev	.0244066	.0021620	.0023975	.000289	.0009973	.0097184	.001705
%RSD	12.04555	17.84837	32.12878	36.59268	125.0025	62.37041	53.83225
#1	.2039670	.0130306	.0100246	-.000456	.0017748	.0045382	-.002917
#2	.2263243	.0136654	.0070887	-.000945	.0008374	.0193783	-.004985
#3	.1775669	.0096438	.0052734	-.000966	-.000219	.0228289	-.001602

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB07 Acquired: 1/20/2023 19:48:34 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003067	.0018054	.0000632
Stddev	.005151	.0023687	.0000895
%RSD	167.9895	131.2038	141.5331
#1	.002193	.0037656	.0001568
#2	-.003290	-.000827	.0000544
#3	-.008103	.002477	-.000022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4317.936	71957.84	5886.663	3853.421	4480.333
Stddev	3.812	753.61	158.022	42.103	5.702
%RSD	.0882898	1.047298	2.684399	1.092617	.1272675
#1	4316.608	71120.61	5861.918	3806.044	4486.064
#2	4322.234	72581.92	5742.473	3886.557	4480.275
#3	4314.965	72171.00	6055.597	3867.662	4474.661

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1229-01 Acquired: 1/20/2023 19:52:36 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: OK-02-011923 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0109144**	**-.011515**	**.1086207**	**-.018280**	**.0084374**	**95.10437**	**.3948773**
Stddev	.0020710	.001528	.0026385	.002414	.0007206	.31749	.0005062
%RSD	18.97539	13.27000	2.429111	13.20504	8.540379	.3338332	.1282004
#1	.0133017	-.013041	.1075970	-.020659	.0077452	95.45849	.3953946
#2	.0098422	-.009984	.1066473	-.018347	.0091833	94.84516	.3948544
#3	.0095992	-.011521	.1116176	-.015833	.0083836	95.00946	.3943829

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061787**	**.0043707**	**36.75897**	**.1472114**	**.0993140**	**.2591235**	**227.6083**
Stddev	.0001553	.0000751	.06145	.0004845	.0002364	.0014389	1.2340
%RSD	2.513487	1.718230	.1671606	.3291434	.2380667	.5553061	.5421474
#1	.0063426	.0044566	36.81291	.1477394	.0992506	.2598092	227.0189
#2	.0060337	.0043174	36.69208	.1471076	.0991157	.2574700	229.0264
#3	.0061599	.0043382	36.77192	.1467871	.0995757	.2600913	226.7795

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.383224**	**42.76011**	**.1603732**	**.0138370**	**6.513683**	**.4192089**	**.4011095**
Stddev	.011843	.21083	.0007952	.0000798	.046671	.0028387	.0005318
%RSD	.3500485	.4930600	.4958338	.5765409	.7165114	.6771658	.1325853
#1	3.396896	43.00354	.1598234	.0139198	6.471106	.4223978	.4006035
#2	3.376140	42.63602	.1612850	.0138306	6.563583	.4169574	.4016638
#3	3.376636	42.64075	.1600111	.0137606	6.506361	.4182714	.4010611

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.73617**	**-.261736**	**.0076735**	**.0197343**	**5.287534**	**1.934638**	**7.150728**
Stddev	.09673	.004791	.0002223	.0007060	.024218	.022979	.006773
%RSD	.7594894	1.830329	2.897114	3.577580	.4580175	1.187754	.0947168
#1	12.64024	-.265751	.0075719	.0203107	5.311294	1.959718	7.143465
#2	12.73459	-.256433	.0079284	.0189468	5.262883	1.929599	7.151847
#3	12.83368	-.263024	.0075201	.0199453	5.288426	1.914597	7.156871

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1229-01 Acquired: 1/20/2023 19:52:36 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: OK-02-011923 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.765910**	**.0954632**	**.1237319**
Stddev	.010821	.0006360	.0006148
%RSD	.2270396	.6662242	.4968635
#1	4.760249	.0951519	.1244404
#2	4.759094	.0950429	.1234168
#3	4.778386	.0961949	.1233386

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5114.432**	**84401.20**	**6831.604**	**4600.392**	**4246.689**
Stddev	9.078	350.18	33.157	15.156	6.124
%RSD	.1774905	.4148935	.4853501	.3294406	.1442014
#1	5122.472	84455.71	6793.822	4606.374	4253.758
#2	5116.237	84026.97	6855.863	4583.159	4243.022
#3	5104.588	84720.93	6845.126	4611.644	4243.285

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1230-01 Acquired: 1/20/2023 19:56:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BBC Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0270936**	**-.006754**	**.0496675**	**-.014728**	**.0040337**	**21.12599**
Stddev	.0025903	.001137	.0019340	.003324	.0014216	.54657
%RSD	9.560463	16.82639	3.893790	22.57057	35.24330	2.587184
#1	.0265617	-.007467	.0499971	-.016122	.0055136	20.70743
#2	.0248106	-.007352	.0475899	-.010934	.0026787	20.92619
#3	.0299085	-.005444	.0514154	-.017128	.0039088	21.74434

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1189889**	**.0016423**	**.0003703**	**371.2149**	**.1392754**	**.0158200**
Stddev	.0040345	.0000737	.0002010	9.3195	.0008751	.0004922
%RSD	3.390642	4.485774	54.26543	2.510542	.6283298	3.111133
#1	.1170283	.0015658	.0001924	364.1985	.1398671	.0158873
#2	.1163095	.0016481	.0003302	367.6569	.1382701	.0152976
#3	.1236290	.0017128	.0005883	381.7893	.1396889	.0162750

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1382621**	**115.1087**	**.6087270**	**99.13036**	**.0570675**	**.0071211**
Stddev	.0032459	.6985	.0150684	2.57845	.0008073	.0004915
%RSD	2.347643	.6067990	2.475396	2.601072	1.414727	6.902557
#1	.1382968	115.2033	.5975309	97.21454	.0575121	.0065544
#2	.1349990	114.3677	.6027907	98.11453	.0561355	.0073762
#3	.1414905	115.7550	.6258595	102.0620	.0575548	.0074326

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.084296**	**.0798597**	**.3373180**	**3.049933**	**-.103061**	**.0143942**
Stddev	.005752	.0010229	.0013109	.070987	.005283	.0004059
%RSD	.2759790	1.280897	.3886122	2.327489	5.126286	2.819859
#1	2.090875	.0801960	.3374690	2.983688	-.098139	.0141796
#2	2.080215	.0787110	.3359382	3.041247	-.102402	.0141407
#3	2.081799	.0806721	.3385468	3.124863	-.108643	.0148624

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1230-01 Acquired: 1/20/2023 19:56:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BBC Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0115807	.9787870	.7466989	1.157616	F 16.85839	.0408239
Stddev	.0007319	.0300755	.0182505	.024687	.32646	.0014658
%RSD	6.319756	3.072733	2.444160	2.132537	1.936486	3.590439
#1	.0115169	.9568482	.7654426	1.159446	16.88996	.0417240
#2	.0108828	.9664423	.7289852	1.132066	16.51729	.0416151
#3	.0123424	1.013071	.7456689	1.181337	17.16792	.0391325

Elem	Sr4077
Units	ppm
Avg	.6687336
Stddev	.0161854
%RSD	2.420312
#1	.6572250
#2	.6617351
#3	.6872406

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4329.907	70633.25	5934.563	3841.309	4057.403
Stddev	60.195	356.07	135.054	24.986	57.308
%RSD	1.390218	.5041172	2.275721	.6504485	1.412437
#1	4334.298	70293.12	6035.395	3822.077	4061.162
#2	4387.786	71003.37	5987.173	3869.550	4112.740
#3	4267.636	70603.28	5781.121	3832.301	3998.309

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1231-01 Acquired: 1/20/2023 20:00:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BBC Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0281523**	**-.009804**	**.0527887**	**-.018547**	**.0053273**	**21.72703**
Stddev	.0031218	.000086	.0026334	.001205	.0015922	.17614
%RSD	11.08904	.8783732	4.988548	6.498016	29.88758	.8106927
#1	.0267709	-.009758	.0530794	-.018839	.0045838	21.52815
#2	.0317265	-.009903	.0500221	-.017223	.0042429	21.78958
#3	.0259596	-.009751	.0552647	-.019580	.0071552	21.86336

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1155479**	**.0018886**	**.0006198**	**389.0684**	**.1505566**	**.0148434**
Stddev	.0020689	.0000165	.0002600	2.8307	.0008488	.0003929
%RSD	1.790493	.8755484	41.94870	.7275490	.5637691	2.646752
#1	.1133419	.0018845	.0005050	385.8643	.1515359	.0148347
#2	.1174449	.0019068	.0004369	390.1111	.1500340	.0144549
#3	.1158568	.0018745	.0009174	391.2298	.1500998	.0152405

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1546957**	**141.3649**	**.6341250**	**105.7216**	**.0617941**	**.0078523**
Stddev	.0022090	.3359	.0044452	.7163	.0009169	.0001592
%RSD	1.427960	.2376471	.7009960	.6775321	1.483851	2.027477
#1	.1528146	141.6900	.6290995	104.9934	.0614760	.0076732
#2	.1541444	141.3856	.6375425	105.7462	.0610786	.0079779
#3	.1571281	141.0191	.6357329	106.4253	.0628277	.0079057

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.133901**	**.0790374**	**.3706666**	**3.148564**	**-.142481**	**.0159678**
Stddev	.000871	.0035375	.0035057	.023948	.002331	.0003650
%RSD	.0408272	4.475741	.9457798	.7605942	1.636201	2.285861
#1	2.133395	.0750447	.3739357	3.172558	-.141377	.0158976
#2	2.133401	.0817805	.3710996	3.124663	-.140907	.0156430
#3	2.134907	.0802870	.3669645	3.148472	-.145159	.0163628

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1231-01 Acquired: 1/20/2023 20:00:13 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BBC Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129510	1.014178	.5761044	1.012813	F 16.23545	.0418391
Stddev	.0008716	.006159	.0126282	.015570	.25388	.0008368
%RSD	6.730413	.6072587	2.191991	1.537341	1.563738	1.999966
#1	.0135353	1.007068	.5904112	1.008825	16.09672	.0424937
#2	.0133686	1.017582	.5665104	.999625	16.08115	.0408963
#3	.0119491	1.017882	.5713916	1.029990	16.52846	.0421272

Elem	Sr4077
Units	ppm
Avg	.6853382
Stddev	.0061756
%RSD	.9011041
#1	.6788791
#2	.6859509
#3	.6911846

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4256.669	69640.68	5879.235	3783.023	3984.121
Stddev	44.882	297.65	23.033	8.798	50.054
%RSD	1.054391	.4274133	.3917607	.2325664	1.256338
#1	4284.786	69301.49	5905.484	3772.979	4003.780
#2	4280.313	69762.26	5869.818	3789.366	4021.362
#3	4204.908	69858.31	5862.403	3786.724	3927.222

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1234-01 Acquired: 1/20/2023 20:04:02 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: EO-02-11923 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0274601	-.022556	.3899757	-.022053	.0069086	142.3572	.8435275
Stddev	.0014328	.002023	.0035352	.002679	.0009170	.9377	.0041047
%RSD	5.217607	8.969506	.9065090	12.14870	13.27304	.6587265	.4866116
#1	.0258212	-.020310	.3940569	-.024405	.0058544	141.6178	.8431278
#2	.0280837	-.024235	.3878627	-.022619	.0075216	143.4120	.8478175
#3	.0284753	-.023125	.3880075	-.019137	.0073499	142.0418	.8396373

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092033	.0108453	48.33080	.1962426	.1615850	.6227693	288.3334
Stddev	.0000884	.0002003	.25109	.0001497	.0004890	.0015092	1.4270
%RSD	.9603622	1.846476	.5195317	.0762817	.3026534	.2423385	.4949263
#1	.0091622	.0110563	48.12748	.1964097	.1616577	.6241043	286.9281
#2	.0093047	.0108218	48.61147	.1961207	.1610636	.6211317	288.2909
#3	.0091429	.0106579	48.25344	.1961975	.1620335	.6230719	289.7812

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.866438	66.98188	.3237550	.0162239	9.512175	.3712516	.7629270
Stddev	.018854	.59637	.0012860	.0003295	.045253	.0048064	.0017089
%RSD	.3874333	.8903420	.3972150	2.031137	.4757405	1.294651	.2239912
#1	4.860936	66.67926	.3228335	.0163034	9.466224	.3719091	.7616176
#2	4.887431	67.66889	.3232074	.0158619	9.513604	.3756954	.7623033
#3	4.850947	66.59750	.3252242	.0165064	9.556697	.3661503	.7648601

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.27949	-.267965	.0023012	.0315545	4.493108	1.820454	6.319426
Stddev	.06767	.008793	.0001263	.0010206	.025457	.010666	.011405
%RSD	.4157065	3.281232	5.488330	3.234486	.5665837	.5859146	.1804745
#1	16.21076	-.272670	.0021734	.0327318	4.473737	1.822099	6.329023
#2	16.28167	-.273404	.0023042	.0310126	4.521942	1.809061	6.306818
#3	16.34606	-.257821	.0024260	.0309191	4.483647	1.830202	6.322436

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1234-01 Acquired: 1/20/2023 20:04:02 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: EO-02-11923 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.685072	.2422912	.2105919
Stddev	.006133	.0008652	.0012396
%RSD	.2284256	.3570966	.5886244
#1	2.692017	.2422967	.2096600
#2	2.682798	.2431537	.2119988
#3	2.680399	.2414233	.2101170

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5514.221	89830.57	7563.488	4901.041	4056.189
Stddev	7.478	82.67	52.514	12.566	5.413
%RSD	.1356188	.0920292	.6943120	.2563866	.1334598
#1	5511.617	89921.21	7557.405	4907.587	4056.452
#2	5522.653	89811.20	7514.280	4908.982	4061.466
#3	5508.393	89759.31	7618.779	4886.554	4050.649

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1237-01 Acquired: 1/20/2023 20:07:50 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: COMP-1-2-3A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155213	-.010033	.0543675	-.011060	.0016907	63.50254	.1849627
Stddev	.0003196	.000379	.0005077	.001453	.0022190	.36074	.0020495
%RSD	2.059383	3.774773	.9338982	13.13991	131.2504	.5680712	1.108065
#1	.0158188	-.010046	.0542314	-.009384	-.000108	63.18126	.1832294
#2	.0151834	-.009648	.0539418	-.011976	.001010	63.43358	.1844339
#3	.0155616	-.010405	.0549295	-.011819	.004170	63.89278	.1872248

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038638	.0012275	4.893455	.0765347	.0601843	.0835900	145.9581
Stddev	.0000790	.0003192	.032851	.0021167	.0003301	.0012343	3.7270
%RSD	2.043938	26.00335	.6713171	2.765625	.5484294	1.476646	2.553451
#1	.0039057	.0011911	4.874066	.0768786	.0603797	.0833563	146.3111
#2	.0037727	.0015634	4.874914	.0742672	.0603701	.0849245	142.0671
#3	.0039130	.0009281	4.931384	.0784584	.0598033	.0824893	149.4959

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.124159	21.05170	.1213267	.0091560	.4562485	.1350660	.3609607
Stddev	.014694	.10509	.0006092	.0004106	.0207928	.0052185	.0087345
%RSD	.3562893	.4991825	.5020836	4.484657	4.557336	3.863667	2.419783
#1	4.108072	20.93661	.1220078	.0096104	.4568827	.1294434	.3646324
#2	4.127530	21.07595	.1211384	.0088115	.4351459	.1360003	.3509898
#3	4.136874	21.14255	.1208340	.0090462	.4767170	.1397541	.3672600

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.758348	-.183108	.0010715	.0064768	1.289591	1.870804	2.577515
Stddev	.115989	.003026	.0002055	.0003917	.006475	.060558	.008437
%RSD	3.086162	1.652717	19.18179	6.047592	.5020684	3.237010	.3273312
#1	3.799157	-.183239	.0012119	.0067481	1.284243	1.857955	2.583637
#2	3.627471	-.186067	.0011669	.0060278	1.287740	1.817702	2.581018
#3	3.848418	-.180019	.0008356	.0066545	1.296789	1.936756	2.567891

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1237-01 Acquired: 1/20/2023 20:07:50 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: COMP-1-2-3A Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2481893	.1073494	.0436000
Stddev	.0032456	.0031310	.0001428
%RSD	1.307715	2.916628	.3274382
#1	.2446883	.1060463	.0435875
#2	.2487815	.1109215	.0434639
#3	.2510980	.1050804	.0437486

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4719.356	76604.42	6253.219	4189.903	4372.363
Stddev	9.745	1853.07	3.132	94.486	11.025
%RSD	.2064991	2.419015	.0500849	2.255091	.2521560
#1	4709.164	75992.80	6249.751	4147.005	4360.428
#2	4720.323	78685.99	6255.841	4298.229	4374.494
#3	4728.582	75134.47	6254.065	4124.477	4382.167

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1238-01 Acquired: 1/20/2023 20:11:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: RBRB22281-OI Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003206**	**-.001201**	**.0452782**	**-.002959**	**-.001706**	**1.349976**	**.0150139**
Stddev	.000463	.001745	.0013802	.001728	.001031	.015157	.0033672
%RSD	14.45456	145.2900	3.048326	58.41145	60.44504	1.122776	22.42738
#1	-.003145	-.002352	.0446669	-.004208	-.002649	1.332519	.0112132
#2	-.003697	.000807	.0443091	-.000986	-.001865	1.357609	.0176245
#3	-.002776	-.002059	.0468585	-.003683	-.000605	1.359798	.0162040

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002248**	**.0005025**	**8.153324**	**.0443751**	**.0041917**	**.3425892**	**25.88858**
Stddev	.0000465	.0000274	.039182	.0003408	.0000204	.0037494	.18261
%RSD	20.67408	5.451195	.4805676	.7680491	.4856459	1.094418	.7053554
#1	.0002185	.0005303	8.117699	.0441633	.0041961	.3458359	25.68865
#2	.0002741	.0004755	8.146983	.0447683	.0042095	.3434463	25.93050
#3	.0001818	.0005016	8.195290	.0441938	.0041695	.3384856	26.04657

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2500004**	**.6679877**	**.0224599**	**.0036915**	**.5882841**	**-.000048**	**2.814457**
Stddev	.0036848	.0306567	.0001731	.0003272	.0154532	.001610	.008341
%RSD	1.473932	4.589415	.7708516	8.863273	2.626831	3347.743	.2963608
#1	.2457534	.6336375	.0225739	.0035244	.5780453	-.000958	2.813255
#2	.2523489	.6925710	.0225451	.0040685	.5807475	.001811	2.823334
#3	.2518988	.6777546	.0222607	.0034815	.6060597	-.000997	2.806783

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5656038**	**-.004593**	**.0267436**	**.0062095**	**.0438551**	**.1949741**	**2.275222**
Stddev	.0507939	.001575	.0003248	.0005783	.0019417	.0064618	.011178
%RSD	8.980474	34.27997	1.214344	9.313462	4.427657	3.314208	.4912823
#1	.5562241	-.006340	.0270402	.0068298	.0419980	.1893865	2.281166
#2	.6204338	-.004157	.0267940	.0056853	.0436957	.1934854	2.282171
#3	.5201535	-.003283	.0263965	.0061133	.0458717	.2020504	2.262328

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1238-01 Acquired: 1/20/2023 20:11:39 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: RBRB22281-OI Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**6.065001**	**.0018788**	**.0128502**
Stddev	.053820	.0018967	.0002825
%RSD	.8873937	100.9566	2.198254
#1	6.103169	.0021045	.0125448
#2	6.088391	.0036525	.0129035
#3	6.003443	-.000121	.0131022

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4405.074**	**73501.06**	**6104.126**	**3960.678**	**4545.147**
Stddev	29.166	219.90	39.596	13.967	32.041
%RSD	.6620908	.2991733	.6486743	.3526350	.7049597
#1	4384.760	73627.16	6141.402	3960.883	4527.349
#2	4391.968	73247.15	6062.560	3946.610	4525.956
#3	4438.493	73628.87	6108.416	3974.542	4582.137

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1239-01 Acquired: 1/20/2023 20:15:34 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BORING-3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0931645	-.070567	.3375427	-.038336	.0177356	246.4659
Stddev	.0018087	.003416	.0034563	.002596	.0018474	1.2665
%RSD	1.941439	4.840331	1.023961	6.770384	10.41634	.5138573
#1	.0952316	-.074484	.3412520	-.035427	.0162593	245.0376
#2	.0918720	-.069012	.3344126	-.040415	.0198073	246.9083
#3	.0923901	-.068206	.3369635	-.039167	.0171404	247.4519

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.604922	.0169113	.0316097	47.47600	.4036738	.3627916
Stddev	.008191	.0000785	.0007824	.22288	.0021138	.0001609
%RSD	.5103551	.4639938	2.475113	.4694492	.5236283	.0443573
#1	1.595734	.0169863	.0323562	47.22963	.4051073	.3628867
#2	1.607571	.0169176	.0316770	47.53475	.4012463	.3628823
#3	1.611461	.0168298	.0307958	47.66362	.4046678	.3626058

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4236938	599.0804	12.21410	100.0590	.7447949	.0323438
Stddev	.0015831	4.2108	.05365	.4395	.0007386	.0008341
%RSD	.3736385	.7028764	.4392347	.4392725	.0991635	2.578846
#1	.4249693	595.4707	12.15719	99.6037	.7446806	.0314791
#2	.4241901	598.0641	12.22136	100.0925	.7441201	.0331434
#3	.4219221	603.7063	12.26375	100.4808	.7455839	.0324089

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.109732	.6346460	1.210626	19.86853	^ *****	.0054089
Stddev	.030953	.0042833	.009619	.17667	-----	.0000819
%RSD	.9953599	.6749076	.7945421	.8891717	-----	1.514701
#1	3.077029	.6326699	1.217985	19.69461	^ -----	.0053571
#2	3.113595	.6317075	1.199742	19.86315	^ -----	.0055033
#3	3.138572	.6395606	1.214153	20.04782	^ -----	.0053662

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1239-01 Acquired: 1/20/2023 20:15:34 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: BORING-3 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0270682	4.223987	3.180084	F 11.54444	.6569523	.4269856
Stddev	.0002147	.012452	.020479	.00698	.0042818	.0017902
%RSD	.7933679	.2947812	.6439854	.0604760	.6517734	.4192552
#1	.0273033	4.210373	3.176399	11.53653	.6613087	.4249562
#2	.0270189	4.226791	3.202155	11.54973	.6567989	.4276596
#3	.0268823	4.234798	3.161697	11.54707	.6527492	.4283409

Elem	Sr4077
Units	ppm
Avg	.2865029
Stddev	.0014593
%RSD	.5093319
#1	.2848444
#2	.2870748
#3	.2875897

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6128.060	100329.1	8656.046	5448.627	3869.252
Stddev	11.215	283.6	39.299	33.176	4.733
%RSD	.1830131	.2826454	.4540045	.6088822	.1223234
#1	6122.027	100108.4	8611.743	5415.043	3867.143
#2	6141.000	100649.0	8669.690	5481.379	3874.673
#3	6121.153	100230.0	8686.703	5449.460	3865.941

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1240-01 Acquired: 1/20/2023 20:19:21 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TR-05-011923 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0565380	-.014187	.1749012	-.014028	.0054761	62.88229	.2714468
Stddev	.0027612	.002152	.0013341	.000750	.0022129	.21353	.0014534
%RSD	4.883892	15.17187	.7627552	5.342914	40.41042	.3395641	.5354437
#1	.0590164	-.016518	.1755487	-.014538	.0047971	63.05806	.2730893
#2	.0535617	-.013769	.1757878	-.013168	.0036822	62.94414	.2709238
#3	.0570359	-.012274	.1733669	-.014380	.0079490	62.64467	.2703272

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055505	.0016766	62.72578	.2394801	.0514414	.2162309	191.1312
Stddev	.0000048	.0004397	.33979	.0026383	.0000728	.0014423	2.2195
%RSD	.0858621	26.22342	.5416995	1.101682	.1414803	.6670069	1.161254
#1	.0055514	.0020820	62.96295	.2381830	.0515218	.2174373	189.4763
#2	.0055547	.0017387	62.87787	.2377414	.0513800	.2166219	190.2640
#3	.0055453	.0012092	62.33651	.2425159	.0514223	.2146334	193.6534

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.606088	30.06934	.1008843	.0109728	5.531106	.3196350	.3966601
Stddev	.010977	.11039	.0002020	.0003861	.080407	.0033772	.0036464
%RSD	.6834385	.3671086	.2002351	3.518976	1.453720	1.056586	.9192668
#1	1.615544	30.17879	.1006551	.0106207	5.467376	.3209615	.3955591
#2	1.608671	30.07121	.1010367	.0109120	5.504497	.3221476	.3936912
#3	1.594051	29.95803	.1009610	.0113858	5.621444	.3157959	.4007301

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.44417	-.172648	.0043133	.0126541	1.892006	2.073467	4.261371
Stddev	.15354	.005661	.0003502	.0007428	.014156	.020290	.009246
%RSD	1.341604	3.278672	8.119066	5.869973	.7482109	.9785559	.2169727
#1	11.29678	-.178429	.0047177	.0119377	1.895813	2.073545	4.267097
#2	11.43255	-.172400	.0041103	.0134207	1.903870	2.053138	4.266311
#3	11.60319	-.167116	.0041119	.0126039	1.876336	2.093718	4.250704

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1240-01 Acquired: 1/20/2023 20:19:21 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: TR-05-011923 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.813649	.0703127	.3515585
Stddev	.004928	.0007142	.0010286
%RSD	.1751637	1.015755	.2925954
#1	2.819223	.0710908	.3527441
#2	2.809870	.0701603	.3509038
#3	2.811853	.0696870	.3510277

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4689.003	77347.84	6258.312	4179.971	4288.297
Stddev	8.197	615.85	49.561	25.274	6.227
%RSD	.1748079	.7962119	.7919265	.6046495	.1452108
#1	4681.584	77828.35	6214.253	4194.871	4281.218
#2	4687.623	77561.58	6248.712	4194.253	4290.747
#3	4697.802	76653.60	6311.971	4150.789	4292.927

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150370BL Acquired: 1/20/2023 20:23:10 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150370BL Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000829**	**-.000562**	**-.001233**	**-.003127**	**-.001182**	**.0137685**	**-.010219**
Stddev	.000520	.001790	.000371	.004212	.001385	.0066320	.001950
%RSD	62.70625	318.3294	30.06728	134.6942	117.1061	48.16780	19.07826
#1	-.001183	.000050	-.001641	-.007753	-.002777	.0209634	-.011314
#2	-.000232	-.002578	-.000916	.000484	-.000290	.0124421	-.011374
#3	-.001072	.000842	-.001143	-.002111	-.000480	.0078999	-.007968

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000195**	**.0000264**	**.0041917**	**-.000549**	**-.000054**	**-.000110**	**.0617138**
Stddev	.0000481	.0000162	.0005712	.000305	.000066	.000335	.0215284
%RSD	246.7359	61.30893	13.62675	55.50414	123.0783	304.2835	34.88431
#1	.0000298	.0000400	.0036058	-.000236	-.000050	-.000033	.0864629
#2	-.000033	.0000085	.0047469	-.000567	-.000122	-.000477	.0513605
#3	.000062	.0000306	.0042223	-.000845	.000010	.000180	.0473180

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000166**	**-.009593**	**.0002465**	**.0018773**	**.0375495**	**-.002740**	**-.000008**
Stddev	.000194	.021480	.0001711	.0001993	.0210489	.002375	.000059
%RSD	116.3673	223.9152	69.43014	10.61689	56.05646	86.66577	771.2686
#1	-.000299	.012767	.0004231	.0018397	.0136619	-.004574	.000059
#2	.000056	-.030068	.0000814	.0020927	.0456080	-.000058	-.000026
#3	-.000256	-.011478	.0002349	.0016994	.0533785	-.003589	-.000056

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0780692**	**-.003079**	**.0005026**	**-.001373**	**.0008293**	**.0084673**	**-.001841**
Stddev	.0234108	.000809	.0002647	.000107	.0007053	.0174995	.000149
%RSD	29.98722	26.25898	52.66844	7.773120	85.05342	206.6718	8.096896
#1	.0838301	-.003406	.0002333	-.001250	.0013690	.0251385	-.001953
#2	.0980618	-.003674	.0005121	-.001441	.0000312	-.009757	-.001672
#3	.0523158	-.002159	.0007624	-.001429	.0010876	.010020	-.001898

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150370BL Acquired: 1/20/2023 20:23:10 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150370BL Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000231	.0016451	-.000037
Stddev	.000979	.0009263	.000073
%RSD	423.3706	56.30467	198.6360
#1	.000050	.0008102	-.000115
#2	-.001320	.0014837	-.000023
#3	.000576	.0026415	.000029

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4349.175	70994.90	5908.901	3823.187	4547.573
Stddev	47.000	189.85	40.360	14.145	50.156
%RSD	1.080658	.2674122	.6830318	.3699876	1.102914
#1	4367.633	70779.76	5871.316	3807.203	4568.007
#2	4384.143	71066.04	5903.831	3834.090	4584.286
#3	4295.748	71138.91	5951.556	3828.268	4490.426

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150370BS Acquired: 1/20/2023 20:27:11 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150370BS Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8243677**	**2.064525**	**.9631583**	**2.027506**	**.7770848**	**1.963846**
Stddev	.0042873	.002573	.0024478	.000145	.0004646	.052303
%RSD	.5200669	.1246378	.2541465	.0071524	.0597877	2.663279
#1	.8214252	2.065537	.9643707	2.027476	.7775780	1.989242
#2	.8292867	2.066438	.9603409	2.027378	.7766554	1.903695
#3	.8223912	2.061600	.9647633	2.027664	.7770210	1.998603

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2038363**	**.1760293**	**.1931849**	**1.001821**	**.3831241**	**.1823788**
Stddev	.0076644	.0043819	.0002450	.034497	.0001945	.0001680
%RSD	3.760088	2.489280	.1268053	3.443413	.0507611	.0921367
#1	.2043419	.1792577	.1934546	1.017313	.3831857	.1824099
#2	.1959316	.1710411	.1929762	.962294	.3829063	.1821974
#3	.2112354	.1777892	.1931238	1.025856	.3832803	.1825291

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2949638**	**3.173033**	**.2000605**	**1.912363**	**.4879027**	**.0729261**
Stddev	.0005108	.024544	.0032997	.039649	.0004184	.0004829
%RSD	.1731665	.7735332	1.649346	2.073279	.0857496	.6621525
#1	.2954945	3.158818	.2007380	1.874965	.4883853	.0734784
#2	.2944756	3.158907	.1964746	1.908191	.4876426	.0727163
#3	.2949213	3.201375	.2029689	1.953932	.4876803	.0725836

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.882276**	**.3000965**	**.2080454**	**10.27516**	**.2783163**	**.3873940**
Stddev	.017142	.0069956	.0009824	.16684	.0075578	.0001893
%RSD	.5947364	2.331117	.4722254	1.623735	2.715544	.0488575
#1	2.865452	.3050479	.2091747	10.09583	.2845336	.3873127
#2	2.881658	.2920935	.2073879	10.30387	.2699039	.3872590
#3	2.899719	.3031480	.2075735	10.42579	.2805114	.3876104

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: PB150370BS Acquired: 1/20/2023 20:27:11 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: PB150370BS Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6637753	.1963657	.8777084	5.459646	F 2.370763	.2013451
Stddev	.0008503	.0041835	.0091212	.010536	.083927	.0070964
%RSD	.1280952	2.130476	1.039203	.1929704	3.540099	3.524505
#1	.6628529	.1985589	.8750550	5.450071	2.454541	.2000339
#2	.6645277	.1915416	.8702082	5.457934	2.371061	.1949958
#3	.6639452	.1989966	.8878621	5.470932	2.286687	.2090057

Elem	Sr4077
Units	ppm
Avg	.2048575
Stddev	.0052219
%RSD	2.549021
#1	.2067259
#2	.1989584
#3	.2088880

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4315.711	70726.19	5923.745	3823.057	4419.082
Stddev	12.587	173.00	147.477	11.232	9.659
%RSD	.2916611	.2446087	2.489587	.2938018	.2185751
#1	4306.907	70577.58	5812.760	3810.526	4411.231
#2	4310.097	70684.87	6091.091	3826.428	4416.147
#3	4330.128	70916.10	5867.384	3832.218	4429.868

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV08 Acquired: 1/20/2023 20:30:58 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.196596**	**5.190548**	**4.892652**	**5.061235**	**5.001546**	**9.869149**	**10.72152**
Stddev	.175381	.169300	.160991	.167469	.165008	.042255	.02682
%RSD	3.374930	3.261696	3.290472	3.308863	3.299141	.4281537	.2501753
#1	5.050943	5.047791	4.769035	4.919224	4.869560	9.890666	10.72744
#2	5.391273	5.377589	5.074699	5.245910	5.186545	9.820466	10.74489
#3	5.147572	5.146264	4.834222	5.018571	4.948532	9.896316	10.69224

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2574231**	**2.463915**	**24.67351**	**.9405203**	**2.356859**	**1.201356**	**5.232096**
Stddev	.0021989	.081934	.05965	.0018982	.079234	.039133	.023954
%RSD	.8542010	3.325367	.2417503	.2018198	3.361835	3.257382	.4578203
#1	.2598804	2.397609	24.74066	.9399271	2.293636	1.169926	5.207491
#2	.2567478	2.555513	24.65322	.9389896	2.445743	1.245186	5.255340
#3	.2556410	2.438624	24.62666	.9426442	2.331197	1.188955	5.233457

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.466561**	**24.20762**	**2.508572**	**1.191037**	**23.11117**	**2.538031**	**2.514753**
Stddev	.009815	.02556	.081757	.001498	.18146	.000551	.008890
%RSD	.3979340	.1055865	3.259108	.1257513	.7851455	.0217087	.3535110
#1	2.465016	24.21025	2.441843	1.191060	22.90765	2.537442	2.524870
#2	2.477057	24.23176	2.599770	1.189528	23.16977	2.538534	2.511198
#3	2.457610	24.18084	2.484104	1.192523	23.25608	2.538117	2.508191

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.07991**	**4.736957**	**4.957582**	**4.938720**	**4.961860**	**4.589856**	**4.858912**
Stddev	.30954	.043806	.160794	.159416	.012091	.074504	.160730
%RSD	1.234224	.9247639	3.243392	3.227871	.2436787	1.623234	3.307946
#1	24.73345	4.787077	4.819336	4.808220	4.965638	4.512575	4.722100
#2	25.17704	4.717804	5.134040	5.116401	4.971611	4.595762	5.035928
#3	25.32924	4.705989	4.919371	4.891540	4.948332	4.661231	4.818709

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV08 Acquired: 1/20/2023 20:30:58 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.906220**	**4.904646**	**5.046419**
Stddev	.159040	.005471	.038052
%RSD	3.241592	.1115553	.7540315
#1	4.770529	4.899989	5.089859
#2	5.081232	4.910672	5.018985
#3	4.866901	4.903277	5.030414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4195.942**	**70547.28**	**5821.206**	**3811.204**	**4102.845**
Stddev	119.286	220.08	64.853	20.163	117.089
%RSD	2.842891	.3119595	1.114081	.5290348	2.853842
#1	4288.400	70396.59	5746.321	3788.087	4193.213
#2	4061.295	70799.84	5858.749	3825.154	3970.569
#3	4238.131	70445.42	5858.550	3820.372	4144.753

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB08 Acquired: 1/20/2023 20:34:45 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002394**	**-.000263**	**-.000330**	**-.003699**	**.0000911**	**.0099795**	**-.008937**
Stddev	.001834	.001418	.000445	.001948	.0012774	.0092087	.001701
%RSD	76.61379	538.1862	134.8871	52.65974	1402.492	92.27686	19.03088
#1	-.001017	-.000304	-.000211	-.004463	.0011251	.0204697	-.010122
#2	-.001689	.001174	.000044	-.005148	.0004851	.0032289	-.006988
#3	-.004475	-.001660	-.000823	-.001485	-.001337	.0062397	-.009701

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000037**	**.0000310**	**-.004684**	**.0000255**	**-.000040**	**.0000415**	**-.003732**
Stddev	.000071	.0000834	.013951	.0001097	.000216	.0001285	.002576
%RSD	189.4256	268.6072	297.8354	430.1384	534.7816	309.8424	69.02961
#1	.000023	.0001258	-.020428	-.000096	-.000287	.0000020	-.000771
#2	-.000019	-.000002	.000234	.000055	.000054	-.000063	-.004965
#3	-.000115	-.000031	.006142	.000117	.000112	.000185	-.005461

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002646**	**-.007171**	**.0000393**	**.0020327**	**.0592779**	**-.007147**	**.0001355**
Stddev	.0002097	.021095	.0001121	.0005305	.0202314	.001850	.0002451
%RSD	79.26746	294.1789	285.4153	26.09883	34.12984	25.88418	180.9018
#1	.0003226	.016263	.0000432	.0021820	.0451700	-.006351	-.000138
#2	.0000319	-.013133	-.000075	.0024726	.0824575	-.005829	.000336
#3	.0004392	-.024642	.000149	.0014436	.0502061	-.009262	.000208

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1215191**	**.0068437**	**.0066159**	**-.000415**	**-.000469**	**.0187070**	**-.003813**
Stddev	.0338632	.0016039	.0030342	.000498	.001631	.0224084	.000299
%RSD	27.86659	23.43542	45.86260	119.8633	348.0289	119.7861	7.838837
#1	.1599646	.0081786	.0100902	-.000005	.000683	.0276374	-.003855
#2	.1084749	.0072879	.0052710	-.000968	-.002335	.0352732	-.003496
#3	.0961177	.0050646	.0044866	-.000272	.000246	-.006790	-.004089

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB08 Acquired: 1/20/2023 20:34:45 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CRI Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002086	.0046475	-.000031
Stddev	.000319	.0020479	.000050
%RSD	15.26834	44.06466	160.4569
#1	-.001954	.0056806	.000025
#2	-.002450	.0059731	-.000070
#3	-.001855	.0022888	-.000048

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4380.669	68367.10	5899.028	3693.153	4592.746
Stddev	5.139	5754.01	37.619	308.136	12.587
%RSD	.1173141	8.416339	.6377169	8.343450	.2740670
#1	4383.378	72415.58	5856.211	3902.368	4595.808
#2	4383.886	61780.41	5926.779	3339.307	4603.519
#3	4374.742	70905.31	5914.094	3837.784	4578.910

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01 Acquired: 1/20/2023 20:38:47 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205430	-.010992	.1436675	-.010601	.0070733	48.19812	.6341209
Stddev	.0023748	.001490	.0022779	.001706	.0010687	.54877	.0075327
%RSD	11.56019	13.55068	1.585509	16.08997	15.10849	1.138577	1.187894
#1	.0231438	-.009720	.1423676	-.011812	.0080735	47.56464	.6254447
#2	.0199952	-.010626	.1423373	-.008650	.0059473	48.52819	.6389920
#3	.0184899	-.012631	.1462977	-.011340	.0071993	48.50153	.6379260

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053874	.0024204	28.04169	.2241526	.0914419	.1715398	170.2644
Stddev	.0000852	.0000794	.35029	.0006143	.0012042	.0026666	1.2403
%RSD	1.581430	3.279783	1.249160	.2740433	1.316915	1.554505	.7284416
#1	.0052901	.0024350	27.64313	.2234764	.0907339	.1707118	168.8592
#2	.0054485	.0023347	28.18132	.2246762	.0907595	.1693855	170.7275
#3	.0054236	.0024914	28.30064	.2243052	.0928324	.1745222	171.2065

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.536349	35.05919	.4408185	.0111541	1.008301	.1778402	.3603050
Stddev	.067456	.48700	.0058332	.0003348	.006020	.0036626	.0003982
%RSD	1.218426	1.389067	1.323266	3.001660	.5970016	2.059498	.1105124
#1	5.458834	34.50085	.4375811	.0110844	1.007004	.1752746	.3601032
#2	5.568479	35.39630	.4373219	.0108596	1.014864	.1762113	.3607636
#3	5.581734	35.28043	.4475524	.0115182	1.003036	.1820347	.3600481

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.69542	-.171699	.0069107	.0087662	2.190476	6.027132	4.236049
Stddev	.13048	.001528	.0002747	.0000950	.024592	.014274	.056831
%RSD	1.219930	.8898911	3.975142	1.083710	1.122680	.2368338	1.341597
#1	10.55162	-.171053	.0070499	.0086620	2.162363	6.010865	4.214389
#2	10.72840	-.173444	.0070878	.0088479	2.201062	6.032962	4.193234
#3	10.80625	-.170600	.0065942	.0087887	2.208002	6.037568	4.300525

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01 Acquired: 1/20/2023 20:38:47 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17A Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1724790	.1352974	.0798432
Stddev	.0058051	.0040320	.0009582
%RSD	3.365688	2.980063	1.200101
#1	.1708089	.1309432	.0787496
#2	.1676920	.1389018	.0805356
#3	.1789361	.1360471	.0802445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4791.467	79105.27	6613.351	4331.578	4214.323
Stddev	45.314	103.28	38.396	9.596	45.623
%RSD	.9457289	.1305551	.5805796	.2215385	1.082581
#1	4816.982	79185.82	6655.516	4331.886	4235.768
#2	4818.271	78988.84	6580.401	4321.831	4245.272
#3	4739.148	79141.15	6604.135	4341.016	4161.928

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01DUP Acquired: 1/20/2023 20:42:35 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17ADUP Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0201312	-.013344	.1424317	-.016269	.0056721	49.03934	.6456232
Stddev	.0052711	.000861	.0020031	.002401	.0030571	.17968	.0046159
%RSD	26.18393	6.451115	1.406338	14.75814	53.89809	.3664025	.7149535
#1	.0155587	-.012666	.1425318	-.014246	.0090883	49.22159	.6494905
#2	.0189384	-.013053	.1443829	-.015639	.0047343	49.03410	.6468659
#3	.0258966	-.014312	.1403805	-.018922	.0031937	48.86234	.6405131

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054755	.0023035	28.48743	.2220840	.0903013	.1696654	167.0544
Stddev	.0001363	.0000475	.01261	.0014968	.0004943	.0009803	.3085
%RSD	2.488935	2.060896	.0442557	.6739751	.5474183	.5777982	.1846779
#1	.0056020	.0022517	28.48538	.2235591	.0908539	.1704557	166.7010
#2	.0054934	.0023449	28.50094	.2221265	.0899010	.1699720	167.1918
#3	.0053312	.0023141	28.47597	.2205664	.0901491	.1685684	167.2703

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.618559	35.57148	.4343074	.0104126	.9840701	.1813357	.3561094
Stddev	.016075	.12163	.0020278	.0004616	.0160608	.0030922	.0028310
%RSD	.2861100	.3419204	.4669133	4.432697	1.632078	1.705256	.7949840
#1	5.630725	35.67554	.4366209	.0105181	.9745019	.1777784	.3593270
#2	5.624618	35.60114	.4328377	.0099074	.9750961	.1833811	.3550006
#3	5.600335	35.43777	.4334638	.0108122	1.002612	.1828476	.3540006

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.46714	-.185508	.0066232	.0095731	2.221260	5.893699	4.115540
Stddev	.02916	.003332	.0003201	.0011069	.004509	.061493	.017804
%RSD	.2785648	1.796055	4.833628	11.56254	.2030054	1.043365	.4326099
#1	10.46165	-.188537	.0068806	.0102379	2.226085	5.878224	4.136091
#2	10.49865	-.186047	.0067243	.0101861	2.220542	5.841422	4.105758
#3	10.44112	-.181939	.0062647	.0082953	2.217152	5.961451	4.104771

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01DUP Acquired: 1/20/2023 20:42:35 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17ADUP Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1686536	.1382391	.0811954
Stddev	.0002563	.0026853	.0003848
%RSD	.1519874	1.942532	.4738891
#1	.1688920	.1409987	.0813383
#2	.1686864	.1356348	.0814883
#3	.1683825	.1380838	.0807597

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4874.602	81156.60	6549.880	4409.961	4313.989
Stddev	16.965	320.35	46.578	18.683	20.965
%RSD	.3480382	.3947320	.7111222	.4236658	.4859852
#1	4855.930	81166.29	6524.706	4390.139	4290.098
#2	4878.806	80831.51	6521.306	4412.498	4322.549
#3	4889.071	81471.99	6603.627	4427.247	4329.320

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01LX5 Acquired: 1/20/2023 20:46:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA11684 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031741	-.002448	.0275380	-.006179	.0001981	9.805518	.1203246
Stddev	.0012897	.000572	.0014002	.002476	.0008297	.074139	.0007376
%RSD	40.63228	23.38059	5.084509	40.07453	418.8578	.7560992	.6130229
#1	.0025340	-.002214	.0262918	-.007970	.0009818	9.724749	.1201421
#2	.0046586	-.002030	.0272692	-.007215	-.000671	9.870477	.1196954
#3	.0023296	-.003100	.0290532	-.003353	.000283	9.821328	.1211364

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011240	.0002899	5.676625	.0443443	.0171859	.0376342	33.19071
Stddev	.0000424	.0000728	.026519	.0003347	.0004246	.0009273	.11056
%RSD	3.769683	25.12286	.4671623	.7548033	2.470489	2.463917	.3330959
#1	.0010991	.0002059	5.650446	.0443226	.0166972	.0367691	33.08420
#2	.0010999	.0003350	5.703472	.0440210	.0173966	.0375205	33.18300
#3	.0011729	.0003289	5.675958	.0446894	.0174640	.0386131	33.30492

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.113013	7.060460	.0836897	.0030795	.1922008	.0340070	.0725623
Stddev	.002456	.075649	.0019447	.0001113	.0096243	.0017912	.0001044
%RSD	.2206481	1.071444	2.323719	3.614698	5.007437	5.267043	.1439152
#1	1.110403	6.982163	.0815941	.0029510	.1837758	.0319763	.0724791
#2	1.115279	7.133148	.0840387	.0031418	.2026896	.0353622	.0725284
#3	1.113355	7.066069	.0854363	.0031457	.1901371	.0346825	.0726795

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.027995	-.041501	.0017371	.0000648	.4370625	1.159175	.7734523
Stddev	.051662	.000827	.0000251	.0002918	.0040508	.035288	.0217896
%RSD	2.547455	1.992892	1.445648	450.6317	.9268235	3.044224	2.817191
#1	1.970467	-.040592	.0017109	.0003045	.4327824	1.181593	.7513037
#2	2.070428	-.042209	.0017394	-.000260	.4375688	1.177432	.7741889
#3	2.043092	-.041702	.0017610	.000150	.4408364	1.118499	.7948643

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01LX5 Acquired: 1/20/2023 20:46:23 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSA11684 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0281965	.0283156	.0161729
Stddev	.0026038	.0011484	.0000722
%RSD	9.234364	4.055618	.4465338
#1	.0303260	.0280100	.0160897
#2	.0289698	.0273509	.0162093
#3	.0252937	.0295859	.0162196

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4482.455	75456.86	6028.792	4076.675	4447.736
Stddev	44.000	240.93	20.568	14.662	48.316
%RSD	.9816012	.3193012	.3411645	.3596477	1.086300
#1	4533.057	75197.91	6019.988	4059.790	4503.149
#2	4453.210	75498.23	6014.092	4086.187	4425.643
#3	4461.098	75674.42	6052.297	4084.047	4414.417

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01MS Acquired: 1/20/2023 20:50:20 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17AMS Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7050607**	**1.858809**	**1.021047**	**1.625121**	**.6008423**	**56.32211**	**.8411978**
Stddev	.0057375	.004101	.002688	.000727	.0020507	.39314	.0046178
%RSD	.8137580	.2206489	.2632657	.0447606	.3413048	.6980229	.5489489
#1	.7006543	1.855456	1.024126	1.624325	.5987914	55.86877	.8360234
#2	.7029796	1.857589	1.019851	1.625289	.6008427	56.52820	.8426706
#3	.7115484	1.863382	1.019164	1.625751	.6028928	56.56936	.8448996

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1516506**	**.1856530**	**37.05767**	**.5549727**	**.2702258**	**.3950602**	**203.3507**
Stddev	.0007200	.0003172	.19083	.0005892	.0006651	.0013830	.7112
%RSD	.4747590	.1708325	.5149604	.1061686	.2461313	.3500608	.3497630
#1	.1508506	.1853670	36.83732	.5549993	.2697784	.3935496	202.8529
#2	.1522464	.1855980	37.16743	.5543706	.2699090	.3953668	203.0339
#3	.1518548	.1859941	37.16827	.5555482	.2709901	.3962641	204.1653

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.602131**	**43.19261**	**.9445713**	**.0712251**	**3.451951**	**.4671144**	**.6090764**
Stddev	.031806	.38427	.0047619	.0006360	.008632	.0048136	.0004225
%RSD	.6911118	.8896718	.5041295	.8928769	.2500505	1.030495	.0693608
#1	4.566067	42.75885	.9410651	.0706184	3.447241	.4618065	.6088829
#2	4.626177	43.32852	.9426564	.0711702	3.446700	.4683401	.6087853
#3	4.614148	43.49045	.9499926	.0718867	3.461913	.4711967	.6095609

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.93504**	**.0308120**	**.3120552**	**.6451668**	**2.770243**	**3.821368**	**9.880843**
Stddev	.05725	.0024374	.0017877	.0004173	.026194	.027670	.023489
%RSD	.2871899	7.910611	.5728820	.0646890	.9455475	.7240891	.2377242
#1	19.86924	.0327170	.3102048	.6454941	2.740306	3.792957	9.892789
#2	19.97341	.0280652	.3121879	.6453094	2.781477	3.848232	9.853782
#3	19.96248	.0316536	.3137728	.6446968	2.788946	3.822913	9.895958

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01MS Acquired: 1/20/2023 20:50:20 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17AMS Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4399973	.3124987	.2638916
Stddev	.0052147	.0031752	.0019263
%RSD	1.185170	1.016057	.7299696
#1	.4456410	.3094722	.2617741
#2	.4389932	.3122199	.2643606
#3	.4353576	.3158041	.2655402

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4876.511	80201.94	6770.382	4370.028	4230.819
Stddev	12.887	28.51	36.377	6.215	12.556
%RSD	.2642744	.0355422	.5372909	.1422247	.2967642
#1	4871.799	80169.02	6812.171	4376.297	4228.627
#2	4891.091	80217.99	6745.813	4369.918	4244.326
#3	4866.642	80218.79	6753.162	4363.868	4219.504

