



INITIAL AND CONTINUING CALIBRATION VERIFICATION

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV53	Mercury	3.68	4.0	92	90 - 110	CV	03/19/2024	12:37	LB129940



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

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. **SDG No.:** P1747
Contract: LIRO01 **Lab Code:** CHEM **Case No.:** P1747 **SAS No.:** P1747
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
CCV81	Mercury	4.73	5.0	95	90 - 110	CV	03/19/2024	12:42	LB129940
CCV82	Mercury	5.26	5.0	105	90 - 110	CV	03/19/2024	13:12	LB129940
CCV83	Mercury	5.49	5.0	110	90 - 110	CV	03/19/2024	13:42	LB129940
CCV84	Mercury	5.31	5.0	106	90 - 110	CV	03/19/2024	14:09	LB129940
CCV85	Mercury	5.13	5.0	103	90 - 110	CV	03/19/2024	14:40	LB129940
CCV86	Mercury	5.30	5.0	106	90 - 110	CV	03/19/2024	14:57	LB129940



INITIAL AND CONTINUING CALIBRATION VERIFICATION

Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV55	Mercury	3.87	4.0	97	95 - 105	CV	03/20/2024	14:24	LB129958



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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
CCV89	Mercury	5.01	5.0	100	90 - 110	CV	03/20/2024	14:33	LB129958
CCV90	Mercury	4.63	5.0	93	90 - 110	CV	03/20/2024	15:24	LB129958
CCV91	Mercury	4.62	5.0	92	90 - 110	CV	03/20/2024	15:47	LB129958



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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	2550	2500	102	90 - 110	P	03/14/2024	12:40	LB129894
	Antimony	1050	1000	105	90 - 110	P	03/14/2024	12:40	LB129894
	Arsenic	1050	1000	105	90 - 110	P	03/14/2024	12:40	LB129894
	Barium	551	520	106	90 - 110	P	03/14/2024	12:40	LB129894
	Beryllium	506	510	99	90 - 110	P	03/14/2024	12:40	LB129894
	Cadmium	505	510	99	90 - 110	P	03/14/2024	12:40	LB129894
	Calcium	10400	10000	104	90 - 110	P	03/14/2024	12:40	LB129894
	Chromium	506	520	97	90 - 110	P	03/14/2024	12:40	LB129894
	Cobalt	498	520	96	90 - 110	P	03/14/2024	12:40	LB129894
	Copper	525	510	103	90 - 110	P	03/14/2024	12:40	LB129894
	Iron	10200	10000	102	90 - 110	P	03/14/2024	12:40	LB129894
	Lead	1020	1000	102	90 - 110	P	03/14/2024	12:40	LB129894
	Magnesium	5930	6000	99	90 - 110	P	03/14/2024	12:40	LB129894
	Manganese	527	520	101	90 - 110	P	03/14/2024	12:40	LB129894
	Nickel	503	530	95	90 - 110	P	03/14/2024	12:40