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01MSD Acquired: 1/20/2023 20:54:03 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17AMSD Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7166270	1.900706	1.036811	1.663148	.6119684	55.55238
Stddev	.0080080	.034583	.016266	.025201	.0107728	.51608
%RSD	1.117461	1.819475	1.568850	1.515229	1.760358	.9290057
#1	.7118878	1.893350	1.031207	1.662592	.6083285	54.95739
#2	.7121203	1.870393	1.024088	1.638230	.6034871	55.87882
#3	.7258729	1.938375	1.055139	1.688622	.6240897	55.82091

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8137830	.1559941	.1910784	33.01956	.5799953	.2777127
Stddev	.0085889	.0011345	.0035821	.28362	.0006392	.0049964
%RSD	1.055436	.7272589	1.874680	.8589562	.1102066	1.799122
#1	.8039167	.1549428	.1901543	32.69277	.5806034	.2766540
#2	.8195897	.1571966	.1880489	33.20163	.5800536	.2733304
#3	.8178424	.1558428	.1950320	33.16427	.5793290	.2831535

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4065832	195.7889	4.412584	45.01174	1.000577	.0699217
Stddev	.0071666	1.0714	.047112	.42629	.016506	.0004296
%RSD	1.762631	.5472371	1.067674	.9470583	1.649610	.6144106
#1	.4049236	194.9660	4.360430	44.51954	.996816	.0696651
#2	.4003921	197.0004	4.452059	45.26260	.986277	.0696823
#3	.4144340	195.4003	4.425263	45.25309	1.018639	.0704177

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.285410	.4600550	.5903313	19.12010	.0105963	.3175393
Stddev	.021836	.0087068	.0020437	.09258	.0006278	.0047361
%RSD	.6646459	1.892562	.3461863	.4842008	5.924761	1.491505
#1	3.260311	.4508592	.5926368	19.05890	.0103067	.3158694
#2	3.300043	.4611335	.5887426	19.22660	.0113166	.3138644
#3	3.295877	.4681723	.5896145	19.07478	.0101655	.3228842

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01MSD Acquired: 1/20/2023 20:54:03 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17AMSD Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6579888	2.763795	3.700209	F 10.07063	.3849783	.3131036
Stddev	.0092271	.025599	.045779	.16749	.0058207	.0027574
%RSD	1.402314	.9262084	1.237207	1.663192	1.511959	.8806847
#1	.6559327	2.737199	3.651451	10.04061	.3844237	.3101280
#2	.6499632	2.788264	3.742272	9.92018	.3794546	.3155728
#3	.6680704	2.765922	3.706905	10.25111	.3910564	.3136098

Elem	Sr4077
Units	ppm
Avg	.2583237
Stddev	.0021262
%RSD	.8230850
#1	.2558806
#2	.2593345
#3	.2597559

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4801.973	80969.34	6588.706	4407.973	4153.390
Stddev	58.357	181.30	19.009	15.347	57.617
%RSD	1.215280	.2239148	.2885105	.3481591	1.387240
#1	4802.200	80768.20	6609.659	4390.912	4157.421
#2	4860.216	81019.65	6572.566	4420.652	4208.886
#3	4743.502	81120.18	6583.892	4412.355	4093.863

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01A Acquired: 1/20/2023 20:57:45 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSAB11684 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7576776**	**2.020239**	**1.121328**	**1.765056**	**.6807781**	**50.76247**	**.8239350**
Stddev	.0015829	.011468	.006109	.006407	.0044845	.44630	.0074418
%RSD	.2089173	.5676544	.5448041	.3629666	.6587279	.8791947	.9031999
#1	.7569233	2.007337	1.114407	1.757659	.6767852	51.18337	.8300979
#2	.7594966	2.029271	1.123609	1.768800	.6856299	50.29450	.8156676
#3	.7566130	2.024110	1.125968	1.768710	.6799192	50.80953	.8260394

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1676222**	**.1981830**	**29.55866**	**.5704343**	**.2746682**	**.4248047**	**171.7145**
Stddev	.0022953	.0012919	.19363	.0005470	.0020491	.0021884	.9579
%RSD	1.369329	.6518551	.6550807	.0958927	.7460157	.5151549	.5578561
#1	.1700730	.1967144	29.74113	.5702988	.2723041	.4229115	170.6520
#2	.1655229	.1991438	29.35552	.5710364	.2759343	.4272008	172.5122
#3	.1672707	.1986907	29.57932	.5699679	.2757661	.4243019	171.9792

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.565823**	**37.44655**	**.9296463**	**.0740727**	**3.534606**	**.4528246**	**.5474865**
Stddev	.042759	.41512	.0068751	.0003577	.028395	.0028329	.0013446
%RSD	.7682476	1.108556	.7395426	.4829508	.8033317	.6256176	.2455881
#1	5.606668	37.87135	.9217191	.0744784	3.502024	.4558101	.5472556
#2	5.521377	37.04184	.9339793	.0738023	3.554070	.4501739	.5462724
#3	5.569424	37.42645	.9332406	.0739376	3.547724	.4524899	.5489316

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.68427**	**.0730430**	**.3480390**	**.6790805**	**2.358488**	**6.626821**	**9.743119**
Stddev	.18584	.0033933	.0021853	.0049653	.023691	.087668	.087132
%RSD	.9441115	4.645549	.6278828	.7311847	1.004512	1.322923	.8942956
#1	19.47198	.0699998	.3455182	.6733653	2.374041	6.539268	9.643809
#2	19.76324	.0767020	.3493963	.6823338	2.331222	6.714603	9.806746
#3	19.81758	.0724274	.3492026	.6815425	2.370203	6.626590	9.778801

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-01A Acquired: 1/20/2023 20:57:45 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: ICSAB11684 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1691983	.3184300	.2677279
Stddev	.0010565	.0027868	.0023408
%RSD	.6244173	.8751637	.8743263
#1	.1681061	.3211735	.2701656
#2	.1702151	.3156019	.2654978
#3	.1692739	.3185147	.2675203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4845.184	79108.70	6492.088	4317.952	4269.726
Stddev	19.591	155.25	85.291	8.292	26.831
%RSD	.4043385	.1962479	1.313763	.1920354	.6284072
#1	4867.290	79146.33	6400.050	4327.235	4300.548
#2	4829.973	78938.09	6568.459	4315.342	4251.584
#3	4838.289	79241.67	6507.755	4311.278	4257.048

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-02 Acquired: 1/20/2023 21:01:26 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17B Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137887	-.007751	.0723391	-.011224	.0065634	42.71399	.5724361
Stddev	.0021931	.003848	.0054415	.001179	.0009468	.36639	.0045331
%RSD	15.90538	49.64649	7.522271	10.50101	14.42622	.8577638	.7919031
#1	.0128368	-.004619	.0674759	-.011842	.0074757	42.29136	.5673651
#2	.0122323	-.006587	.0713249	-.009865	.0055854	42.94197	.5760954
#3	.0162969	-.012047	.0782163	-.011966	.0066290	42.90863	.5738477

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046962	.0019437	72.25548	.1372343	.0691689	.1211384	139.1492
Stddev	.0000372	.0009145	.59565	.0001767	.0046482	.0091431	1.3596
%RSD	.7911495	47.05000	.8243612	.1287486	6.720083	7.547619	.9770634
#1	.0046997	.0012941	71.57018	.1370627	.0657696	.1146685	137.8175
#2	.0047315	.0015474	72.54745	.1374157	.0672714	.1171483	139.0952
#3	.0046574	.0029895	72.64880	.1372245	.0744657	.1315983	140.5350

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.059173	32.15033	.2775513	.0088998	1.314357	.1935899	.3129535
Stddev	.022936	.24335	.0180830	.0003658	.011675	.0061183	.0006032
%RSD	.7497527	.7569207	6.515187	4.110119	.8882437	3.160465	.1927487
#1	3.032807	31.86995	.2629961	.0091206	1.300909	.1888282	.3122571
#2	3.074529	32.30661	.2718634	.0091012	1.320273	.2004906	.3133130
#3	3.070181	32.27444	.2977944	.0084776	1.321890	.1914509	.3132905

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.58973	-.147542	.0027558	.0070152	2.117770	2.985807	3.829376
Stddev	.11994	.004140	.0003143	.0011547	.019641	.031481	.246029
%RSD	1.034862	2.806146	11.40523	16.46031	.9274274	1.054353	6.424769
#1	11.45294	-.149686	.0029815	.0057307	2.095117	2.967609	3.640748
#2	11.67687	-.150170	.0023968	.0073477	2.128154	2.967655	3.739721
#3	11.63937	-.142769	.0028890	.0079671	2.130038	3.022158	4.107659

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-02 Acquired: 1/20/2023 21:01:26 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-17B Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5952163	.1305212	.1486186
Stddev	.0456247	.0029901	.0010065
%RSD	7.665232	2.290860	.6771997
#1	.5544415	.1279244	.1474567
#2	.5867128	.1298490	.1492175
#3	.6444945	.1337901	.1491818

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4696.505	79632.57	6515.394	4309.470	4180.090
Stddev	208.402	121.51	30.026	11.920	212.708
%RSD	4.437384	.1525837	.4608432	.2766052	5.088594
#1	4842.542	79698.53	6511.381	4301.494	4336.812
#2	4789.124	79492.35	6487.577	4303.742	4265.507
#3	4457.847	79706.83	6547.225	4323.173	3937.951

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-04 Acquired: 1/20/2023 21:05:15 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-18A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0612645	-.062288	.3775790	-.035052	.0270623	97.78974	.4275452
Stddev	.0008120	.001125	.0017301	.004279	.0024556	.42140	.0019820
%RSD	1.325422	1.806743	.4582136	12.20712	9.073846	.4309264	.4635768
#1	.0618036	-.062990	.3785595	-.033420	.0265624	97.36690	.4270573
#2	.0603306	-.062883	.3785961	-.031829	.0248951	97.79264	.4258528
#3	.0616593	-.060990	.3755813	-.039907	.0297293	98.20968	.4297256

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118326	.0182127	15.35434	1.390655	.2571992	.4907720	569.3267
Stddev	.0000555	.0001920	.09023	.000579	.0001916	.0007110	1.3398
%RSD	.4691975	1.054041	.5876536	.0416011	.0745013	.1448683	.2353244
#1	.0117691	.0180376	15.30533	1.390927	.2572185	.4900109	569.3654
#2	.0118717	.0184180	15.29922	1.389990	.2569987	.4914191	567.9680
#3	.0118570	.0181826	15.45847	1.391047	.2573805	.4908859	570.6467

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.128242	40.61964	1.350469	.0282553	3.789039	1.069656	1.126012
Stddev	.016640	.22357	.000212	.0000559	.018597	.005839	.001907
%RSD	.3244796	.5503970	.0157327	.1979871	.4908202	.5458632	.1693310
#1	5.121801	40.37444	1.350332	.0282315	3.784249	1.064247	1.127897
#2	5.115784	40.67230	1.350362	.0283192	3.773305	1.068876	1.124084
#3	5.147139	40.81218	1.350714	.0282152	3.809563	1.075846	1.126054

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.61488	^ *****	.0156647	.0318999	5.702901	4.101919	6.067378
Stddev	.03524	-----	.0003060	.0004750	.020428	.063021	.006476
%RSD	.2256590	-----	1.953337	1.489003	.3582053	1.536388	.1067392
#1	15.57660	^ -----	.0156985	.0322160	5.682332	4.060901	6.059932
#2	15.64596	^ -----	.0153432	.0321301	5.703186	4.070372	6.071708
#3	15.62210	^ -----	.0159524	.0313537	5.723185	4.174484	6.070493

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-04 Acquired: 1/20/2023 21:05:15 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-18A Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8547722	.1474347	.1098332
Stddev	.0025153	.0004246	.0007002
%RSD	.2942643	.2879669	.6375472
#1	.8569863	.1473672	.1090993
#2	.8520373	.1478890	.1099064
#3	.8552931	.1470480	.1104940

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5650.420	92553.35	7859.434	5059.064	4111.457
Stddev	11.581	96.39	16.539	4.588	11.130
%RSD	.2049596	.1041440	.2104366	.0906915	.2707182
#1	5637.059	92633.63	7876.638	5058.263	4098.656
#2	5657.594	92579.96	7858.012	5064.000	4118.850
#3	5656.606	92446.45	7843.652	5054.929	4116.866

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-05 Acquired: 1/20/2023 21:09:01 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-18B Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0374977	-.036461	.2295689	-.030332	.0179448	77.79081	.8887380
Stddev	.0033857	.001436	.0007164	.000547	.0023246	1.94086	.0251366
%RSD	9.029053	3.938868	.3120685	1.803489	12.95391	2.494973	2.828350
#1	.0336248	-.035730	.2290144	-.030962	.0171071	78.64623	.9044330
#2	.0389721	-.035536	.2293146	-.030055	.0205722	79.15701	.9020353
#3	.0398961	-.038115	.2303778	-.029978	.0161552	75.56919	.8597458

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112272	.0114098	28.37703	1.136968	.2817957	.2888319	396.6073
Stddev	.0002155	.0000641	.61589	.000858	.0008670	.0007736	.6151
%RSD	1.919823	.5621430	2.170397	.0754234	.3076539	.2678470	.1550999
#1	.0114025	.0114624	28.69155	1.136070	.2824863	.2893064	396.0412
#2	.0112926	.0113383	28.77216	1.137779	.2808228	.2879392	396.5189
#3	.0109865	.0114286	27.66738	1.137055	.2820782	.2892502	397.2619

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.689476	114.9602	2.919697	.0216323	2.772070	.5176476	.7544485
Stddev	.157882	2.9293	.008398	.0001225	.005358	.0136971	.0013985
%RSD	2.360149	2.548120	.2876286	.5663123	.1932855	2.646020	.1853654
#1	6.778579	116.4175	2.921817	.0216522	2.770235	.5246715	.7557457
#2	6.782664	116.8751	2.910442	.0217436	2.767870	.5264079	.7529670
#3	6.507186	111.5881	2.926832	.0215010	2.778104	.5018634	.7546329

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.67944	-.474451	.0159958	.0221126	4.208318	3.957612	5.605869
Stddev	.09015	.025388	.0003412	.0004637	.108307	.052941	.010808
%RSD	.5749352	5.351030	2.132991	2.096764	2.573645	1.337694	.1928031
#1	15.78092	-.490329	.0163553	.0215866	4.261119	3.911721	5.610998
#2	15.60862	-.487853	.0156765	.0224622	4.280098	4.015532	5.593452
#3	15.64879	-.445170	.0159555	.0222888	4.083736	3.945582	5.613159

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-05 Acquired: 1/20/2023 21:09:01 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-18B Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.515500	.1575727	.0981809
Stddev	.001447	.0059618	.0025226
%RSD	.0954945	3.783535	2.569300
#1	1.515785	.1542421	.0994352
#2	1.513932	.1644556	.0998304
#3	1.516784	.1540204	.0952770

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5425.304	90996.27	7290.718	4926.445	4120.332
Stddev	5.970	173.20	172.499	17.762	5.649
%RSD	.1100318	.1903420	2.366004	.3605459	.1370984
#1	5419.128	91159.41	7204.142	4910.928	4116.622
#2	5431.044	91014.90	7178.654	4945.818	4126.833
#3	5425.740	90814.51	7489.358	4922.587	4117.542

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-06 Acquired: 1/20/2023 21:12:47 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-19A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0690426	-.021229	.5440123	-.018713	.0130858	92.96971	.7632773
Stddev	.0019446	.001659	.0019597	.002395	.0017272	.15076	.0028949
%RSD	2.816570	7.816987	.3602319	12.79934	13.19923	.1621577	.3792713
#1	.0668882	-.021308	.5444082	-.021295	.0140721	92.83994	.7599424
#2	.0706680	-.022848	.5418848	-.018277	.0110914	92.93411	.7647467
#3	.0695715	-.019532	.5457438	-.016565	.0140938	93.13508	.7651428

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087684	.0073853	20.51451	.3841948	.1736583	.3758112	277.7012
Stddev	.0000724	.0002868	.08602	.0030092	.0003457	.0002704	2.4397
%RSD	.8261066	3.883707	.4193127	.7832379	.1990475	.0719536	.8785292
#1	.0086888	.0074705	20.41854	.3841235	.1732612	.3757139	276.9257
#2	.0087859	.0076199	20.58466	.3812220	.1738916	.3756029	275.7435
#3	.0088304	.0070656	20.54034	.3872390	.1738222	.3761168	280.4344

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.355916	44.28001	1.238443	.0173455	2.741505	.3645433	.7445861
Stddev	.016723	.13273	.001678	.0005747	.046613	.0027646	.0044907
%RSD	.3122420	.2997435	.1355260	3.313110	1.700265	.7583704	.6031125
#1	5.339764	44.13427	1.237036	.0172638	2.707864	.3659418	.7442899
#2	5.354825	44.31183	1.237993	.0179567	2.721939	.3663292	.7402509
#3	5.373158	44.39394	1.240301	.0168160	2.794712	.3613589	.7492176

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.00263	-.304069	.0075096	.0349005	3.885162	5.082682	6.230666
Stddev	.16279	.002994	.0001174	.0002381	.012488	.106060	.011603
%RSD	1.017290	.9847035	1.563203	.6822644	.3214258	2.086684	.1862168
#1	15.92311	-.304801	.0073747	.0349988	3.880136	4.980751	6.218096
#2	15.89488	-.306628	.0075888	.0350738	3.875969	5.074859	6.232935
#3	16.18990	-.300776	.0075653	.0346290	3.899379	5.192436	6.240966

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: O1232-06 Acquired: 1/20/2023 21:12:47 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: B-P-19A Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6917840	.1560097	.1384570
Stddev	.0059035	.0007733	.0005817
%RSD	.8533745	.4956465	.4201395
#1	.6856587	.1555083	.1382471
#2	.6922559	.1569002	.1380095
#3	.6974375	.1556206	.1391146

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5103.976	83859.62	7084.196	4589.136	4131.789
Stddev	6.352	474.13	13.888	20.517	6.803
%RSD	.1244434	.5653885	.1960397	.4470851	.1646417
#1	5097.585	83955.67	7086.716	4597.278	4126.785
#2	5110.287	84278.37	7069.221	4604.333	4139.535
#3	5104.055	83344.81	7096.651	4565.797	4129.049

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV09 Acquired: 1/20/2023 21:16:34 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV19989 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.120594**	**5.121297**	**4.823894**	**4.996094**	**4.941799**	**9.623385**	**10.45978**
Stddev	.101886	.093634	.096118	.099397	.102877	.110233	.06438
%RSD	1.989732	1.828322	1.992532	1.989503	2.081771	1.145468	.6155340
#1	5.236007	5.228705	4.934037	5.108436	5.059973	9.499621	10.38571
#2	5.043123	5.056873	4.756993	4.919568	4.872229	9.659516	10.50228
#3	5.082652	5.078313	4.780651	4.960279	4.893196	9.711018	10.49135

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2553143**	**2.432683**	**24.05743**	**.9294545**	**2.323695**	**1.180921**	**5.100727**
Stddev	.0033526	.046327	.19718	.0008526	.042917	.024104	.065192
%RSD	1.313115	1.904366	.8196302	.0917295	1.846920	2.041126	1.278084
#1	.2568021	2.485820	23.83136	.9287394	2.372793	1.208322	5.049029
#2	.2576656	2.400770	24.19389	.9292259	2.293324	1.162991	5.079191
#3	.2514754	2.411460	24.14706	.9303980	2.304968	1.171449	5.173962

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.409562**	**23.82362**	**2.475062**	**1.181171**	**22.90925**	**2.494310**	**2.485558**
Stddev	.013012	.17928	.048383	.001762	.28713	.015325	.007535
%RSD	.5400010	.7525392	1.954805	.1491338	1.253315	.6143879	.3031564
#1	2.394543	23.61773	2.530758	1.181894	22.65535	2.476654	2.481833
#2	2.417409	23.94527	2.443424	1.182456	22.85158	2.502116	2.494231
#3	2.416735	23.90785	2.451004	1.179163	23.22084	2.504160	2.480612

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.74157**	**4.699022**	**4.865782**	**4.870136**	**4.848530**	**4.614060**	**4.775343**
Stddev	.33362	.057869	.094721	.099023	.033161	.108778	.093411
%RSD	1.348425	1.231519	1.946672	2.033279	.6839474	2.357527	1.956116
#1	24.47636	4.722532	4.973773	4.983888	4.810777	4.516421	4.882864
#2	24.63219	4.741436	4.796770	4.803209	4.861867	4.594450	4.714161
#3	25.11615	4.633097	4.826804	4.823311	4.872947	4.731309	4.729004

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCV09 Acquired: 1/20/2023 21:16:34 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCV19989 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.853753**	**4.807436**	**5.006317**
Stddev	.104948	.036988	.073772
%RSD	2.162197	.7693893	1.473586
#1	4.974262	4.764811	4.921491
#2	4.782440	4.831086	5.055490
#3	4.804558	4.826410	5.041972

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4255.314**	**70729.35**	**5888.774**	**3840.639**	**4156.002**
Stddev	79.606	78.84	67.831	13.880	74.536
%RSD	1.870735	.1114682	1.151866	.3613875	1.793455
#1	4163.571	70720.30	5868.850	3840.609	4070.313
#2	4296.232	70655.43	5833.137	3826.774	4191.869
#3	4306.138	70812.33	5964.336	3854.533	4205.824

Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB09 Acquired: 1/20/2023 21:20:22 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB19989 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001070**	**.0012887**	**-.001954**	**-.001314**	**-.000865**	**.0073879**	**-.007932**
Stddev	.002011	.0013138	.001546	.003466	.000397	.0135602	.002074
%RSD	187.8454	101.9473	79.11934	263.8628	45.82286	183.5459	26.15269
#1	-.001870	.0014640	-.000277	-.000302	-.001174	-.000116	-.005805
#2	-.002558	.0025060	-.002262	.001534	-.000418	-.000762	-.009950
#3	.001217	-.000104	-.003323	-.005173	-.001004	.023041	-.008041

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000008**	**.0001029**	**.0031446**	**-.000505**	**-.000205**	**.0003633**	**.0046341**
Stddev	.000088	.0001122	.0044936	.000039	.000069	.0002410	.0018633
%RSD	1064.182	109.0408	142.8965	7.653252	33.73127	66.31665	40.20888
#1	-.000090	-.000024	.0031168	-.000505	-.000268	.0003013	.0056099
#2	-.000020	.000143	-.001335	-.000543	-.000131	.0001595	.0024855
#3	.000085	.000190	.007652	-.000466	-.000215	.0006293	.0058068

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006394**	**-.020347**	**.0000935**	**.0016993**	**.0022507**	**-.001889**	**-.000008**
Stddev	.0007023	.031292	.0002636	.0003435	.0108669	.001904	.000235
%RSD	109.8464	153.7897	282.0048	20.21731	482.8149	100.8179	2889.413
#1	.0007862	-.008805	-.000211	.0017593	-.001117	-.002376	-.000232
#2	-.000125	-.055771	.000242	.0013296	.014403	-.003502	-.000029
#3	.001257	.003534	.000249	.0020088	-.006534	.000212	.000236

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0918890**	**.0059753**	**.0065818**	**.0000472**	**.0006960**	**.0097824**	**-.006525**
Stddev	.0268633	.0004969	.0022141	.0000634	.0002245	.0096113	.000580
%RSD	29.23454	8.315383	33.64033	134.2986	32.26063	98.25190	8.891508
#1	.0919204	.0062962	.0088644	.0001094	.0007511	-.001026	-.006082
#2	.0650100	.0062267	.0064380	-.000017	.0004490	.017369	-.006312
#3	.1187366	.0054030	.0044431	.000050	.0008878	.013004	-.007182

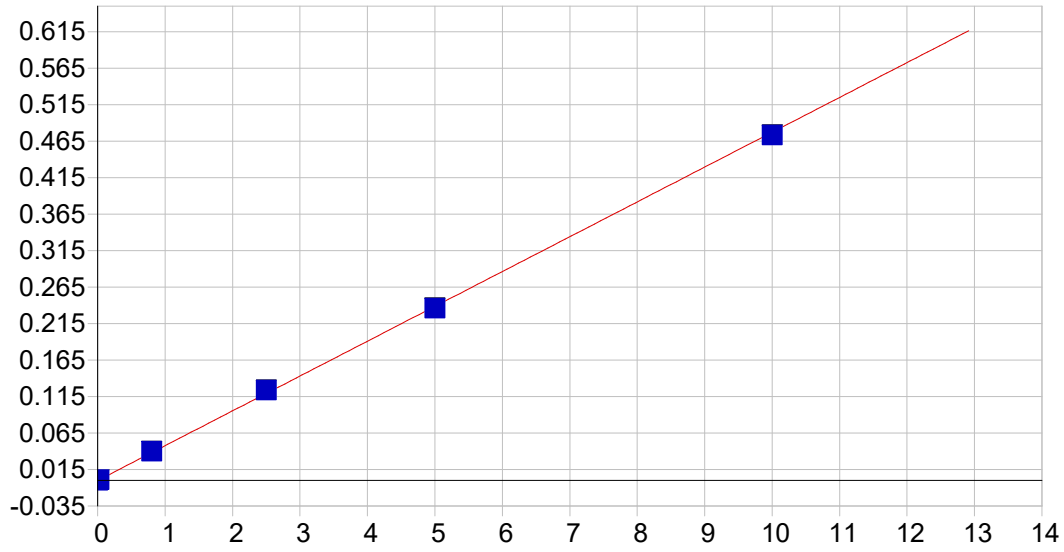
Reviewed By:jaswal
On:1/24/2023 8:09:32 PM
Inst Id :P4
LB :LB123754

Sample Name: CCB09 Acquired: 1/20/2023 21:20:22 Type: Unk
Method: NON EPA-6010-200.7(v1697) Mode: CONC Corr. Factor: 1.000000
User: Bin Custom ID1: CCB19989 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000070	.0015946	-.000053
Stddev	.002011	.0014111	.000035
%RSD	2887.706	88.48977	66.04579
#1	.002225	.0032229	-.000023
#2	-.001529	.0007297	-.000092
#3	-.000905	.0008312	-.000045

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4254.914	71258.13	5883.460	3869.447	4334.084
Stddev	22.008	74.16	24.180	15.688	13.672
%RSD	.5172321	.1040717	.4109824	.4054411	.3154481
#1	4236.513	71236.06	5855.588	3865.080	4326.084
#2	4248.937	71197.50	5898.812	3856.405	4326.299
#3	4279.294	71340.82	5895.982	3886.856	4349.871

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



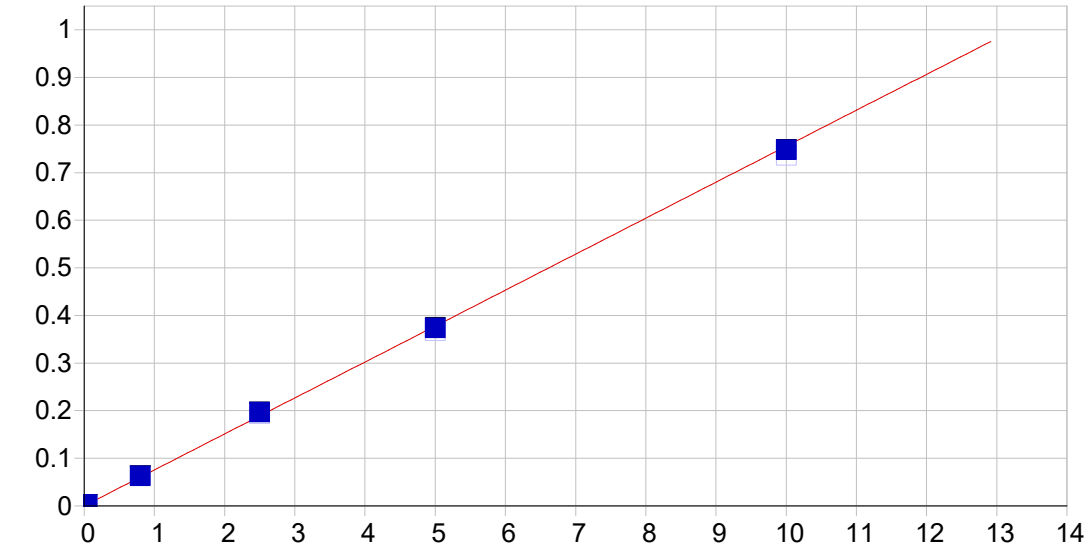
As 189.042 {479}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000090	Re-Slope:	1.000000
A1 (Gain):	0.047727	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999798	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.003050		
Predicted MQL:	0.010168		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00009	.000	1
S1	.02000	.02467	.005	23.3	.00109	.000	1
S3	2.5000	2.5933	.093	3.73	.12367	.000	1
S4	5.0000	4.9498	-.050	-1.00	.23612	.000	1
S5	10.000	9.9163	-.084	-.837	.47312	.001	1
S2	.80000	.83593	.036	4.49	.03980	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



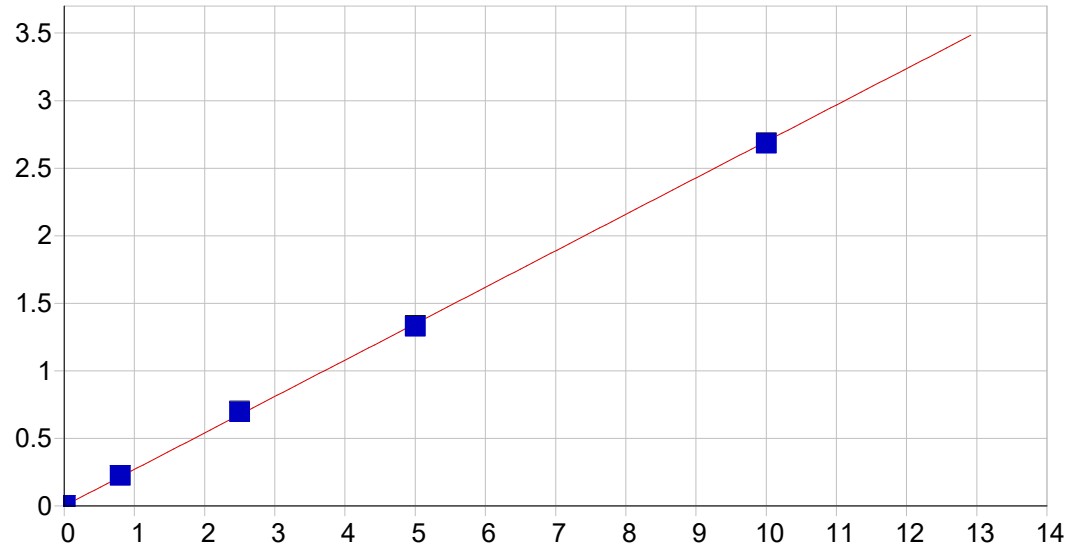
Tl 190.856 {477}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000092	Re-Slope:	1.000000
A1 (Gain):	0.075541	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999780	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.001994		
Predicted MQL:	0.006647		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00009	.000	1
S1	.04000	.04039	.000	.969	.00296	.000	1
S3	2.5000	2.6059	.106	4.24	.19384	.000	1
S4	5.0000	4.9507	-.049	-.985	.36786	.001	1
S5	10.000	9.9039	-.096	-.961	.73582	.000	1
S2	.80000	.83908	.039	4.89	.06248	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



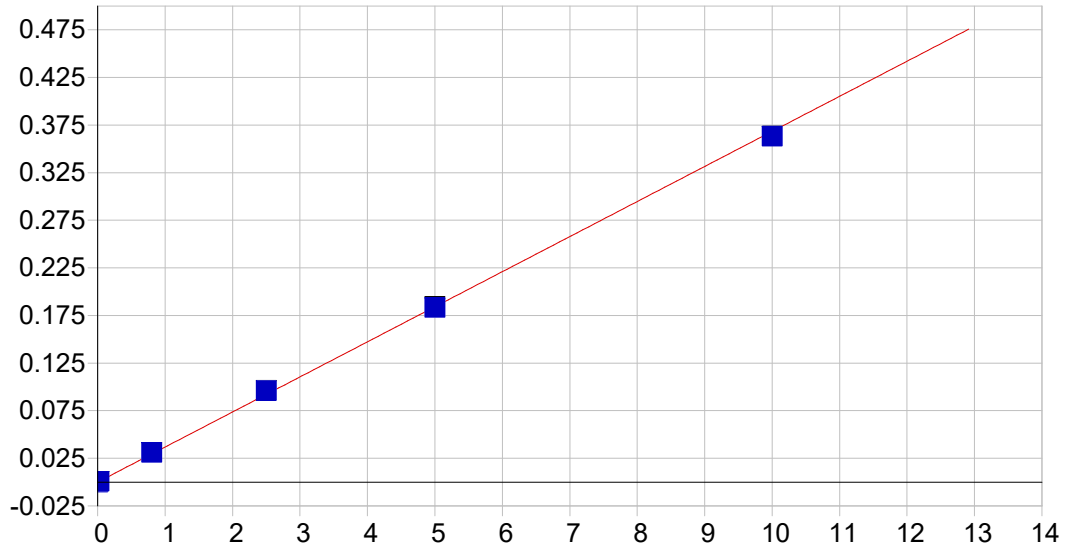
Pb 220.353 {453}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000198	Re-Slope:	1.000000
A1 (Gain):	0.269739	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999849	Status:	OK.
Std Error of Est:	0.000085		
Predicted MDL:	0.001554		
Predicted MQL:	0.005179		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00020	.000	1
S1	.01200	.01314	.001	9.53	.00371	.000	1
S3	2.5000	2.5852	.085	3.41	.69740	.003	1
S4	5.0000	4.9298	-.070	-1.40	1.3297	.003	1
S5	10.000	9.9516	-.048	-.484	2.6840	.002	1
S2	.80000	.83223	.032	4.03	.22464	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



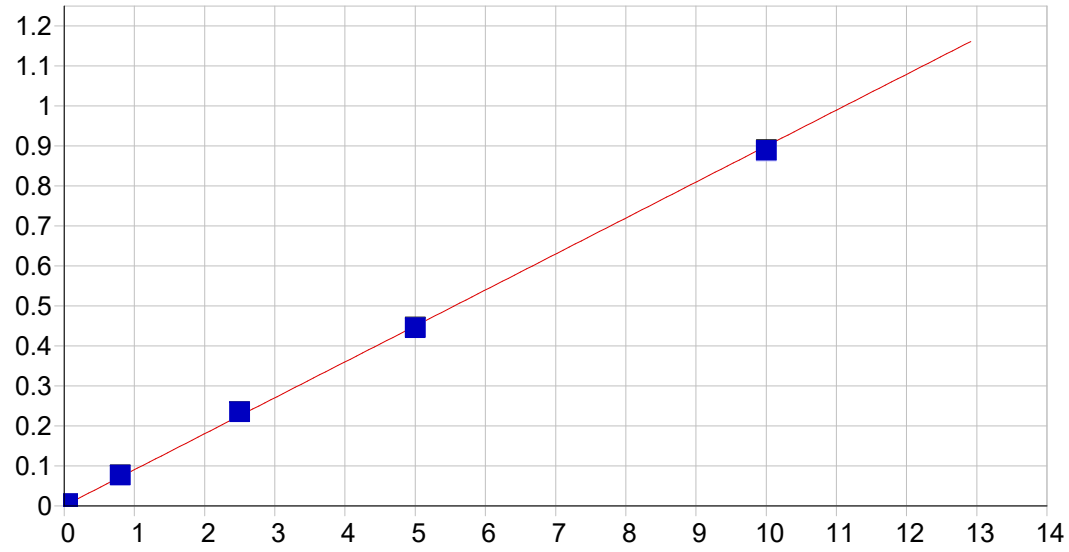
Se 196.090 {472}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000016	Re-Slope:	1.000000
A1 (Gain):	0.036834	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999718	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.004512		
Predicted MQL:	0.015040		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00002	.000	1
S1	.02000	.02495	.005	24.8	.00090	.000	1
S3	2.5000	2.6096	.110	4.39	.09614	.000	1
S4	5.0000	4.9797	-.020	-.407	.18347	.001	1
S5	10.000	9.8625	-.137	-1.37	.36339	.000	1
S2	.80000	.84322	.043	5.40	.03105	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



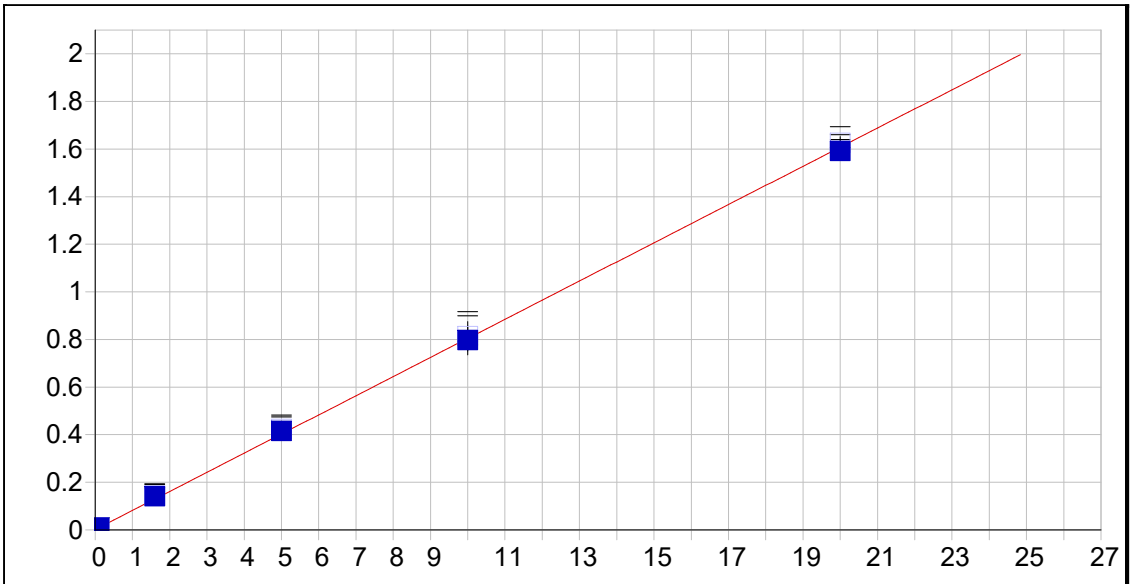
Sb 206.833 {463}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000528	Re-Slope:	1.000000
A1 (Gain):	0.089908	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999737	Status:	OK.
Std Error of Est:	0.000076		
Predicted MDL:	0.002395		
Predicted MQL:	0.007983		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00053	.000	1
S1	.05000	.05258	.003	5.16	.00524	.000	1
S3	2.5000	2.6070	.107	4.28	.23427	.000	1
S4	5.0000	4.9535	-.046	-.929	.44461	.001	1
S5	10.000	9.8866	-.113	-1.13	.88684	.001	1
S2	.80000	.85028	.050	6.28	.07677	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



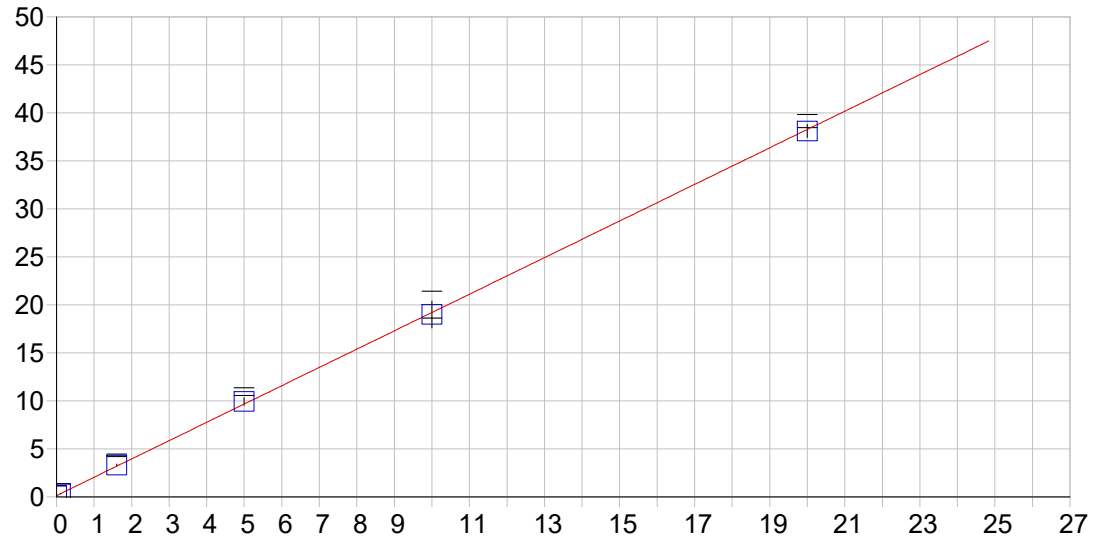
Al 396.152 { 85}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001239	Re-Slope:	1.000000
A1 (Gain):	0.080336	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999728	Status:	OK.
Std Error of Est:	0.000142		
Predicted MDL:	0.016000		
Predicted MQL:	0.053333		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00124	.000	1
S1	.10000	.10376	.004	3.76	.01021	.001	1
S3	5.0000	5.1514	.151	3.03	.42352	.018	1
S4	10.000	9.9001	-.100	-.999	.81344	.062	1
S5	20.000	19.800	-.200	-1.00	1.6256	.027	1
S2	1.6000	1.7447	.145	9.04	.14410	.007	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



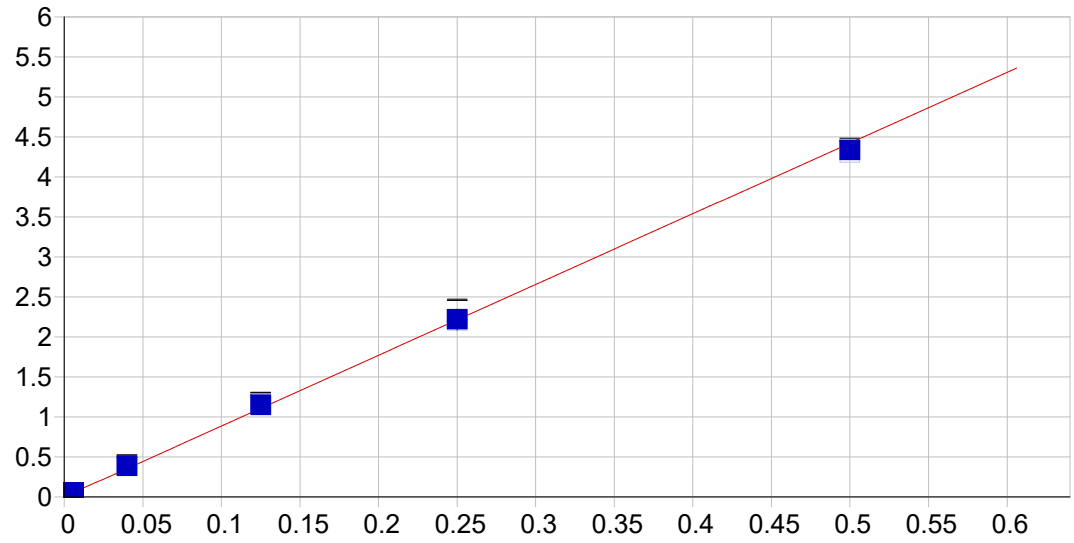
Ba 493.409 { 68}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.142489	Re-Slope:	1.000000
A1 (Gain):	1.906484	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999903	Status:	OK.
Std Error of Est:	0.001970		
Predicted MDL:	0.002081		
Predicted MQL:	0.006935		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.14248	.005	1
S1	.10000	.10017	.000	.167	.33346	.012	1
S3	5.0000	5.1353	.135	2.71	9.9328	.413	1
S4	10.000	9.8960	-.104	-1.04	19.009	1.40	1
S5	20.000	19.912	-.088	-.440	38.104	.679	1
S2	1.6000	1.6566	.057	3.54	3.3007	.144	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



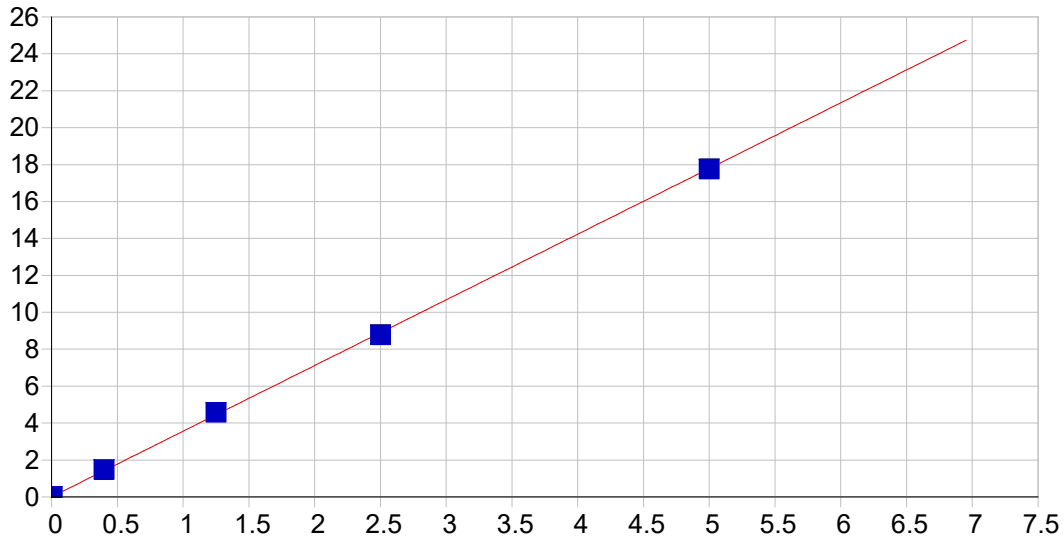
Be 234.861 {144}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002248	Re-Slope:	1.000000
A1 (Gain):	8.842221	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999601	Status:	OK.
Std Error of Est:	0.000713		
Predicted MDL:	0.000075		
Predicted MQL:	0.000251		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00224	.000	1
S1	.00600	.00648	.000	7.99	.05893	.001	1
S3	.12500	.13005	.005	4.04	1.1438	.031	1
S4	.25000	.25073	.001	.292	2.2027	.128	1
S5	.50000	.49033	-.010	-1.93	4.3046	.020	1
S2	.04000	.04342	.003	8.55	.38352	.015	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



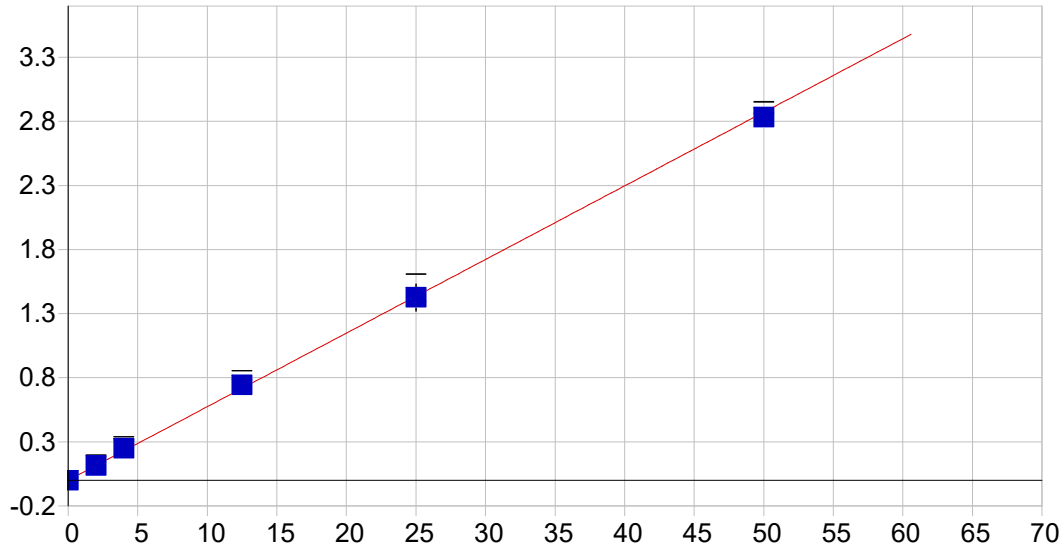
Cd 226.502 {449}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000414	Re-Slope:	1.000000
A1 (Gain):	3.558150	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999899	Status:	OK.
Std Error of Est:	0.000459		
Predicted MDL:	0.000097		
Predicted MQL:	0.000324		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00041	.000	1
S1	.00600	.00648	.000	8.02	.02356	.000	1
S3	1.2500	1.2841	.034	2.73	4.5732	.010	1
S4	2.5000	2.4648	-.035	-1.41	8.7782	.016	1
S5	5.0000	4.9886	-.011	-.228	17.766	.006	1
S2	.40000	.41203	.012	3.01	1.4677	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



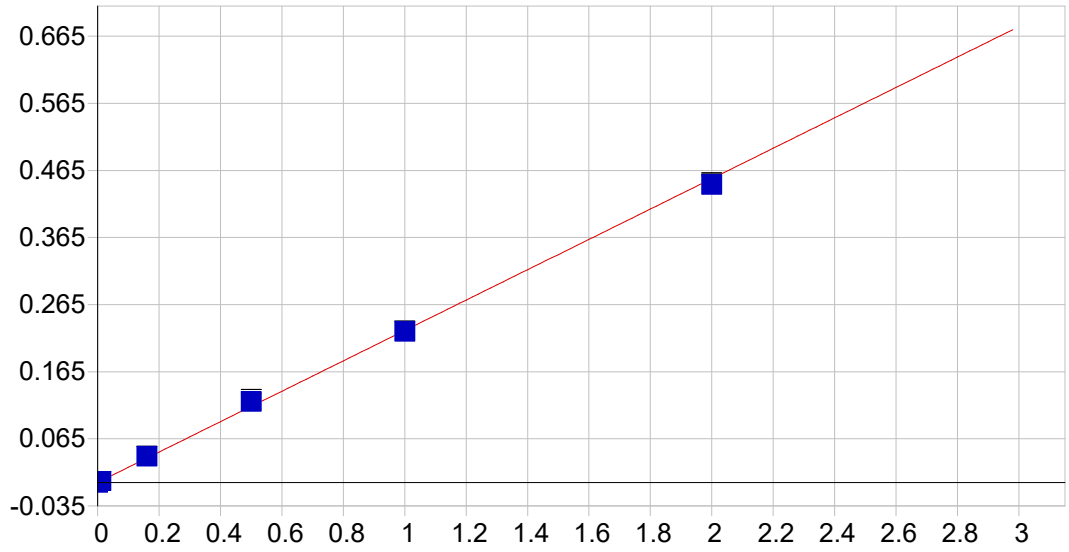
Ca 373.690 { 90}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000127	Re-Slope:	1.000000
A1 (Gain):	0.057429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999694	Status:	OK.
Std Error of Est:	0.000750		
Predicted MDL:	0.017210		
Predicted MQL:	0.057366		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00022	-.000	.000	-.00014	.000	1
S2	4.0000	4.3480	.348	8.70	.24923	.011	1
S3	12.500	12.961	.461	3.68	.74309	.033	1
S4	25.000	24.847	-.153	-.610	1.4247	.106	1
S5	50.000	49.338	-.662	-1.32	2.8289	.045	1
S1	2.0000	2.0065	.006	.323	.11506	.004	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



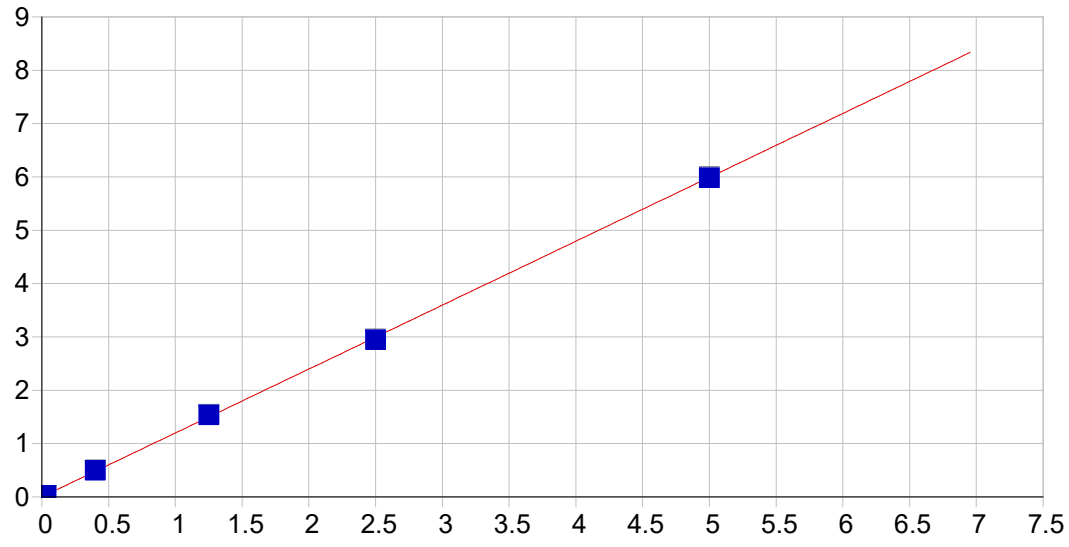
Cr 267.716 {126}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000004	Re-Slope:	1.000000
A1 (Gain):	0.226431	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999461	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	0.000417		
Predicted MQL:	0.001390		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00000	.000	1
S1	.01000	.01029	.000	2.93	.00233	.000	1
S3	.50000	.53316	.033	6.63	.12088	.003	1
S4	1.0000	.99381	-.006	-.619	.22534	.001	1
S5	2.0000	1.9604	-.040	-1.98	.44452	.002	1
S2	.16000	.17229	.012	7.68	.03906	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



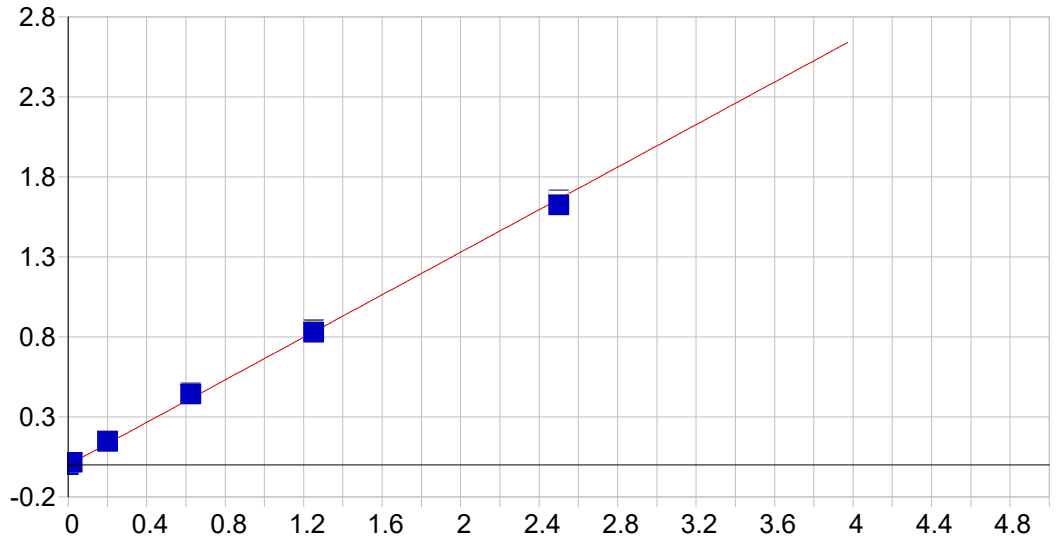
Co 228.616 {448}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000336	Re-Slope:	1.000000
A1 (Gain):	1.198407	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999888	Status:	OK.
Std Error of Est:	0.000365		
Predicted MDL:	0.000255		
Predicted MQL:	0.000850		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00033	.000	1
S1	.03000	.03024	.000	.810	.03648	.000	1
S3	1.2500	1.2836	.034	2.69	1.5419	.003	1
S4	2.5000	2.4596	-.040	-1.62	2.9545	.005	1
S5	5.0000	4.9925	-.007	-.150	5.9965	.006	1
S2	.40000	.41408	.014	3.52	.49762	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



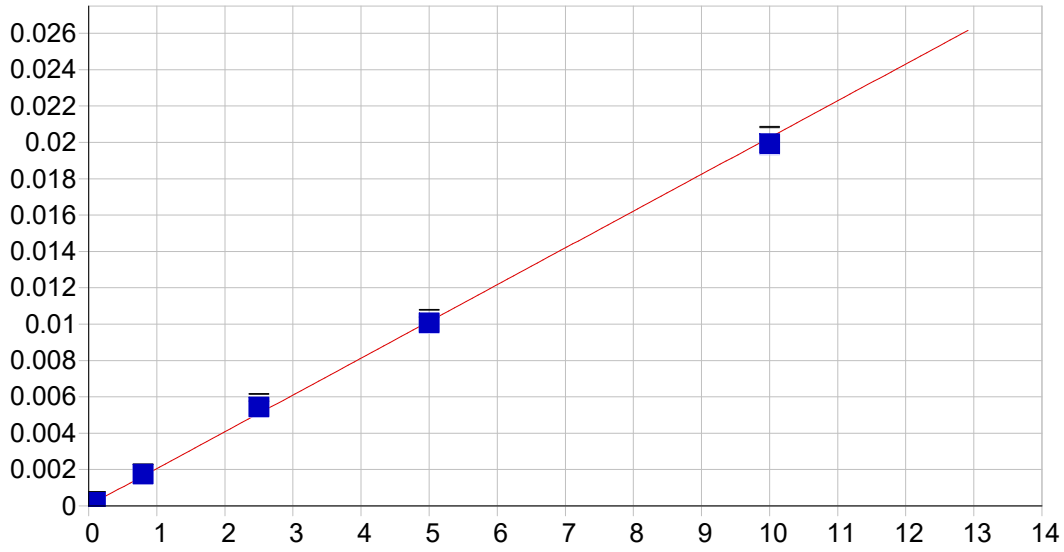
Cu 224.700 {450}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000156	Re-Slope:	1.000000
A1 (Gain):	0.664718	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999359	Status:	OK.
Std Error of Est:	0.000285		
Predicted MDL:	0.000536		
Predicted MQL:	0.001786		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00016	.000	1
S1	.02000	.02296	.003	14.8	.01534	.000	1
S3	.62500	.66469	.040	6.35	.44960	.001	1
S4	1.2500	1.2456	-.004	-.354	.84364	.003	1
S5	2.5000	2.4427	-.057	-2.29	1.6552	.001	1
S2	.20000	.21912	.019	9.56	.14803	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



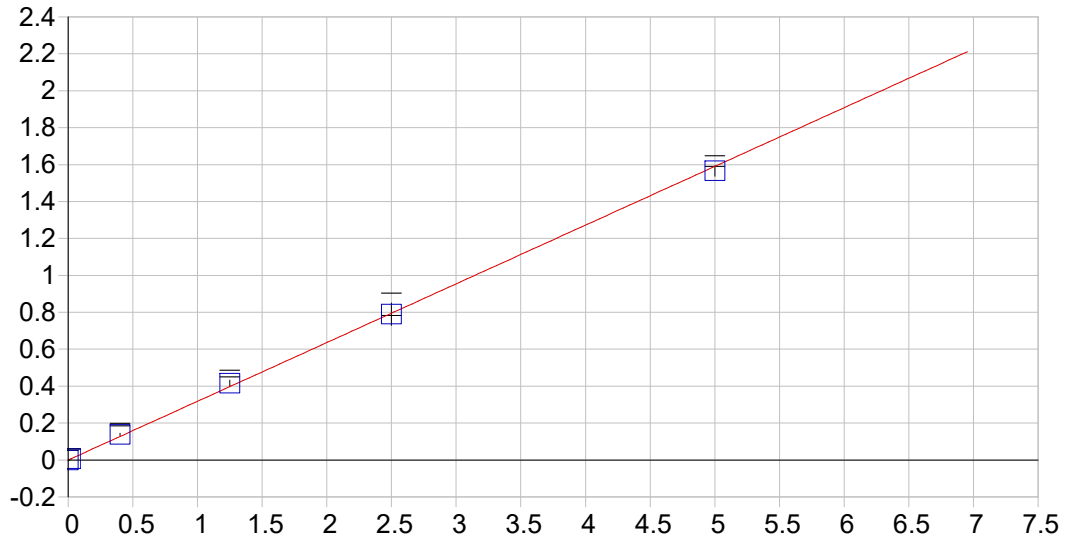
Fe 240.488 {140}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000030	Re-Slope:	1.000000
A1 (Gain):	0.002023	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999498	Status:	OK.
Std Error of Est:	0.000003		
Predicted MDL:	0.012497		
Predicted MQL:	0.041657		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.10000	.09005	-.010	-9.95	.00021	.000	1
S3	2.5000	2.6693	.169	6.77	.00541	.000	1
S4	5.0000	4.9596	-.040	-.808	.01003	.000	1
S5	10.000	9.8339	-.166	-1.66	.01985	.000	1
S2	.80000	.84724	.047	5.91	.00174	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



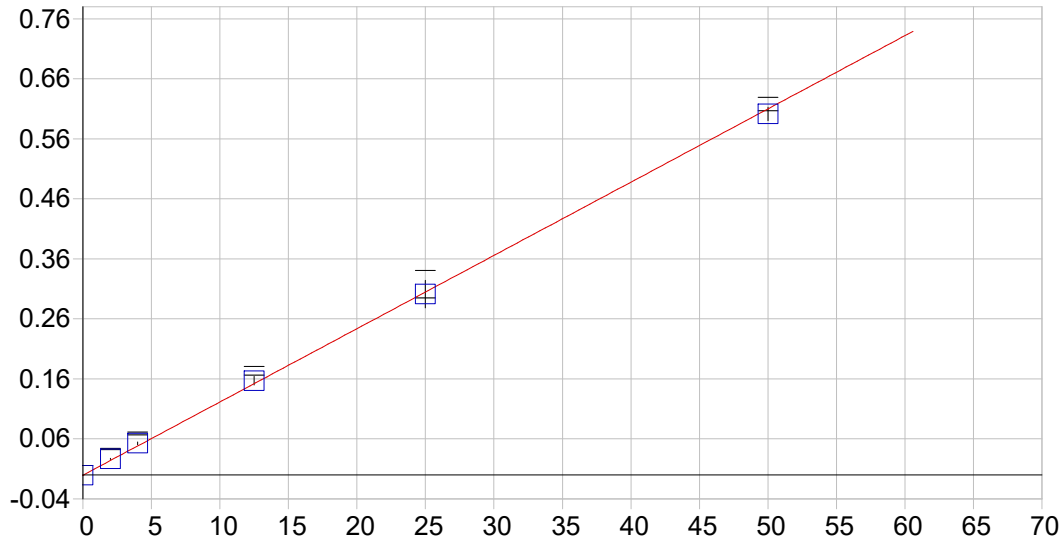
Mn 257.610 {131}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000061	Re-Slope:	1.000000
A1 (Gain):	0.318060	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999613	Status:	OK.
Std Error of Est:	0.000147		
Predicted MDL:	0.000988		
Predicted MQL:	0.003293		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00006	.000	1
S1	.02000	.02187	.002	9.34	.00689	.000	1
S3	1.2500	1.3045	.054	4.36	.41485	.018	1
S4	2.5000	2.4835	-.017	-.662	.78983	.060	1
S5	5.0000	4.9239	-.076	-1.52	1.5660	.029	1
S2	.40000	.43627	.036	9.07	.13870	.007	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



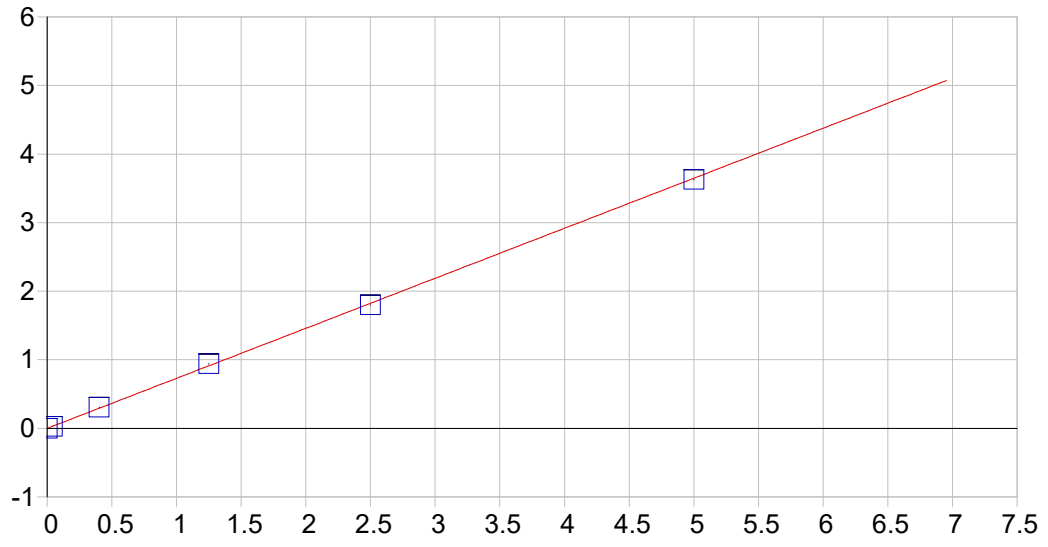
Mg 279.079 {121}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000540	Re-Slope:	1.000000
A1 (Gain):	0.012207	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999585	Status:	OK.
Std Error of Est:	0.000186		
Predicted MDL:	0.035889		
Predicted MQL:	0.119631		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00040	-.000	.000	-.00054	.000	1
S2	4.0000	4.3461	.346	8.65	.05251	.002	1
S3	12.500	12.901	.401	3.21	.15695	.007	1
S4	25.000	24.731	-.269	-1.07	.30136	.023	1
S5	50.000	49.310	-.690	-1.38	.60140	.011	1
S1	2.0000	2.2112	.211	10.6	.02645	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



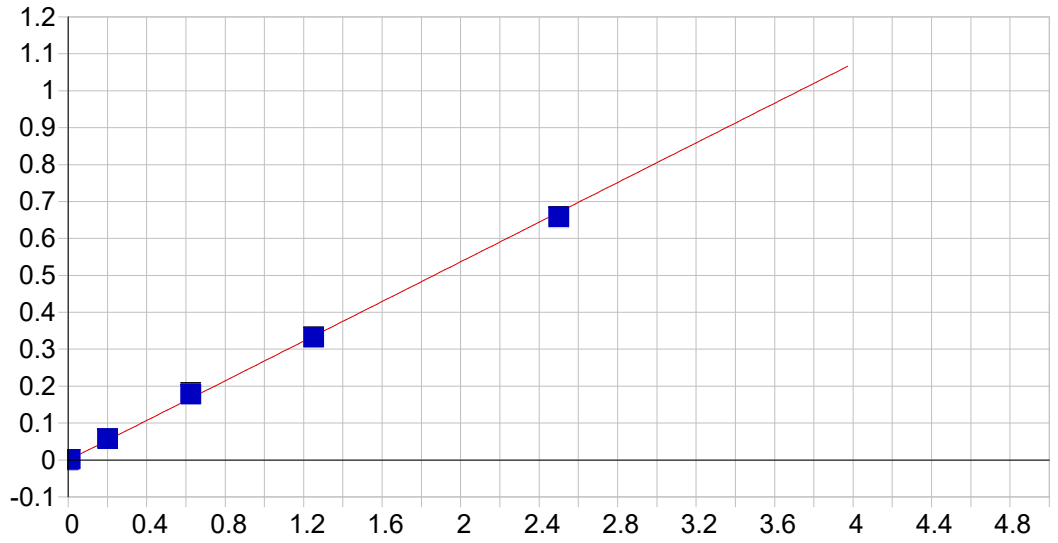
Ni 231.604 {446}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000362	Re-Slope:	1.000000
A1 (Gain):	0.729509	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999832	Status:	OK.
Std Error of Est:	0.000314		
Predicted MDL:	0.000413		
Predicted MQL:	0.001376		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00036	.000	1
S1	.04000	.03965	-.000	-.870	.02856	.000	1
S3	1.2500	1.2909	.041	3.27	.94133	.003	1
S4	2.5000	2.4658	-.034	-1.37	1.7984	.002	1
S5	5.0000	4.9725	-.028	-.551	3.6271	.001	1
S2	.40000	.42127	.021	5.32	.30696	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



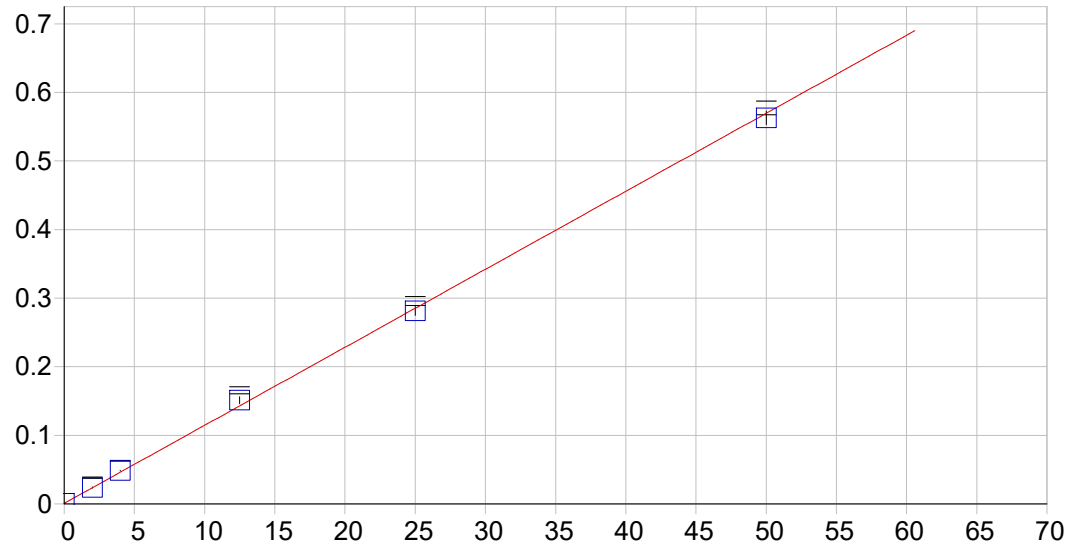
Ag 328.068 {103}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000438	Re-Slope:	1.000000
A1 (Gain):	0.268531	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999470	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.000573		
Predicted MQL:	0.001909		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00044	.000	1
S1	.01000	.01049	.000	4.85	.00236	.000	1
S3	.62500	.66541	.040	6.47	.17737	.004	1
S4	1.2500	1.2413	-.009	-.695	.33114	.000	1
S5	2.5000	2.4523	-.048	-1.91	.65457	.001	1
S2	.20000	.21553	.016	7.77	.05716	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



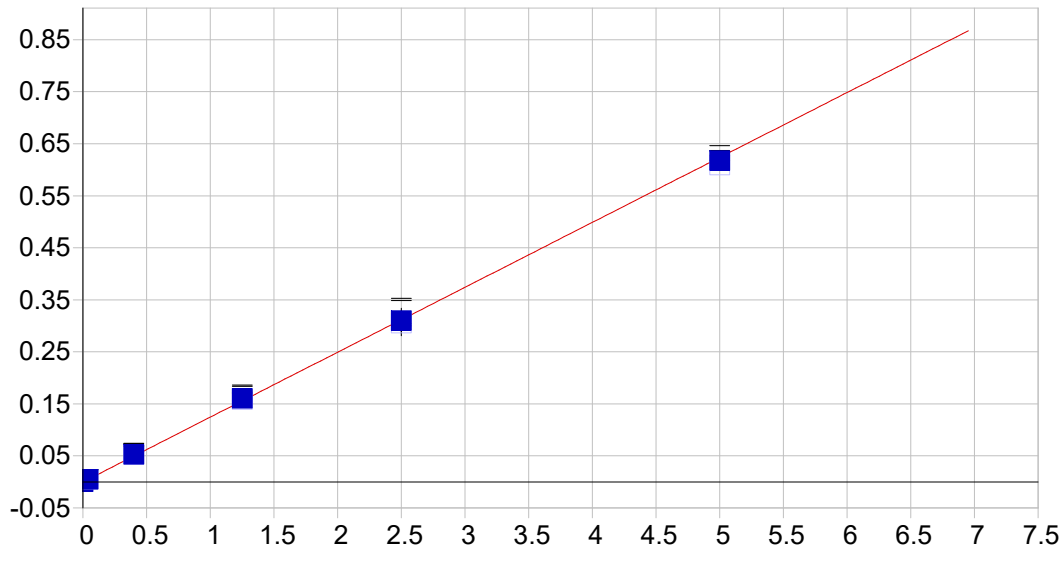
Na 589.592 { 57}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000830	Re-Slope:	1.000000
A1 (Gain):	0.011374	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999663	Status:	OK.
Std Error of Est:	0.000156		
Predicted MDL:	0.017765		
Predicted MQL:	0.059216		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00018	-.000	.000	.00083	.000	1
S2	4.0000	4.1901	.190	4.75	.04849	.001	1
S3	12.500	13.226	.726	5.81	.15127	.005	1
S4	25.000	24.673	-.327	-1.31	.28146	.007	1
S5	50.000	49.396	-.604	-1.21	.56265	.010	1
S1	2.0000	2.0144	.014	.718	.02374	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



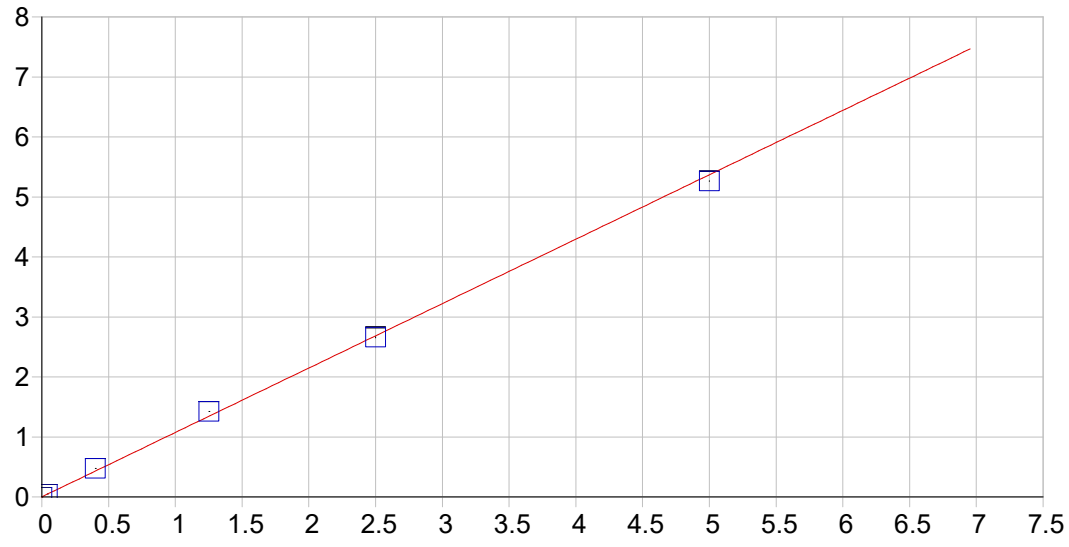
V 292.402 {115}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000329	Re-Slope:	1.000000
A1 (Gain):	0.124788	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999807	Status:	OK.
Std Error of Est:	0.000057		
Predicted MDL:	0.004335		
Predicted MQL:	0.014451		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00033	.000	1
S1	.04000	.04046	.000	1.14	.00454	.000	1
S3	1.2500	1.2880	.038	3.04	.15816	.007	1
S4	2.5000	2.4842	-.016	-.631	.30520	.024	1
S5	5.0000	4.9511	-.049	-.977	.60857	.010	1
S2	.40000	.42620	.026	6.55	.05214	.002	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



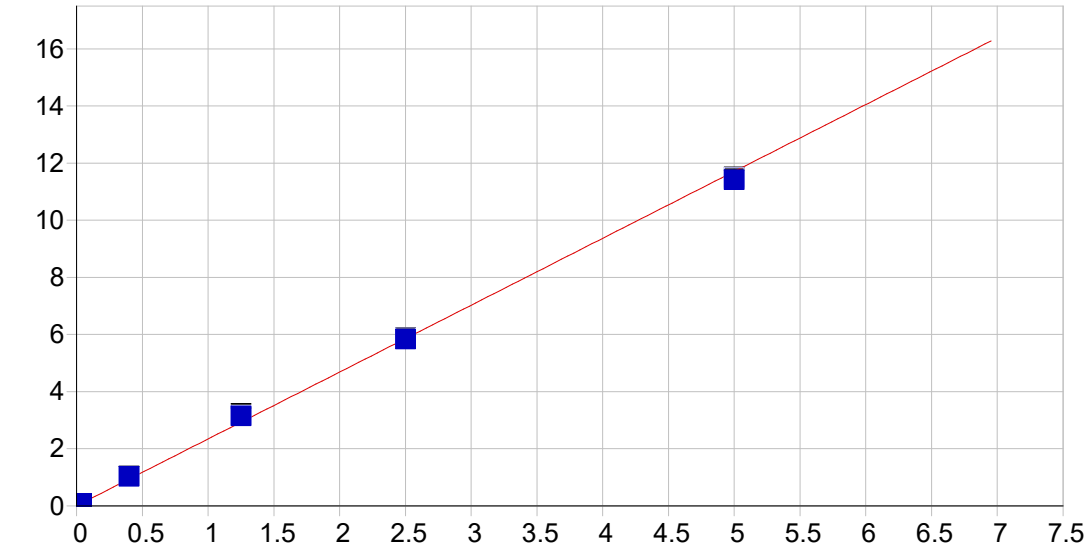
Zn 206.200 {464}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000600	Re-Slope:	1.000000
A1 (Gain):	1.073704	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999392	Status:	OK.
Std Error of Est:	0.000879		
Predicted MDL:	0.000190		
Predicted MQL:	0.000635		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00059	.000	1
S1	.04000	.04288	.003	7.20	.04664	.000	1
S3	1.2500	1.3255	.076	6.04	1.4238	.002	1
S4	2.5000	2.4799	-.020	-.805	2.6632	.011	1
S5	5.0000	4.9004	-.100	-1.99	5.2622	.005	1
S2	.40000	.44129	.041	10.3	.47441	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



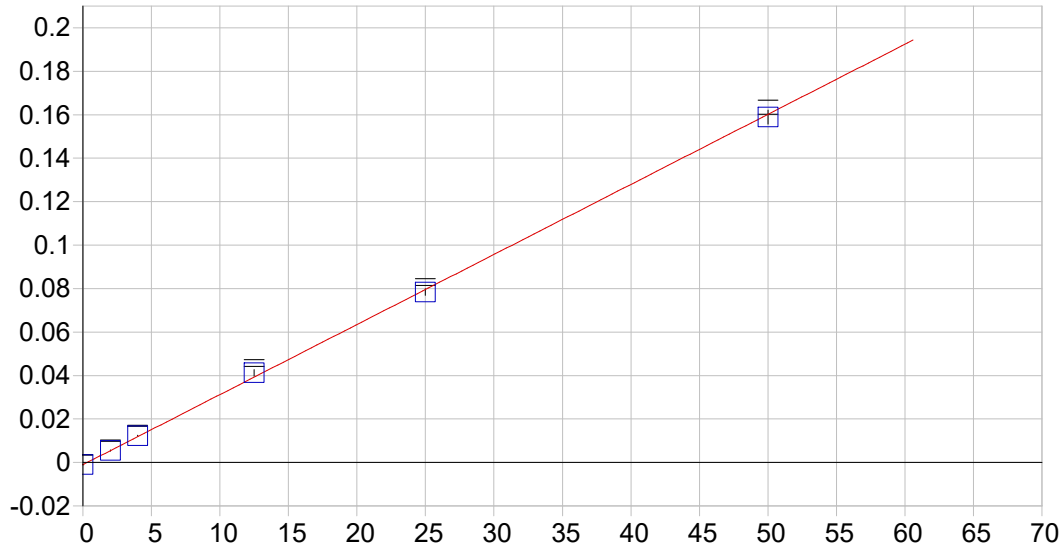
Zn 213.856 {158}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003022	Re-Slope:	1.000000
A1 (Gain):	2.341443	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999235	Status:	OK.
Std Error of Est:	0.002166		
Predicted MDL:	0.000278		
Predicted MQL:	0.000928		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00300	.001	1
S1	.04000	.04222	.002	5.55	.10257	.001	1
S3	1.2500	1.3425	.092	7.40	3.1681	.074	1
S4	2.5000	2.4920	-.008	-.320	5.8813	.008	1
S5	5.0000	4.8730	-.127	-2.54	11.500	.021	1
S2	.40000	.44032	.040	10.1	1.0410	.002	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



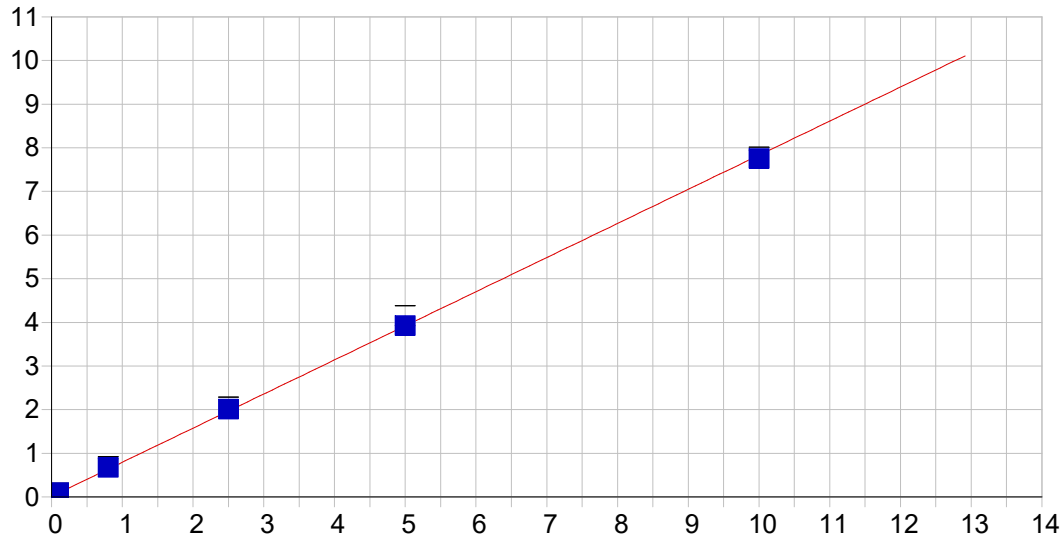
K 766.490 { 44}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001034	Re-Slope:	1.000000
A1 (Gain):	0.003224	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999768	Status:	OK.
Std Error of Est:	0.000037		
Predicted MDL:	0.077319		
Predicted MQL:	0.257731		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00015	-.000	.000	-.00103	.000	1
S2	4.0000	4.1323	.132	3.31	.01229	.000	1
S3	12.500	13.111	.611	4.89	.04124	.002	1
S4	25.000	24.634	-.366	-1.47	.07839	.002	1
S5	50.000	49.594	-.406	-.812	.15887	.003	1
S1	2.0000	2.0290	.029	1.45	.00551	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



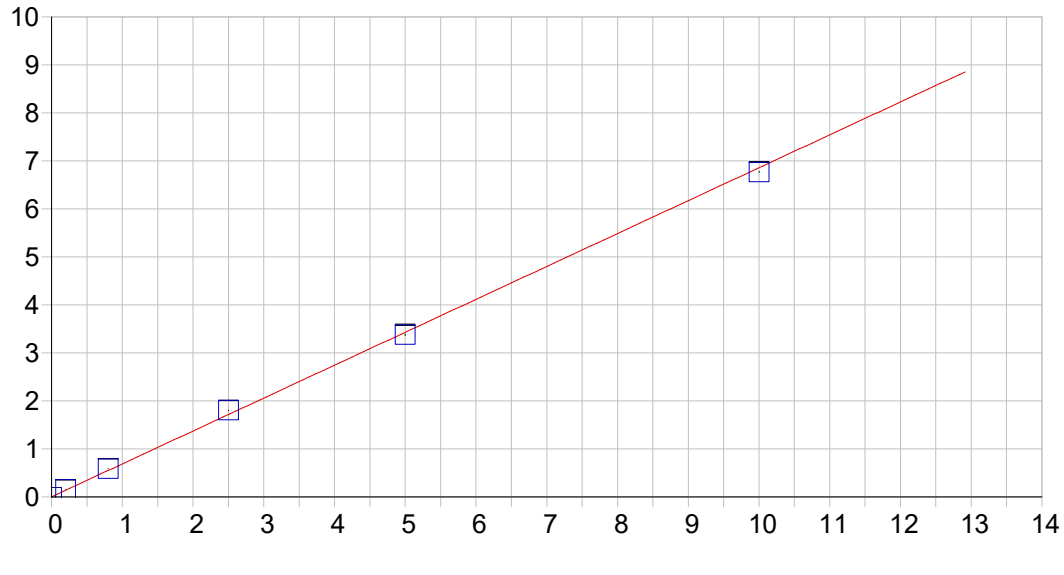
B 249.678 {135}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.012455	Re-Slope:	1.000000
A1 (Gain):	0.781759	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999876	Status:	OK.
Std Error of Est:	0.000647		
Predicted MDL:	0.001091		
Predicted MQL:	0.003635		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.01245	.001	1
S1	.10000	.10255	.003	2.55	.09239	.002	1
S3	2.5000	2.5505	.051	2.02	2.0074	.051	1
S4	5.0000	5.0035	.004	.070	3.9260	.229	1
S5	10.000	9.8990	-.101	-1.01	7.7551	.034	1
S2	.80000	.84437	.044	5.55	.67287	.026	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



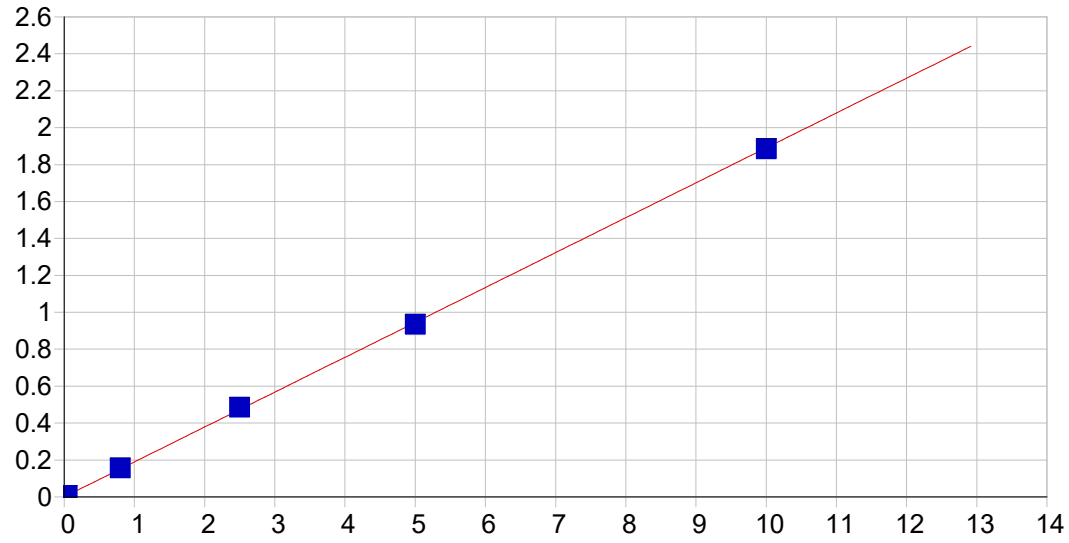
Mo 202.030 {467}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002127	Re-Slope:	1.000000
A1 (Gain):	0.685531	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999603	Status:	OK.
Std Error of Est:	0.001438		
Predicted MDL:	0.000312		
Predicted MQL:	0.001040		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00004	-.000	.000	.00210	.001	1
S1	.20000	.21597	.016	7.99	.15018	.000	1
S3	2.5000	2.6285	.129	5.14	1.8041	.002	1
S4	5.0000	4.9262	-.074	-1.48	3.3792	.013	1
S5	10.000	9.8722	-.128	-1.28	6.7698	.011	1
S2	.80000	.85716	.057	7.14	.58974	.001	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



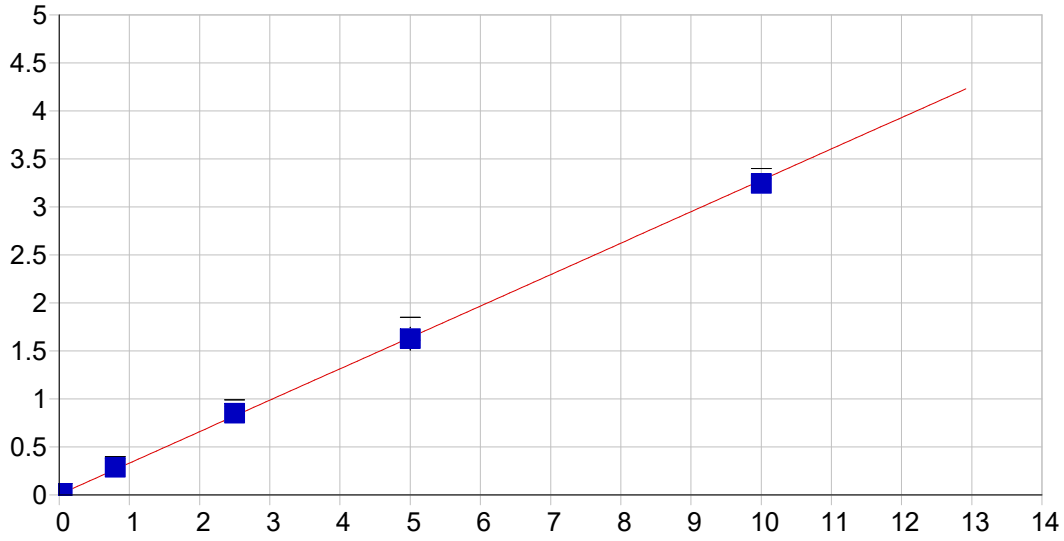
Sn 189.989 {478}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000388	Re-Slope:	1.000000
A1 (Gain):	0.188983	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999917	Status:	OK.
Std Error of Est:	0.000081		
Predicted MDL:	0.000773		
Predicted MQL:	0.002576		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00039	.000	1
S1	.04000	.03891	-.001	-2.74	.00772	.000	1
S3	2.5000	2.5648	.065	2.59	.48382	.001	1
S4	5.0000	4.9408	-.059	-1.18	.93158	.002	1
S5	10.000	9.9743	-.026	-.257	1.8803	.000	1
S2	.80000	.82120	.021	2.65	.15517	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



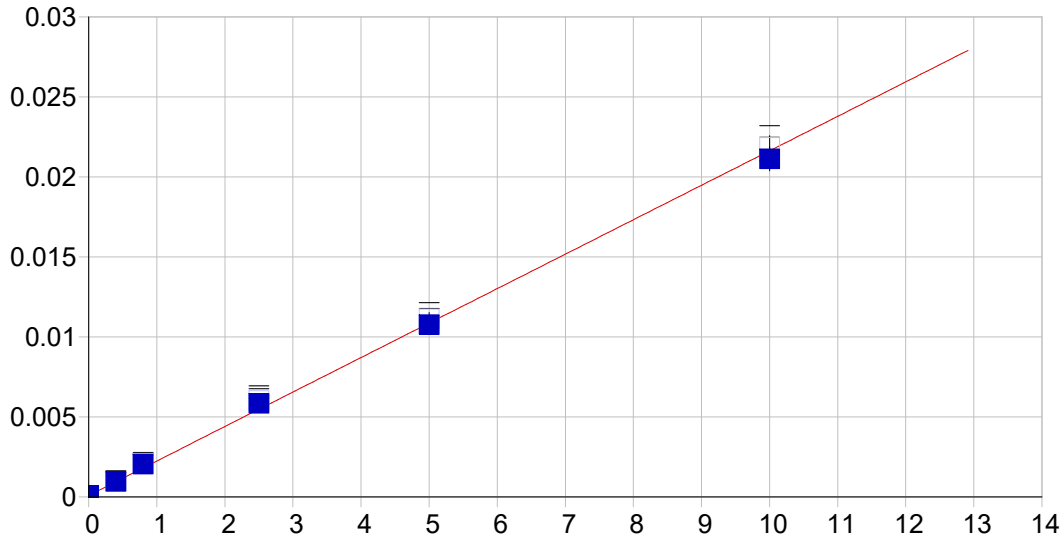
Ti 336.121 {100}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004420	Re-Slope:	1.000000
A1 (Gain):	0.327201	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999767	Status:	OK.
Std Error of Est:	0.000234		
Predicted MDL:	0.002186		
Predicted MQL:	0.007287		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00442	.000	1
S1	.04000	.03961	-.000	-.979	.01738	.001	1
S3	2.5000	2.5865	.087	3.46	.85105	.035	1
S4	5.0000	4.9610	-.039	-.780	1.6283	.120	1
S5	10.000	9.8952	-.105	-1.05	3.2434	.053	1
S2	.80000	.85769	.058	7.21	.28516	.013	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



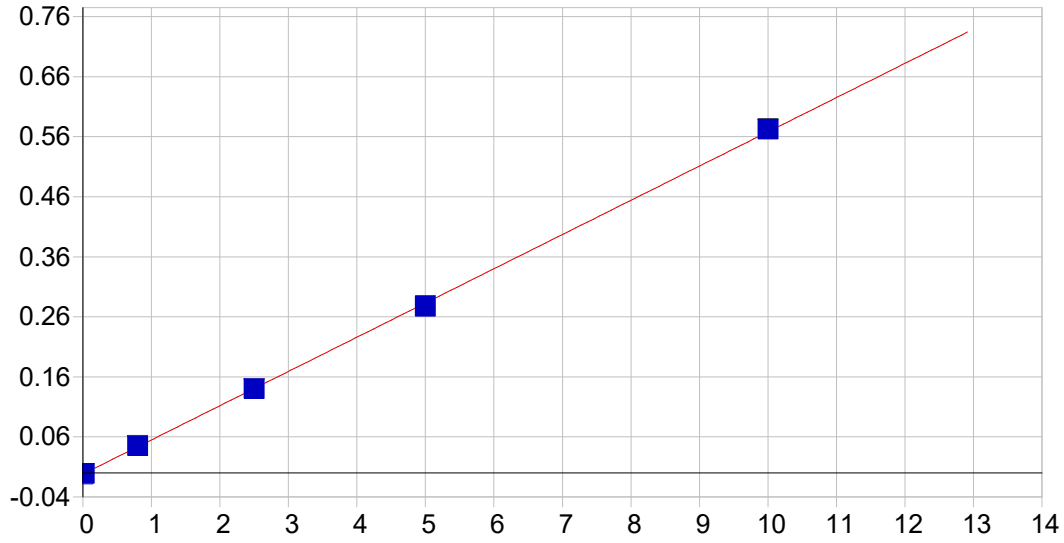
Si 288.158 {117}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000090	Re-Slope:	1.000000
A1 (Gain):	0.002154	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999183	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.021991		
Predicted MQL:	0.073302		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00007	-.000	.000	.00009	.000	1
S1	.40000	.40378	.004	.946	.00096	.000	1
S3	2.5000	2.6724	.172	6.90	.00603	.000	1
S4	5.0000	4.9532	-.047	-.935	.01112	.000	1
S5	10.000	9.7626	-.237	-2.37	.02185	.001	1
S2	.80000	.90813	.108	13.5	.00210	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



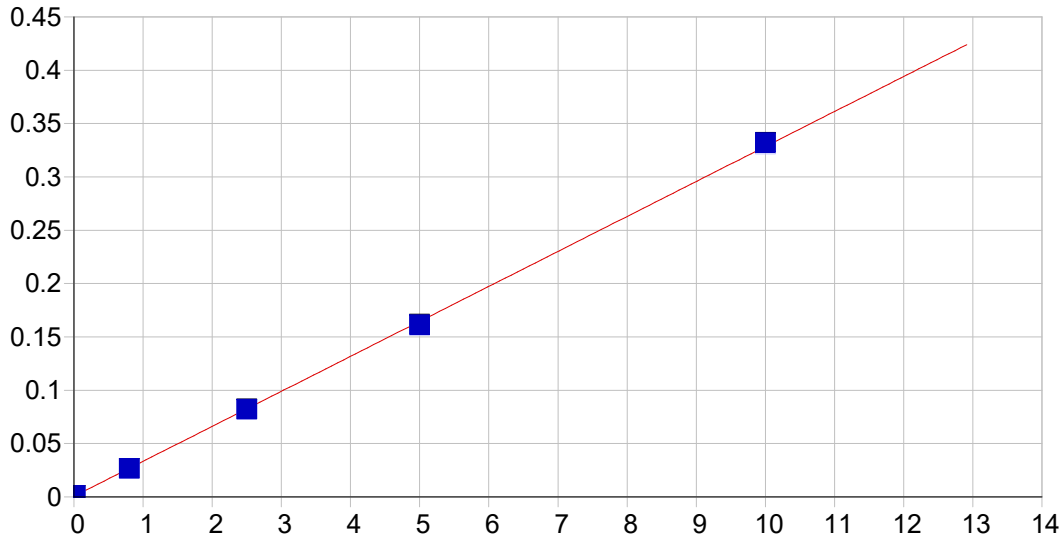
P 177.495 {490}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002076	Re-Slope:	1.000000
A1 (Gain):	0.057020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999891	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.002208		
Predicted MQL:	0.007359		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00208	.000	1
S1	.02000	.02032	.000	1.59	-.00091	.000	1
S3	2.5000	2.4916	-.008	-.334	.14008	.000	1
S4	5.0000	4.9006	-.099	-1.99	.27752	.001	1
S5	10.000	10.073	.073	.731	.57261	.001	1
S2	.80000	.83430	.034	4.29	.04552	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



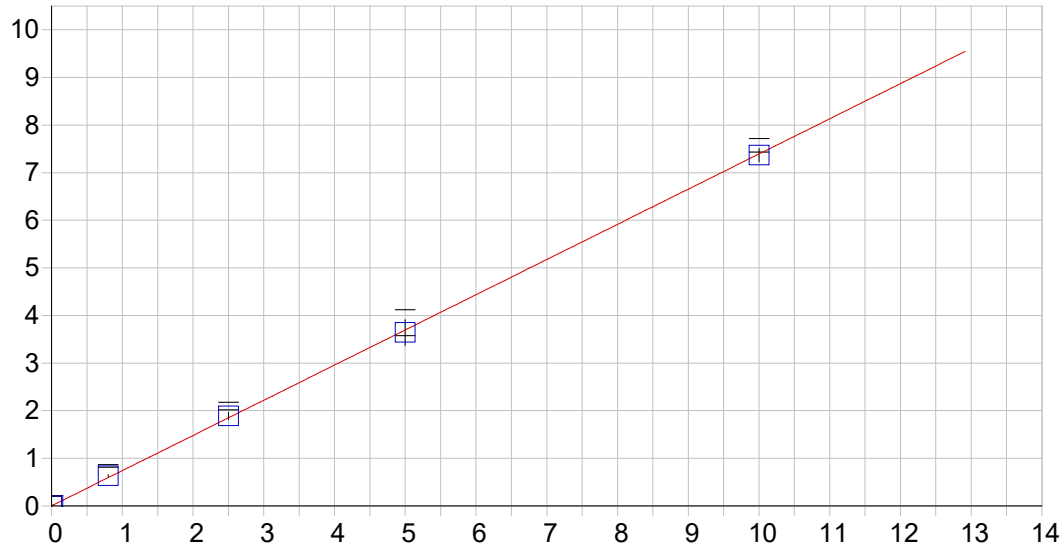
S 182.034 {485}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000592	Re-Slope:	1.000000
A1 (Gain):	0.032791	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999910	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.004019		
Predicted MQL:	0.013397		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00059	.000	1
S1	.02000	.02047	.000	2.37	.00122	.000	1
S3	2.5000	2.4887	-.011	-.453	.08181	.000	1
S4	5.0000	4.9036	-.096	-1.93	.16061	.000	1
S5	10.000	10.114	.114	1.14	.33069	.000	1
S2	.80000	.79324	-.007	-.845	.02648	.000	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



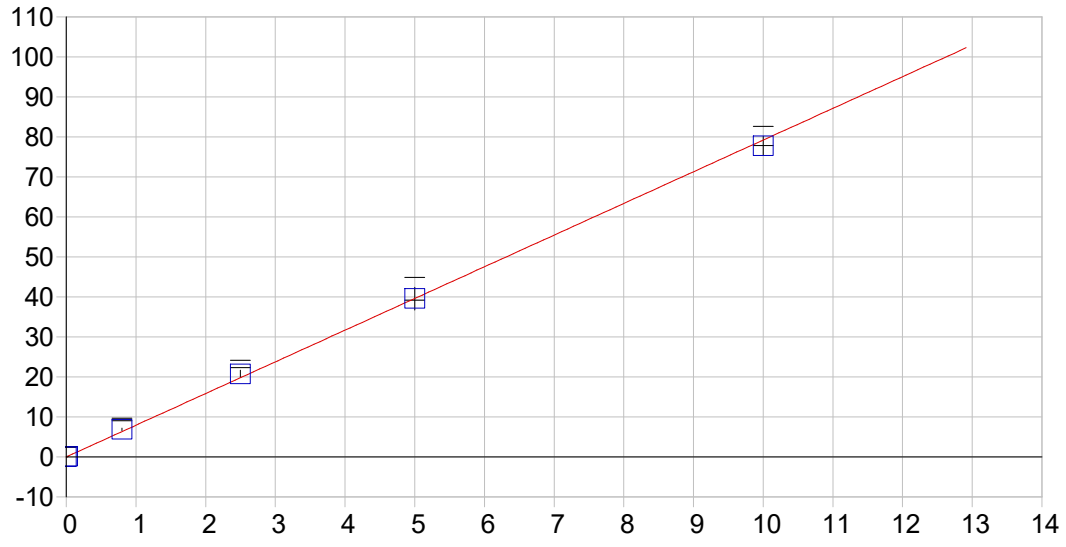
Li 670.784 { 50}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001899	Re-Slope:	1.000000
A1 (Gain):	0.739100	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999800	Status:	OK.
Std Error of Est:	0.000346		
Predicted MDL:	0.003428		
Predicted MQL:	0.011427		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00189	.001	1
S5	10.000	9.9637	-.036	-.363	7.3661	.140	1
S4	5.0000	4.9236	-.076	-1.53	3.6409	.272	1
S3	2.5000	2.5538	.054	2.15	1.8894	.080	1
S1	.02000	.02494	.005	24.7	.02033	.001	1
S2	.80000	.85398	.054	6.75	.63307	.029	1

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



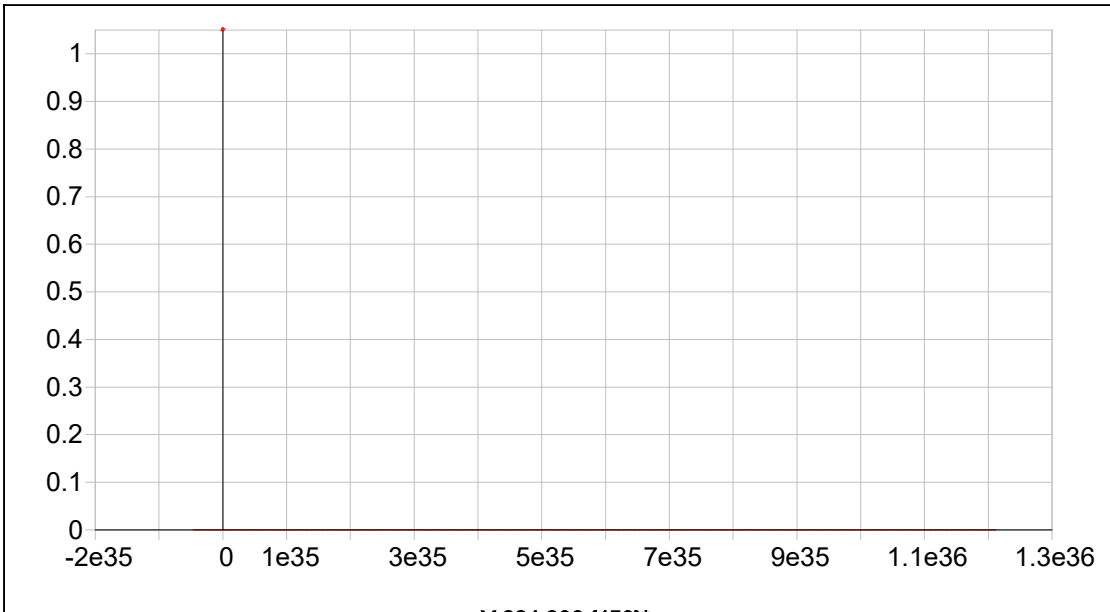
Sr 407.771 { 83}

Date of Fit:	1/24/2023 12:57:25	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000523	Re-Slope:	1.000000
A1 (Gain):	7.921151	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999595	Status:	OK.
Std Error of Est:	0.005282		
Predicted MDL:	0.000150		
Predicted MQL:	0.000500		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00055	.001	1
S1	.02000	.02083	.001	4.14	.16447	.005	1
S3	2.5000	2.6187	.119	4.75	20.742	.899	1
S4	5.0000	4.9954	-.005	-.091	39.569	2.84	1
S5	10.000	9.8169	-.183	-1.83	77.760	2.42	1
S2	.80000	.86821	.068	8.53	6.8767	.337	1

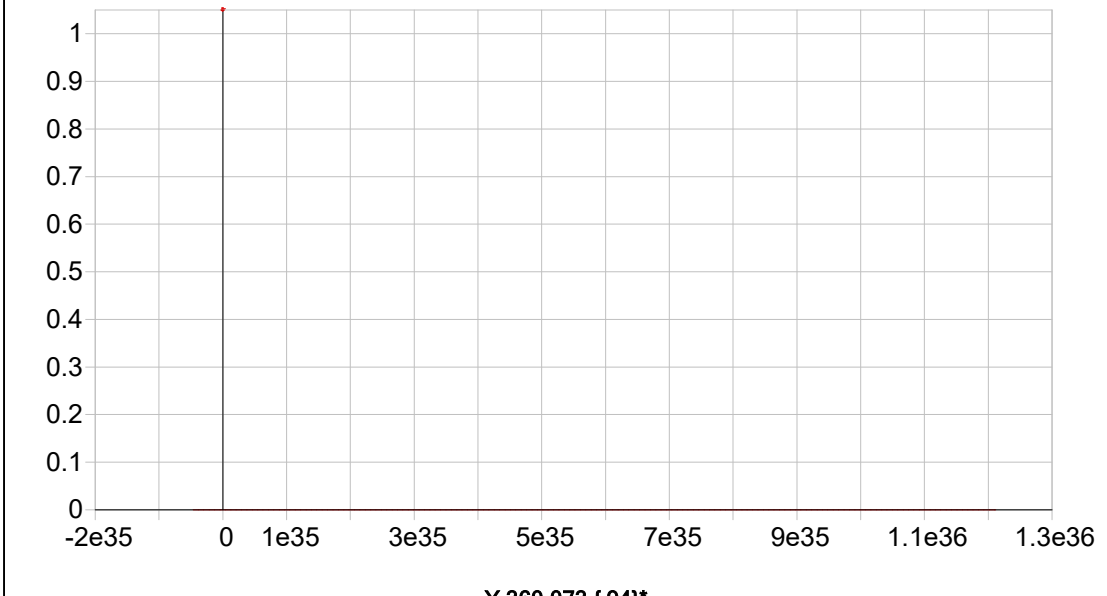
Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



Y 224.306 {450}*

Date of Fit:	1/24/2023 12:33:22	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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



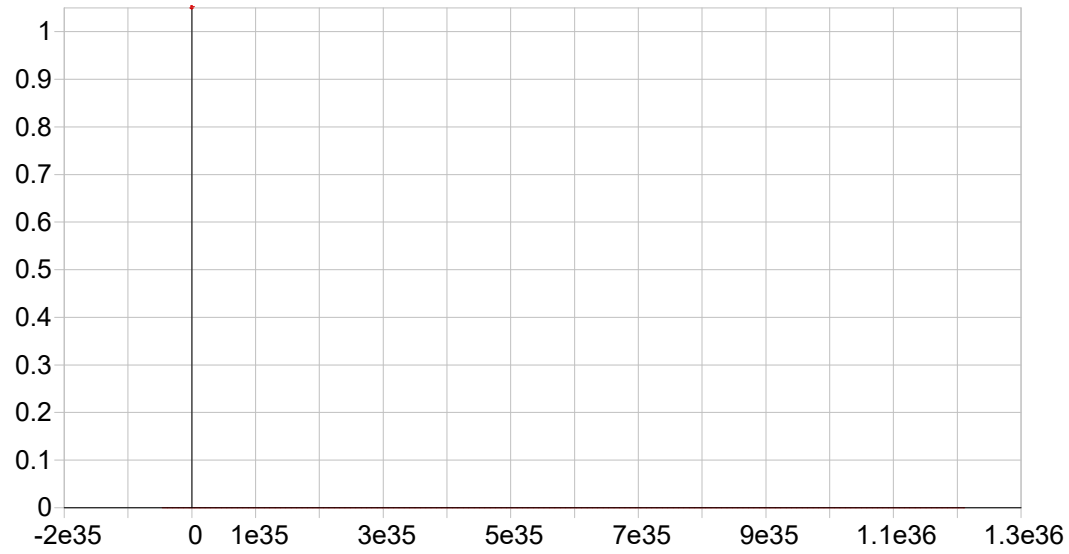
Y 360.073 { 94}*

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

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785

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

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



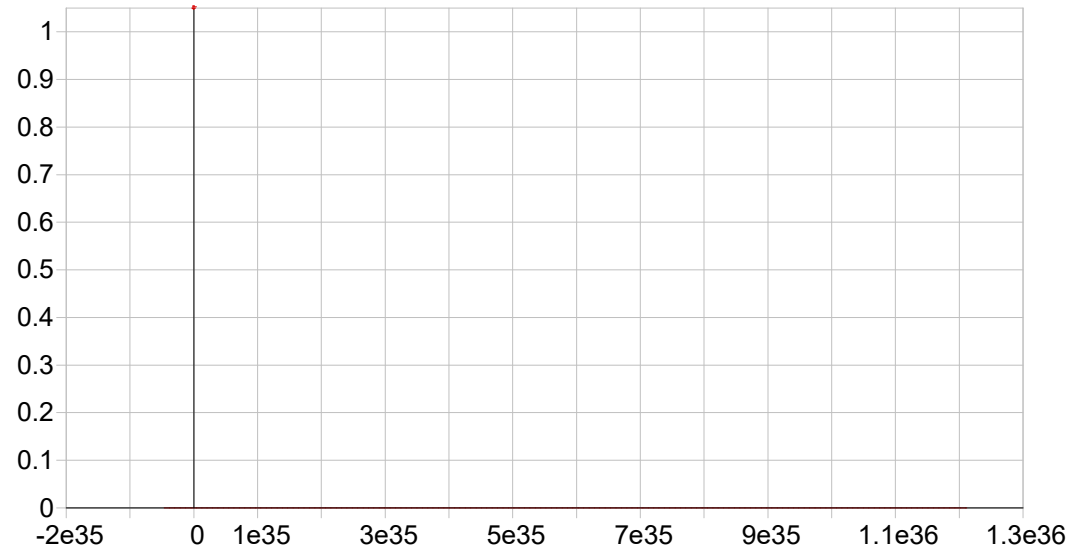
Y 371.030 { 91}*

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

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

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

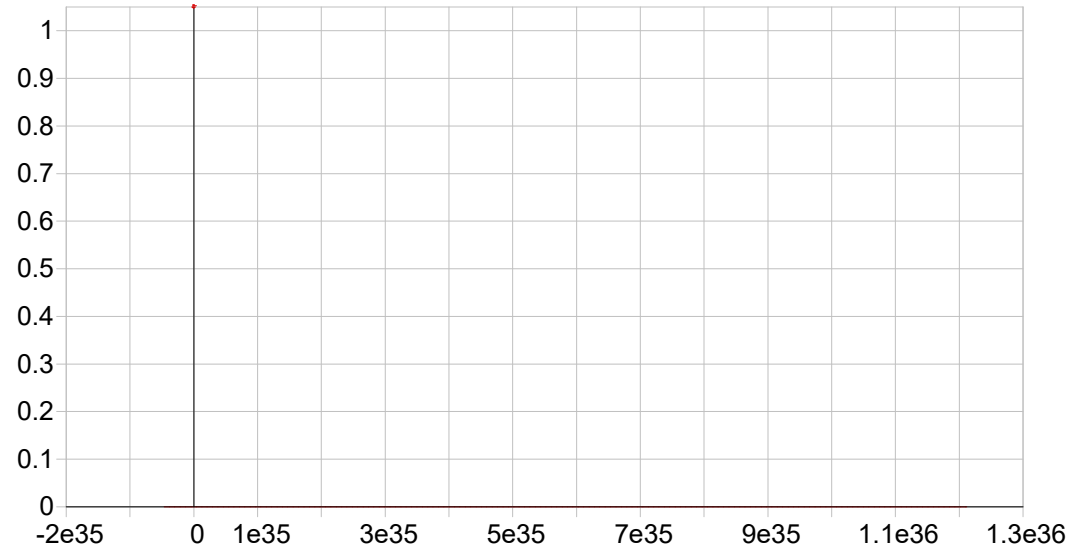
Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785



Y 224.306 {150}*

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

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



In 230.606 {446}*

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

Reviewed By:jaswal
On:1/25/2023 9:31:47 PM
Inst Id :P4
LB :LB123785

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

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

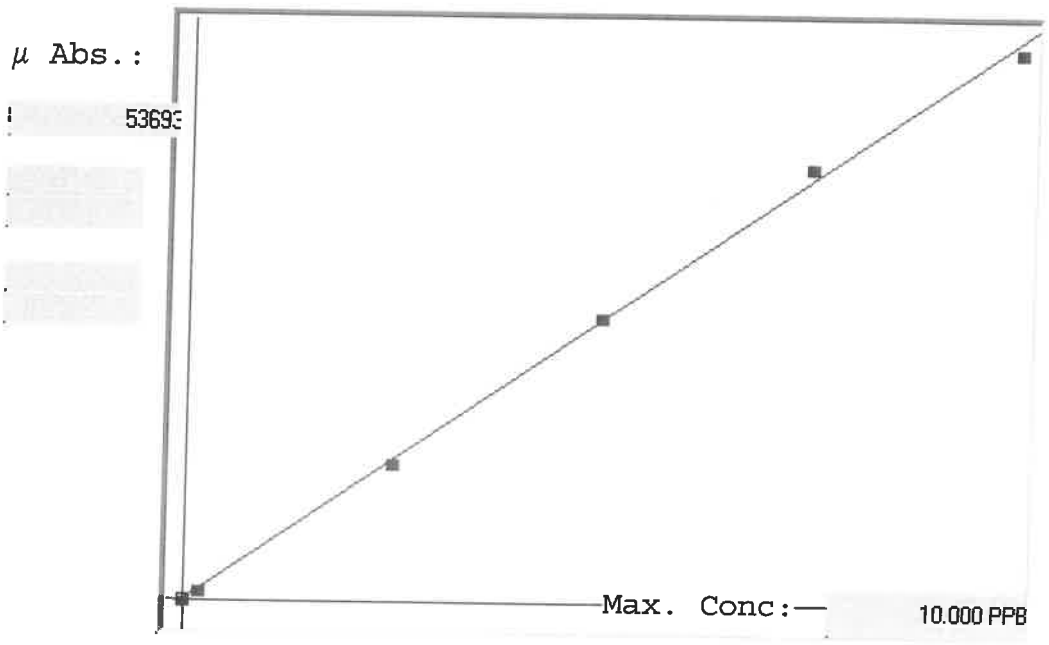
Reviewed By:jaswal
On:1/23/2023 11:07:10 PM
Inst Id :CV1
LB :LB123763

LB123763

7471B

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 1.8268e-004

C= -1.1830e-002

Rho= 0.9993716

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	-0.006	-0.006	32	0.000	32					-
0.2	0.200	0.160	-0.040	943	0.0 %	943					-20
2.5	2.500	2.453	-0.047	13493	0.0 %	13493					-2
5.0	5.000	5.065	0.065	27792	0.0 %	27792					1
7.5	7.500	7.731	0.231	42384	0.0 %	42384					3
10.0	10.000	9.797	-0.203	53693	0.0 %	53693					-2

Reviewed By:jaswal
On:1/23/2023 11:07:10 PM
Inst Id :CV1
LB :LB123763

LB123763 INSTRUMENT ID : CV1

Method: 7471B Operator: Admin Date of Analysis: 23 Jan 2023 09:31:51

Sample ID	Extended ID	µ Abs.	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	50	32	-	0.00000	7471B	PPB	23 Jan 2023 10:06:41	S	Std
0.2 - 1	50.2	943	-	0.20000	7471B	PPB	23 Jan 2023 10:11:30	S	Std
2.5 - 1	52.5	13493	-	2.50000	7471B	PPB	23 Jan 2023 10:13:48	S	Std
5.0 - 1	55	27792	-	5.00000	7471B	PPB	23 Jan 2023 10:16:04	S	Std
7.5 - 1	57.5	42384	-	7.50000	7471B	PPB	23 Jan 2023 10:20:53	S	Std
10.0 - 1	510	53693	-	10.00000	7471B	PPB	23 Jan 2023 10:23:09	S	Std
ICV12 - 1	ICV12	21485	3.9130	-	7471B	PPB	23 Jan 2023 10:28:33	U	SMPL
ICB12 - 1	ICB12	-12	-0.0140	-	7471B	PPB	23 Jan 2023 10:30:48	U	SMPL
CCV93 - 1	CCV93	26713	4.8680	-	7471B	PPB	23 Jan 2023 10:33:03	U	SMPL
CCB93 - 1	CCB93	-47	-0.0204	-	7471B	PPB	23 Jan 2023 10:35:18	U	SMPL
CRA - 1	CRA	957	0.1630	-	7471B	PPB	23 Jan 2023 10:37:33	U	SMPL
HighStd - 1	HighStd	53734	9.8041	-	7471B	PPB	23 Jan 2023 10:39:48	U	SMPL
ChkStd - 1	ChkStd	39341	7.1749	-	7471B	PPB	23 Jan 2023 10:42:03	U	SMPL
PB150381BL - 1	PBS	-100	-0.0301	-	7471B	PPB	23 Jan 2023 10:44:19	U	SMPL
PB150381BS - 1	LCSS	19305	3.5147	-	7471B	PPB	23 Jan 2023 10:46:35	U	SMPL
O1229-01 - 1	OK-02-011923	1049	0.1798	-	7471B	PPB	23 Jan 2023 10:48:51	U	SMPL
O1230-01 - 1	BBC	3353	0.6007	-	7471B	PPB	23 Jan 2023 10:51:07	U	SMPL
O1231-01 - 1	BBC	3589	0.6438	-	7471B	PPB	23 Jan 2023 10:53:24	U	SMPL
O1232-01 - 1	B-P-17A	224	0.0291	-	7471B	PPB	23 Jan 2023 10:55:41	U	SMPL
O1232-01DUP - 1	B-P-17ADUP	381	0.0578	-	7471B	PPB	23 Jan 2023 10:57:56	U	SMPL
CCV94 - 1	CCV94	25802	4.7016	-	7471B	PPB	23 Jan 2023 11:00:11	U	SMPL
CCB94 - 1	CCB94	-57	-0.0222	-	7471B	PPB	23 Jan 2023 11:02:27	U	SMPL
O1232-01MS - 1	B-P-17AMS	21674	3.9475	-	7471B	PPB	23 Jan 2023 11:04:42	U	SMPL
O1232-01MSD - 1	B-P-17AMSD	21884	3.9859	-	7471B	PPB	23 Jan 2023 11:06:58	U	SMPL
O1232-02 - 1	B-P-17B	985	0.1681	-	7471B	PPB	23 Jan 2023 11:09:13	U	SMPL
O1232-04 - 1	B-P-18A	1683	0.2956	-	7471B	PPB	23 Jan 2023 11:11:29	U	SMPL
O1232-05 - 1	B-P-18B	381	0.0578	-	7471B	PPB	23 Jan 2023 11:13:45	U	SMPL
O1232-06 - 1	B-P-19A	3591	0.6442	-	7471B	PPB	23 Jan 2023 11:16:02	U	SMPL
O1232-07 - 1	B-P-19B	2992	0.5347	-	7471B	PPB	23 Jan 2023 11:18:18	U	SMPL
O1232-08 - 1	B-P-35A	409	0.0629	-	7471B	PPB	23 Jan 2023 11:20:35	U	SMPL
O1232-09 - 1	B-P-35B	278	0.0390	-	7471B	PPB	23 Jan 2023 11:22:52	U	SMPL
O1232-10 - 1	DUP01	865	0.1462	-	7471B	PPB	23 Jan 2023 11:25:08	U	SMPL
CCV95 - 1	CCV95	25568	4.6589	-	7471B	PPB	23 Jan 2023 11:27:24	U	SMPL
CCB95 - 1	CCB95	-45	-0.0201	-	7471B	PPB	23 Jan 2023 11:29:41	U	SMPL
PB150382BL - 1	PBS	-11	-0.0138	-	7471B	PPB	23 Jan 2023 11:31:57	U	SMPL
PB150382BS - 1	LCSS	18545	3.3759	-	7471B	PPB	23 Jan 2023 11:34:13	U	SMPL
O1233-02 - 1	B-P34A	1415	0.2467	-	7471B	PPB	23 Jan 2023 11:36:28	U	SMPL
O1233-03 - 1	B-P34B	626	0.1025	-	7471B	PPB	23 Jan 2023 11:38:44	U	SMPL
O1233-04 - 1	B-P36A	590	0.0959	-	7471B	PPB	23 Jan 2023 11:40:59	U	SMPL
O1233-05 - 1	B-P36B	259	0.0355	-	7471B	PPB	23 Jan 2023 11:43:16	U	SMPL
O1233-06 - 1	B-P37A	2447	0.4352	-	7471B	PPB	23 Jan 2023 11:45:32	U	SMPL
O1233-07 - 1	B-P37B	1646	0.2889	-	7471B	PPB	23 Jan 2023 11:47:49	U	SMPL
O1233-08 - 1	B-P38A	3730	0.6696	-	7471B	PPB	23 Jan 2023 11:50:06	U	SMPL
O1233-09 - 1	B-P38B	223	0.0289	-	7471B	PPB	23 Jan 2023 11:52:22	U	SMPL
CCV96 - 1	CCV96	26895	4.9013	-	7471B	PPB	23 Jan 2023 11:54:38	U	SMPL
CCB96 - 1	CCB96	-54	-0.0217	-	7471B	PPB	23 Jan 2023 11:56:53	U	SMPL
O1233-11 - 1	B-P38C	225	0.0293	-	7471B	PPB	23 Jan 2023 11:59:09	U	SMPL
O1234-01 - 1	EO-02-11923	1913	0.3376	-	7471B	PPB	23 Jan 2023 12:01:24	U	SMPL
O1237-01 - 1	COMP-1-2-3A	390	0.0594	-	7471B	PPB	23 Jan 2023 12:03:41	U	SMPL
O1239-01 - 1	BORING-3	4650	0.8376	-	7471B	PPB	23 Jan 2023 12:05:56	U	SMPL
O1240-01 - 1	TR-05-011923	568	0.0919	-	7471B	PPB	23 Jan 2023 12:08:12	U	SMPL
O1244-01 - 1	VNJ-223	2202	0.3904	-	7471B	PPB	23 Jan 2023 12:10:29	U	SMPL
O1252-01 - 1	MH-9	709	0.1177	-	7471B	PPB	23 Jan 2023 12:12:46	U	SMPL
O1252-01DUP - 1	MH-9DUP	495	0.0786	-	7471B	PPB	23 Jan 2023 12:15:04	U	SMPL
O1252-01MS - 1	MH-9MS	19565	3.5622	-	7471B	PPB	23 Jan 2023 12:17:21	U	SMPL
O1252-01MSD - 1	MH-9MSD	21367	3.8914	-	7471B	PPB	23 Jan 2023 12:19:36	U	SMPL
CCV97 - 1	CCV97	27200	4.9570	-	7471B	PPB	23 Jan 2023 12:21:52	U	SMPL
CCB97 - 1	CCB97	-53	-0.0215	-	7471B	PPB	23 Jan 2023 12:24:07	U	SMPL
O1232-01LX5 - 1		26	-0.0071	-	7471B	PPB	23 Jan 2023 12:26:24	U	SMPL
O1232-01A - 1		20681	3.7661	-	7471B	PPB	23 Jan 2023 12:28:40	U	SMPL
O1252-01LX5 - 1		87	0.0041	-	7471B	PPB	23 Jan 2023 12:30:55	U	SMPL
O1252-01A - 1		21214	3.8635	-	7471B	PPB	23 Jan 2023 12:33:11	U	SMPL
CCV98 - 1	CCV98	25827	4.7062	-	7471B	PPB	23 Jan 2023 12:35:27	U	SMPL
CCB98 - 1	CCB98	-53	-0.0215	-	7471B	PPB	23 Jan 2023 12:37:43	U	SMPL

CHEMTECH

Soil/Sludge Metals Preparation Sheet

PB150370

SOP ID : M3050B-Digestion-19

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK#3 2. N/A

Temp : 1. 96°C 2. N/A

Start Digest Date: 01/20/2023 **Time :** 15:00 **Temp :** 96 °C

End Digest Date: 01/20/2023 **Time :** 17:45 **Temp :** 96 °C

Digestion tube ID: M5338

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: AJ

Supervisor Signature: BH

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M5317
LFS-2	1.00	M5322
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP73178
Conc. HNO3	5.00	M5425
30% H2O2	3.00	M5285
Conc. HCL	10.00	M5418
PTFE Boiling Stones	N/A	M5422
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:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
1/20/23 18:00	AI/Dig. Lab	BH / Metals Lab
	Preparation Group	**Analysis Group**

CHEMTECH

Soil/Sludge Metals Preparation Sheet

PB150370

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
O1232-01	B-P-17A	N/A	2.15	100	Brown	Brown	Medium	No	N/A	3-1
O1232-01DUP	B-P-17ADUP	N/A	2.19	100	Brown	Brown	Medium	No	N/A	2
O1232-01MS	B-P-17AMS	N/A	2.20	100	Brown	Brown	Medium	No	M5317,M5322	3
O1232-01MSD	B-P-17AMSD	N/A	2.14	100	Brown	Brown	Medium	No	M5317,M5322	4
O1232-02	B-P-17B	N/A	2.39	100	Brown	Brown	Medium	No	N/A	5
O1232-04	B-P-18A	N/A	2.32	100	Brown	Brown	Medium	No	N/A	6
O1232-05	B-P-18B	N/A	2.12	100	Brown	Brown	Medium	No	N/A	7
O1232-06	B-P-19A	N/A	2.02	100	Brown	Brown	Medium	No	N/A	8
O1232-07	B-P-19B	N/A	2.09	100	Brown	Brown	Medium	No	N/A	9
O1232-08	B-P-35A	N/A	2.34	100	Brown	Brown	Medium	No	N/A	10
O1232-09	B-P-35B	N/A	2.07	100	Brown	Brown	Medium	No	N/A	11
O1232-10	DUP01	N/A	2.11	100	Brown	Brown	Medium	No	N/A	12
O1233-02	B-P34A	N/A	2.12	100	Brown	Brown	Medium	No	N/A	13
O1233-03	B-P34B	N/A	2.01	100	Brown	Brown	Medium	No	N/A	14
O1233-04	B-P36A	N/A	2.19	100	Brown	Brown	Medium	No	N/A	15
O1233-05	B-P36B	N/A	2.16	100	Brown	Brown	Medium	No	N/A	16
O1233-06	B-P37A	N/A	2.24	100	Brown	Brown	Medium	No	N/A	17
O1233-07	B-P37B	N/A	2.21	100	Brown	Brown	Medium	No	N/A	18
O1233-08	B-P38A	N/A	2.39	100	Brown	Brown	Medium	No	N/A	19
O1233-09	B-P38B	N/A	2.27	100	Brown	Brown	Medium	No	N/A	20
O1233-11	B-P38C	N/A	2.14	100	Brown	Brown	Medium	No	N/A	21
O1244-01	VNJ-223	N/A	2.06	100	Brown	Brown	Medium	No	N/A	22
O1252-01	MH-9	N/A	2.29	100	Brown	Brown	Medium	No	N/A	23
PB150370BL	PBS370	N/A	2.09	100	Colorless	Colorless	Fine	No	N/A	24
PB150370BS	LCS370	N/A	2.03	100	Colorless	Colorless	Fine	No	M5317,M5322	25

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB150370 **WorkList ID :** 166729 **Department :** Digestion **Date :** 01-20-2023 14:45:35

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/26/2023	Solid	O1232-01	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-17A	01/18/2023	6010D
01/26/2023	Solid	O1232-02	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-17B	01/18/2023	6010D
01/26/2023	Solid	O1232-04	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-18A	01/18/2023	6010D
01/26/2023	Solid	O1232-05	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-18B	01/18/2023	6010D
01/26/2023	Solid	O1232-06	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-19A	01/18/2023	6010D
01/26/2023	Solid	O1232-07	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-19B	01/18/2023	6010D
01/26/2023	Solid	O1232-08	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-35A	01/18/2023	6010D
01/26/2023	Solid	O1232-09	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P-35B	01/18/2023	6010D
01/26/2023	Solid	O1232-10	Metals ICP-TAL	Cool 4 deg C	loui01	N11	DUP01	01/18/2023	6010D
01/26/2023	Solid	O1233-02	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P34A	01/18/2023	6010D
01/26/2023	Solid	O1233-03	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P34B	01/18/2023	6010D
01/26/2023	Solid	O1233-04	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P36A	01/18/2023	6010D
01/26/2023	Solid	O1233-05	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P36B	01/18/2023	6010D
01/26/2023	Solid	O1233-06	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P37A	01/18/2023	6010D
01/26/2023	Solid	O1233-07	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P37B	01/18/2023	6010D
01/26/2023	Solid	O1233-08	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-38A	01/18/2023	6010D
01/26/2023	Solid	O1233-09	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P38B	01/18/2023	6010D
01/26/2023	Solid	O1233-11	Metals ICP-TAL	Cool 4 deg C	loui01	N11	B-P38C	01/18/2023	6010D
01/27/2023	Solid	O1244-01	Metals ICP-TAL	Cool 4 deg C	PSEG03	N11	VNJ-223	01/20/2023	6010D
01/27/2023	Solid	O1252-01	Metals ICP-TAL	Cool 4 deg C	PSEG03	N11	MH-9	01/20/2023	6010D

Date/Time 1/20/23 14:45
Raw Sample Received by: AI/DigLab
Raw Sample Relinquished by: CP SM

Date/Time 1/20/23 15:45
Raw Sample Received by: CP SM
Raw Sample Relinquished by: AI/DigLab

CHEMTECH

Soil/Sludge Mercury Preparation Sheet

PB150382

SOP ID : M7471B-Mercury-17

SDG No : NA

Matrix : SOIL

Pippete ID: HG A

Balance ID : M SC-3

Filter paper ID : NA

pH Strip ID : NA

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Temp : 1. 95°C 2. N/A

Start Digest Date: 01/20/2023 **Time :** 16:35 **Temp :** 95 °C

End Digest Date: 01/20/2023 **Time :** 17:05 **Temp :** 94 °C

Digestion tube ID: M5287

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: IV

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP73414
CCV	30mL	MP73416
CRA	30mL	MP73418
Blank Spike	0.48mL	MP73407
Matrix Spike	0.48mL	MP73407

Chemical Used	ML/SAMPLE USED	Lot Number
AQUA REGIA	1.5mL	MP73420
KMnO4	4.5mL	MP73235
Hydroxylamine HCL	2.0mL	MP73236
PTFE Boiling Stones	----------	M4583
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP73408
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP73409
2.5 ppb	S2.5	30mL	MP73410
5.0 ppb	S5.0	30mL	MP73411
7.5 ppb	S7.5	30mL	MP73412
10.0 ppb	S10.0	30mL	MP73413
ICV	ICV	30mL	MP73414
ICB	ICB	30mL	MP73415
CCV	CCV	30mL	MP73416
CCB	CCB	30mL	MP73417
CRI	CRI	30mL	MP73418
CHK STD	CHK STD	30mL	MP73419

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
1/20/23 @ 17:40	MB · HG · Oven	MB - Digestion Lab
	Preparation Group	**Analysis Group**

CHEMTECH

Soil/Sludge Mercury Preparation Sheet

PB150382

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Comment	Prep Pos
01233-02	B-P34A	0.56	35	NA	N/A	3-18
01233-03	B-P34B	0.56	35	NA	N/A	19
01233-04	B-P36A	0.56	35	NA	N/A	20
01233-05	B-P36B	0.56	35	NA	N/A	21
01233-06	B-P37A	0.54	35	NA	N/A	22
01233-07	B-P37B	0.57	35	NA	N/A	23
01233-08	B-P38A	0.54	35	NA	N/A	24
01233-09	B-P38B	0.57	35	NA	N/A	25
01233-11	B-P38C	0.54	35	NA	N/A	26
01234-01	EO-02-11923	0.53	35	NA	N/A	27
01237-01	COMP-1-2-3A	0.55	35	NA	N/A	28
01239-01	BORING-3	0.57	35	NA	N/A	29
01240-01	TR-05-011923	0.52	35	NA	N/A	30
01244-01	VNJ-223	0.53	35	NA	N/A	31
01252-01	MH-9	0.58	35	NA	N/A	32
01252-01DUP	MH-9DUP	0.57	35	NA	N/A	33
01252-01MS	MH-9MS	0.55	35	NA	MP73407	34
01252-01MSD	MH-9MSD	0.57	35	NA	MP73407	35
PB150382BL	PBS382	0.57	35	NA	N/A	36
PB150382BS	LCS382	0.52	35	NA	MP73407	37

WORKLIST(Hardcopy Internal Chain)

WorkList Name : 012023_7471B **WorkList ID :** 166726 **Department :** Digestion **Date :** 01-20-2023 10:11:05

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/26/2023	Solid	O1233-02	Mercury	Cool 4 deg C	loui01	N11	B-P34A	01/18/2023	7471B
01/26/2023	Solid	O1233-03	Mercury	Cool 4 deg C	loui01	N11	B-P34B	01/18/2023	7471B
01/26/2023	Solid	O1233-04	Mercury	Cool 4 deg C	loui01	N11	B-P36A	01/18/2023	7471B
01/26/2023	Solid	O1233-05	Mercury	Cool 4 deg C	loui01	N11	B-P36B	01/18/2023	7471B
01/26/2023	Solid	O1233-06	Mercury	Cool 4 deg C	loui01	N11	B-P37A	01/18/2023	7471B
01/26/2023	Solid	O1233-07	Mercury	Cool 4 deg C	loui01	N11	B-P37B	01/18/2023	7471B
01/26/2023	Solid	O1233-08	Mercury	Cool 4 deg C	loui01	N11	B-38A	01/18/2023	7471B
01/26/2023	Solid	O1233-09	Mercury	Cool 4 deg C	loui01	N11	B-P38B	01/18/2023	7471B
01/26/2023	Solid	O1233-11	Mercury	Cool 4 deg C	loui01	N11	B-P38C	01/18/2023	7471B
01/24/2023	Solid	O1234-01	Mercury	Cool 4 deg C	PSEG05	N11	EO-02-11923	01/19/2023	7471B
01/24/2023	Solid	O1237-01	Mercury	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	7471B
01/26/2023	Solid	O1239-01	Mercury	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	7471B
01/24/2023	Solid	O1240-01	Mercury	Cool 4 deg C	PSEG05	N12	TR-05-011923	01/19/2023	7471B
01/27/2023	Solid	O1244-01	Mercury	Cool 4 deg C	PSEG03	N11	VNJ-223	01/20/2023	7471B
01/27/2023	Solid	O1252-01	Mercury	Cool 4 deg C	PSEG03	N11	MH-9	01/20/2023	7471B

Date/Time 1/20/23 @ 16:05

Raw Sample Received by: MB - DG - CB

Raw Sample Relinquished by: CP CMS

Date/Time 1/20/23 @ 16:45

Raw Sample Received by: CP CMS

Raw Sample Relinquished by: MB - DG - CB

CHEMTECH

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC: LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g)(B)	Dish+Dry Sample Wt(g)(C)	% Solid	Comments
O1229-01	OK-02-011923	1	1.12	8.72	9.84	8.73	87.3	
O1229-02	OK-02-011923-EPH-2	2	1.12	8.72	9.84	8.73	87.3	
O1230-01	BBC	3	1.15	8.45	9.6	9.47	98.5	
O1231-01	BBC	4	1.19	8.53	9.72	9.57	98.2	
O1232-01	B-P-17A	18	1.15	8.78	9.93	9.00	89.4	
O1232-02	B-P-17B	19	1.15	8.41	9.56	8.46	86.9	
O1232-03	WC-17	20	1.13	8.64	9.77	9.03	91.4	
O1232-04	B-P-18A	21	1.13	8.57	9.7	8.63	87.5	
O1232-05	B-P-18B	22	1.15	8.83	9.98	9.22	91.4	
O1232-06	B-P-19A	23	1.12	8.57	9.69	8.68	88.2	
O1232-07	B-P-19B	24	1.18	8.35	9.53	8.53	88.0	
O1232-08	B-P-35A	25	1.13	8.62	9.75	9.00	91.3	
O1232-09	B-P-35B	26	1.17	8.53	9.7	9.13	93.3	
O1232-10	DUP01	27	1.15	8.80	9.95	9.08	90.1	
O1233-02	B-P34A	28	1.13	8.76	9.89	8.6	85.3	
O1233-03	B-P34B	29	1.13	8.71	9.84	9.03	90.7	
O1233-04	B-P36A	30	1.16	8.75	9.91	9.00	89.6	
O1233-05	B-P36B	31	1.13	8.84	9.97	9.12	90.4	
O1233-06	B-P37A	32	1.18	8.60	9.78	8.74	87.9	
O1233-07	B-P37B	33	1.18	8.38	9.56	8.18	83.5	
O1233-08	B-P38A	34	1.12	8.66	9.78	8.85	89.3	
O1233-09	B-P38B	35	1.15	8.81	9.96	8.26	80.7	
O1233-10	WC-38	36	1.18	8.59	9.77	8.47	84.9	
O1233-11	B-P38C	37	1.15	8.82	9.97	8.73	85.9	
O1234-01	EO-02-11923	5	1.14	8.82	9.96	8.72	85.9	
O1234-02	EO-02-11923	6	1.12	8.54	9.66	8.48	86.2	
O1235-04	12X52	7	1.12	7.08	8.2	6.57	77.0	
O1235-05	12X53	8	1.16	5.17	6.33	5.91	91.9	

CHEMTECH

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC: LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g)(B)	Dish+Dry Sample Wt(g)(C)	% Solid	Comments
O1235-06	12X54	9	1.11	8.50	9.61	5.73	54.4	
O1235-07	12X55	10	1.13	8.43	9.56	7.14	71.3	
O1237-01	COMP-1-2-3A	11	1.18	8.72	9.9	9.24	92.4	
O1237-02	3A	12	1.13	8.44	9.57	9.33	97.2	
O1238-01	RBRB22281-OILY-DEBRIS	13	1.00	1.00	2.00	2.00	100.0	OILY DEBRIS
O1239-01	BORING-3	14	1.17	8.73	9.9	8.29	81.6	
O1239-03	BORING-3-EPH-2	15	1.13	8.64	9.77	8.31	83.1	
O1240-01	TR-05-011923	16	1.18	8.50	9.68	8.38	84.7	
O1240-02	TR-05-011923-EPH-2	17	1.17	8.67	9.84	8.73	87.2	
O1241-01	34326-FRONT	38	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-02	34326-BACK	39	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-03	34327-FRONT	40	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-04	34327-BACK	41	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-05	34328-FRONT	42	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-06	34328BACK	43	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-07	343269-FRONT	44	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1241-08	34329-BACK	45	1.00	1.00	2.00	2.00	100.0	PILC REEL
O1243-01	TJRC-11823-B4-0-10	60	1.12	8.65	9.77	8.54	85.8	
O1243-02	TJRC-11823-B4-0-10	61	1.14	8.45	9.59	8.02	81.4	
O1243-03	TJRC-11823-B4-10-20	62	1.15	8.81	9.96	8.85	87.4	
O1243-04	TJRC-11823-B4-10-20	63	1.17	8.57	9.74	8.16	81.6	
O1243-05	TJRC-11923-B4-20-30	64	1.15	8.75	9.9	8.28	81.5	
O1243-06	TJRC-11923-B4-20-30	65	1.13	8.70	9.83	8.43	83.9	
O1243-07	TJRC-11923-B4-30-40	66	1.16	8.77	9.93	8.29	81.3	
O1243-08	TJRC-11923-B4-30-40	67	1.14	8.83	9.97	8.47	83.0	
O1244-01	VNJ-223	46	1.12	8.62	9.74	8.59	86.7	
O1244-02	VNJ-223	47	1.16	8.80	9.96	8.62	84.8	
O1248-05	SVOC-GPC-BLANK	50	1.00	1.00	2.00	2.00	100.0	

CHEMTECH

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC: LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g)(B)	Dish+Dry Sample Wt(g)(C)	% Solid	Comments
O1248-06	PEST-GPC-BLANK	51	1.00	1.00	2.00	2.00	100.0	
O1248-07	PEST-GPC-BLANK-SPIKE	52	1.00	1.00	2.00	2.00	100.0	
O1248-08	PCB-GPC-BLANK	53	1.00	1.00	2.00	2.00	100.0	
O1248-09	PCB-GPC-BLANK-SPIKE	54	1.00	1.00	2.00	2.00	100.0	
O1248-10	SVOC-GPC2-BLANK	55	1.00	1.00	2.00	2.00	100.0	
O1248-11	PEST-GPC2-BLANK	56	1.00	1.00	2.00	2.00	100.0	
O1248-12	PEST-GPC2-BLANK-SPIKE	57	1.00	1.00	2.00	2.00	100.0	
O1248-13	PCB-GCP2-BLANK	58	1.00	1.00	2.00	2.00	100.0	
O1248-14	PCB-GCP2-BLANK-SPIKE	59	1.00	1.00	2.00	2.00	100.0	
O1251-01	COMP-1	68	1.13	8.43	9.56	8.44	86.7	
O1251-03	EPH-1	69	1.11	8.51	9.62	8.47	86.5	
O1251-05	TOT-VOC-1	70	1.00	1.00	2.00	2.00	100.0	no jar
O1251-06	TOT-VOC-2	71	1.00	1.00	2.00	2.00	100.0	no jar
O1251-07	COMP-2	72	1.12	8.74	9.86	8.75	87.3	
O1251-09	EPH-2	73	1.14	8.80	9.94	8.8	87.0	
O1251-11	TOT-VOC-3	74	1.00	1.00	2.00	2.00	100.0	no jar
O1251-12	TOT-VOC-4	75	1.00	1.00	2.00	2.00	100.0	no jar
O1252-01	MH-9	48	1.14	8.84	9.98	9.47	94.2	
O1252-02	MH-9-EPH	49	1.12	8.46	9.58	8.67	89.2	
O1253-01	SU-04-012023	79	1.12	8.47	9.59	8.99	92.9	
O1253-02	SU-04-012023-EPH-2	80	1.18	8.69	9.87	9.17	91.9	
O1254-01	HR-04-012023	81	1.13	8.66	9.79	9.09	91.9	
O1254-02	HR-04-012023-EPH-2	82	1.16	8.69	9.85	8.95	89.6	
O1255-01	BORING-1	76	1.18	8.61	9.79	8.32	82.9	
O1255-03	BORING-1-EPH-2	77	1.11	8.78	9.89	8.35	82.5	
O1256-01	OR-02-012023	83	1.15	8.81	9.96	9.09	90.1	
O1256-02	OR-02-012023-EPH-2	84	1.1	8.87	9.97	8.66	85.2	

CHEMTECH

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/23/2023

OVENTEMP IN Celsius(°C): 107
Time IN: 17:15
In Date: 01/20/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:30
Out Date: 01/21/2023
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC: LB123747

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
O1258-01	WASTE-VOA-2	78	1.12	8.58	9.7	8.62	87.4	

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

WORKLIST(Hardcopy Internal Chain)

VB 123747

WorkList Name : %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/24/2023	Solid	O1229-01	Percent Solids	Cool 4 deg C	PSEG05	N11	OK-02-011923	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1229-02	Percent Solids	Cool 4 deg C	PSEG05	N11	OK-02-011923-EPH-2	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1230-01	Percent Solids	Cool 4 deg C	EART12	N11	BBC	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1231-01	Percent Solids	Cool 4 deg C	EART12	N11	BBC	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1232-01	Percent Solids	Cool 4 deg C	loui01	N11	B-P-17A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-02	Percent Solids	Cool 4 deg C	loui01	N11	B-P-17B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-03	Percent Solids	Cool 4 deg C	loui01	N11	WC-17	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-04	Percent Solids	Cool 4 deg C	loui01	N11	B-P-18A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-05	Percent Solids	Cool 4 deg C	loui01	N11	B-P-18B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-06	Percent Solids	Cool 4 deg C	loui01	N11	B-P-19A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-07	Percent Solids	Cool 4 deg C	loui01	N11	B-P-19B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-08	Percent Solids	Cool 4 deg C	loui01	N11	B-P-35A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-09	Percent Solids	Cool 4 deg C	loui01	N11	B-P-35B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1232-10	Percent Solids	Cool 4 deg C	loui01	N11	DUP01	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-02	Percent Solids	Cool 4 deg C	loui01	N11	B-P34A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-03	Percent Solids	Cool 4 deg C	loui01	N11	B-P34B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-04	Percent Solids	Cool 4 deg C	loui01	N11	B-P36A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-05	Percent Solids	Cool 4 deg C	loui01	N11	B-P36B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-06	Percent Solids	Cool 4 deg C	loui01	N11	B-P37A	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-07	Percent Solids	Cool 4 deg C	loui01	N11	B-P37B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-08	Percent Solids	Cool 4 deg C	loui01	N11	B-P38A	01/18/2023	Chemtech -SO

Date/Time 01.20.23 15:45

Raw Sample Received by: JD (WC)

Raw Sample Relinquished by: JD (CSM)

Date/Time 01.20.23 17:25

Raw Sample Received by: JD CSM

Raw Sample Relinquished by: JD (WC)

123747

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/26/2023	Solid	O1233-09	Percent Solids	Cool 4 deg C	loui01	N11	B-P38B	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-10	Percent Solids	Cool 4 deg C	loui01	N11	WC-38	01/18/2023	Chemtech -SO
01/26/2023	Solid	O1233-11	Percent Solids	Cool 4 deg C	loui01	N11	B-P38C	01/18/2023	Chemtech -SO
01/24/2023	Solid	O1234-01	Percent Solids	Cool 4 deg C	PSEG05	N11	EO-02-11923	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1234-02	Percent Solids	Cool 4 deg C	PSEG05	N11	EO-02-11923	01/19/2023	Chemtech -SO
01/28/2023	Solid	O1235-04	Percent Solids	Cool 4 deg C	ATCE02	N11	12X52	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1235-05	Percent Solids	Cool 4 deg C	ATCE02	N11	12X53	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1235-06	Percent Solids	Cool 4 deg C	ATCE02	N11	12X54	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1235-07	Percent Solids	Cool 4 deg C	ATCE02	N11	12X55	01/18/2023	Chemtech -SO
01/24/2023	Solid	O1237-01	Percent Solids	Cool 4 deg C	PSEG03	N12	COMP-1-2-3A	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1237-02	Percent Solids	Cool 4 deg C	PSEG03	N12	3A	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1238-01	Percent Solids	Cool 4 deg C	PSEG03	N12	RBRB22281-OILY-DEBRIS	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1239-01	Percent Solids	Cool 4 deg C	PSEG03	N12	BORING-3	01/19/2023	Chemtech -SO
01/26/2023	Solid	O1239-03	Percent Solids	Cool 4 deg C	PSEG03	N12	BORING-3-EPH-2	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1240-01	Percent Solids	Cool 4 deg C	PSEG05	N12	TR-05-011923	01/19/2023	Chemtech -SO
01/24/2023	Solid	O1240-02	Percent Solids	Cool 4 deg C	PSEG05	N12	TR-05-011923-EPH-2	01/19/2023	Chemtech -SO
01/27/2023	Solid	O1241-01	Percent Solids	Cool 4 deg C	PSEG03	N11	34326-FRONT	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-02	Percent Solids	Cool 4 deg C	PSEG03	N11	34326-BACK	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-03	Percent Solids	Cool 4 deg C	PSEG03	N11	34327-FRONT	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-04	Percent Solids	Cool 4 deg C	PSEG03	N11	34327-BACK	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-05	Percent Solids	Cool 4 deg C	PSEG03	N11	34328-FRONT	01/20/2023	Chemtech -SO

Date/Time 01.20.23 15:45

Raw Sample Received by: JP (WC)

Raw Sample Relinquished by: JD CSM)

Date/Time 01.20.23 17:25

Raw Sample Received by: JD CSM)

Raw Sample Relinquished by: JP (WC)

UB 123747

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/27/2023	Solid	O1241-06	Percent Solids	Cool 4 deg C	PSEG03	N11	34328BACK	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-07	Percent Solids	Cool 4 deg C	PSEG03	N11	343269-FRONT	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1241-08	Percent Solids	Cool 4 deg C	PSEG03	N11	34329-BACK	01/20/2023	Chemtech -SO
01/28/2023	Solid	O1243-01	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-0-10	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1243-02	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-0-10	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1243-03	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-10-20	01/18/2023	Chemtech -SO
01/28/2023	Solid	O1243-04	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-10-20	01/18/2023	Chemtech -SO
01/29/2023	Solid	O1243-05	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-20-30	01/19/2023	Chemtech -SO
01/29/2023	Solid	O1243-06	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-20-30	01/19/2023	Chemtech -SO
01/29/2023	Solid	O1243-07	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-30-40	01/19/2023	Chemtech -SO
01/29/2023	Solid	O1243-08	Percent Solids	Cool 4 deg C	ENTE01	N11	TJRC-11823-B4-30-40	01/19/2023	Chemtech -SO
01/27/2023	Solid	O1244-01	Percent Solids	Cool 4 deg C	PSEG03	N11	VNJ-223	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1244-02	Percent Solids	Cool 4 deg C	PSEG03	N11	VNJ-223	01/20/2023	Chemtech -SO
01/23/2023	Solid	O1248-05	Percent Solids	Cool 4 deg C	CHEM02	N11	SVOC-GPC-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-06	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-07	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC-BLANK-SPIKE	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-08	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GPC-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-09	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GPC-BLANK-SPIKE	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-10	Percent Solids	Cool 4 deg C	CHEM02	N11	SVOC-GPC2-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-11	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC2-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-12	Percent Solids	Cool 4 deg C	CHEM02	N11	PEST-GPC2-BLANK-SPIKE	01/13/2023	Chemtech -SO

Date/Time 01.20.23 15:45

Raw Sample Received by: JP (WC)

Raw Sample Relinquished by: JD CSM

Date/Time 01.20.23 17:25

Raw Sample Received by: JD CSM

Raw Sample Relinquished by: JP (WC)

1P223747

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

Due Date	Matrix	Sample	Test	Preservative	Customer	Raw Sample Storage Location	Customer Sample	Collect Date	Method
01/23/2023	Solid	O1248-13	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GCP2-BLANK	01/13/2023	Chemtech -SO
01/23/2023	Solid	O1248-14	Percent Solids	Cool 4 deg C	CHEM02	N11	PCB-GCP2-BLANK-SPIKE	01/13/2023	Chemtech -SO
01/25/2023	Solid	O1251-01	Percent Solids	Cool 4 deg C	SOUN03	N11	COMP-1	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-03	Percent Solids	Cool 4 deg C	SOUN03	N11	EPH-1	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-05	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-1	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-06	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-07	Percent Solids	Cool 4 deg C	SOUN03	N11	COMP-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-09	Percent Solids	Cool 4 deg C	SOUN03	N11	EPH-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-11	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-3	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1251-12	Percent Solids	Cool 4 deg C	SOUN03	N11	TOT-VOC-4	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1252-01	Percent Solids	Cool 4 deg C	PSEG03	N11	MH-9	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1252-02	Percent Solids	Cool 4 deg C	PSEG03	N11	MH-9-EPH	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1253-01	Percent Solids	Cool 4 deg C	PSEG05	N13	SU-04-012023	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1253-02	Percent Solids	Cool 4 deg C	PSEG05	N13	SU-04-012023-EPH-2	01/20/2023	Chemtech -SO
01/26/2023	Solid	O1254-01	Percent Solids	Cool 4 deg C	PSEG05	N11	HR-04-012023	01/20/2023	Chemtech -SO
01/26/2023	Solid	O1254-02	Percent Solids	Cool 4 deg C	PSEG05	N11	HR-04-012023-EPH-2	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1255-01	Percent Solids	Cool 4 deg C	PSEG03	N11	BORING-1	01/20/2023	Chemtech -SO
01/27/2023	Solid	O1255-03	Percent Solids	Cool 4 deg C	PSEG03	N11	BORING-1-EPH-2	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1256-01	Percent Solids	Cool 4 deg C	PSEG05	N11	OR-02-012023	01/20/2023	Chemtech -SO
01/25/2023	Solid	O1256-02	Percent Solids	Cool 4 deg C	PSEG05	N11	OR-02-012023-EPH-2	01/20/2023	Chemtech -SO
01/23/2023	Solid	O1258-01	Percent Solids	Cool 4 deg C	RMJE02	N11	WASTE-VOA-2	01/20/2023	Chemtech -SO

Date/Time 01.20.23 15:45
Raw Sample Received by: JP (WC)
Raw Sample Relinquished by: JD CSM

Date/Time 01.20.23 17:25
Raw Sample Received by: JD CSM
Raw Sample Relinquished by: JP (WC)

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123754

Review By	bin	Review On	1/24/2023 11:10:18 AM
Supervise By	jaswal	Supervise On	1/24/2023 8:09:32 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73193,MP73257,MP73258,MP73259,MP73260
ICV Standard	MP73191,MP73193
CCV Standard	MP73261
ICSA Standard	MP73255,MP73256
CRI Standard	
LCS Standard	
Chk Standard	MP73254,MP73188,MP73262,MP73263

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/20/23 12:15		Bin	OK
2	S1	S1	CAL2	01/20/23 12:19		Bin	OK
3	S2	S2	CAL3	01/20/23 12:23		Bin	OK
4	S3	S3	CAL4	01/20/23 12:27		Bin	OK
5	S4	S4	CAL5	01/20/23 12:31		Bin	OK
6	S5	S5	CAL6	01/20/23 12:34		Bin	OK
7	ICV01	ICV01	ICV	01/20/23 12:38		Bin	OK
8	ICB01	ICB01	ICB	01/20/23 12:43		Bin	OK
9	ICSA01	ICSA01	ICSA	01/20/23 13:26		Bin	OK
10	ICSAB01	ICSAB01	ICSAB	01/20/23 13:30		Bin	OK
11	ICSADL	ICSADL	ICSA	01/20/23 13:34		Bin	OK
12	ICSABDL	ICSABDL	ICSAB	01/20/23 13:38		Bin	OK
13	CCV01	CCV01	CCV	01/20/23 13:42		Bin	OK
14	LLCCV01	LLCCV01	LLCCV	01/20/23 13:46		Bin	OK
15	CCB01	CCB01	CCB	01/20/23 13:50		Bin	OK
16	O1175-02	YARD-1	SAM	01/20/23 13:54		Bin	OK
17	O1175-11	YARD-2	SAM	01/20/23 13:58		Bin	OK
18	PB150302BL	PB150302BL	MB	01/20/23 14:02		Bin	OK
19	PB150302BS	PB150302BS	LCS	01/20/23 14:06		Bin	OK
20	O1121-01	WEEKLY-OUTFALL-0	SAM	01/20/23 14:10		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123754

Review By	bin	Review On	1/24/2023 11:10:18 AM
Supervise By	jaswal	Supervise On	1/24/2023 8:09:32 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73193,MP73257,MP73258,MP73259,MP73260
ICV Standard	MP73191,MP73193
CCV Standard	MP73261
ICSA Standard	MP73255,MP73256
CRI Standard	
LCS Standard	
Chk Standard	MP73254,MP73188,MP73262,MP73263

21	O1121-01DUP	WEEKLY-OUTFALL-0	DUP	01/20/23 14:14	Si high	Bin	Dilution
22	O1121-01L	WEEKLY-OUTFALL-0	SD	01/20/23 14:18		Bin	OK
23	O1121-01MS	WEEKLY-OUTFALL-0	MS	01/20/23 14:22	Si high	Bin	Dilution
24	O1121-01MSD	WEEKLY-OUTFALL-0	MSD	01/20/23 14:26	Si high	Bin	Dilution
25	O1121-01A	WEEKLY-OUTFALL-0	PS	01/20/23 14:30	0.1 ml of LFS-1(M5317) + LFS-	Bin	OK
26	CCV02	CCV02	CCV	01/20/23 14:37		Bin	OK
27	CCB02	CCB02	CCB	01/20/23 14:41		Bin	OK
28	O1192-01	CELL-A-POOL-WATE	SAM	01/20/23 14:45		Bin	OK
29	O1192-02	CELL-B/C-POOL-WAT	SAM	01/20/23 14:49		Bin	OK
30	O1192-03	CELL-D-POOL-WATE	SAM	01/20/23 14:53		Bin	OK
31	O1203-01DL	BI-WEEKLY-INFLUEN	SAM	01/20/23 14:57	10x for Fe	Bin	Confirms
32	O1186-03DL	TWP04DL	SAM	01/20/23 15:01	10x for Na	Bin	Confirms
33	PB150344BL	PB150344BL	MB	01/20/23 15:09		Bin	OK
34	O1198-01	PL-02-011823	SAM	01/20/23 15:17		Bin	OK
35	O1198-01DUP	PL-02-011823DUP	DUP	01/20/23 15:21		Bin	OK
36	PB150344BS	PB150344BS	LCS	01/20/23 15:25		Bin	OK
37	CCV03	CCV03	CCV	01/20/23 15:29		Bin	OK
38	CCB03	CCB03	CCB	01/20/23 15:33		Bin	OK
39	O1198-01L	PL-02-011823L	SD	01/20/23 15:37		Bin	OK
40	O1198-01MS	PL-02-011823MS	MS	01/20/23 15:41		Bin	OK
41	O1198-01MSD	PL-02-011823MSD	MSD	01/20/23 15:44		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123754

Review By	bin	Review On	1/24/2023 11:10:18 AM
Supervise By	jaswal	Supervise On	1/24/2023 8:09:32 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73193,MP73257,MP73258,MP73259,MP73260
ICV Standard	MP73191,MP73193
CCV Standard	MP73261
ICSA Standard	MP73255,MP73256
CRI Standard	
LCS Standard	
Chk Standard	MP73254,MP73188,MP73262,MP73263

42	O1198-01A	PL-02-011823A	PS	01/20/23 15:48	0.1 ml of LFS-1(M5317) + LFS-	Bin	OK
43	O1215-01	BU-02-011823	SAM	01/20/23 15:52		Bin	OK
44	O1220-01	MH-8	SAM	01/20/23 15:55		Bin	OK
45	O1220-04	TP-G	SAM	01/20/23 15:59		Bin	OK
46	O1214-02	TJRC-011723-B3-0-1(	SAM	01/20/23 16:03		Bin	OK
47	O1214-05	TJRC-011723-B3-10-2	SAM	01/20/23 16:07		Bin	OK
48	O1214-08	TJRC-011723-B3-0-1(	SAM	01/20/23 16:11		Bin	OK
49	CCV04	CCV04	CCV	01/20/23 16:15		Bin	OK
50	CCB04	CCB04	CCB	01/20/23 16:18		Bin	OK
51	PB150319BL	PB150319BL	MB	01/20/23 16:22		Bin	OK
52	PB150319BS	PB150319BS	LCS	01/20/23 16:26		Bin	OK
53	PB150329TB	PB150329TB	MB	01/20/23 16:30		Bin	OK
54	PB150307TB	PB150307TB	MB	01/20/23 16:34		Bin	OK
55	O1180-02	MH-7	SAM	01/20/23 16:38		Bin	OK
56	O1180-02DUP	MH-7DUP	DUP	01/20/23 16:43		Bin	OK
57	O1180-02L	MH-7L	SD	01/20/23 16:55		Bin	OK
58	O1180-02MS	MH-7MS	MS	01/20/23 16:59		Bin	OK
59	O1180-02MSD	MH-7MSD	MSD	01/20/23 17:03		Bin	OK
60	CRI01	CRI01	CRDL	01/20/23 17:07		Bin	OK
61	CCV05	CCV05	CCV	01/20/23 17:11		Bin	OK
62	CCB05	CCB05	CCB	01/20/23 17:15		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123754

Review By	bin	Review On	1/24/2023 11:10:18 AM
Supervise By	jaswal	Supervise On	1/24/2023 8:09:32 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73193,MP73257,MP73258,MP73259,MP73260
ICV Standard	MP73191,MP73193
CCV Standard	MP73261
ICSA Standard	MP73255,MP73256
CRI Standard	
LCS Standard	
Chk Standard	MP73254,MP73188,MP73262,MP73263

63	O1180-02A	MH-7A	PS	01/20/23 17:27	0.1 ml of LFS-1(M5317) + LFS-	Bin	OK
64	O1220-05	TP-G	SAM	01/20/23 17:32		Bin	OK
65	O1220-05DUP	TP-GDUP	DUP	01/20/23 17:36		Bin	OK
66	O1220-05L	TP-GL	SD	01/20/23 17:40		Bin	OK
67	O1220-05MS	TP-GMS	MS	01/20/23 17:44		Bin	OK
68	O1220-05MSD	TP-GMSD	MSD	01/20/23 17:48		Bin	OK
69	O1220-05A	TP-GA	PS	01/20/23 17:52	0.1 ml of LFS-1(M5317) + LFS-	Bin	OK
70	O1121-01DL	WEEKLY-OUTFALL-0	SAM	01/20/23 17:56	Not required	Bin	Not Ok
71	LR CHECK 2	LR CHECK 2	HIGH STD	01/20/23 18:04		Bin	OK
72	LR CHECK 1	LR CHECK 1	HIGH STD	01/20/23 18:42		Bin	OK
73	CCV06	CCV06	CCV	01/20/23 18:47		Bin	OK
74	CCB06	CCB06	CCB	01/20/23 18:51		Bin	OK
75	O1121-01DUPDL	WEEKLY-OUTFALL-0	DUP	01/20/23 18:55	10x for Si	Bin	Confirms
76	O1121-01LDL	WEEKLY-OUTFALL-0	SD	01/20/23 18:59	Not required	Bin	Not Ok
77	O1121-01MSDL	WEEKLY-OUTFALL-0	MS	01/20/23 19:03	10x for Si	Bin	Confirms
78	O1121-01MSDDL	WEEKLY-OUTFALL-0	MSD	01/20/23 19:07	10x for Si	Bin	Confirms
79	O1121-01ADL	WEEKLY-OUTFALL-0	PS	01/20/23 19:11	Not required	Bin	Not Ok
80	O1214-11	TJRC-011823-B3-20-3	SAM	01/20/23 19:19		Bin	OK
81	O1214-14	TJRC-011823-B3-30-4	SAM	01/20/23 19:23		Bin	OK
82	O1217-01	BORING-4	SAM	01/20/23 19:26		Bin	OK
83	O1217-14	BORING-2	SAM	01/20/23 19:30		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123754

Review By	bin	Review On	1/24/2023 11:10:18 AM
Supervise By	jaswal	Supervise On	1/24/2023 8:09:32 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73193,MP73257,MP73258,MP73259,MP73260
ICV Standard	MP73191,MP73193
CCV Standard	MP73261
ICSA Standard	MP73255,MP73256
CRI Standard	
LCS Standard	
Chk Standard	MP73254,MP73188,MP73262,MP73263

84	CCV07	CCV07	CCV	01/20/23 19:44		Bin	OK
85	CCB07	CCB07	CCB	01/20/23 19:48		Bin	OK
86	O1229-01	OK-02-011923	SAM	01/20/23 19:52		Bin	OK
87	O1230-01	BBC	SAM	01/20/23 19:56		Bin	OK
88	O1231-01	BBC	SAM	01/20/23 20:00		Bin	OK
89	O1234-01	EO-02-11923	SAM	01/20/23 20:04		Bin	OK
90	O1237-01	COMP-1-2-3A	SAM	01/20/23 20:07		Bin	OK
91	O1238-01	RBRB22281-OILY-DE	SAM	01/20/23 20:11		Bin	OK
92	O1239-01	BORING-3	SAM	01/20/23 20:15		Bin	OK
93	O1240-01	TR-05-011923	SAM	01/20/23 20:19		Bin	OK
94	PB150370BL	PB150370BL	MB	01/20/23 20:23		Bin	OK
95	PB150370BS	PB150370BS	LCS	01/20/23 20:27		Bin	OK
96	CCV08	CCV08	CCV	01/20/23 20:30		Bin	OK
97	CCB08	CCB08	CCB	01/20/23 20:34		Bin	OK
98	O1232-01	B-P-17A	SAM	01/20/23 20:38		Bin	OK
99	O1232-01DUP	B-P-17ADUP	DUP	01/20/23 20:42		Bin	OK
100	O1232-01L	B-P-17AL	SD	01/20/23 20:46		Bin	OK
101	O1232-01MS	B-P-17AMS	MS	01/20/23 20:50		Bin	OK
102	O1232-01MSD	B-P-17AMSD	MSD	01/20/23 20:54		Bin	OK
103	O1232-01A	B-P-17AA	PS	01/20/23 20:57	0.1 ml of LFS-1(M5317) + LFS-	Bin	OK
104	O1232-02	B-P-17B	SAM	01/20/23 21:01		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123754

Review By	bin	Review On	1/24/2023 11:10:18 AM
Supervise By	jaswal	Supervise On	1/24/2023 8:09:32 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73193,MP73257,MP73258,MP73259,MP73260
ICV Standard	MP73191,MP73193
CCV Standard	MP73261
ICSA Standard	MP73255,MP73256
CRI Standard	
LCS Standard	
Chk Standard	MP73254,MP73188,MP73262,MP73263

105	O1232-04	B-P-18A	SAM	01/20/23 21:05		Bin	OK
106	O1232-05	B-P-18B	SAM	01/20/23 21:09		Bin	OK
107	O1232-06	B-P-19A	SAM	01/20/23 21:12		Bin	OK
108	CCV09	CCV09	CCV	01/20/23 21:16		Bin	OK
109	CCB09	CCB09	CCB	01/20/23 21:20		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB123763

Review By	mohan	Review On	1/23/2023 4:32:45 PM
Supervise By	jaswal	Supervise On	1/23/2023 11:07:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP73408,MP73409,MP73410,MP73411,MP73412,MP73413
ICV Standard	MP73414
CCV Standard	MP73416
ICSA Standard	
CRI Standard	MP73418
LCS Standard	
Chk Standard	MP73415,MP73417,MP73419,MP73437

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/23/23 10:06		mohan	OK
2	S0.2	S0.2	CAL2	01/23/23 10:11		mohan	OK
3	S2.5	S2.5	CAL3	01/23/23 10:13		mohan	OK
4	S5	S5	CAL4	01/23/23 10:16		mohan	OK
5	S7.5	S7.5	CAL5	01/23/23 10:20		mohan	OK
6	S10	S10	CAL6	01/23/23 10:23		mohan	OK
7	ICV12	ICV12	ICV	01/23/23 10:28		mohan	OK
8	ICB12	ICB12	ICB	01/23/23 10:30		mohan	OK
9	CCV93	CCV93	CCV	01/23/23 10:33		mohan	OK
10	CCB93	CCB93	CCB	01/23/23 10:35		mohan	OK
11	CRA	CRA	CRDL	01/23/23 10:37		mohan	OK
12	HighStd	HighStd	HIGH STD	01/23/23 10:39		mohan	OK
13	ChkStd	ChkStd	SAM	01/23/23 10:42		mohan	OK
14	PB150381BL	PB150381BL	MB	01/23/23 10:44		mohan	OK
15	PB150381BS	PB150381BS	LCS	01/23/23 10:46		mohan	OK
16	O1229-01	OK-02-011923	SAM	01/23/23 10:48		mohan	OK
17	O1230-01	BBC	SAM	01/23/23 10:51		mohan	OK
18	O1231-01	BBC	SAM	01/23/23 10:53		mohan	OK
19	O1232-01	B-P-17A	SAM	01/23/23 10:55		mohan	OK
20	O1232-01DUP	B-P-17ADUP	DUP	01/23/23 10:57		mohan	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB123763

Review By	mohan	Review On	1/23/2023 4:32:45 PM
Supervise By	jaswal	Supervise On	1/23/2023 11:07:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP73408,MP73409,MP73410,MP73411,MP73412,MP73413
ICV Standard	MP73414
CCV Standard	MP73416
ICSA Standard	
CRI Standard	MP73418
LCS Standard	
Chk Standard	MP73415,MP73417,MP73419,MP73437

21	CCV94	CCV94	CCV	01/23/23 11:00		mohan	OK
22	CCB94	CCB94	CCB	01/23/23 11:02		mohan	OK
23	O1232-01MS	B-P-17AMS	MS	01/23/23 11:04		mohan	OK
24	O1232-01MSD	B-P-17AMSD	MSD	01/23/23 11:06		mohan	OK
25	O1232-02	B-P-17B	SAM	01/23/23 11:09		mohan	OK
26	O1232-04	B-P-18A	SAM	01/23/23 11:11		mohan	OK
27	O1232-05	B-P-18B	SAM	01/23/23 11:13		mohan	OK
28	O1232-06	B-P-19A	SAM	01/23/23 11:16		mohan	OK
29	O1232-07	B-P-19B	SAM	01/23/23 11:18		mohan	OK
30	O1232-08	B-P-35A	SAM	01/23/23 11:20		mohan	OK
31	O1232-09	B-P-35B	SAM	01/23/23 11:22		mohan	OK
32	O1232-10	DUP01	SAM	01/23/23 11:25		mohan	OK
33	CCV95	CCV95	CCV	01/23/23 11:27		mohan	OK
34	CCB95	CCB95	CCB	01/23/23 11:29		mohan	OK
35	PB150382BL	PB150382BL	MB	01/23/23 11:31		mohan	OK
36	PB150382BS	PB150382BS	LCS	01/23/23 11:34		mohan	OK
37	O1233-02	B-P34A	SAM	01/23/23 11:36		mohan	OK
38	O1233-03	B-P34B	SAM	01/23/23 11:38		mohan	OK
39	O1233-04	B-P36A	SAM	01/23/23 11:40		mohan	OK
40	O1233-05	B-P36B	SAM	01/23/23 11:43		mohan	OK
41	O1233-06	B-P37A	SAM	01/23/23 11:45		mohan	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB123763

Review By	mohan	Review On	1/23/2023 4:32:45 PM
Supervise By	jaswal	Supervise On	1/23/2023 11:07:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP73408,MP73409,MP73410,MP73411,MP73412,MP73413
ICV Standard	MP73414
CCV Standard	MP73416
ICSA Standard	
CRI Standard	MP73418
LCS Standard	
Chk Standard	MP73415,MP73417,MP73419,MP73437

42	O1233-07	B-P37B	SAM	01/23/23 11:47		mohan	OK
43	O1233-08	B-38A	SAM	01/23/23 11:50		mohan	OK
44	O1233-09	B-P38B	SAM	01/23/23 11:52		mohan	OK
45	CCV96	CCV96	CCV	01/23/23 11:54		mohan	OK
46	CCB96	CCB96	CCB	01/23/23 11:56		mohan	OK
47	O1233-11	B-P38C	SAM	01/23/23 11:59		mohan	OK
48	O1234-01	EO-02-11923	SAM	01/23/23 12:01		mohan	OK
49	O1237-01	COMP-1-2-3A	SAM	01/23/23 12:03		mohan	OK
50	O1239-01	BORING-3	SAM	01/23/23 12:05		mohan	OK
51	O1240-01	TR-05-011923	SAM	01/23/23 12:08		mohan	OK
52	O1244-01	VNJ-223	SAM	01/23/23 12:10		mohan	OK
53	O1252-01	MH-9	SAM	01/23/23 12:12		mohan	OK
54	O1252-01DUP	MH-9DUP	DUP	01/23/23 12:15		mohan	OK
55	O1252-01MS	MH-9MS	MS	01/23/23 12:17		mohan	OK
56	O1252-01MSD	MH-9MSD	MSD	01/23/23 12:19		mohan	OK
57	CCV97	CCV97	CCV	01/23/23 12:21		mohan	OK
58	CCB97	CCB97	CCB	01/23/23 12:24		mohan	OK
59	O1232-01L	B-P-17AL	SD	01/23/23 12:26		mohan	OK
60	O1232-01A	B-P-17AA	PS	01/23/23 12:28		mohan	OK
61	O1252-01L	MH-9L	SD	01/23/23 12:30		mohan	OK
62	O1252-01A	MH-9A	PS	01/23/23 12:33		mohan	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB123763

Review By	mohan	Review On	1/23/2023 4:32:45 PM
Supervise By	jaswal	Supervise On	1/23/2023 11:07:10 PM

STD. NAME	STD REF.#
ICAL Standard	MP73408,MP73409,MP73410,MP73411,MP73412,MP73413
ICV Standard	MP73414
CCV Standard	MP73416
ICSA Standard	
CRI Standard	MP73418
LCS Standard	
Chk Standard	MP73415,MP73417,MP73419,MP73437

63	CCV98	CCV98	CCV	01/23/23 12:35		mohan	OK
64	CCB98	CCB98	CCB	01/23/23 12:37		mohan	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123785

Review By	bin	Review On	1/25/2023 3:41:13 PM
Supervise By	jaswal	Supervise On	1/25/2023 9:31:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73484,MP73480,MP73479,MP73478,MP73477
ICV Standard	MP73485,MP73484
CCV Standard	MP73481
ICSA Standard	MP73475,MP73476
CRI Standard	
LCS Standard	
Chk Standard	MP73474,MP73188,MP73482,MP73483

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/24/23 12:34		Bin	OK
2	S1	S1	CAL2	01/24/23 12:38		Bin	OK
3	S2	S2	CAL3	01/24/23 12:42		Bin	OK
4	S3	S3	CAL4	01/24/23 12:46		Bin	OK
5	S4	S4	CAL5	01/24/23 12:49		Bin	OK
6	S5	S5	CAL6	01/24/23 12:53		Bin	OK
7	ICV01	ICV01	ICV	01/24/23 13:12		Bin	OK
8	ICB01	ICB01	ICB	01/24/23 13:16		Bin	OK
9	CRI01	CRI01	CRDL	01/24/23 13:20		Bin	OK
10	ICSA01	ICSA01	ICSA	01/24/23 13:25		Bin	OK
11	ICSAB01	ICSAB01	ICSAB	01/24/23 13:29		Bin	OK
12	CCV01	CCV01	CCV	01/24/23 13:33		Bin	OK
13	LLCCV01	LLCCV01	LLCCV	01/24/23 13:41		Bin	OK
14	CCB01	CCB01	CCB	01/24/23 13:45		Bin	OK
15	O1232-07	B-P-19B	SAM	01/24/23 13:49		Bin	OK
16	O1232-08	B-P-35A	SAM	01/24/23 13:53		Bin	OK
17	O1232-09	B-P-35B	SAM	01/24/23 13:57		Bin	OK
18	O1232-10	DUP01	SAM	01/24/23 14:00		Bin	OK
19	O1233-02	B-P34A	SAM	01/24/23 14:04		Bin	OK
20	O1233-03	B-P34B	SAM	01/24/23 14:08		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123785

Review By	bin	Review On	1/25/2023 3:41:13 PM
Supervise By	jaswal	Supervise On	1/25/2023 9:31:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73484,MP73480,MP73479,MP73478,MP73477
ICV Standard	MP73485,MP73484
CCV Standard	MP73481
ICSA Standard	MP73475,MP73476
CRI Standard	
LCS Standard	
Chk Standard	MP73474,MP73188,MP73482,MP73483

21	O1233-04	B-P36A	SAM	01/24/23 14:12		Bin	OK
22	O1233-05	B-P36B	SAM	01/24/23 14:15		Bin	OK
23	O1233-06	B-P37A	SAM	01/24/23 14:19		Bin	OK
24	O1233-07	B-P37B	SAM	01/24/23 14:23		Bin	OK
25	CCV02	CCV02	CCV	01/24/23 14:35		Bin	OK
26	CCB02	CCB02	CCB	01/24/23 14:38		Bin	OK
27	O1233-08	B-38A	SAM	01/24/23 14:42		Bin	OK
28	O1233-09	B-P38B	SAM	01/24/23 14:46		Bin	OK
29	O1233-11	B-P38C	SAM	01/24/23 14:50		Bin	OK
30	LR CHECK 1	LR CHECK 1	HIGH STD	01/24/23 14:54		Bin	OK
31	LR CHECK 2	LR CHECK 2	HIGH STD	01/24/23 14:58		Bin	OK
32	O1141-06	SOUTH-WALL	SAM	01/24/23 16:52		Bin	OK
33	O1237-04	COMP-1-2-3A	SAM	01/24/23 16:56		Bin	OK
34	O1238-02	RBRB22281-OILY-DE	SAM	01/24/23 17:00		Bin	OK
35	O1251-01	COMP-1	SAM	01/24/23 17:16		Bin	OK
36	O1251-01DUP	COMP-1DUP	DUP	01/24/23 17:20		Bin	OK
37	CCV03	CCV03	CCV	01/24/23 17:46		Bin	OK
38	CCB03	CCB03	CCB	01/24/23 17:50		Bin	OK
39	O1251-01MS	COMP-1MS	MS	01/24/23 17:54		Bin	OK
40	O1251-01MSD	COMP-1MSD	MSD	01/24/23 17:57		Bin	OK
41	O1251-01A	COMP-1A	PS	01/24/23 18:01	0.1 ml of LFS-1(M5317) and LF	Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB123785

Review By	bin	Review On	1/25/2023 3:41:13 PM
Supervise By	jaswal	Supervise On	1/25/2023 9:31:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP73406,MP73484,MP73480,MP73479,MP73478,MP73477
ICV Standard	MP73485,MP73484
CCV Standard	MP73481
ICSA Standard	MP73475,MP73476
CRI Standard	
LCS Standard	
Chk Standard	MP73474,MP73188,MP73482,MP73483

42	O1251-07	COMP-2	SAM	01/24/23 18:04		Bin	OK
43	O1251-02	COMP-1	SAM	01/24/23 18:08		Bin	OK
44	O1251-08	COMP-2	SAM	01/24/23 18:12		Bin	OK
45	O1253-01	SU-04-012023	SAM	01/24/23 18:17		Bin	OK
46	O1256-01	OR-02-012023	SAM	01/24/23 18:20		Bin	OK
47	O1255-01	BORING-1	SAM	01/24/23 18:24		Bin	OK
48	O1251-01L	COMP-1L	SD	01/24/23 18:28		Bin	OK
49	CCV04	CCV04	CCV	01/24/23 18:37		Bin	OK
50	CCB04	CCB04	CCB	01/24/23 18:41		Bin	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : O1233

Test : Mercury,Metals ICP-TAL

Prepbatch ID : PB150370,PB150382,

Sequence ID/Qc Batch ID: LB123754,LB123763,LB123785,

Standard ID :

MP73163,MP73178,MP73188,MP73191,MP73192,MP73193,MP73235,MP73236,MP73253,MP73254,MP73255,MP732
56,MP73257,MP73258,MP73259,MP73260,MP73261,MP73262,MP73263,MP73406,MP73407,MP73408,MP73409,MP7
3410,MP73411,MP73412,MP73413,MP73414,MP73415,MP73416,MP73417,MP73418,MP73419,MP73420,MP73437,M
P73473,MP73474,MP73475,MP73476,MP73477,MP73478,MP73479,MP73480,MP73481,MP73482,MP73483,MP73484
,MP73485,

Chemical ID :

M4371,M4459,M4583,M4589,M4657,M4768,M4794,M4825,M4844,M4874,M4876,M4877,M4878,M4880,M4881,M4882,
M4883,M4884,M4885,M4886,M4888,M4889,M4891,M4894,M4901,M4902,M4916,M4920,M4939,M4960,M4961,M5019,
M5020,M5062,M5100,M5108,M5127,M5184,M5193,M5200,M5201,M5218,M5220,M5224,M5226,M5227,M5228,M5285,
M5289,M5290,M5291,M5317,M5322,M5387,M5393,M5394,M5408,M5412,M5414,M5416,M5418,M5422,M5425,W2606,

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP73163	01/02/2023	02/28/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/03/2023

FROM 125.00000ml of M5408 + 2350.00000ml of W2606 + 25.00000ml of M5412 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP73178	01/04/2023	06/27/2023	Al-Terek Isaac	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 01/05/2023

FROM 1250.00000ml of M5412 + 1250.00000ml of W2606 = Final Quantity: 2500.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP73188	01/03/2023	02/28/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/05/2023

FROM 1.00000ml of M4961 + 10.00000ml of M4960 + 1969.00000ml of W2606 + 20.00000ml of M5412 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP73191	01/04/2023	01/22/2023	Bin He	None	None	Sarabjit Jaswal 01/05/2023

FROM 0.02500ml of M5019 + 0.02500ml of M5020 + 0.02500ml of M5228 + 0.25000ml of M5218 + 10.00000ml of M5291 + 89.67500ml of MP73163 = Final Quantity: 100.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP73192	01/04/2023	02/28/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/05/2023

FROM 0.03000ml of M4876 + 0.03000ml of M4877 + 0.05000ml of M4657 + 0.05000ml of M4885 + 0.05000ml of M4894 + 0.05000ml of M5289 + 0.06000ml of M4881 + 0.10000ml of M4874 + 0.10000ml of M4880 + 0.10000ml of M4883 + 0.10000ml of M4902 + 0.10000ml of M4939 + 0.10000ml of M5184 + 0.10000ml of M5228 + 0.15000ml of M4825 + 0.20000ml of M4768 + 0.20000ml of M4886 + 0.20000ml of M4888 + 0.20000ml of M4889 + 0.20000ml of M4891 + 0.20000ml of M5227 + 0.25000ml of M5224 + 0.50000ml of M4901 + 0.50000ml of M5387 + 1.00000ml of M4878 + 1.00000ml of M5108 + 1.00000ml of M5200 + 1.00000ml of M5201 + 1.00000ml of M5290 + 2.00000ml of M4882 + 2.00000ml of M4884 + 87.38000ml of MP73163 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP73193	01/04/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/05/2023

FROM 196.00000ml of MP73163 + 4.00000ml of MP73192 = Final Quantity: 200.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP73235	01/06/2023	07/06/2023	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 01/06/2023

FROM 100.00000gram of M4916 + 2000.00000ml of W2606 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP73236	01/06/2023	07/06/2023	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 01/06/2023

FROM 2000.00000ml of W2606 + 240.00000gram of M4371 + 240.00000gram of M4459 = Final Quantity: 2000.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP73253	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 125.00000ml of M5416 + 2350.00000ml of W2606 + 25.00000ml of M5414 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP73254	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 200.00000ml of M5414 + 9800.00000ml of W2606 = Final Quantity: 10000.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP73255	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 10.00000ml of M5127 + 90.00000ml of MP73253 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP73256	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 0.10000ml of M4589 + 0.10000ml of M4880 + 0.10000ml of M4882 + 0.10000ml of M4939 + 0.10000ml of M5228 + 10.00000ml of M5127 + 10.00000ml of M5220 + 79.50000ml of MP73253 = Final Quantity: 100.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP73257	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 5.00000ml of M4589 + 5.00000ml of M4880 + 5.00000ml of M4882 + 5.00000ml of M4939 + 5.00000ml of M5100 + 5.00000ml of M5224 + 5.00000ml of M5228 + 5.00000ml of M5394 + 460.00000ml of MP73253 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP73258	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 100.00000ml of MP73253 + 100.00000ml of MP73257 = Final Quantity: 200.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP73259	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 150.00000ml of MP73253 + 50.00000ml of MP73257 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP73260	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 16.00000ml of MP73257 + 184.00000ml of MP73253 = Final Quantity: 200.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP73261	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 100.00000ml of MP73253 + 100.00000ml of MP73257 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3651	LR CHECK 1	MP73262	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 10.00000ml of M5201 + 18.00000ml of M5108 + 18.00000ml of M5200 + 18.00000ml of M5290 + 20.00000ml of M5289 + 9.00000ml of M4894 + 7.00000ml of MP73253 = Final Quantity: 100.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3652	LR CHECK2	MP73263	01/09/2023	01/22/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/11/2023

FROM 10.00000ml of M5387 + 2.50000ml of M4844 + 25.00000ml of M5226 + 3.50000ml of M4891 + 4.50000ml of M5184 + 5.00000ml of M4768 + 54.50000ml of MP73253 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP73406	01/19/2023	01/25/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/20/2023

FROM 125.00000ml of M5418 + 2350.00000ml of W2606 + 25.00000ml of M5425 = Final Quantity: 2500.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP73407	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 1.00000ml of M5425 + 2.50000ml of M5062 + 96.50000ml of W2606 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP73408	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 247.50000ml of W2606 = Final Quantity: 250.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP73409	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 247.30000ml of W2606 + 0.20000ml of MP73407 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP73410	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 245.00000ml of W2606 + 2.50000ml of MP73407 = Final Quantity: 250.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP73411	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 242.50000ml of W2606 + 5.00000ml of MP73407 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP73412	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 240.00000ml of W2606 + 7.50000ml of MP73407 = Final Quantity: 250.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP73413	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 237.50000ml of W2606 + 10.00000ml of MP73407 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP73414	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M4794 + 2.50000ml of M5425 + 245.00000ml of W2606 = Final Quantity: 250.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP73415	01/20/2023	01/21/2023	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 247.50000ml of W2606 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP73416	01/20/2023	01/21/2023	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/20/2023

FROM 485.00000ml of W2606 + 5.00000ml of M5425 + 10.00000ml of MP73407 = Final Quantity: 500.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP73417	01/20/2023	01/21/2023	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/20/2023

FROM 495.00000ml of W2606 + 5.00000ml of M5425 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP73418	01/20/2023	01/21/2023	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 247.30000ml of W2606 + 0.20000ml of MP73407 = Final Quantity: 250.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP73419	01/20/2023	01/21/2023	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 01/20/2023

FROM 2.50000ml of M5425 + 240.50000ml of W2606 + 7.00000ml of MP73407 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
887	AQUA REGIA FOR HG ON 7471A	MP73420	01/20/2023	01/21/2023	Mohan Bera	None	None	Sarabjit Jaswal 01/20/2023

FROM 150.00000ml of M5418 + 50.00000ml of M5425 = Final Quantity: 200.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP73437	01/23/2023	01/24/2023	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 01/23/2023

FROM 450.00000ml of W2606 + 50.00000gram of M4920 + 50.00000ml of M5418 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP73473	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 125.00000ml of M5418 + 2350.00000ml of W2606 + 25.00000ml of M5425 = Final Quantity: 2500.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP73474	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 200.00000ml of M5425 + 9800.00000ml of W2606 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP73475	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 10.00000ml of M5127 + 90.00000ml of MP73473 = Final Quantity: 100.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP73476	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 0.10000ml of M4880 + 0.10000ml of M4882 + 0.10000ml of M4939 + 0.10000ml of M5228 + 0.10100ml of M4589 + 10.00000ml of M5127 + 10.00000ml of M5220 + 79.50000ml of MP73473 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP73477	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 5.00000ml of M4589 + 5.00000ml of M4880 + 5.00000ml of M4882 + 5.00000ml of M4939 + 5.00000ml of M5100 + 5.00000ml of M5224 + 5.00000ml of M5228 + 5.00000ml of M5393 + 460.00000ml of MP73473 = Final Quantity: 500.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP73478	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 100.00000ml of MP73473 + 100.00000ml of MP73477 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP73479	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 150.00000ml of MP73473 + 50.00000ml of MP73477 = Final Quantity: 200.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP73480	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 16.00000ml of MP73477 + 184.00000ml of MP73473 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP73481	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 100.00000ml of MP73473 + 100.00000ml of MP73477 = Final Quantity: 200.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3651	LR CHECK 1	MP73482	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 10.00000ml of M5201 + 18.00000ml of M5193 + 18.00000ml of M5200 + 18.00000ml of M5290 + 20.00000ml of M5289 + 9.00000ml of M4894 + 7.00000ml of MP73473 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3652	LR CHECK2	MP73483	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 10.00000ml of M5387 + 2.50000ml of M4844 + 25.00000ml of M5226 + 3.50000ml of M4891 + 4.50000ml of M5184 + 5.00000ml of M4768 + 54.50000ml of MP73473 = Final Quantity: 100.000 ml

CHEMTECH

284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP73484	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 196.00000ml of MP73473 + 4.00000ml of MP73192 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP73485	01/24/2023	02/05/2023	Bin He	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 01/27/2023

FROM 0.02500ml of M5019 + 0.02500ml of M5020 + 0.25000ml of M5218 + 0.25000ml of M5228 + 10.00000ml of M5291 + 89.87500ml of MP73473 = Final Quantity: 100.000 ml

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000237721	04/13/2026	10/03/2022 / Ankita	10/30/2019 / AMANDEEP	M4459

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Labpure	0919120 / Boiling Stones	26275770	07/07/2025	07/03/2020 / mohan	05/07/2020 / mohan	M4583

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	R2-MEB694243	06/29/2024	07/13/2020 / bin	07/02/2020 / bin	M4589

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	082620	08/26/2023	11/11/2020 / bin	10/28/2020 / bin	M4657

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	072420	07/24/2023	02/26/2021 / BIN	10/28/2020 / BIN	M4768

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV5-0415	04/30/2023	11/25/2022 / mohan	04/20/2021 / mohan	M4794

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	020821	02/08/2024	05/23/2021 / jaswal	05/18/2021 / jaswal	M4825

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	032321	03/23/2024	08/09/2021 / bin	05/06/2021 / jaswal	M4844

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Arsenic (As)	012521	01/25/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4874

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	030221	03/02/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4876

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	072821	07/28/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4877

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	072821	07/28/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4878

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	051121	05/11/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4880

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	062221	06/22/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4881

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	051721	05/17/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	070221	07/02/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4883

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	030921	03/09/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4884

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	072921	07/29/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4885

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	021121	02/11/2024	08/05/2021 / jaswal	08/05/2021 / jaswal	M4886

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57022 / Ti, 1000 PPM, 125 ml	070721	07/07/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4888

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	073021	07/30/2024	08/06/2021 / jaswal	08/05/2021 / jaswal	M4889

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	031921	03/19/2024	08/25/2021 / bin	08/05/2021 / jaswal	M4891

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	061021	06/10/2024	07/26/2021 / bin	06/25/2021 / jaswal	M4894

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	031921	03/19/2024	08/06/2021 / jaswal	08/06/2021 / jaswal	M4901

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	080321	08/03/2024	08/06/2021 / jaswal	08/06/2021 / jaswal	M4902

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	210800	03/31/2026	05/28/2022 / mohan	07/28/2021 / mohan	M4920

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	030221	03/02/2024	09/23/2021 / bin	09/22/2021 / bin	M4939

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	100721	10/07/2024	10/09/2021 / jaswal	10/08/2021 / jaswal	M4960

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58139 / Y, 10000 PPM, 500 ml	052521	05/25/2024	10/09/2021 / jaswal	01/25/2019 / jaswal	M4961

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	011421	01/14/2024	12/13/2021 / bin	12/09/2021 / bin	M5019

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	032921	03/29/2024	12/13/2021 / bin	12/09/2021 / bin	M5020

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	R2-MEB689870	02/14/2024	03/14/2022 / bin	04/29/2020 / bin	M5100

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	082021	08/20/2024	12/05/2021 / bin	10/05/2021 / bin	M5108

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	04/26/2023	10/26/2022 /	04/20/2021 / bin	M5127

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	060122	06/01/2025	07/01/2022 / bin	06/02/2022 / jaswal	M5184

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	082021	08/20/2024	06/23/2022 / bin	09/25/2021 / bin	M5193

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	092121	09/21/2024	06/23/2022 / bin	10/05/2021 / bin	M5200

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	062321	06/23/2024	06/23/2022 / bin	10/05/2021 / bin	M5201

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	07/01/2024	07/01/2022 / bin	09/10/2021 / bin	M5218

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	04/26/2023	10/26/2022 /	04/20/2021 / bin	M5220

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	101521	10/15/2024	06/29/2022 / bin	10/18/2021 / bin	M5224

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	022822	02/28/2025	06/15/2022 / bin	03/30/2022 / bin	M5226

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	100121	10/01/2024	07/01/2022 / bin	10/18/2021 / bin	M5227

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	073021	07/30/2024	11/27/2022 / jaswal	07/05/2022 / bin	M5228

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	02/01/2023	10/01/2022 / Al-Terek	09/07/2022 / bin	M5285

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / 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 #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	071222	07/12/2025	09/02/2022 / jaswal	07/21/2022 / jaswal	M5290

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	03/12/2023	09/12/2022 / bin	02/20/2020 / bin	M5291

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	S2-MEB710999	10/18/2025	11/24/2022 / bin	08/11/2022 / bin	M5317

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	R2-MEB693161	05/20/2024	11/24/2022 / bin	08/11/2022 / bin	M5322

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	11/01/2022 / jaswal	09/18/2022 / jaswal	M5387

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	12/12/2023	10/12/2022 / bin	09/19/2022 / bin	M5393

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	11/28/2023	11/28/2022 / bin	09/19/2022 / bin	M5394

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)	22E1662006	06/22/2023	12/23/2022 / Al-Terek	04/11/2022 / Al-Terek	M5408

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)	22B0862001	06/27/2023	01/02/2023 / bin	01/28/2022 / Al-Terek	M5412

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)	22B0862001	06/27/2023	01/09/2023 / Al-Terek	01/28/2022 / Al-Terek	M5414

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)	22D1462006	07/05/2023	01/06/2023 / Al-Terek	02/24/2022 / Al-Terek	M5416

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22D1462006	07/05/2023	01/17/2023 / Al-Terek	02/24/2022 / Al-Terek	M5418

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	26397-103g	07/09/2023	01/09/2023 / Al-Terek	01/09/2023 / Al-Terek	M5422

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)	22C0462001	07/11/2023	01/18/2023 / Al-Terek	02/11/2022 / Al-Terek	M5425

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com
tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	R2-MEB689870
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.24 µg/mL**	**Calcium, Ca**	**5 000 ± 20 µg/mL**
Chromium, Cr	**200.0 ± 1.2 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 1.9 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 18 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**500.0 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.1 µg/mL**

Density: 1.116 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 14, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 14, 2024**

- 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
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

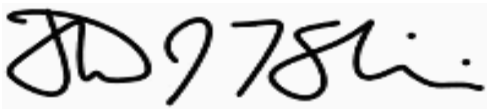
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

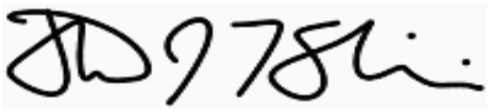
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

avantor™ | J.T.Baker®

From M4452 to M4459

Received on : 10/30/2019
Received by : AK

Material No.: 3624-05
Batch No.: 0000237721
Manufactured Date: 2019/04/15
Retest Date: 2026/04/13
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	>= 99.0 %	100.3
pH of 5% Solution at 25°C	5.0 - 9.0	6.0
ACS - Insoluble Matter	<= 0.005 %	< 0.001
Iodide (I)	<= 0.002 %	< 0.002
Bromide (Br)	<= 0.01 %	< 0.01
Chlorate and Nitrate (as NO_3)	<= 0.003 %	< 0.001
ACS - Phosphate (PO_4)	<= 5 ppm	< 5
Sulfate (SO_4)	<= 0.004 %	< 0.004
Barium (Ba)	Passes Test	PT
ACS - Heavy Metals (as Pb)	<= 5 ppm	< 5
Iron (Fe)	<= 2 ppm	< 2
Calcium (Ca)	<= 0.002 %	< 0.001
Magnesium (Mg)	<= 0.001 %	< 0.001
Potassium (K)	<= 0.005 %	0.002

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M45 P3
Expd Dt. 5 7 24
MB

SAINT-GOBAIN

Manufacturer:
Saint-Gobain Performance Plastics
11 Sicho Drive
Poestenkill, NY 12140

Certificate of Conformance

Part Number/ Revision:	D1069103 0	**Customer Part Number/ Revision:**	1069103 N/A
Description:	*PTFE BOILING STONES-450 GRAMS		
Lot Number:	26275770	**Lot Quantity:**	10 EA
Date of Manufacture (MM/DD/YY)	03/23/20	**Expiration Date: (MM/DD/YY)**	N/A
Post Processing Run Number: (Refer to the attached Certificate for Additional Detail)		N/A	

We certify the material listed above confirms in full with the following specifications:

All items have been manufactured, inspected, tested, and accepted in accordance with our Quality Management system, ISO 9001-2015. Documentation substantiating this certification is kept on record per the Company's retention policy and is available for review.
All materials and processes used in manufacturing conform to the materials and/or manufacturing specifications and notes indicated on the purchase order, drawing, specifications, quality assurance requirements, or other applicable documents effective on the date of manufacture.
Saint-Gobain does not warrant the product for any particular application and it is the responsibility of the user to conduct tests that are deemed necessary to determine the suitability of the product for any particular use. Saint-Gobain's sole responsibility shall be for failure to manufacture the product in accordance with specifications and requirements of the buyer, and from defects in material and workmanship. This warranty is expressly made in lieu of any and all other warranties and Saint-Gobain's sole liability shall be to replace any product not in conformance with the specification and requirements of the buyer.

Quality Approval:	Jonathan Kimble	**Date:**	05/13/20

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	R2-MEB694243
Matrix:	3% (v/v) HNO_3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.031 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 29, 2020

- 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 29, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

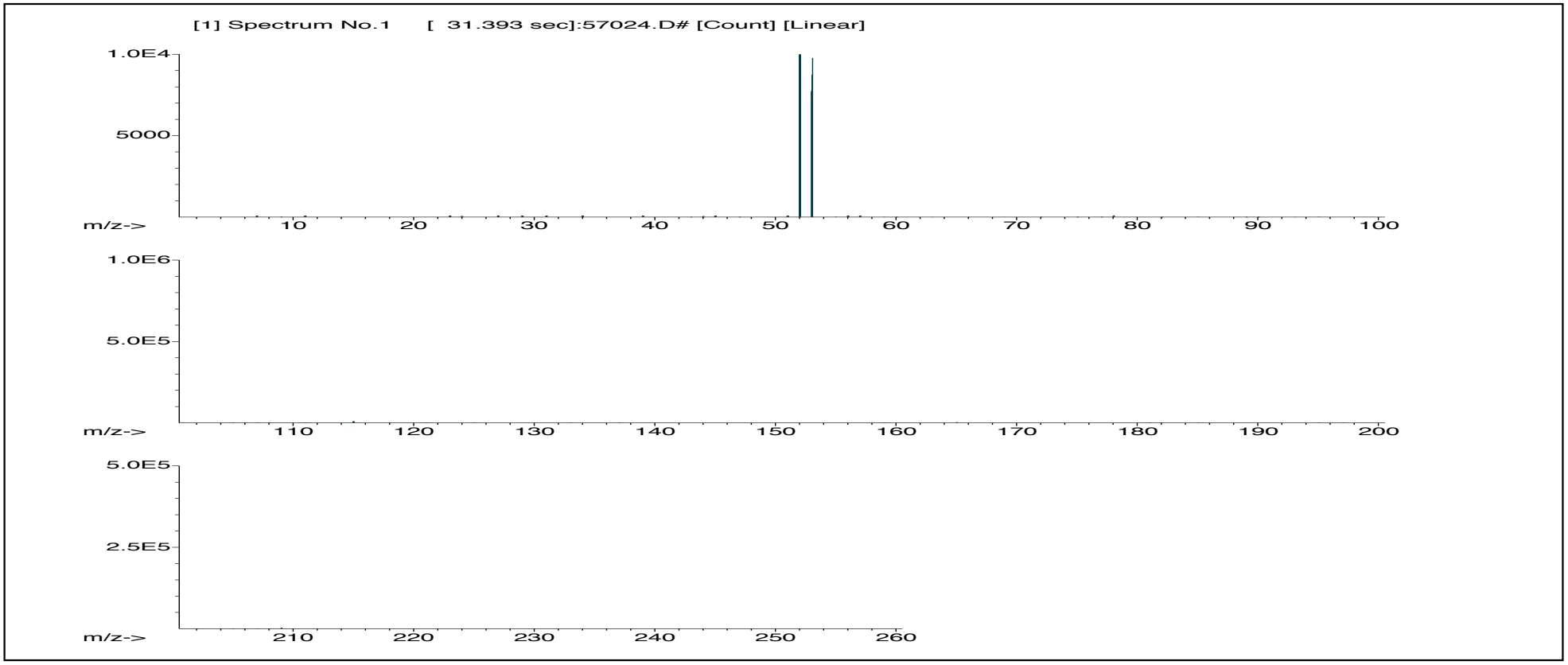
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	19410105	Nitric Acid	
Lot Number:	**082620**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	082623			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	23060	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 082620
Reviewed By:	Pedro L. Rentas 082620

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium (III) nitrate nonahydrate (Cr)	58124	121619	0.1000	200.0	0.084	1000	10000.2	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass 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	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M4768 R: 10/28/2020 BH

Certified Reference Material CRM

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

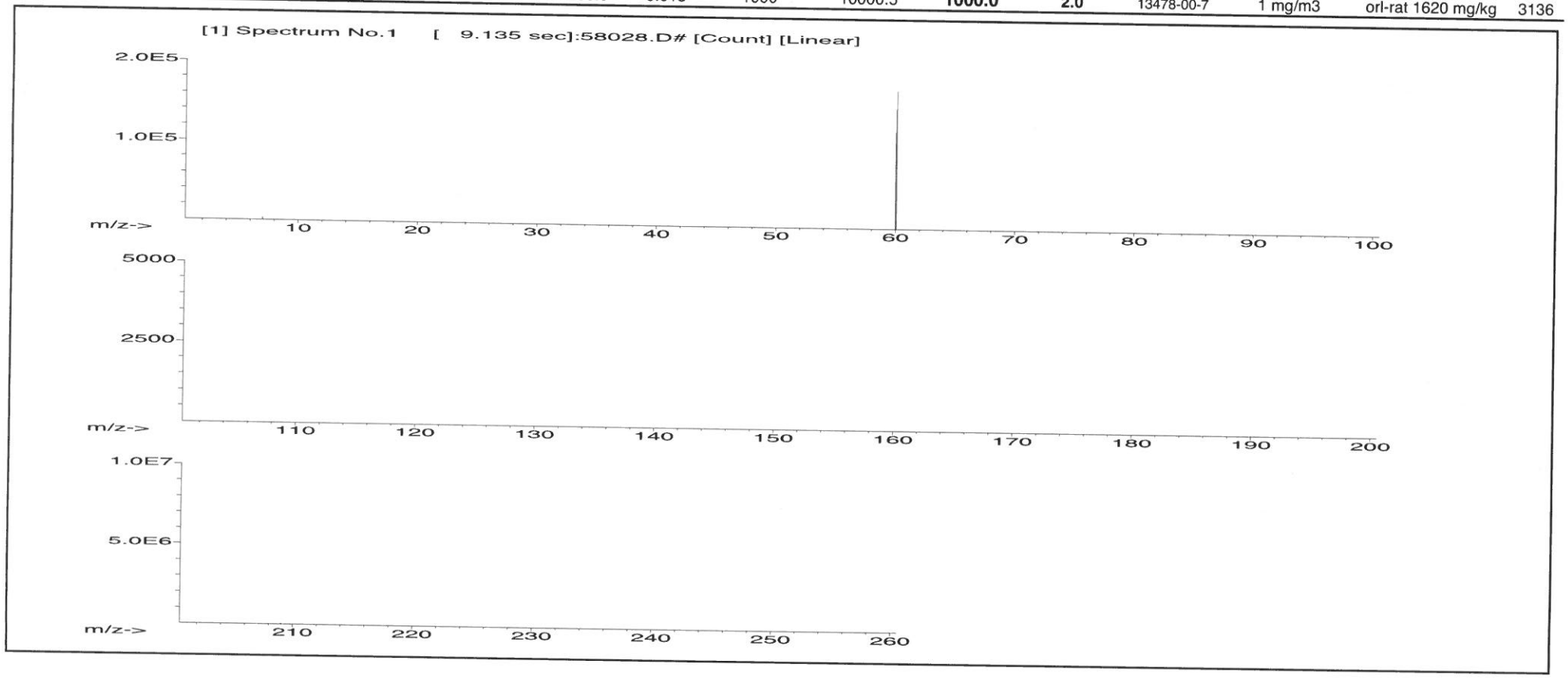
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57028**				
Lot Number:	**072420**	19410105	Nitric Acid		
Description:	**Nickel (Ni)**				
		2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	072423				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	23060	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 072420

Reviewed By: Pedro L. Rentas 072420

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel (II) nitrate Hexahydrate (Ni)	58128	082719	0.1000	200.0	0.013	1000	10000.5	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R: 04/20/21
32

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.

M4791
M4792
M4793
M4794
M4795
NS

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

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

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

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

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

R: 04/20/21
60

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

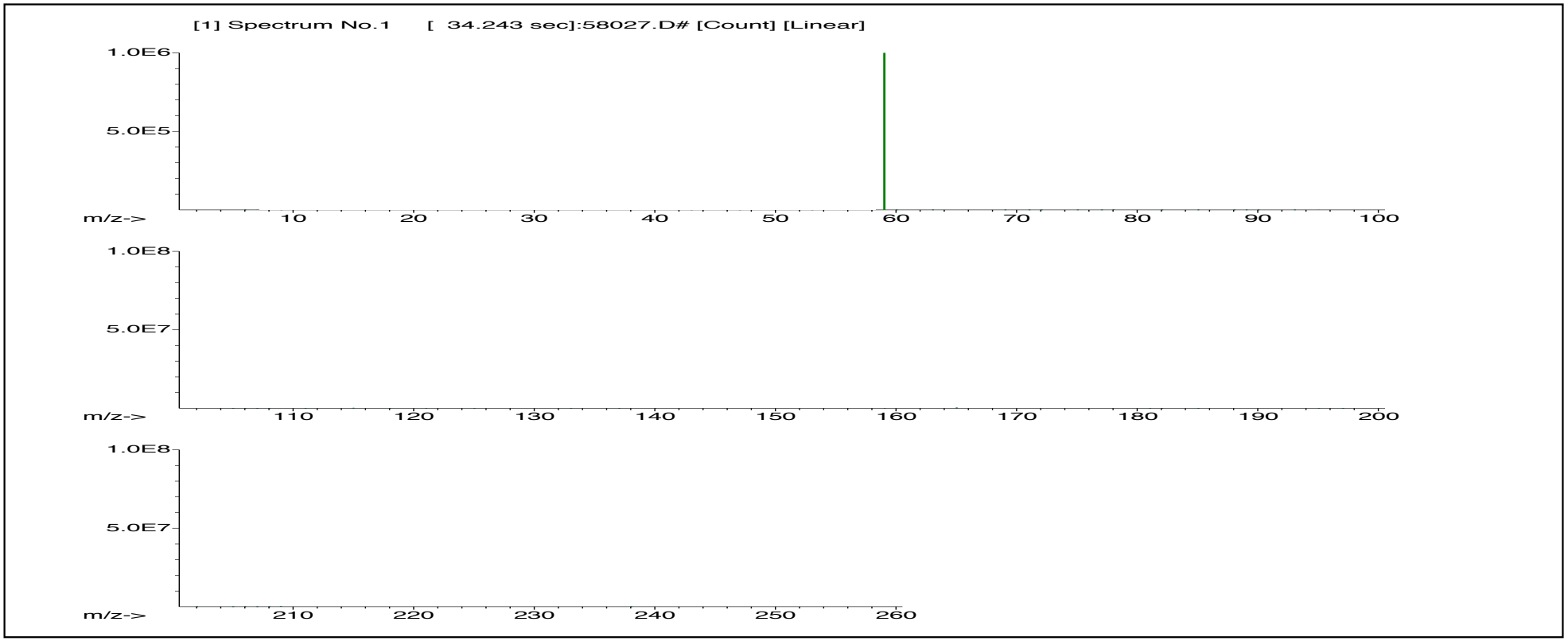
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57027**	19410105	Nitric Acid	
Lot Number:	**020821**			
Description:	**Cobalt (Co)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	020824			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	23060	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	1999.78	0.265	Flask Uncertainty	

Formulated By:	Lawrence Barry 020821
Reviewed By:	Pedro L. Rentas 020821

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt nitrate hexahydrate (Co)	58127	062320	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10026-22-9	5 mg/m3	orl-rat 694 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	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: **57182**
Lot Number: **032321**
Description: **Lead (Pb)**

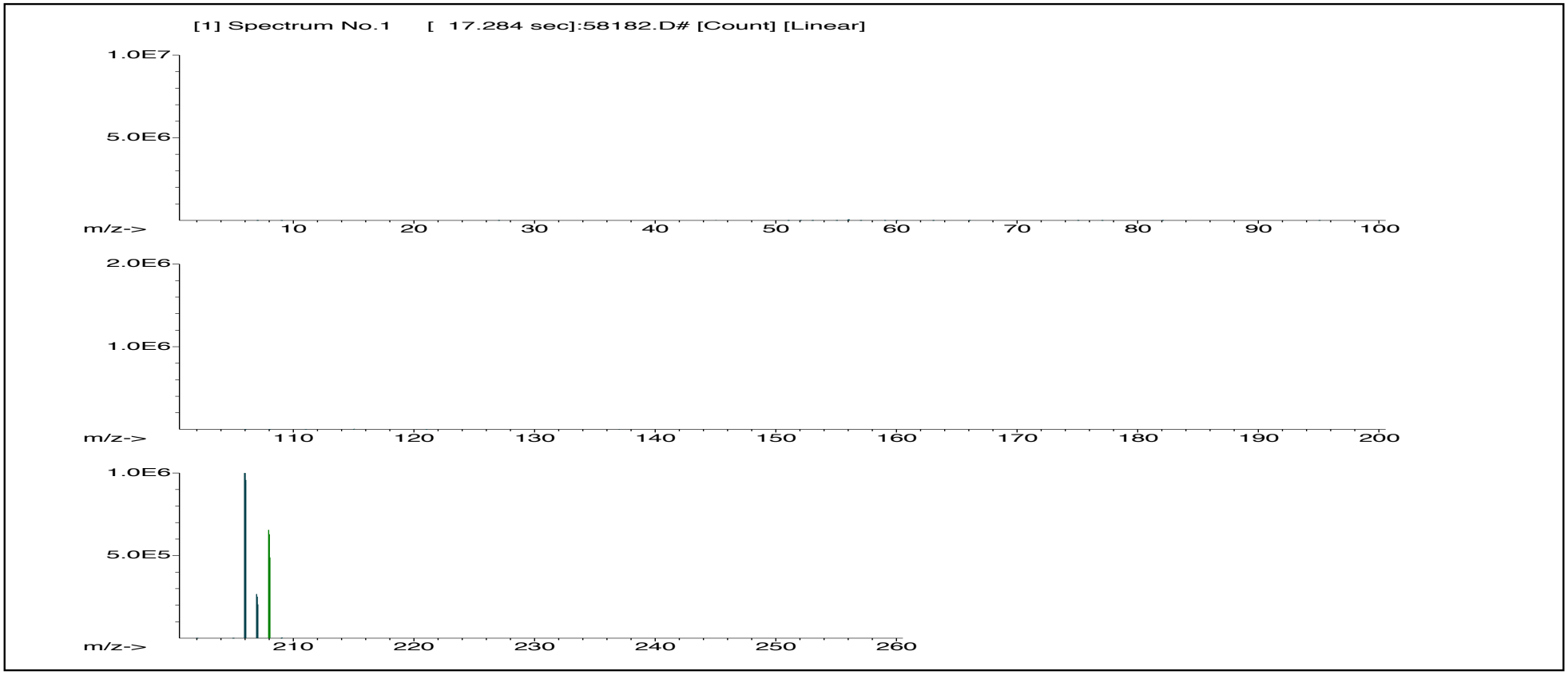
Expiration Date: 032324
Recommended Storage: Ambient (20 ºC)
Nominal Concentration (µg/mL): **10000**
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Formulated By:	Lawrence Barry	032321
Reviewed By:	Pedro L. Rentas	032321

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead (II) Nitrate (Pb)	IN029	PBD122016A1	10000.0	99.999	0.10	62.5	32.0006	32.0010	**10000.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

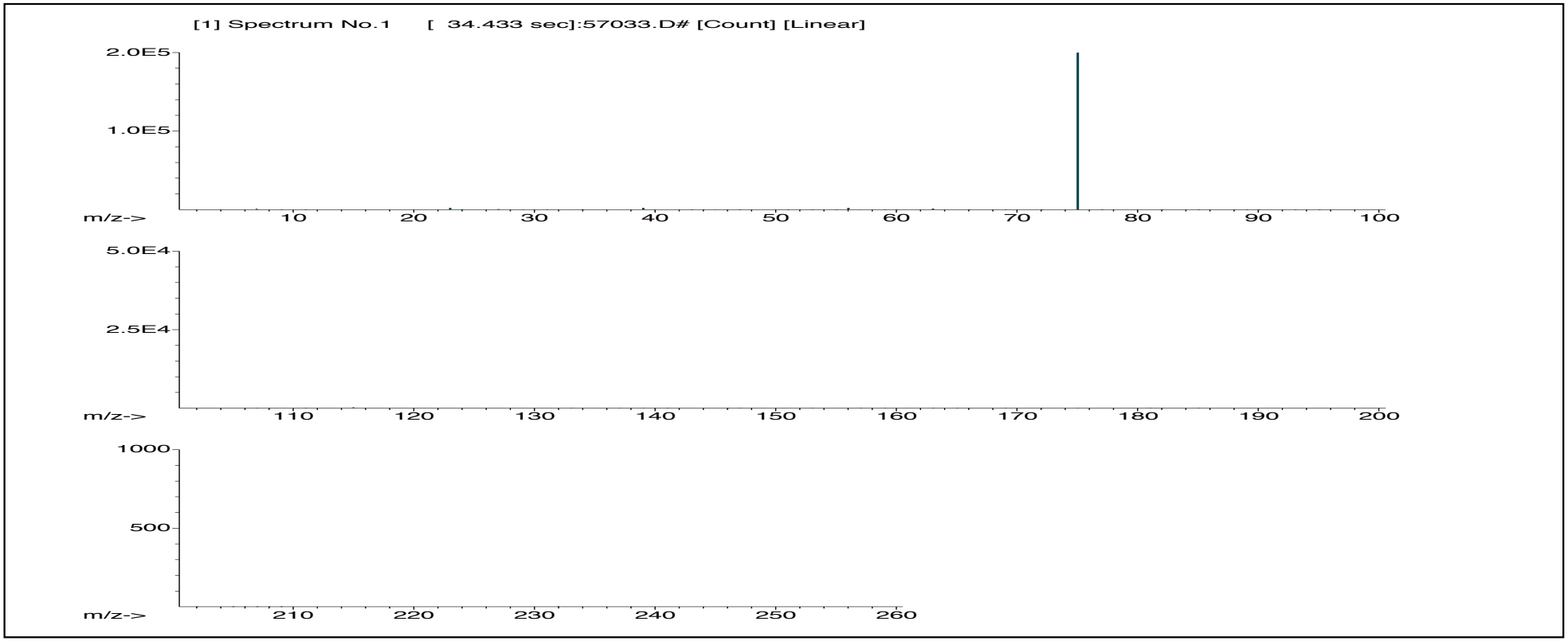
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57033**	19410105	Nitric Acid	
Lot Number:	**012521**			
Description:	**Arsenic (As)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	012524			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	23060	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	012521
Reviewed By:	Pedro L. Rentas	012521

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	092220	0.1000	200.0	0.084	1000	10001.0	**1000.0**	**2.2**	7440-38-2	0.2 mg/m3	orl-rat 763 mg/kg	3103a



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	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

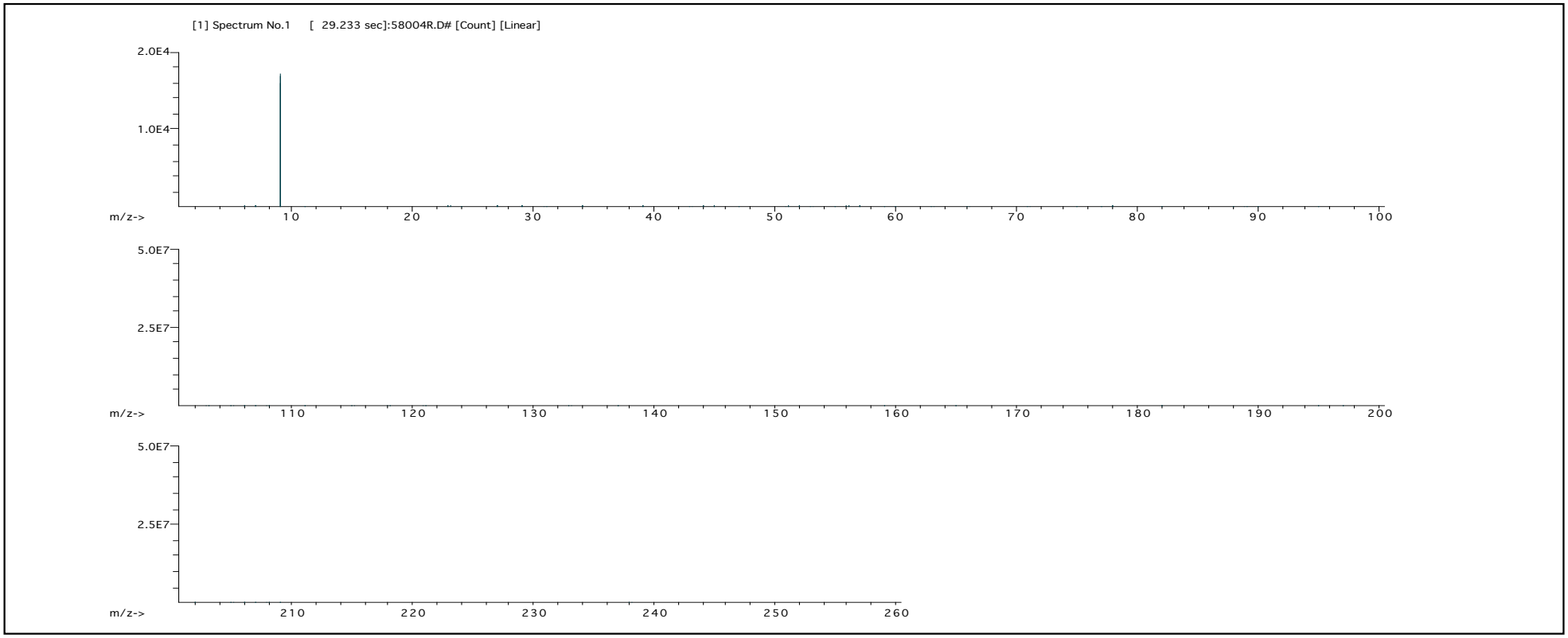
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	19410105	Nitric Acid	
Lot Number:	**030221**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	030224			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	23060	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 030221
Reviewed By:	Pedro L. Rentas 030221

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium acetate basic (Be)	58104	063020	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	19049-40-2	0.002 mg/m3	orl-rat 28 mg/kg	3105a



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	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57048**	20370011	Nitric Acid	
Lot Number:	**072821**			
Description:	**Cadmium (Cd)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	072824			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

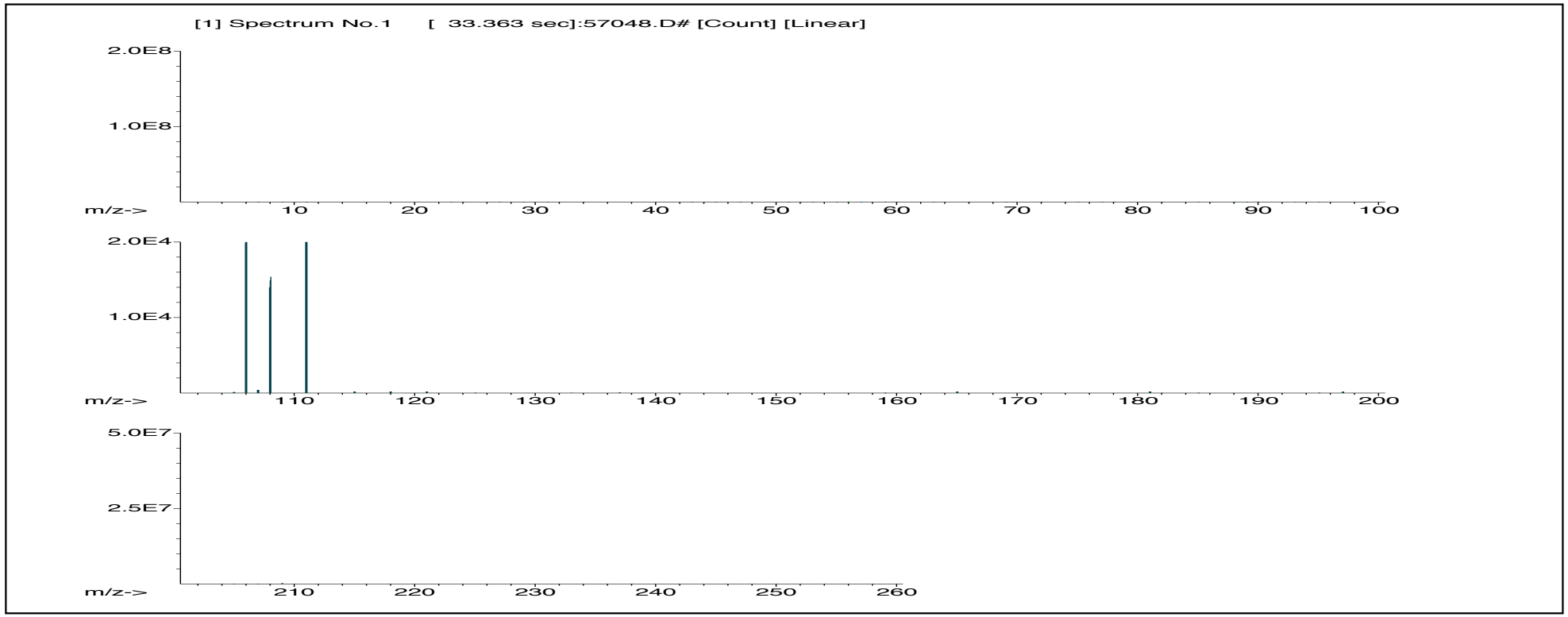
Giovanni Esposito

Formulated By: Giovanni Esposito 072821

Pedro Rentas

Reviewed By: Pedro L. Rentas 072821

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	58148	010920	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10022-68-1	0.2 mg/m3	orl-rat 300 mg/kg	3108



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

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M4878 R: 8/5/21

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

CERTIFIED WEIGHT REPORT:

Part Number: 57042
Lot Number: 072821
Description: Molybdenum (Mo)

Expiration Date: 072824
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Volume shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

Lot #	Solvent:		
MKBQ8597V	Ammonium hydroxide		
0.5%	10.0 (mL)	Ammonium hydroxide	

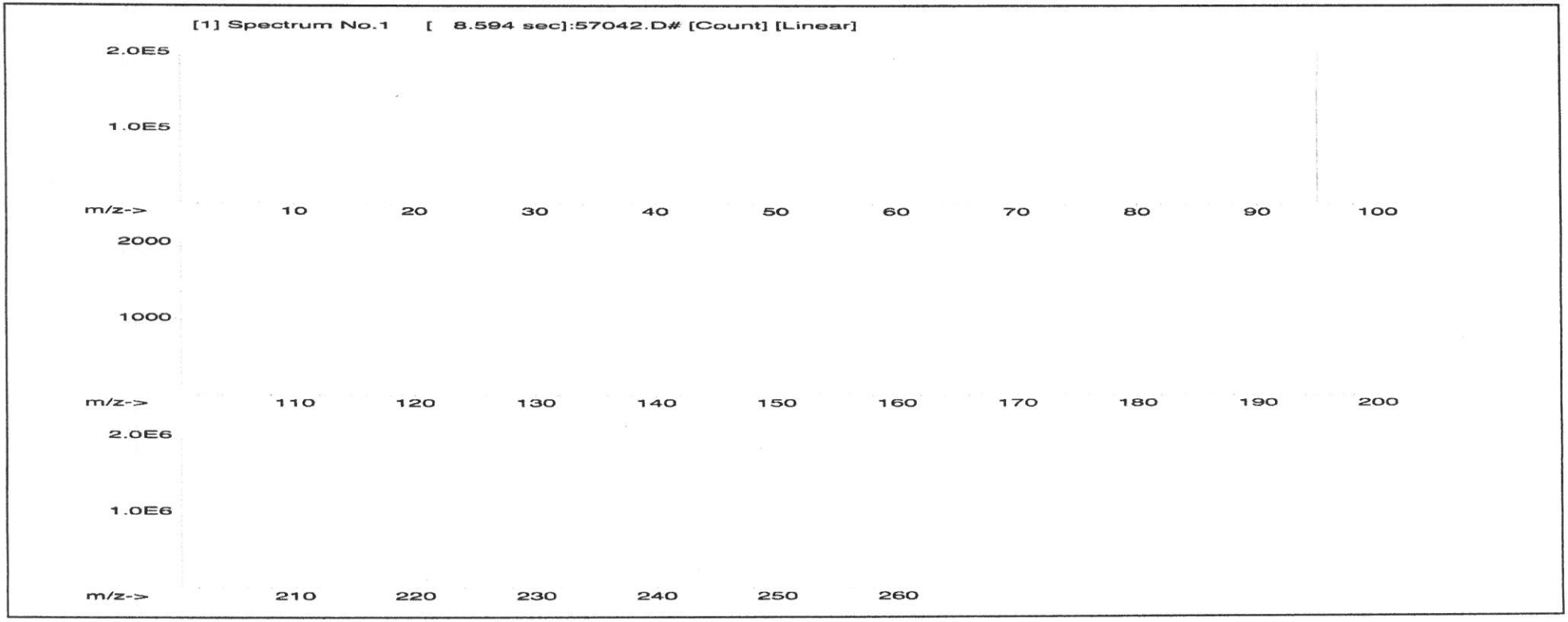
Giovanni Esposito

Formulated By:	Giovanni Esposito	072821

Pedro Rentas

Reviewed By:	Pedro L. Rentas	072821

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	042220	0.1000	200.0	0.084	1000	10000.9	**1000.0**	**2.2**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

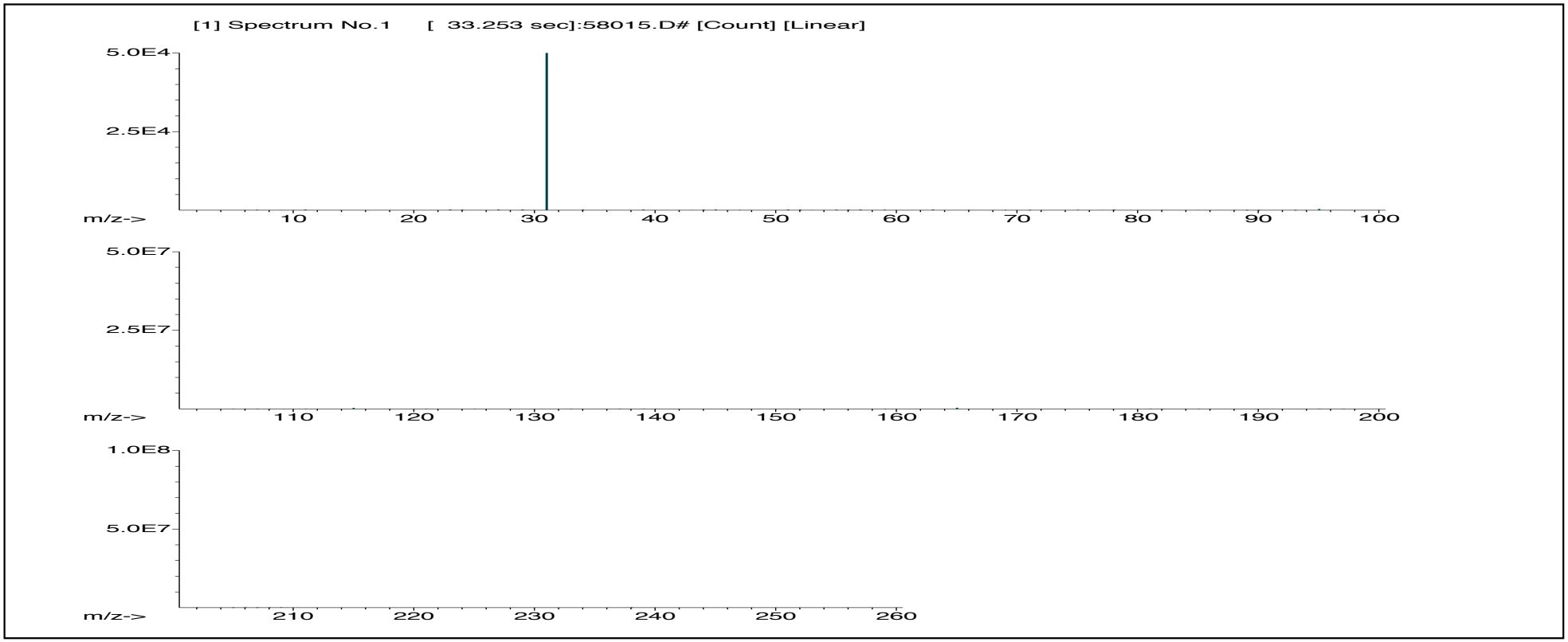
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57015**	20370011	Nitric Acid	
Lot Number:	**051121**			
Description:	**Phosphorous (P)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	051124			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 051121
Reviewed By:	Pedro L. Rentas 051121

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	58115	121020	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7722-76-1	5 mg/m3	NA	3186



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

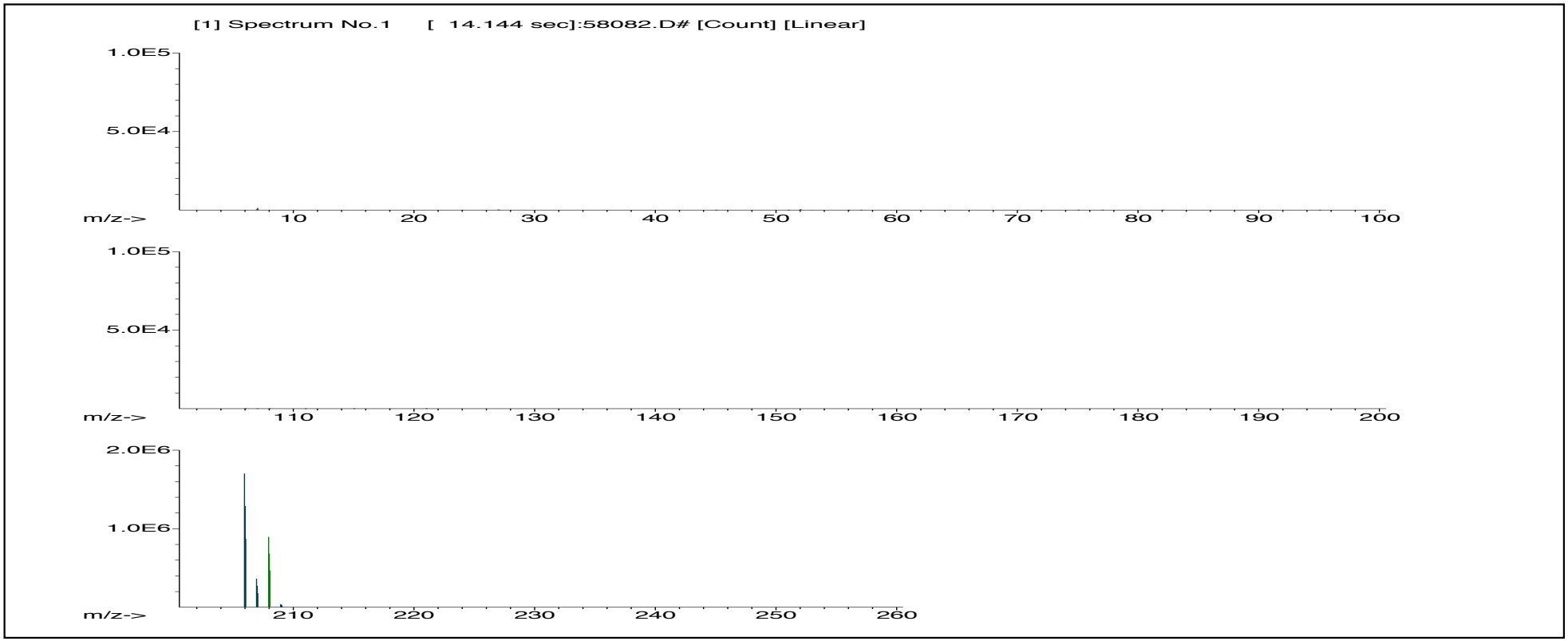
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57082**	20370011	Nitric Acid	
Lot Number:	**062221**			
Description:	**Lead (Pb)**			
		2.0%	40.0	Nitric Acid
Expiration Date:	062224		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 062221
Reviewed By:	Pedro L. Rentas 062221

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead (II) Nitrate (Pb)	58182	032321	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

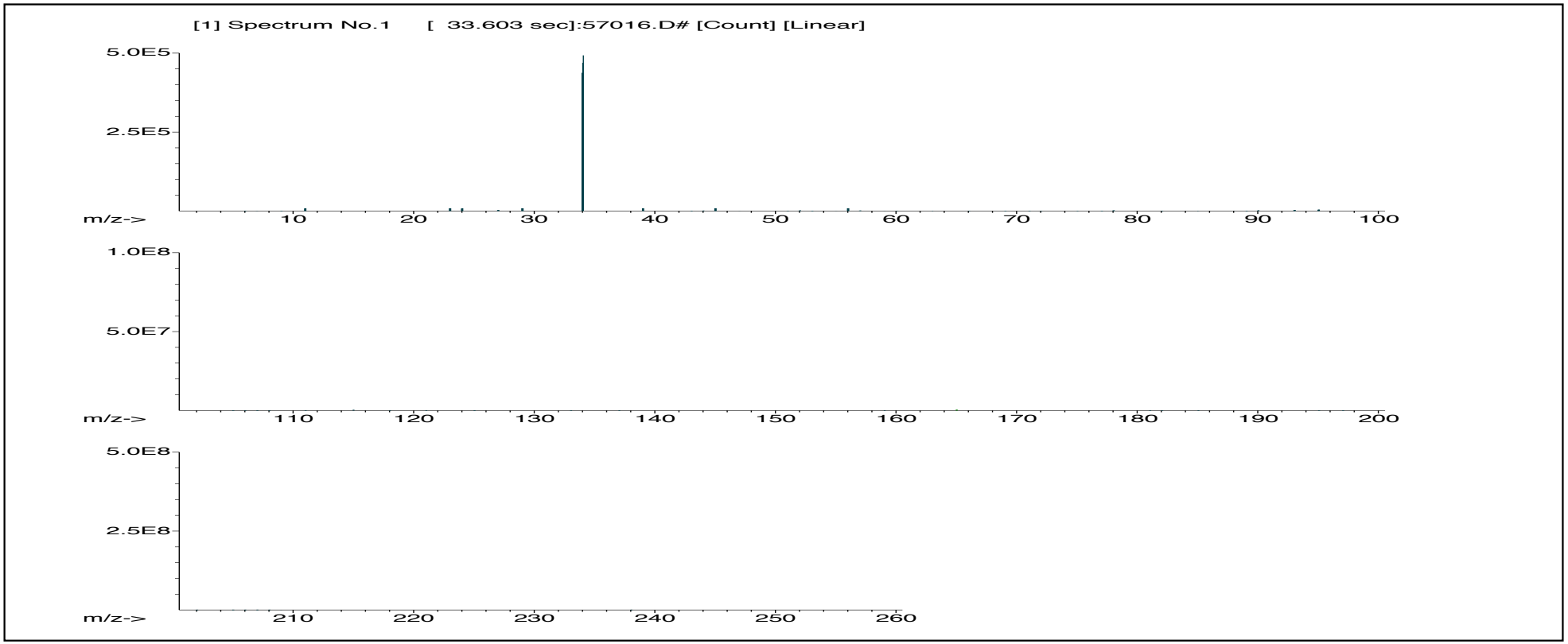
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57016**	051721	ASTM Type 1 Water
Lot Number:	**051721**		
Description:	**Sulfur (S)**		

Expiration Date: 051724
Recommended Storage: Ambient (20 ºC)
Nominal Concentration (µg/mL): **1000**
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Volume shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	051721
Reviewed By:	Pedro L. Rentas	051721

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	58116	011421	0.1000	199.9	0.084	1000	10000.2	**1000.0**	**2.2**	7783-20-2	NA	NA	3181



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	20370011	Nitric Acid	
Lot Number:	**070221**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	070224			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

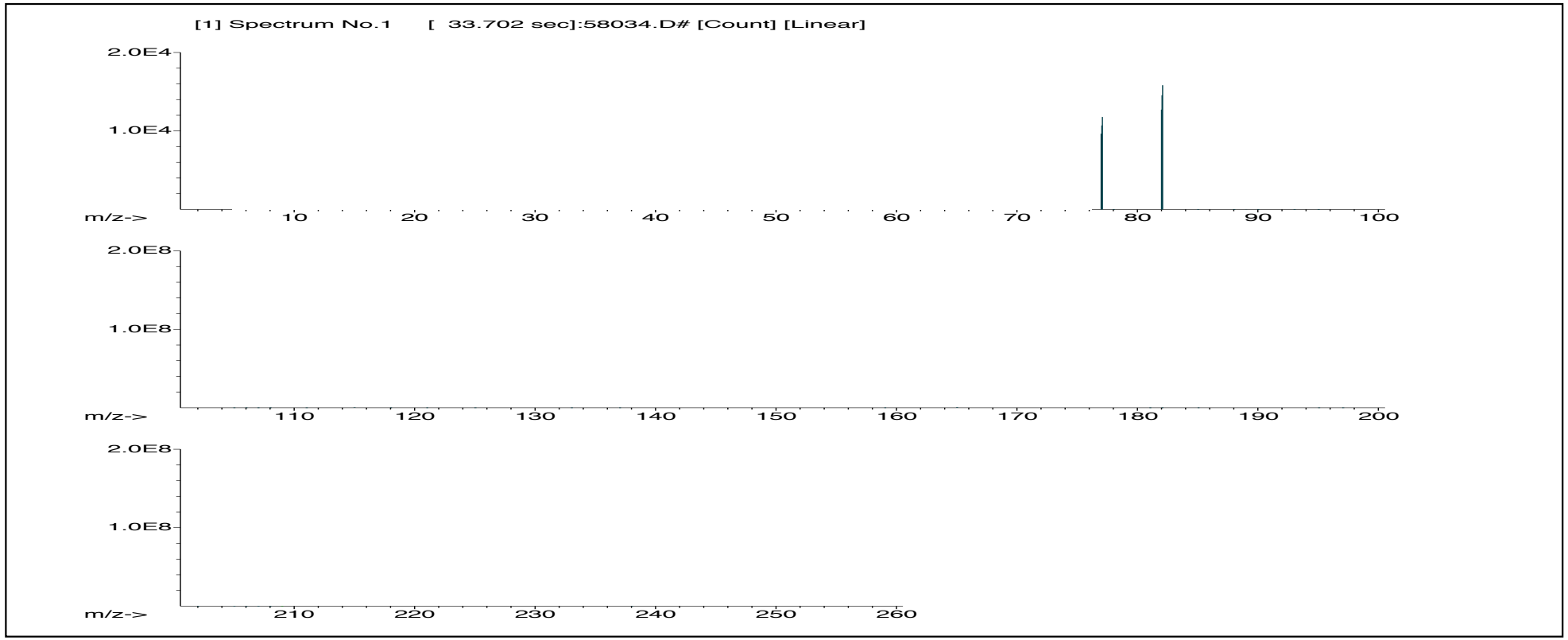
Giovanni Esposito

Formulated By:	Giovanni Esposito	070221

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070221

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium(IV) oxide (Se)	58134	021621	0.1000	200.0	0.084	1000	10000.2	**1000.0**	**2.2**	7446-08-4	0.2 mg/m3	orl-rat 68 mg/kg	3149



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

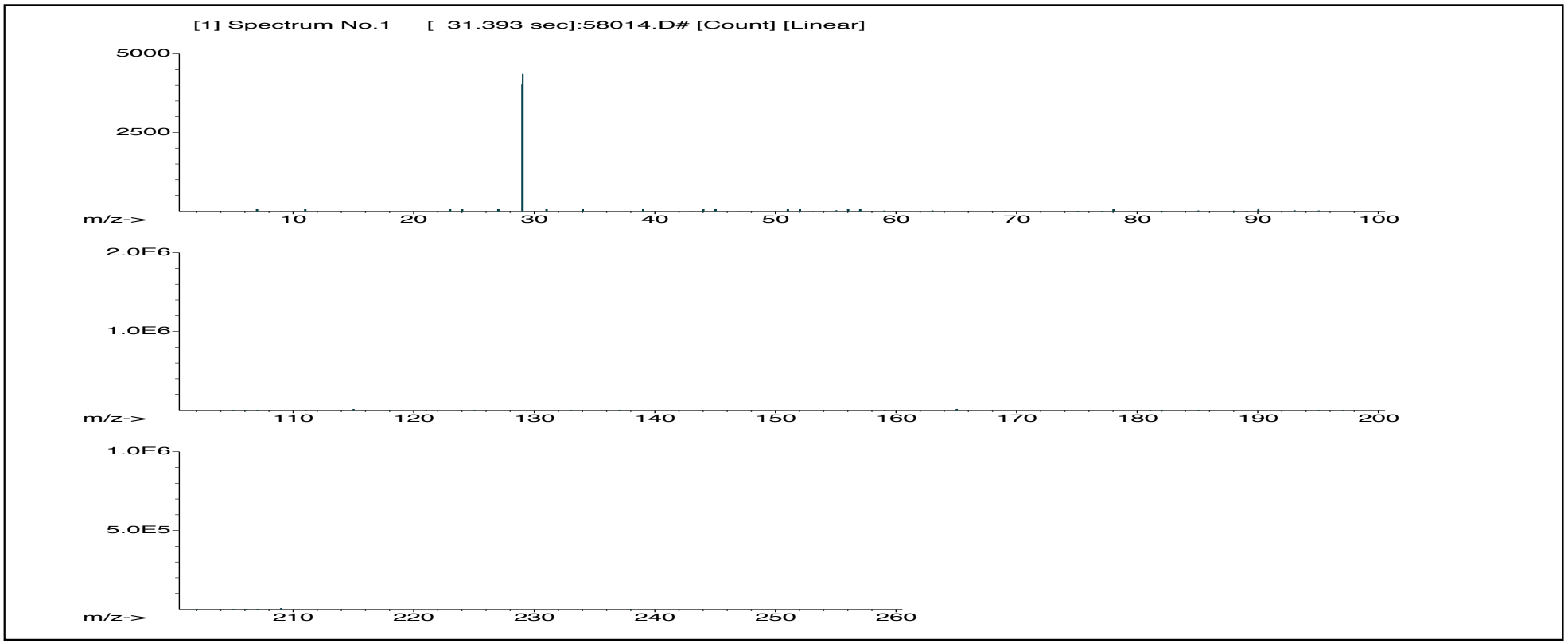
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57014**	19410105	Nitric Acid	
Lot Number:	**030921**			
Description:	**Silicon (Si)**			
		2.0%	60.0	Nitric Acid
Expiration Date:	030924		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	030921
Reviewed By:	Pedro L. Rentas	030921

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium hexafluorosilicate (Si)	58114	070120	0.1000	300.0	0.084	1000	10000.0	**1000.0**	**2.1**	16919-19-0	2.50 mg/m3	orl-rat 70 mg/kg	NA



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57047**	20370011	Nitric Acid	
Lot Number:	**072921**			
Description:	**Silver (Ag)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	072924			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

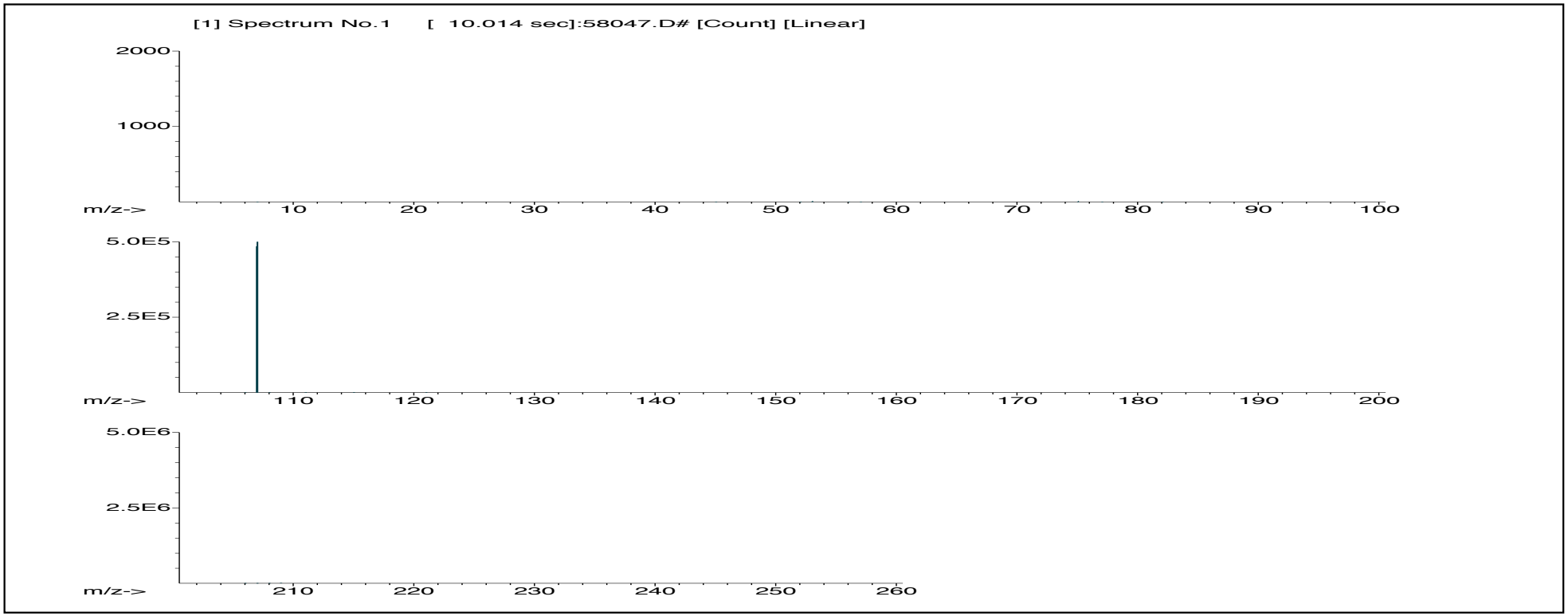
Giovanni Esposito

Formulated By:	Giovanni Esposito	072921

Pedro Rentas

Reviewed By:	Pedro L. Rentas	072921

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	58147	010820	0.1000	200.0	0.084	1000	10000.4	**1000.0**	**2.2**	7761-88-8	10 ug/m3	N/A	3151



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	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

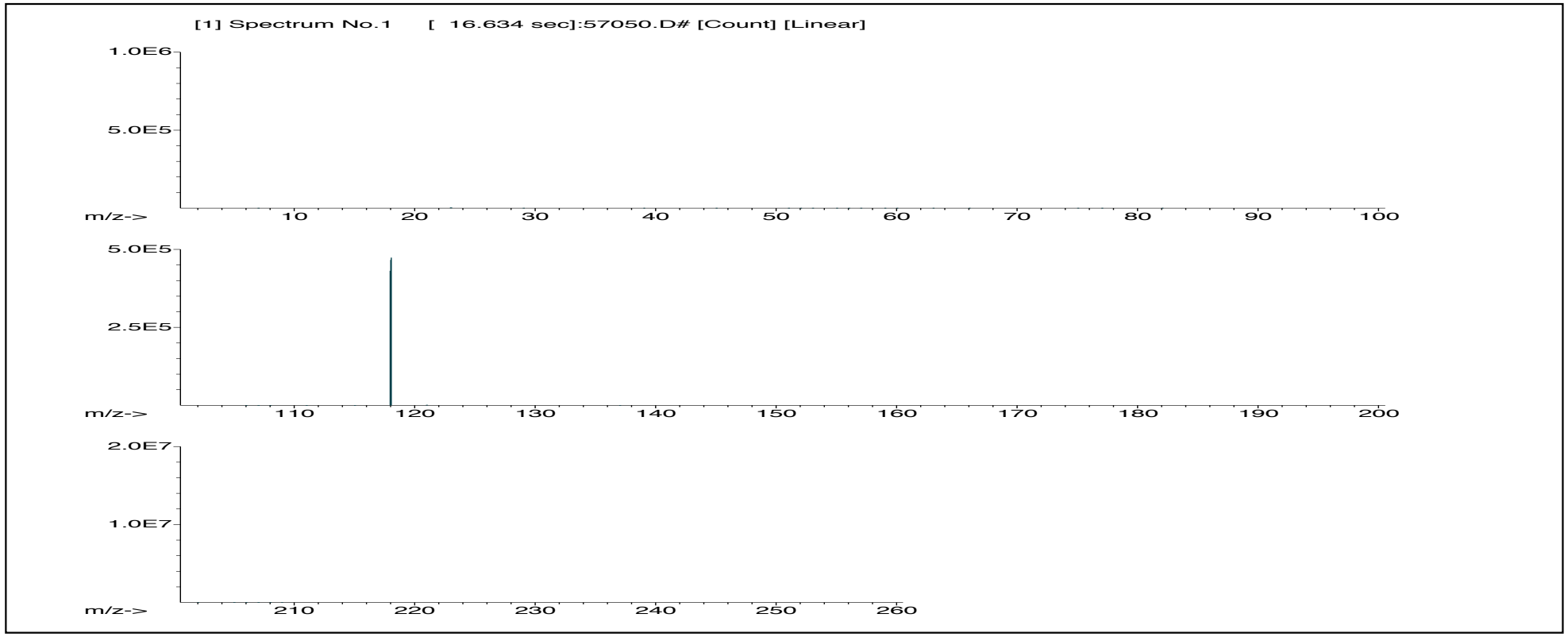
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57050**	19410105	Nitric Acid	
Lot Number:	**021121**	240241	Hydrochloric acid	
Description:	**Tin (Sn)**			
		2.0%	40.0	Nitric Acid
Expiration Date:	021124	6.0%	120.0	Hydrochloric acid
Recommended Storage:	Ambient (20 ºC)		(mL)	
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	23060	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	1999.78	0.265	Flask Uncertainty	

Formulated By:	Lawrence Barry 021121
Reviewed By:	Pedro L. Rentas 021121

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Ammonium hexafluorostannate (IV) (Sn)	58150	041620	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	16919-24-7	7 mg/m3	NA	3161a



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

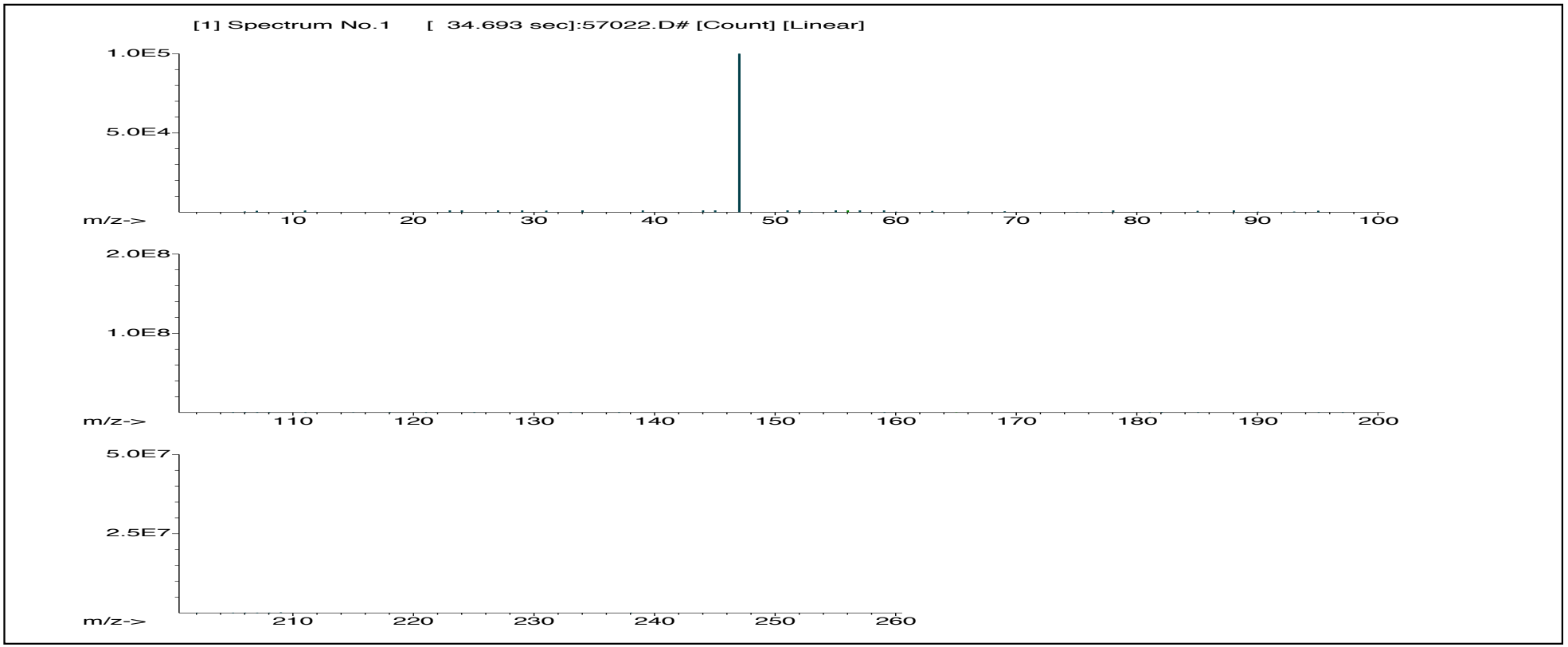
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57022**	20370011	Nitric Acid	
Lot Number:	**070721**			
Description:	**Titanium (Ti)**			
		2.0%	40.0	Nitric Acid
Expiration Date:	070724		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	070721
Reviewed By:	Pedro L. Rentas	070721

	Part	Lot	Dilution	Initial	Uncertainty	Nominal	Initial	**Final**	Expanded Uncertainty	**SDS Information** (Solvent Safety Info. On Attached pg.)			NIST
Compound	Number	Number	Factor	Vol. (mL)	Pipette	Conc. (µg/mL)	Conc. (µg/mL)	**Conc. (µg/mL)**	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM
1. Ammonium hexafluorotitanate (Ti)	58122	070120	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	16962-40-6	2.5 (F) mg/m3	NA	3162a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	T	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57081**	20370011	Nitric Acid	
Lot Number:	**073021**			
Description:	**Thallium (Tl)**			
		2.0%	40.0	Nitric Acid
Expiration Date:	073024		(mL)	
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

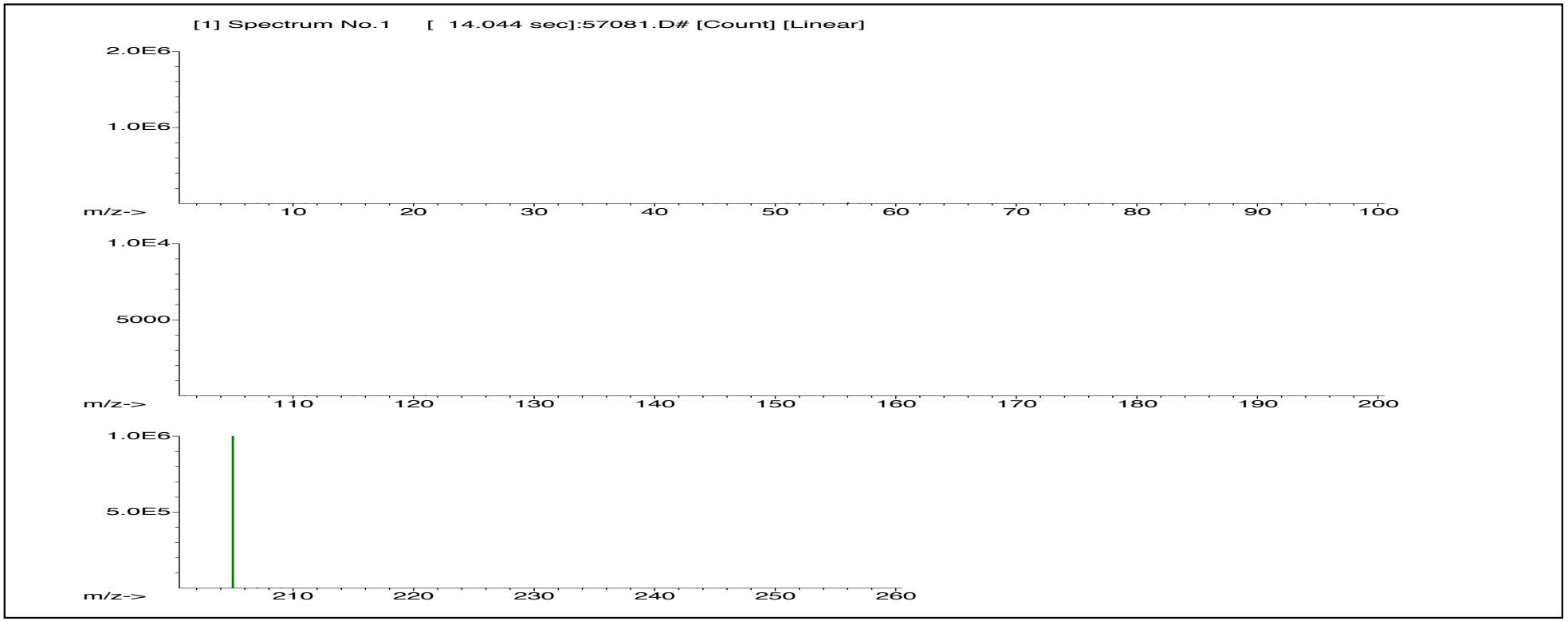
Giovanni Esposito

Formulated By:	Giovanni Esposito	073021

Pedro Rentas

Reviewed By:	Pedro L. Rentas	073021

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium (Tl)	58181	060920	0.1000	200.0	0.084	1000	10001.0	**1000.0**	**2.2**	7440-28-0	0.1 mg/m3	orl-rat 6700 mg/kg	3158



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	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58030**	20370011	Nitric Acid	
Lot Number:	**031921**			
Description:	**Zinc (Zn)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	031924			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

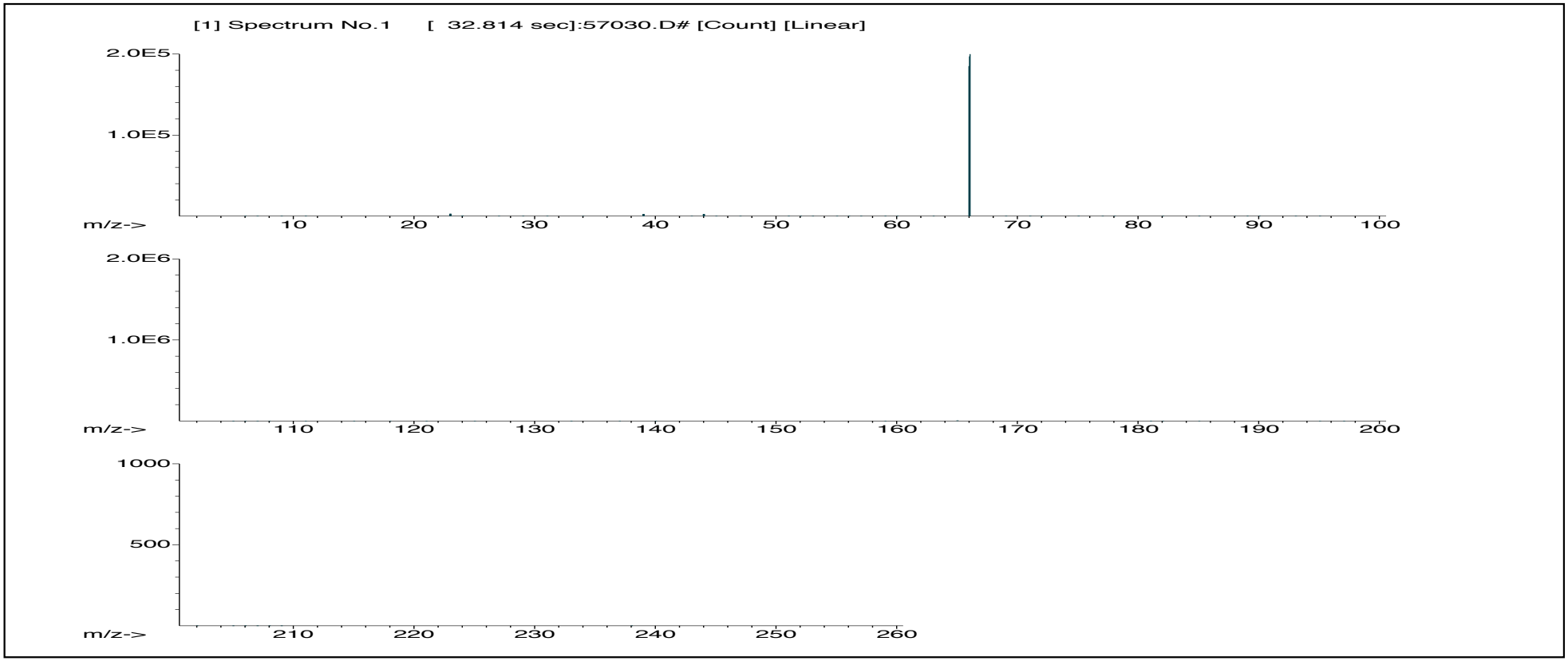
Giovanni Esposito

Formulated By:	Giovanni Esposito	031921

Pedro Rentas

Reviewed By:	Pedro L. Rentas	031921

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	58130	082020	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M4894 RL 06/25/21

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

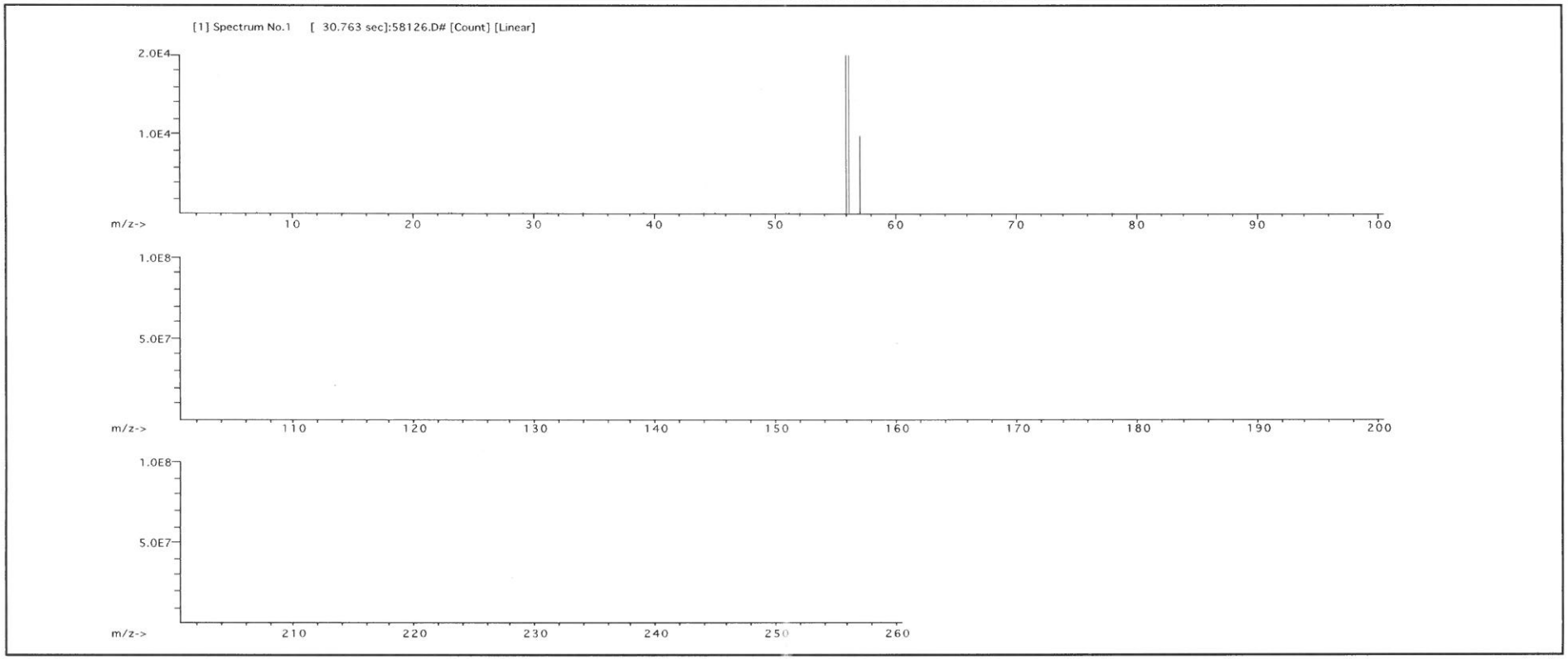
CERTIFIED WEIGHT REPORT:

Part Number:	**58126**		**Lot #**		
Lot Number:	**061021**	**Solvent:**	20370011	Nitric Acid	
Description:	**Iron (Fe)**		7.0%	210.0 (mL)	Nitric Acid
Expiration Date:	061024				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	061021
Reviewed By:	Pedro L. Rentas	061021

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2100409-500	10000	99.99	0.10	100.0	30.0071	30.0085	**10000.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



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

Trace Metals Verification by ICP-MS (µg/L)																	
Al	<0.3	Cd	<0.1	Dy	<0.1	Hf	<0.1	Li	<0.1	Ni	75	Pr	<0.1	Se	<0.5	Tb	<0.1	W	<0.1
Sb	<4	Ca	<5	Er	<0.1	Ho	<0.1	Lu	<0.1	Nb	<0.1	Re	<0.1	Si	<10	Te	<0.1	U	<0.3
As	<3	Ce	<0.1	Eu	<0.1	In	<0.1	Mg	<0.5	Os	<0.1	Rh	<0.1	Ag	<0.1	Tl	<0.1	V	<0.3
Ba	<0.1	Cs	<0.1	Gd	<0.1	Ir	<0.1	Mn	85	Pd	<0.1	Rb	<0.1	Na	<5	Th	<0.1	Yb	<0.1
Be	<0.1	Cr	33	Ga	<5	Fe	T	Hg	<0.1	P	<0.1	Ru	<0.1	Sr	<0.1	Tm	<0.1	Y	<0.1
Bi	<0.1	Co	80	Ge	60	La	<0.1	Mo	<3	Pt	<0.1	Sm	<0.1	S	<0.1	Sn	<3	Zn	<45
B	<5	Cu	50	Au	<0.1	Pb	<0.3	Nd	<0.1	K	<5	Sc	<0.1	Ta	<0.1	Ti	<0.1	Zr	<0.1

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

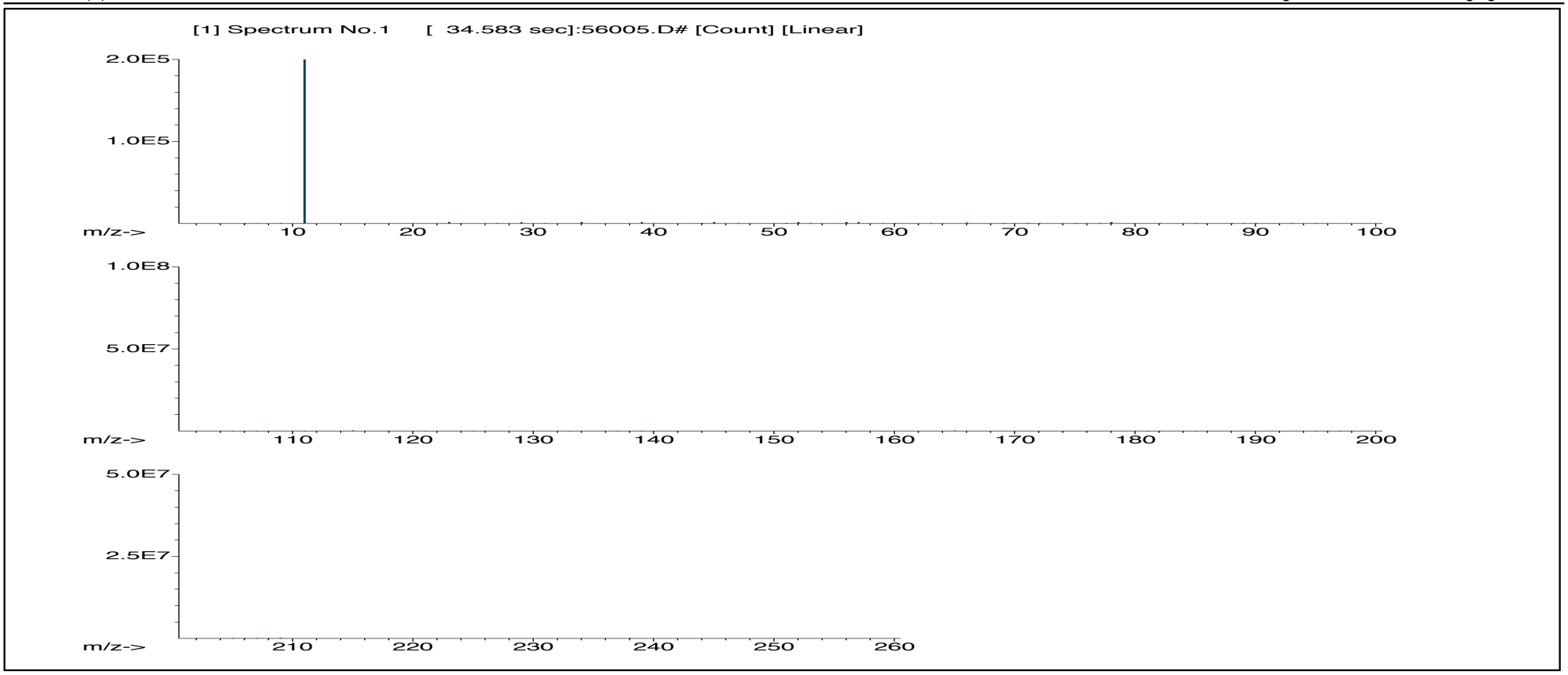
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57005**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**031921**		
Description:	**Boron (B)**		
		2.0%	40.0 (mL) Ammonium hydroxide
Expiration Date:	031924		
Recommended Storage:	Ambient (20 ºC)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058 Flask Uncertainty	

Formulated By:	Giovanni Esposito 031921
Reviewed By:	Pedro L. Rentas 031921

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	58105	063020	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

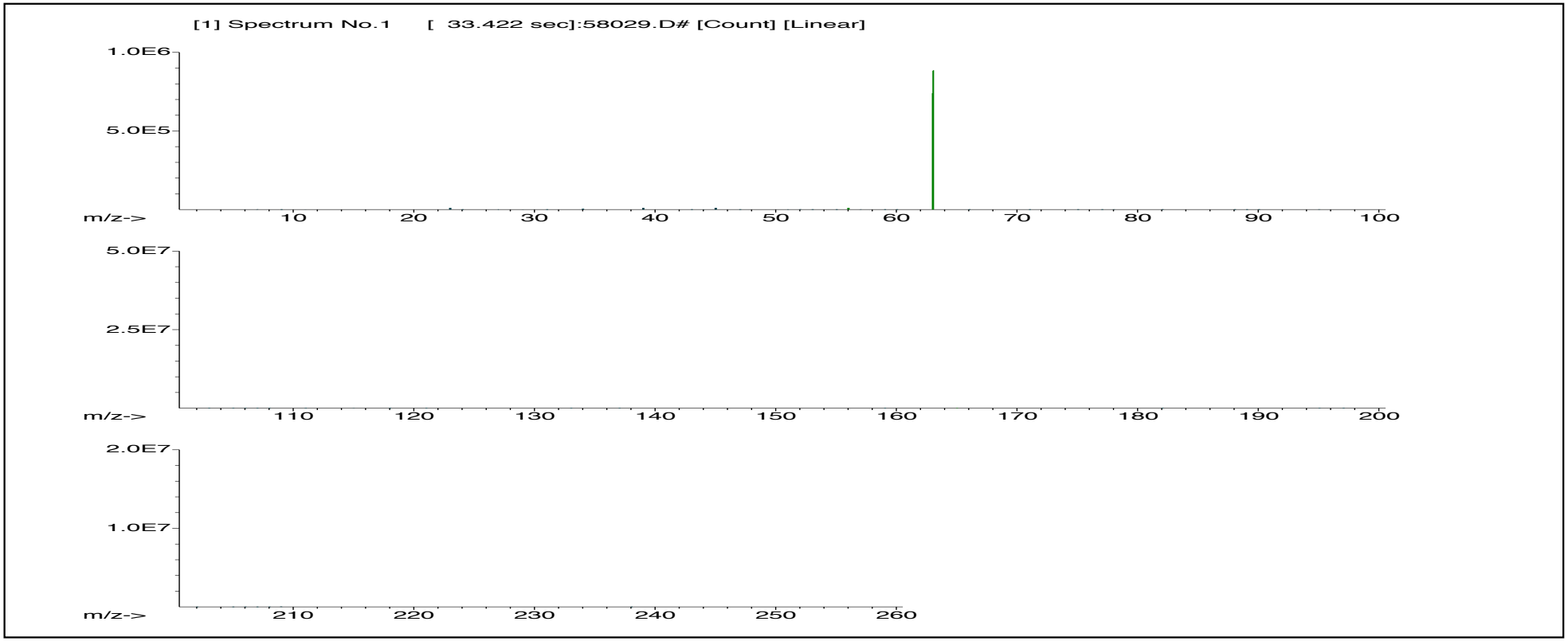
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	20370011	Nitric Acid	
Lot Number:	**080321**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	080324			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry 080321
Reviewed By:	Pedro L. Rentas 080321

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	020821	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

ThermoFisher SCIENTIFIC

M4913-16

MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis
ThermoFisher SCIENTIFIC

M4917 - 20
MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	03/22/2021
Lot Number	210800		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Mar/2026
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	101.56
CALCIUM	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	<0.003
LEAD (Pb)	%	<= 0.01	<0.01
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	<0.005
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM M4939

R: 09/22/21 (RL)

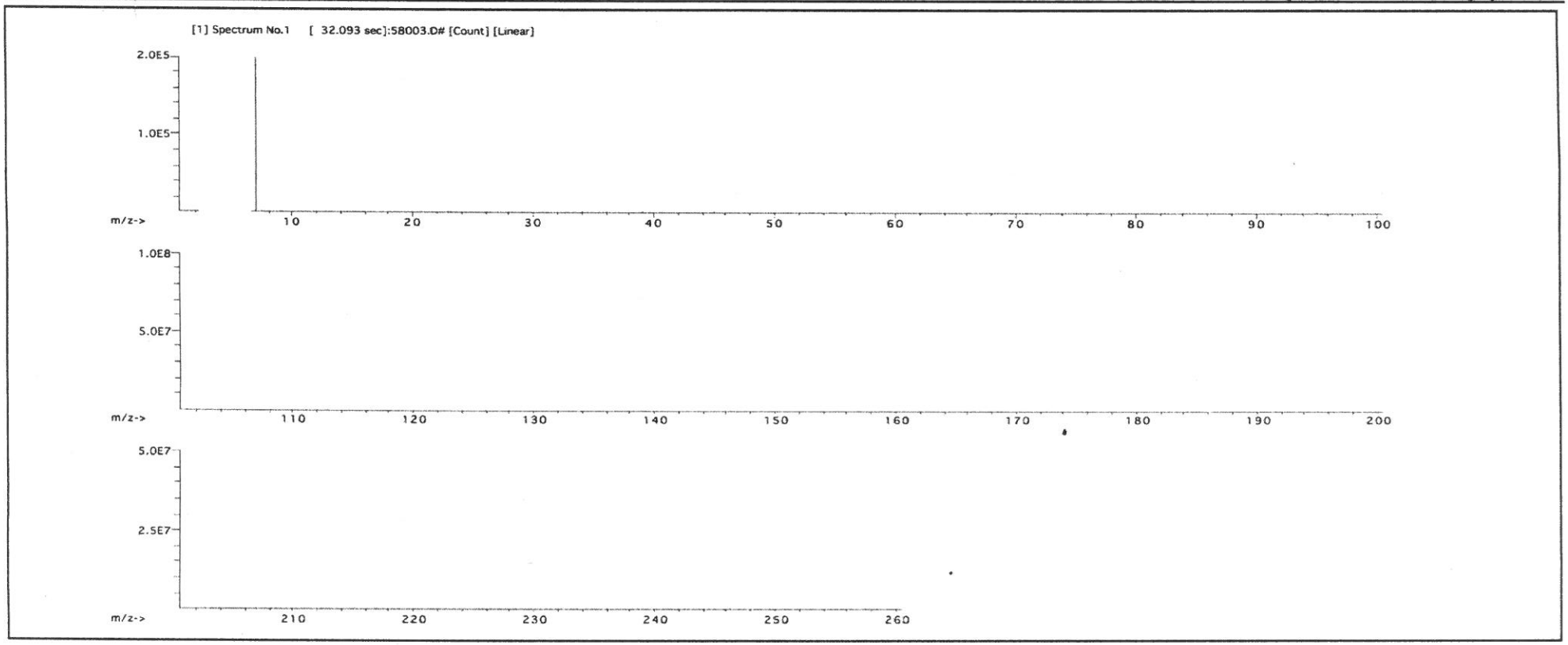
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57003**	19410105	Nitric Acid	
Lot Number:	**030221**			
Description:	**Lithium (Li)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	030224			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	23060	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	030221
Reviewed By:	Pedro L. Rentas	030221

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	010320	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M4960 R: 10/08/21 BH

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

CERTIFIED WEIGHT REPORT:

Part Number: 58149
Lot Number: 100721
Description: Indium (In)

Expiration Date: 100724
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

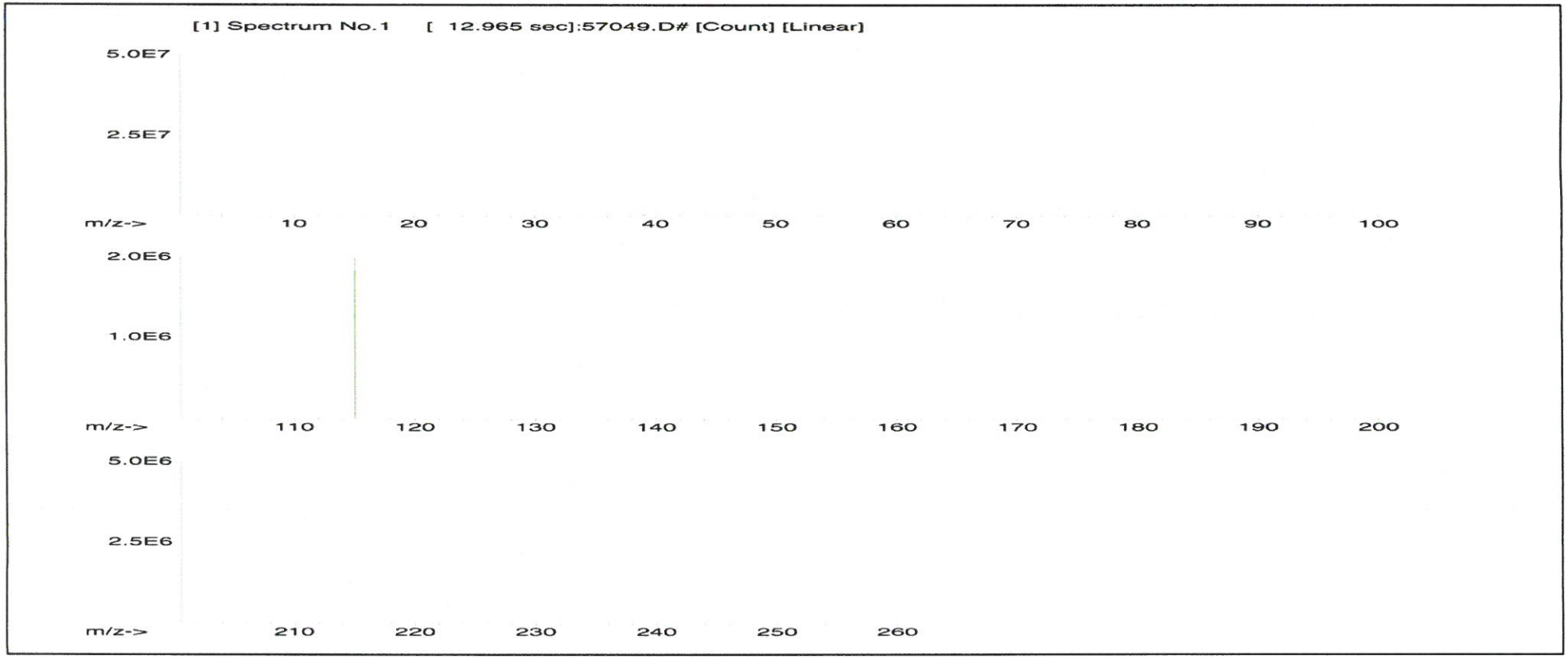
Weight shown below was diluted to (mL): 500.06 0.058 Flask Uncertainty

	Lot #		
Solvent:	20370011	Nitric Acid	
5%	25.0 (mL)	Nitric Acid	
		5E-05	Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	100721
Reviewed By:	Pedro L. Rentas	100721

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Indium Oxide (In)	IN086	W1096A	10000	99.999	0.10	82.6	6.05408	6.05441	**10000.6**	**20.1**	1312-43-2	NA	NA	3124a



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	T	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M4961 R: 10/08/21 BH

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: 58139
Lot Number: 052521
Description: Yttrium (Y)

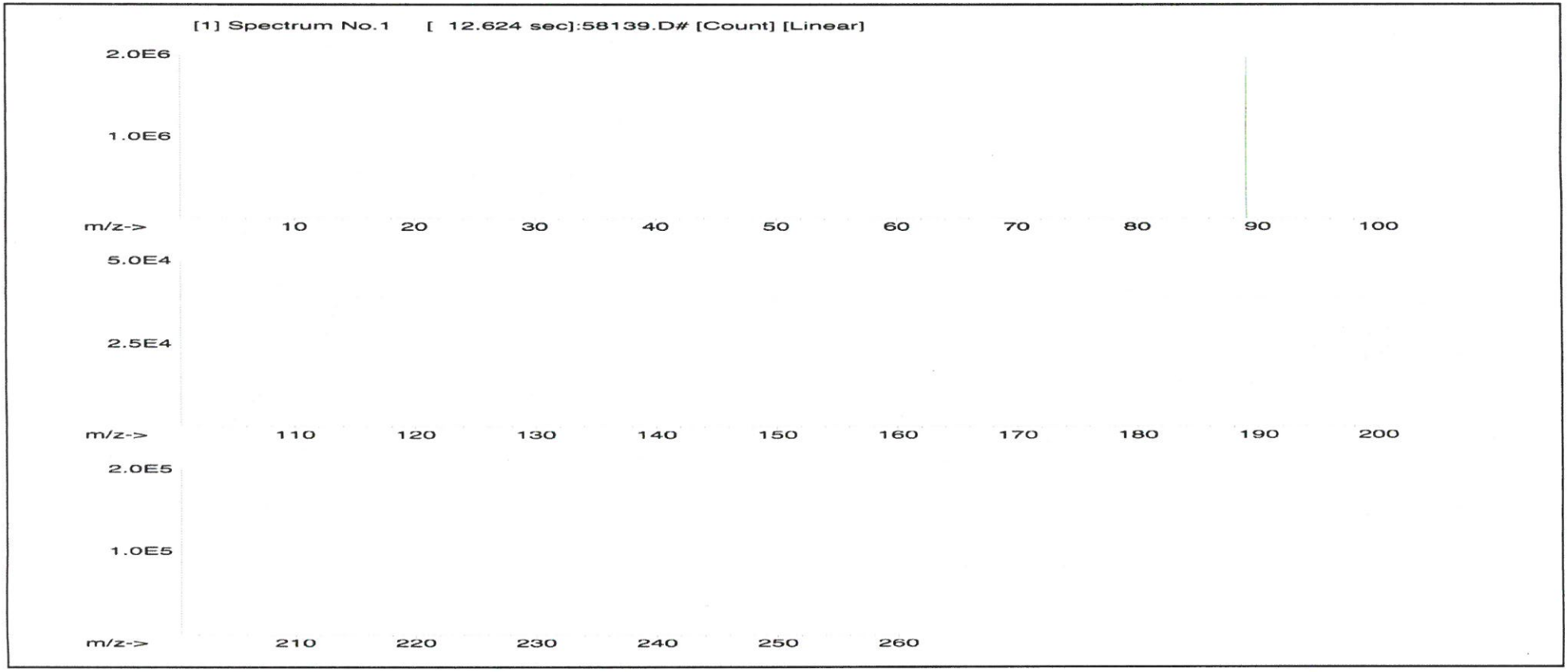
Expiration Date: 052524
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

Formulated By: Lawrence Barry 052521

Reviewed By: Pedro L. Rentas 052521

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Yttrium (III) Oxide (Y)	IN087	YV012015B1	10000	99.999	0.10	77.9	25.6744	25.6745	**10000.0**	**20.0**	1314-36-9	NA	NA	NA



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	T
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

IN 5019 R: 12/09/21 (BH)

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

CERTIFIED WEIGHT REPORT:

Part Number: 57116
Lot Number: 011421
Description: Sulfur (S)

Expiration Date: 011424
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 23060

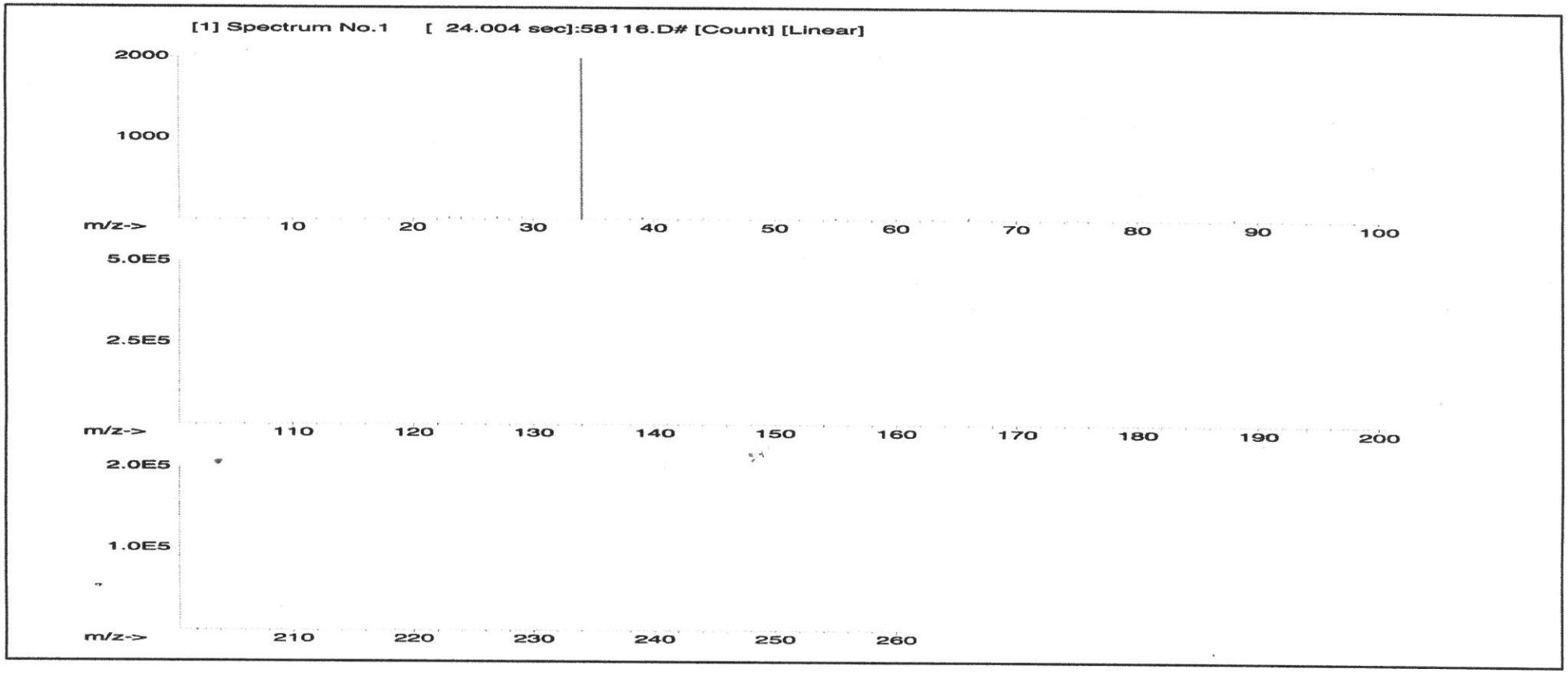
Weight shown below was diluted to (mL): 1999.53 0.100 Flask Uncertainty

Lot #
Solvent: 011421 ASTM Type 1 Water

Formulated By:	Lawrence Barry	011421
Reviewed By:	Pedro L. Rentas	011421

5E-05 Balance Uncertainty

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBF9912V	10000.0	99.0	0.10	24.3	83.2191	83.2206	**10000.2**	**20.2**	7783-20-2	NA	NA	3181



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

BA

M5020

R: 12/09/21

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

CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 032921
Description: Phosphorous (P)

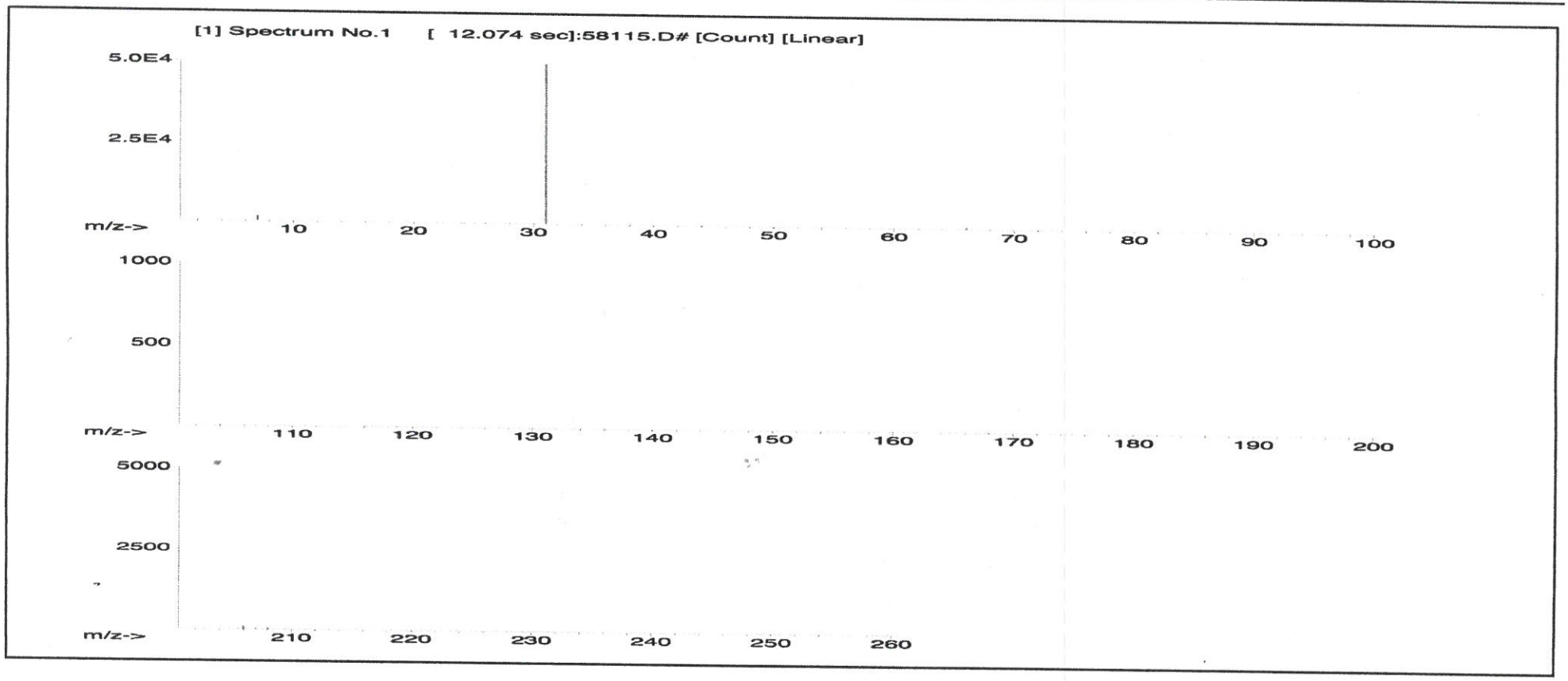
Expiration Date: 032924
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	032921
Reviewed By:	Pedro L. Rentas	032921

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV052018A1	10000	99.999	0.10	27.3	109.9063	109.9093	**10000.3**	**20.0**	7722-76-1	5 mg/m3	NA	3186



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

R: 6/2/22

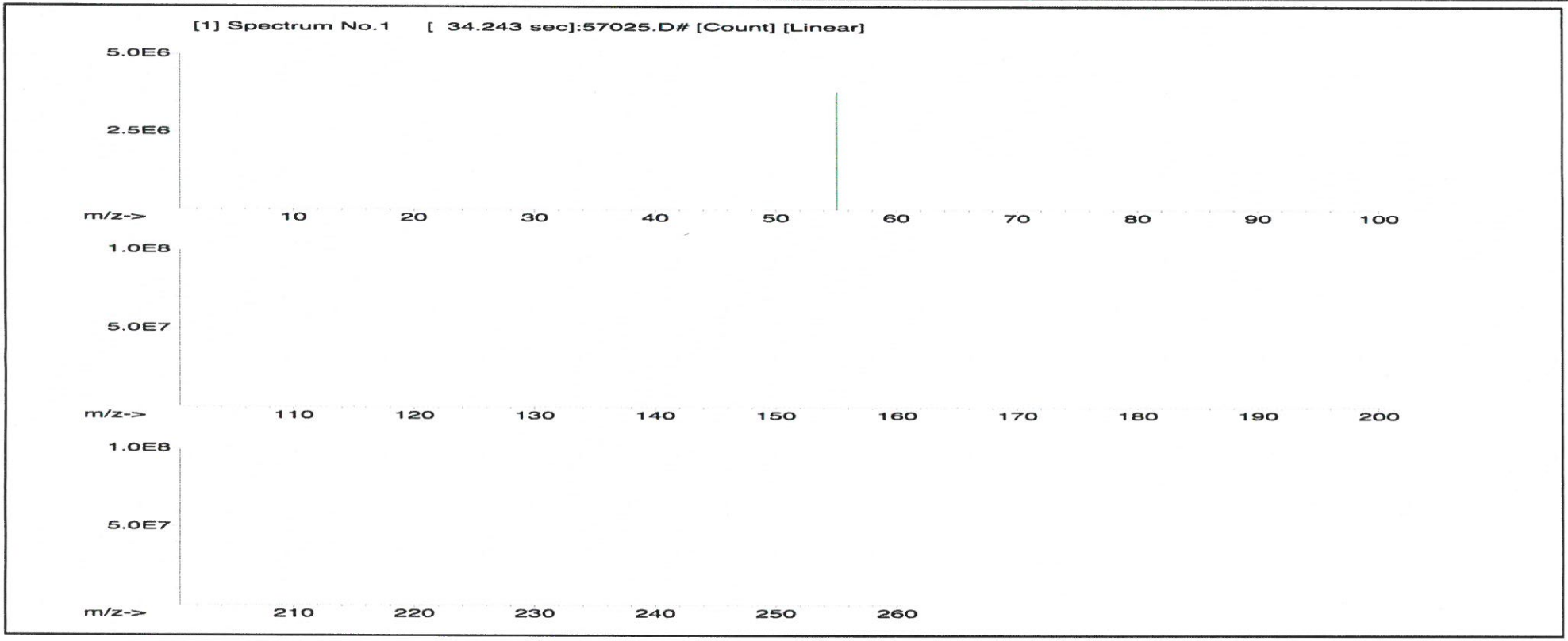
CERTIFIED WEIGHT REPORT:

M5184

		Lot #	Solvent:	
Part Number:	**58025**	20510011	Nitric Acid	
Lot Number:	**060122**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	060125			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060122
Reviewed By:	Pedro L. Rentas	060122

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate tetrahydrate (Mn)	58125	021022	0.1000	300.0	0.084	1000	10000.5	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



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	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5193
R: 09/23/21

Certified Reference Material CRM BA

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

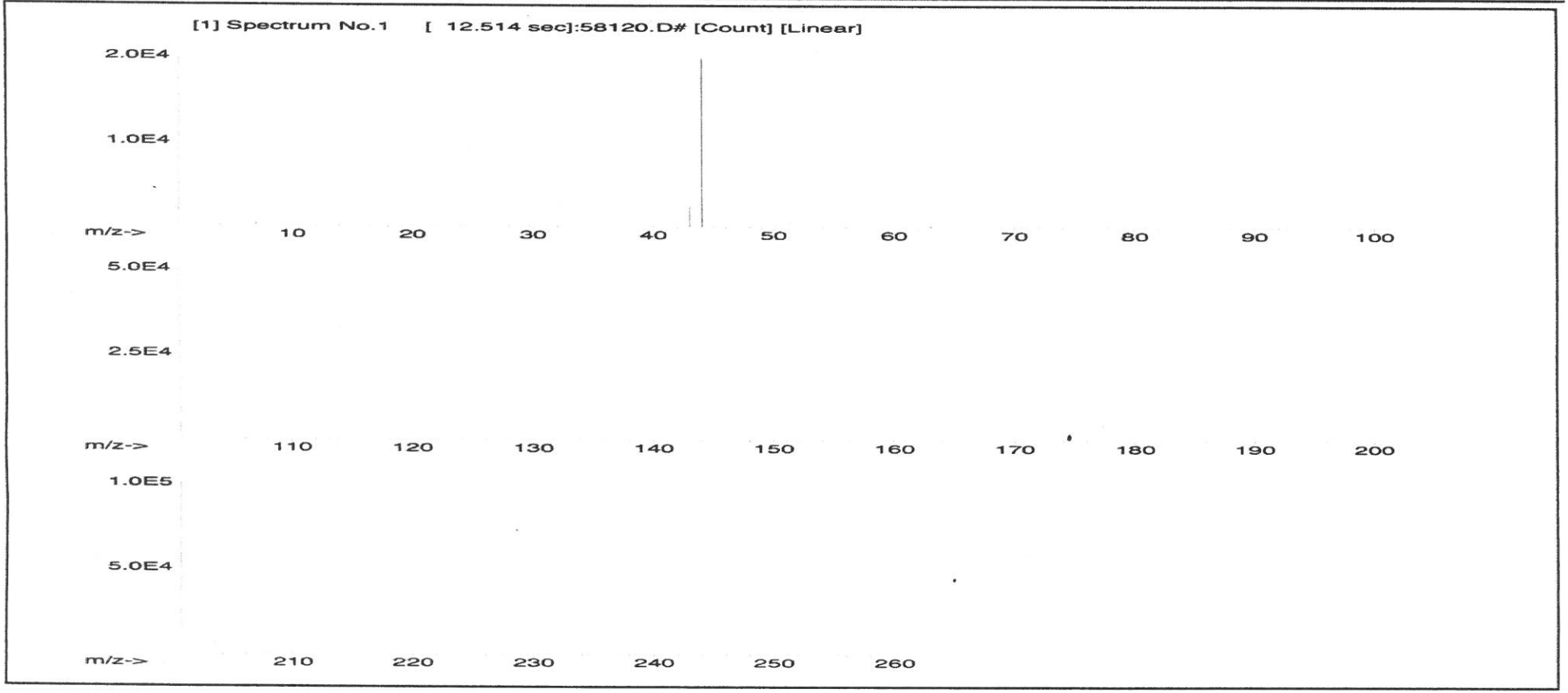
CERTIFIED WEIGHT REPORT:

Part Number:	**58120**		**Lot #**		
Lot Number:	**082021**	**Solvent:**	20370011	Nitric Acid	
Description:	**Calcium (Ca)**				
		2%	60.0 (mL)	Nitric Acid	
Expiration Date:	082024				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	3000.4	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	082021
Reviewed By:	Pedro L. Rentas	082021

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAZ082019A1	10000	99.9995	0.10	39.9	75.1986	75.2065	**10001.0**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M 5700 R: 10/05/21 BH

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

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 092121
Description: Sodium (Na)

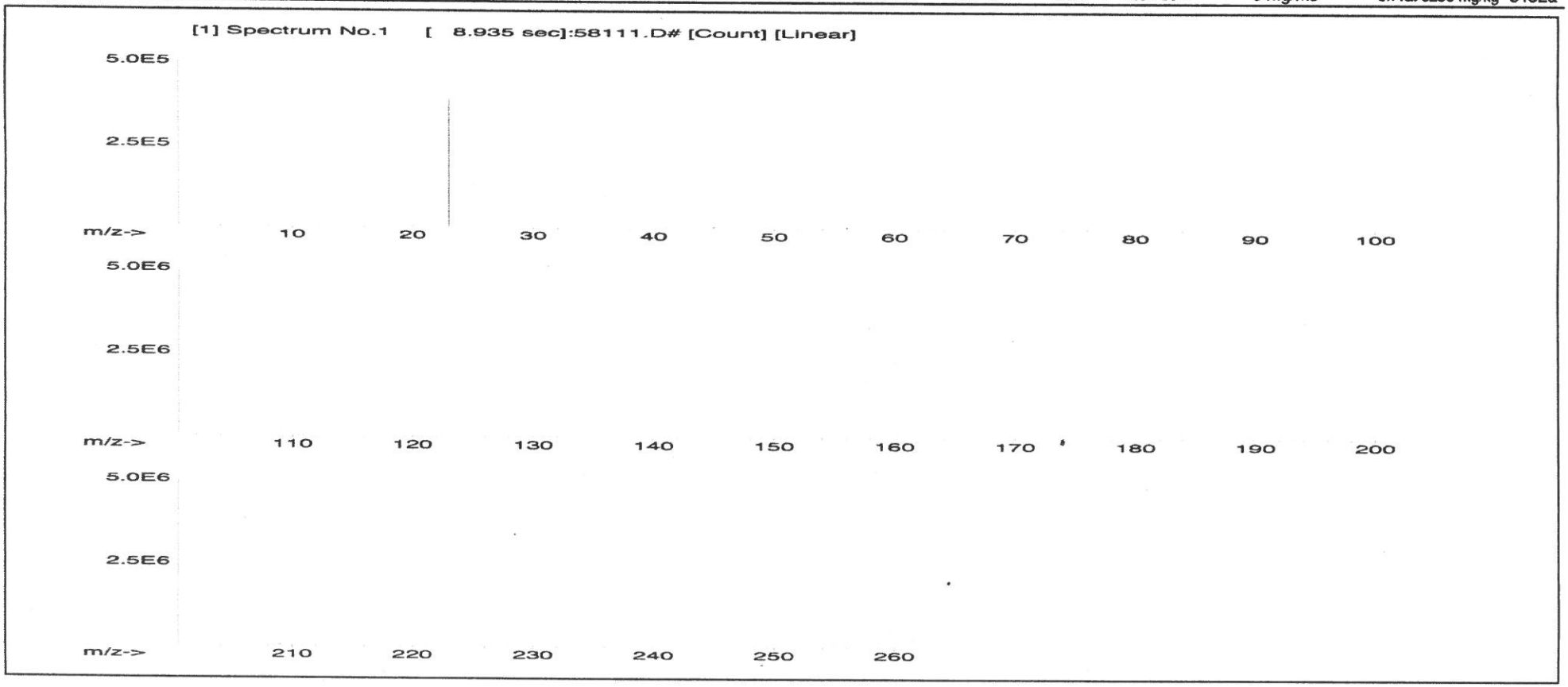
Expiration Date: 092124
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

Lot #		
Solvent: 20370011		Nitric Acid
2%	60.0 (mL)	Nitric Acid
	5E-05	Balance Uncertainty
	0.058	Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	092121
Reviewed By:	Pedro L. Rentas	092121

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	27.0	111.1274	111.1433	**10001.4**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3236 mg/kg	3152a



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	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M 5/20
R: 10/05/21 (BH)

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: 57119
Lot Number: 062321
Description: Potassium (K)
Expiration Date: 062324
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

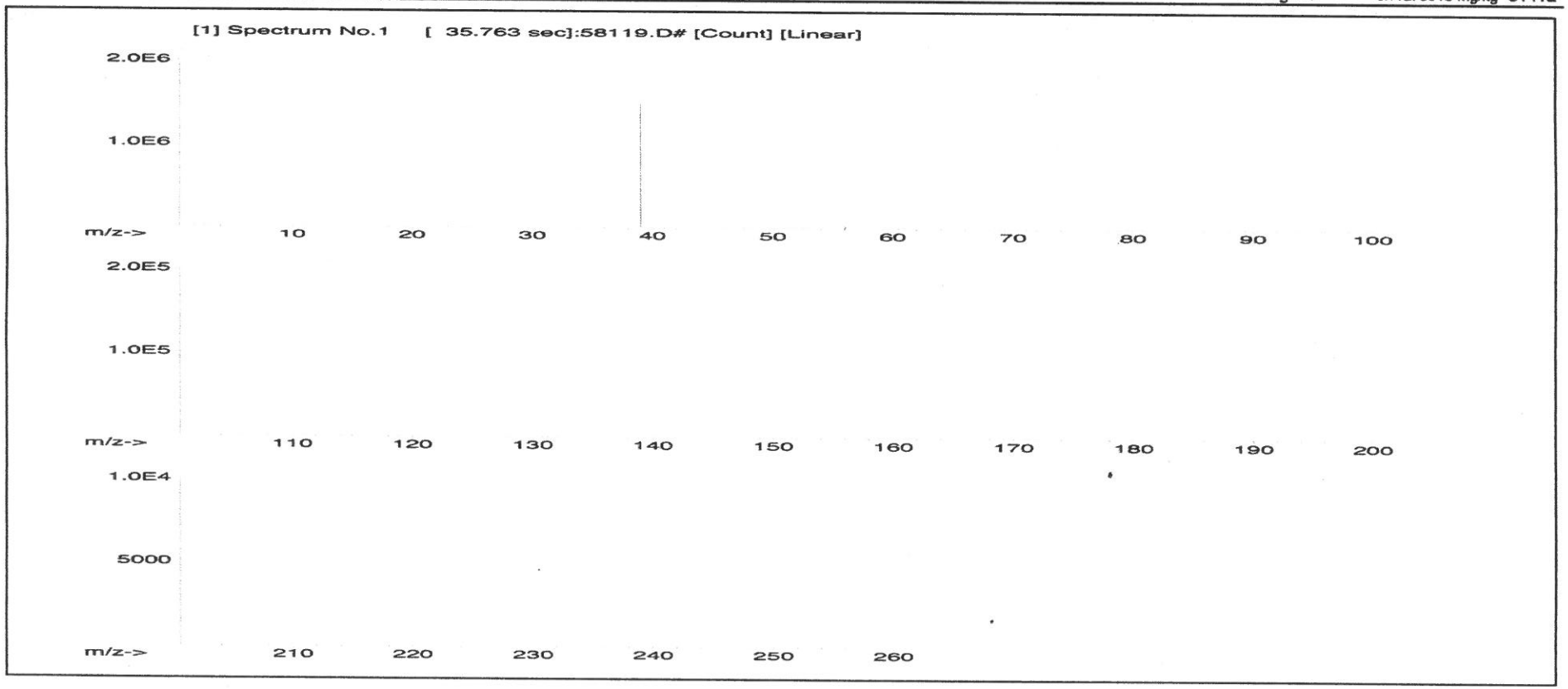
Gabriel Helland

Formulated By:	Gabriel Helland	062321

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062321

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KZ062019A1	10000	99.999	0.10	38.2	52.3570	52.3590	**10000.4**	**20.0**	7757-79-1	5 mg/m3	ori-rat 3015 mg/kg	3141a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	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 certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 001 ± 6 µg/mL**		

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	20370011	Nitric Acid	
Lot Number:	**101521**			
Description:	**Antimony (Sb)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	101524			
Recommended Storage:	Ambient (20 ºC)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.25	0.116	Flask Uncertainty	

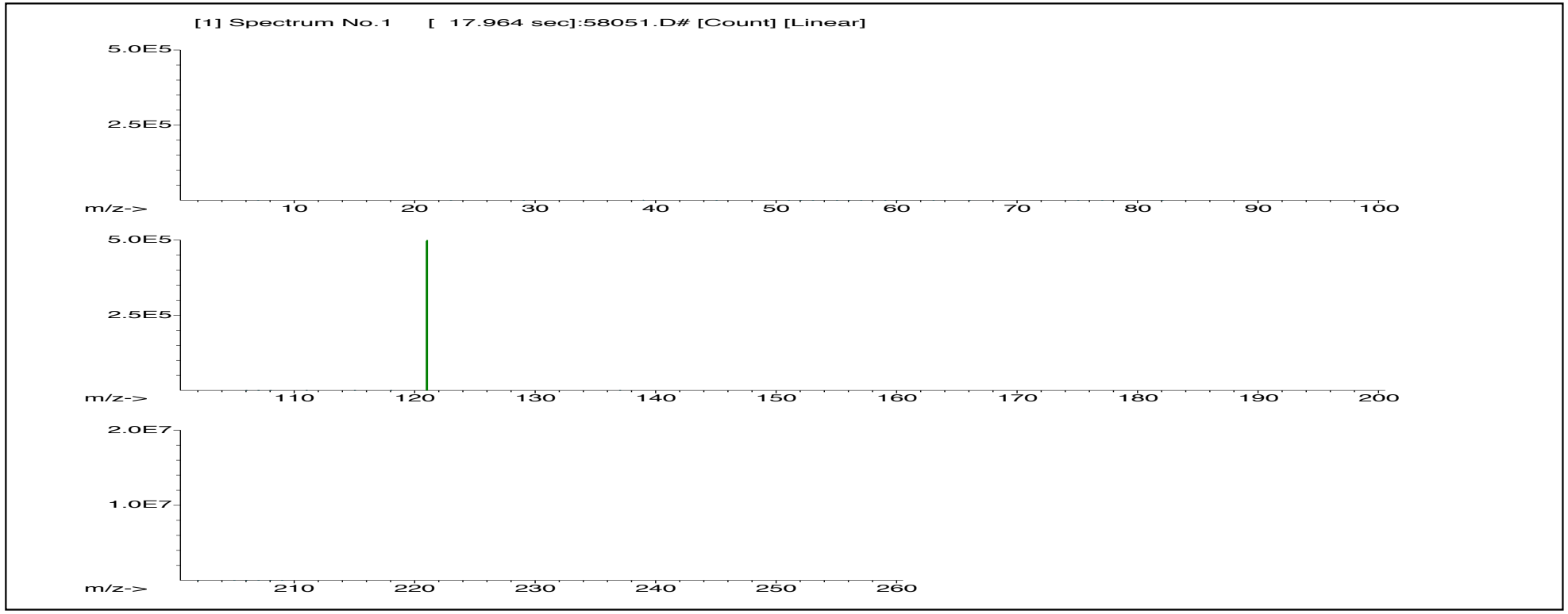
Giovanni Esposito

Formulated By:	Giovanni Esposito	101521

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101521

											SDS Information			
		Part	Lot	Dilution	Initial	Uncertainty	Nominal	Initial	**Final**	Expanded Uncertainty	(Solvent Safety Info. On Attached pg.)			NIST
	Compound	Number	Number	Factor	Vol. (mL)	Pipette (mL)	Conc. (µg/mL)	Conc. (µg/mL)	**Conc. (µg/mL)**	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	SRM
1.	Antimony (Sb)	58151	081820	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R : 03/30/22

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5226 ***Certified Reference Material CRM***

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

CERTIFIED WEIGHT REPORT:

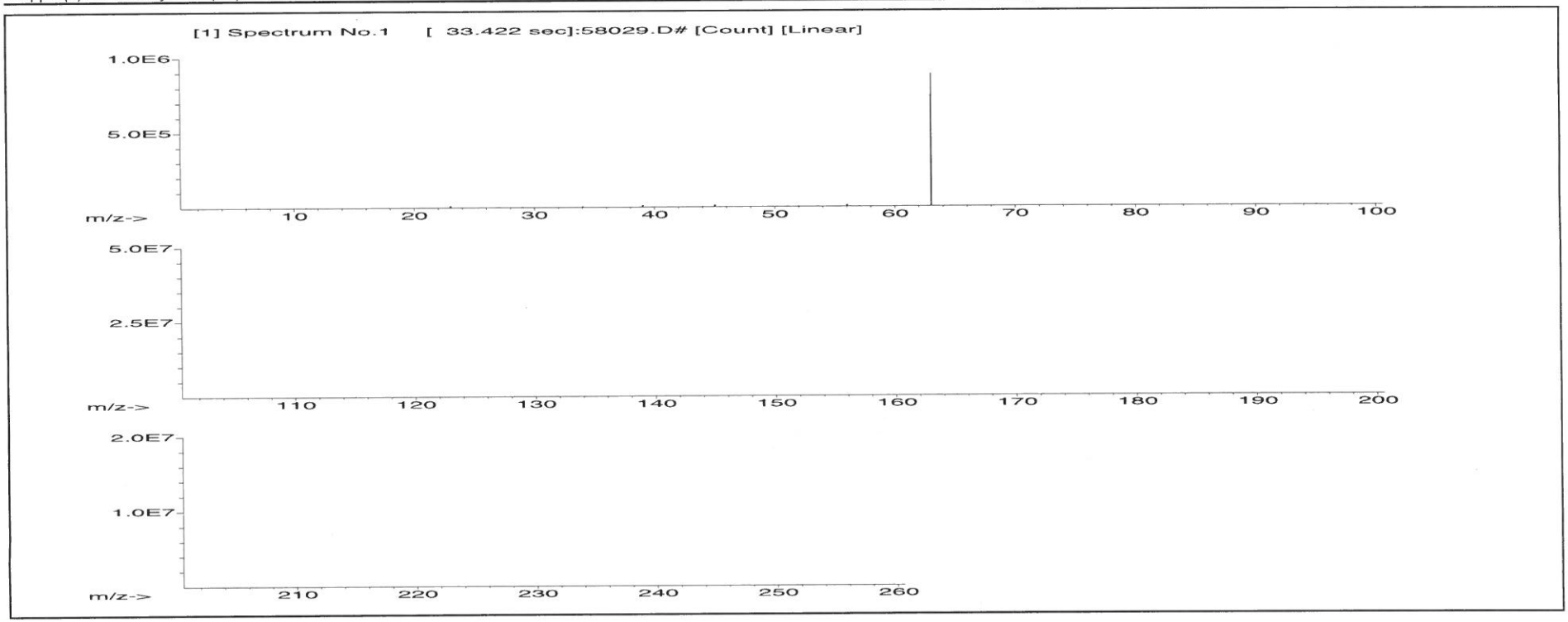
Part Number: 58029
Lot Number: 022822
Description: Copper (Cu)
Expiration Date: 022825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02

Lot #	Solvent:		
20370011	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 022822
Pedro Rentas
Reviewed By: Pedro L. Rentas 022822

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	020821	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5227 R: 10/18/2021

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	20370011	Nitric Acid	
Lot Number:	**100121**			
Description:	**Vanadium (V)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	100124			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.4	0.06	Flask Uncertainty	

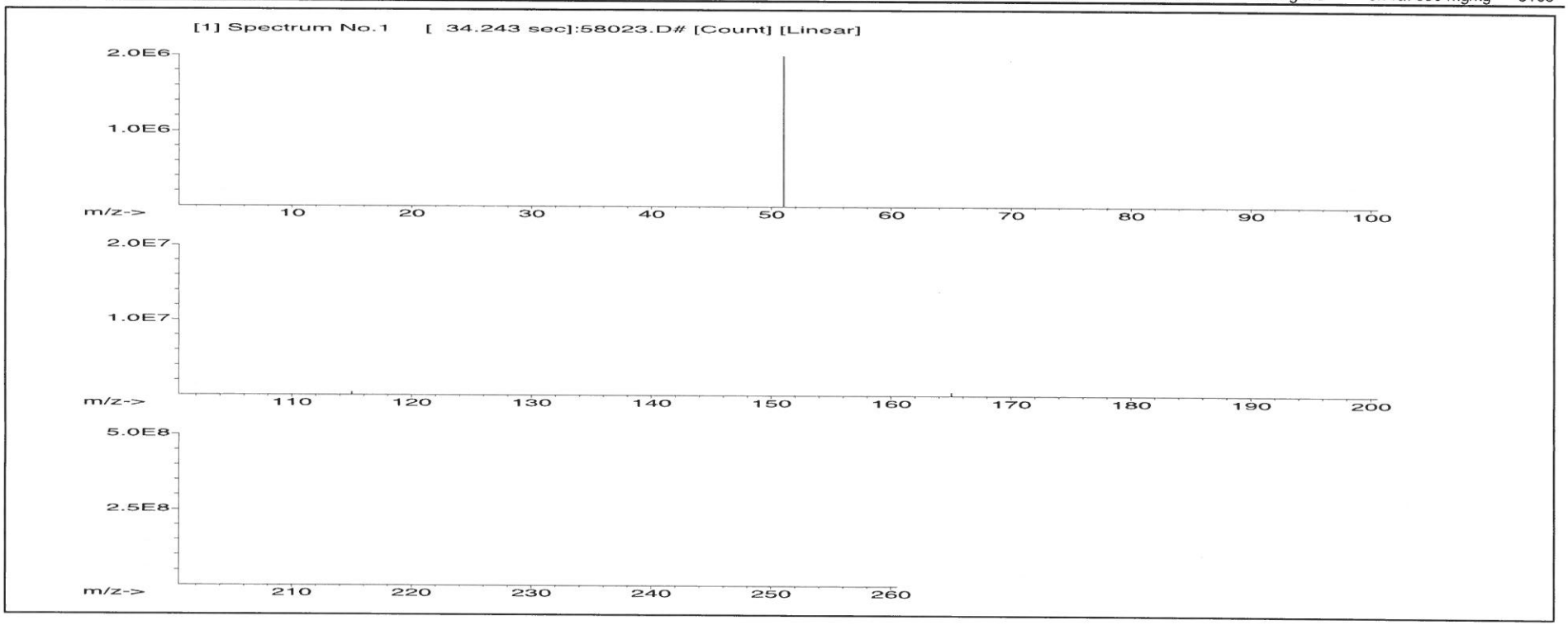
Giovanni Esposito

Formulated By:	Giovanni Esposito	100121

Pedro Rentas

Reviewed By:	Pedro L. Rentas	100121

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	**Final Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium Metavanadate (V)	58123	070721	0.1000	300.0	0.084	1000	10000.4	**1000.0**	**2.1**	7803-55-6	1.0 mg/m3	orl-rat 630 mg/kg	3165



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	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5228 R: 07/05/22 BH

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

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57038**	20370011	Nitric Acid		
Lot Number:	**073021**				
Description:	**Strontium (Sr)**	2.0%	60.0 (mL)	Nitric Acid	
Expiration Date:	073024				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty		

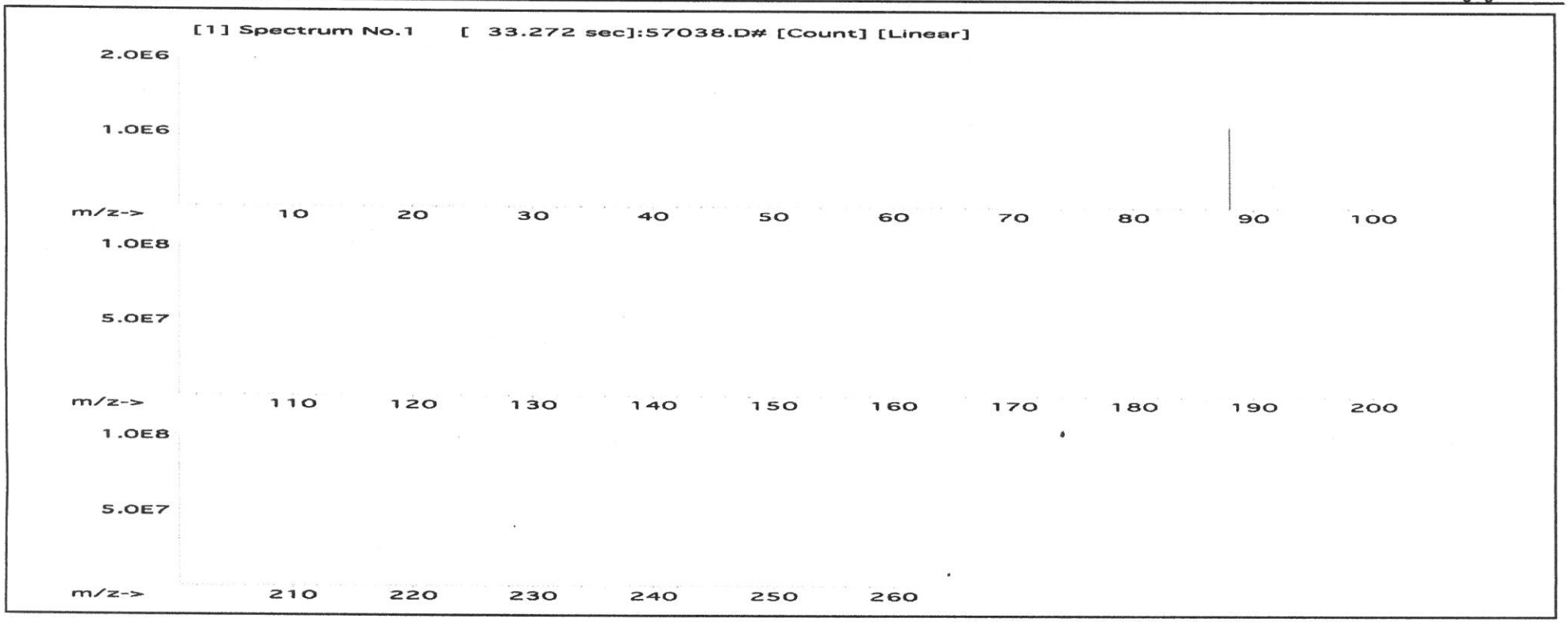
Giovanni Esposito

Formulated By:	Giovanni Esposito	073021

Pedro Rentas

Reviewed By:	Pedro L. Rentas	073021

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	58138	062321	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	10042-76-9	NA	orl-rat 2750mg/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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

M5289 R: 07/12/22 (BH)

Certified Reference Material CRM

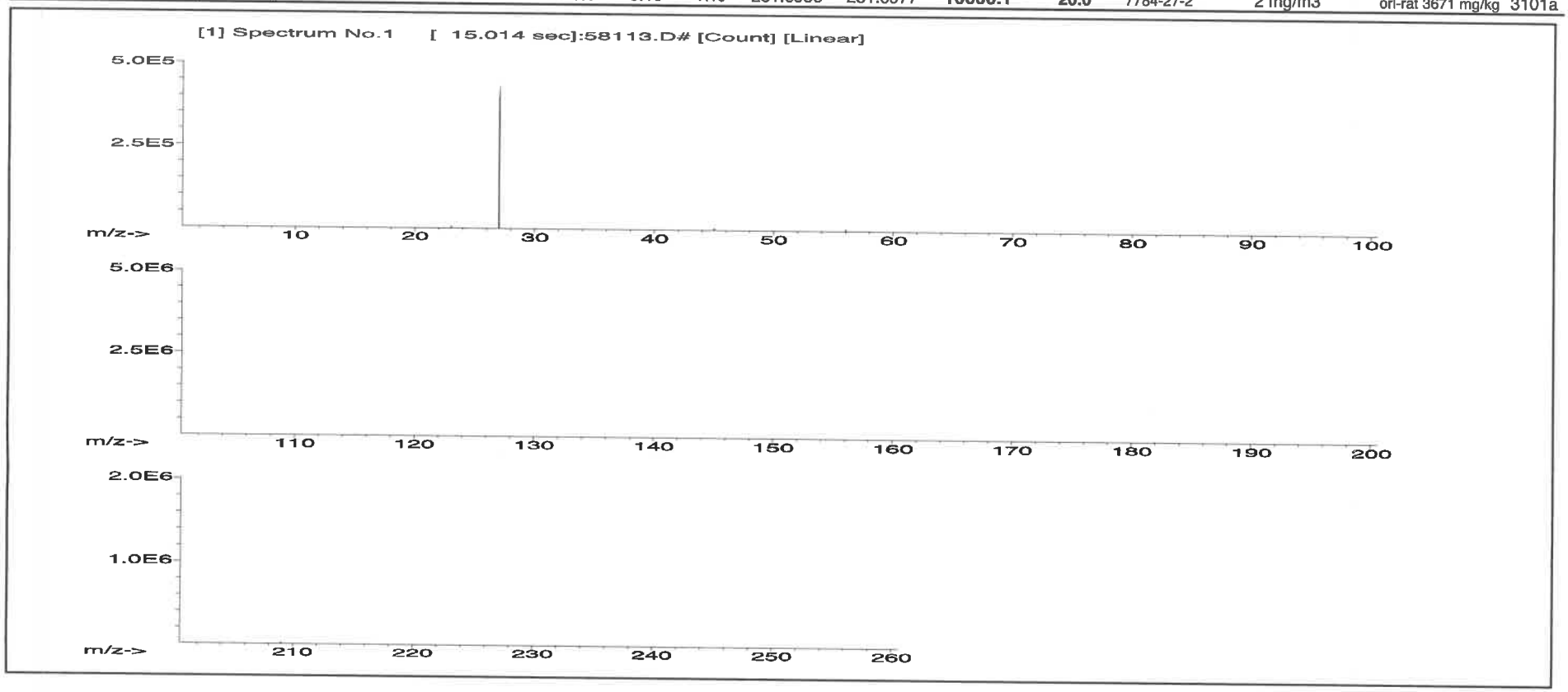
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**58113**			**Lot #**	
Lot Number:	**070622**		**Solvent:**	20370011	Nitric Acid
Description:	**Aluminum (Al)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	070625				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

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

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALD012021A1	10000	99.999	0.10	7.10	281.6956	281.6977	**10000.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	T	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.5	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

IV5240 K: 07/21/22 (BL)

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 071222
Description: Magnesium (Mg)

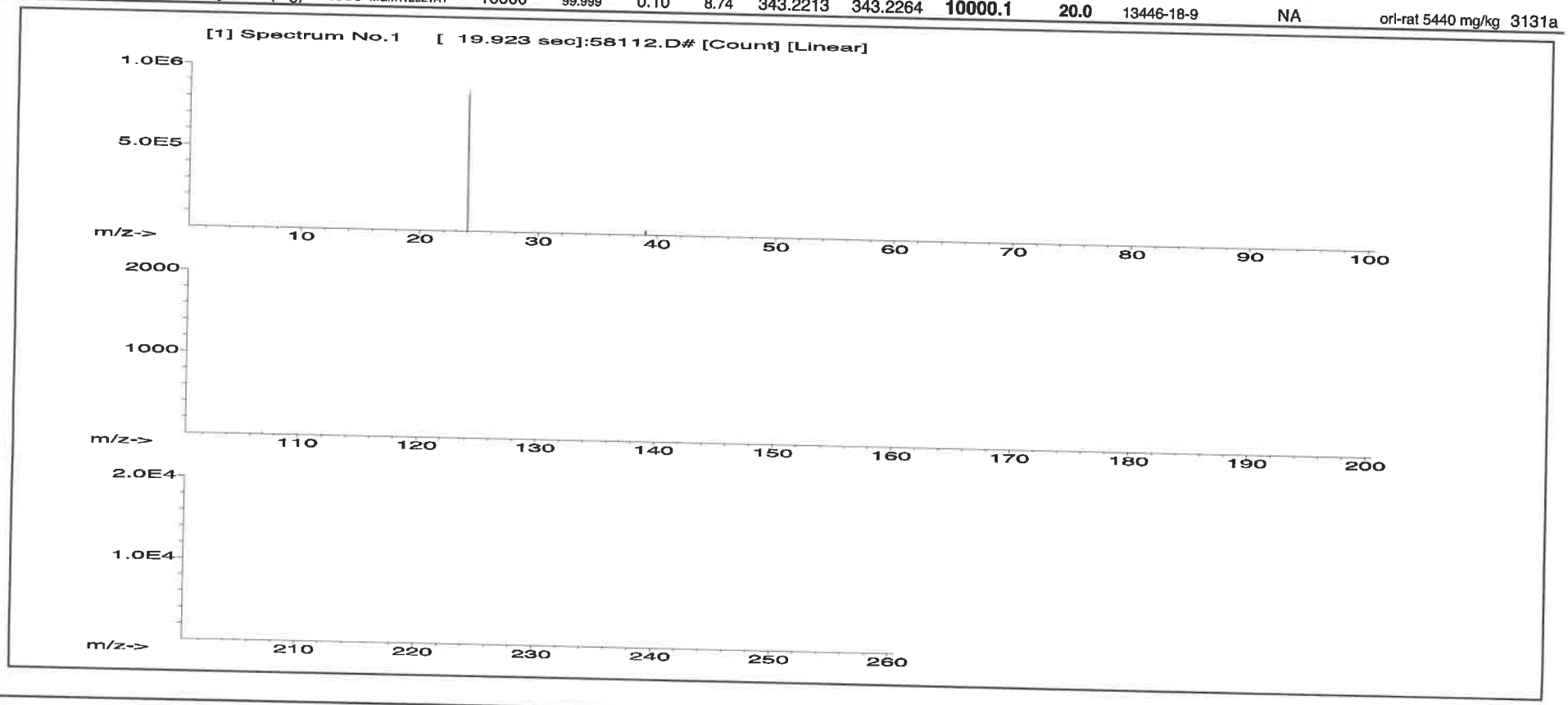
Expiration Date: 071225
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 071222

Reviewed By: Pedro L. Rentas 071222

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGM112021A1	10000	99.999	0.10	8.74	343.2213	343.2264	**10000.1**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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

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

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) =Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R1. 02/20/20
SJ

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 CLP SOWs and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

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

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

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

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

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

For ICP-MS use: dilute the ICV1 concentrate 50-fold with 1% (v/v) nitric acid; pipet 2 mL of the 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: dilute the ICV5 concentrate 100-fold with 2% (v/v) nitric acid; pipet 1 mL of the 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: dilute the ICV6 concentrate 100-fold with Type II water; pipet 1 mL of the 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	2520	504
Sb	1010	202
As	997	199
Ba	518	104
Be	514	103
Cd	514	103
Ca	10000	2000
Cr	517	103
Co	521	104
Cu	505	101
Fe	10100	2020
Pb	1030	206
Mg	5990	1198
Mn	524	105
Ni	525	105
K	9940	1988
Se	1030	206
Ag	252	50
Na	10100	2020
Tl	1040	208
V	504	101
Zn	1010	202

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

R: 09/08/22 (BH)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

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

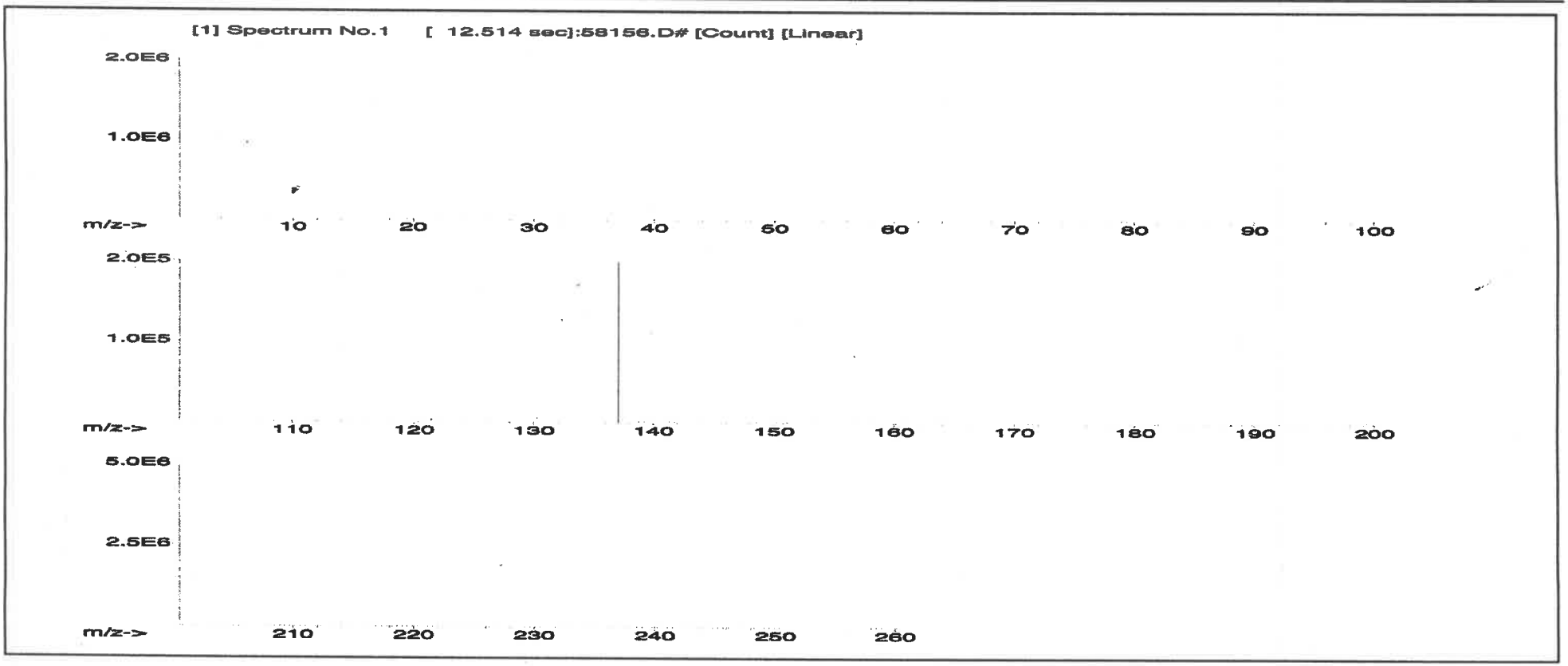
CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**57056**	**Solvent:**	20510011	Nitric Acid
Lot Number:	**072122**			
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	072125			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	072122
Reviewed By:	Pedro L. Rentas	072122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	**1000.0**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M5408 M5409 M5410

Material No.: 9530-33
Batch No.: 22E1662006
Manufactured Date: 2022-04-11
Retest Date: 2027-04-10
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	1.190
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	< 0.2 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	37.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22E1662006

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	1.0 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 0.4 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	1.9 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	< 0.8 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	< 0.3 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

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

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22E1662006

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 Ethier
Vice President Global Quality

Nitric Acid
CMOS

M5411 M5412 M5413
M5414 M5415

Material No.: 9606-03
Batch No.: 22B0862001
Manufactured Date: 2022-01-28
Retest Date: 2027-01-27
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	1.5 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	2.3 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 >>>

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
CMOS

Material No.: 9606-03
Batch No.: 22B0862001

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	4 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid
CMOS

Material No.: 9606-03
Batch No.: 22B0862001

Test	Specification	Result

For Microelectronic Use
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

Nitric Acid
CMOS

M5411 M5412 M5413
M5414 M5415

Material No.: 9606-03
Batch No.: 22B0862001
Manufactured Date: 2022-01-28
Retest Date: 2027-01-27
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	1.5 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	2.3 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 >>>

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
CMOS

Material No.: 9606-03
Batch No.: 22B0862001

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	4 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid
CMOS

Material No.: 9606-03
Batch No.: 22B0862001

Test	Specification	Result

For Microelectronic Use
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M5416 M5417 M5418
M5419 M5420 M5421

Material No.: 9530-33
Batch No.: 22D1462006
Manufactured Date: 2022-02-24
Retest Date: 2027-02-23
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	1.190
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	< 0.5 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	0.2 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	1.4 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	48.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	2 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22D1462006

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	0.7 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	< 5.0 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	< 0.9 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.3 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.5 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

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

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22D1462006

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 Ethier
Vice President Global Quality

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M5416 M5417 M5418
M5419 M5420 M5421

Material No.: 9530-33
Batch No.: 22D1462006
Manufactured Date: 2022-02-24
Retest Date: 2027-02-23
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	1.190
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	< 0.5 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	0.2 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	1.4 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	48.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	2 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22D1462006

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	0.7 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	< 5.0 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	< 0.9 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.3 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.5 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

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

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22D1462006

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 Ethier
Vice President Global Quality

Nitric Acid
CMOS

M5423 M5424 M5425
M5426 M5427 M5428

Material No.: 9606-03
Batch No.: 22C0462001
Manufactured Date: 2022-02-11
Retest Date: 2027-02-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.4 %
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	1.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	1.7 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 >>>

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
CMOS

Material No.: 9606-03
Batch No.: 22C0462001

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	7 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	2 par/ml

>>> Continued on page 3 >>>

Nitric Acid
CMOS

Material No.: 9606-03
Batch No.: 22C0462001

Test	Specification	Result

For Microelectronic Use
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

N5285 N5286 9/7/2022 A.I

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

CERTIFICATE OF ANALYSIS

Date: 8/3/2022

Lot No 820803

Hydrogen Peroxide, ACS
Reagent Grade

TEST	MAXIMUM LIMITS	RESULT
Appearance	Colorless and free from suspended matter or sediment	Pass
Assay	29-32%	31.4%
Color (APHA)	10	5
Residue after Evaporation	0.002%	.0001%
Titratable Acid	0.0006 meq/g	< .0006 meq/g
Chloride (Cl)	2 ppm	< 1 ppm
Nitrate (NO_3)	2 ppm	< 1 ppm
Phosphate	2 ppm	< 1 ppm
Sulfate (SO_4)	5 ppm	< .5 ppm
Ammonium (NH_4)	5 ppm	< 1 ppm
Heavy Metals (as Pb)	1 ppm	< .1 ppm
Iron (Fe)	0.5 ppm	< .1 ppm
Sodium Stannate	200 – 300 ppb	Pass

***Our Hydrogen Peroxide is considered un-stabilized because it is very slightly stabilized with Sodium Stannate, 500 ppb maximum, just for safety purposes.

Date of MFG: 8/2022
Retest date: 8/2024

Gina M. Rambo
Office Manager

CORCO CHEMICAL CORPORATION. 299 CEDAR LANE. FAIRLESS HILLS, PA 19030. 215-295-5006. FAX 215-295-0781

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	S2-MEB710999
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.5 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.10 µg/mL
Boron, B	30.00 ± 0.20 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.20 µg/mL	Cobalt, Co	20.00 ± 0.09 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.5 µg/mL	Lithium, Li	20.00 ± 0.09 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.09 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.6 µg/mL	Silver, Ag	7.50 ± 0.05 µg/mL
Sodium, Na	300.0 ± 1.1 µg/mL	Strontium, Sr	20.00 ± 0.09 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

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
As	ICP Assay	3103a	100818
B	ICP Assay	3107	110830
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
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Ca	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L

Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

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**

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 18, 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 18, 2025**

- 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



INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	R2-MEB693161
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**80.0 ± 0.6 µg/mL**	**Molybdenum, Mo**	**40.00 ± 0.17 µg/mL**
Silica, SiO2	**200.0 ± 1.5 µg/mL**	**Tin, Sn**	**70.0 ± 0.3 µg/mL**
Titanium, Ti	**20.00 ± 0.12 µg/mL**		

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 20, 2020

- 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

- **May 20, 2024**

- 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
Manager, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



CHEMTECH

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 01232/33

COC Number:

CLIENT INFORMATION

COMPANY: Louis Berger dba WSP USA Inc.
ADDRESS: 350 Mt. Kemble Ave
CITY Morristown STATE: NJ ZIP: 07962
ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com)
PHONE: 212-612-7995 FAX:

PROJECT INFORMATION

PROJECT NAME: HWR1140A PCSMP Ph II SCI
PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island
PROJECT MANAGER: Jon Ganz
E-MAIL: Jon.Ganz@wsp.com
PHONE: 212-612-7995 FAX:

BILLING INFORMATION

BILL TO: Louis Berger PO# 31202661.297 Task 02
ADDRESS: 350 Mt. Kemble Ave
CITY: Morristown STATE: NJ ZIP: 07962
ATTENTION: Jon Ganz PHONE: 212-612-7995

DATA TURNAROUND INFORMATION

FAX:_____DAYS
HARD COPY:_____DAYS*
EDD See Contract Rates below DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

TCL VOC - 2 days
TCL SVOC - 5 days
PAH - 5 days
TPH GRO/DRO - 3 days
TAL Metals - 5 Days
PCBs and Pesticides - 5 Day
TCLP RCRA Metals - 5 Day
RCRA Characteristics and Paint Filter - 3 Days

DATA DELIVERABLE INFORMATION

☐ RESEULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other_____

Level 2

☐ EDD Format_____

ANALYSIS

1	2	3	4	5	6	7	8	9
TCL VOC (8260C)	TCL SVOC (8270C/625)	TCL Pest (8081A/608)	PCB (3550B, 8082/608)	TAL Metals (7471A and 6010B)	PCBs (8082), PAHs (8270)	TCLP Metals (RCRA 8) EPA 1311/ 6010B	RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B	TPH-DRO/GRO (8015B), Paint Filter Test (EPA 9095B)

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	B-P17A	soil		X	1/18/23	0950	1	X	X	X	X	X					
2.	B-P17B	soil		X	1/18/23	1005	1	X	X	X	X	X					
3.	WC17	soil	X		1/18/23	1010	1						X	X	X	X	
4.	B-P18A			X	1/18/23	1025		X	X	X	X	X					
5.	B-P18B			X	1/18/23	1045		X	X	X	X	X					
6.	B-P19A			X	1/18/23	1125		X	X	X	X	X					
7.	B-P19B			X	1/18/23	1135		X	X	X	X	X					
8.	B-P35A			X	1/18/23	1225		X	X	X	X	X					
9.	B-P35B			X	1/18/23	1245		X	X	X	X	X					
10.	DUP01			X	—	—		X	X	X	X	X					

PRESERVATIVES (E-ICE)

COMMENTS <-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESION INCLUDING COURIER DELIVERY

	DATE/TIME		
1. RELINQUISHED BY SAMPLER	1/19/23	1. RECEIVED BY	1333 1-19-23
2. RELINQUISHED BY	DATE/TIME	2. RECEIVED BY	
3. RELINQUISHED BY	DATE/TIME 1806 1-19-23	3. RECEIVED FOR LAB BY	—

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.0
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?:_____
Comments:

Page 1 of 3

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 01232/33

COC Number:

CLIENT INFORMATION

COMPANY: Louis Berger dba WSP USA Inc.
ADDRESS: 350 Mt. Kemble Ave
CITY Morristown STATE: NJ ZIP: 07962
ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com)
PHONE: 212-612-7995 FAX:

PROJECT INFORMATION

PROJECT NAME: HWR1140A PCSMP Ph II SCI
PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island
PROJECT MANAGER: Jon Ganz
E-MAIL: Jon.Ganz@wsp.com
PHONE: 212-612-7995 FAX:

BILLING INFORMATION

BILL TO: Louis Berger PO# 31202661.297 Task 02
ADDRESS: 350 Mt. Kemble Ave
CITY: Morristown STATE: NJ ZIP: 07962
ATTENTION: Jon Ganz PHONE: 212-612-7995

DATA TURNAROUND INFORMATION

FAX:_____DAYS
HARD COPY:_____DAYS*
EDD See Contract Rates below DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

TCL VOC - 2 days
TCL SVOC - 5 days
PAH - 5 days
TPH GRO/DRO - 3 days
TAL Metals - 5 Days
PCBs and Pesticides - 5 Day
TCLP RCRA Metals - 5 Day
RCRA Characteristics and Paint Fitler - 3 Days

DATA DELIVERABLE INFORMATION

❑ RESEULTS ONLY ❑ USEPA CLP
❑ RESULTS + QC ❑ New York State ASP "B"
❑ New Jersey REDUCED ❑ New York State ASP "A"
❑ New Jersey CLP ❑ Other_____

Level 2

❑ EDD Format_____

ANALYSIS

1	2	3	4	5	6	7	8	9
TCL VOC (8260C)	TCL SVOC (8270C/625)	TCL Pest (8081A/608)	PCB (3550B, 8082/608)	TAL Metals (7471A and 6010B)	PCBs (8082), PAHs (8270)	TCLP Metals (RCRA 8) EPA 1311/ 6010B	RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B	TPH-DRO/GRO (8015B), Paint Filter Test (EPA 9095B)

PRESERVATIVES

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	1	2	3	4	5	6	7	8	9	COMMENTS
1.	FB01	Field Blank			1/18/23	1205	2	X	X	X	X	X					HCl Preservative
2.	B-P34A	soil		X	1/18/23	2115	1	X	X	X	X	X					Ice Preservative
3.	B-P34B	soil		X	1/18/23	2140	1	X	X	X	X	X					
4.	B-P36A			X		2210	1	X	X	X	X	X					
5.	B-P36B			X		2225	1	X	X	X	X	X					
6.	B-P37A			X		2300	1	X	X	X	X	X					
7.	B-P37B			X		2315	1	X	X	X	X	X					
8.	B-38A			X		2345	1	X	X	X	X	X					
9.	B-P38B			X		2355	1	X	X	X	X	X					
10.	~~WC38~~ WC38		X			2355	1						X	X	X	X	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	1/19/23	1. 1333 1.19.23
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME 1855	RECEIVED FOR LAB BY
3.	1-19-23	3.

Conditions of bottles or coolers at receipt: ❑ Compliant ❑ Non Compliant ❑ Cooler Temp 3.0
MeOH extraction requires an additional 4oz. Jar for percent solid ❑ Ice in Cooler?:_____
Comments:

SHIPPED VIA: CLIENT: ❑ Hand Delivered ❑ Overnight
CHEMTECH: ❑ Picked Up ❑ Overnight

Shipment Complete ❑ YES ❑ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

Chemtech Project Number: 01232/33

COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: Louis Berger dba WSP USA Inc.	PROJECT NAME: HWR1140A PCSMP Ph II SCI	BILL TO: Louis Berger PO# 31202661.297 Task 02
ADDRESS: 350 Mt. Kemble Ave	PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island	ADDRESS: 350 Mt. Kemble Ave
CITY Morristown STATE: NJ ZIP: 07962	PROJECT MANAGER: Jon Ganz	CITY: Morristown STATE: NJ ZIP: 07962
ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com)	E-MAIL: Jon.Ganz@wsp.com	ATTENTION: Jon Ganz PHONE: 212-612-7995
PHONE: 212-612-7995 FAX:	PHONE: 212-612-7995 FAX:	

DATA TURNAROUND INFORMATION

FAX:_____ DAYS
HARD COPY:_____DAYS*
EDD See Contract Rates below DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

TCL VOC - 2 days
TCL SVOC - 5 days
PAH - 5 days
TPH GRO/DRO - 3 days
TAL Metals - 5 Days
PCBs and Pesticides - 5 Day
TCLP RCRA Metals - 5 Day
RCRA Characteristics and Paint Filter - 3 Days

DATA DELIVERABLE INFORMATION

- ❑ RESEULTS ONLY
- ❑ RESULTS + QC
- ❑ New Jersey REDUCED
- ❑ New Jersey CLP
- ❑ USEPA CLP
- ❑ New York State ASP "B"
- ❑ New York State ASP "A"
- ❑ Other_____

Level 2

❑ EDD Format_____

ANALYSIS

1	2	3	4	5	6	7	8	9
TCL VOC (8260C)	TCL SVOC (8270C/625)	TCL Pest (8081A/608)	PCB (3550B, 8082/608)	TAL Metals (7471A and 6010B)	PCBs (8082), PAHs (8270)	TCLP Metals (RCRA 8) EPA 1311/ 6010B	RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B	TPH-DRO/GRO (8015B), Paint Filter Test (EPA 9095B)

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	B-P38C	SOIL		X	1/18/23	2350	1	X	X	X	X	X					
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

	RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	DATE/TIME
1.		1/19/23		1333 1-19-23
2.	RELINQUISHED BY	DATE/TIME	RECEIVED BY	
3.	RELINQUISHED BY	DATE/TIME 1800 1-19-23	RECEIVED FOR LAB BY	

Conditions of bottles or coolers at receipt: ❑ Compliant ❑ Non Compliant ❑ Cooler Temp 3.0
MeOH extraction requires an additional 4oz. Jar for percent solid ❑ Ice in Cooler?:_____
Comments:

Page 3 of 3

SHIPPED VIA: CLIENT: ❑ Hand Delivered ❑ Overnight
CHEMTECH: ❑ Picked Up ❑ Overnight

Shipment Complete ❑ YES ❑ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Maine	2022022
Maryland	296
New Hampshire	255422
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488-22-15

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O1233 loui01
Client Name : Louis Berger U.S.. Inc.. A V
Client Contact : Jonathan Ganz
Invoice Name : Louis Berger U.S.. Inc.. A V
Invoice Contact : Jonathan Ganz

Order Date : 1/19/2023 1:53:00 PM
Project Name : NYCDDC Phase II SCI Artl
Receive DateTime : 1/19/2023 ~~12:00:00~~ AM
Purchase Order : 18:05

Project Mgr :
Report Type : Level 1
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
O1233-02	B-P34A	Solid	01/18/2023	21:15					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-03	B-P34B	Solid	01/18/2023	21:40					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-04	B-P36A	Solid	01/18/2023	22:10					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-05	B-P36B	Solid	01/18/2023	22:25					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-06	B-P37A	Solid	01/18/2023	23:00					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-07	B-P37B	Solid	01/18/2023	23:15					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-08	~~B-P38~~A B-38A	Solid	01/18/2023	23:45					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-09	B-P38B	Solid	01/18/2023	23:55					
					VOC-TCLVOA-10		8260D		2 Bus. Days
O1233-11	B-P38C	Solid	01/18/2023	23:50					

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : O1233 loui01
Client Name : Louis Berger U.S., Inc., A V
Client Contact : Jonathan Ganz
Invoice Name : Louis Berger U.S., Inc., A V
Invoice Contact : Jonathan Ganz

Order Date : 1/19/2023 1:53:00 PM
Project Name : NYCDDC Phase II SCI Artl
Receive DateTime : 1/19/2023 ~~12:00:00 A~~M
Purchase Order : 18:05

Project Mgr :
Report Type : Level 1
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
					VOC-TCLVOA-10		8260D	2 Bus. Days	
O1233-12	FB01	Water	01/18/2023	12:05					
					VOC-TCLVOA-10		8260D	2 Bus. Days	

JAR samples

Stored in VOA FRZ #2

Relinguished By : CH
Date / Time : 1/20/23 9:20

Received By : [signature]
Date / Time : 1/20/23 9:20

Storage Area : VOA Refridgerator Room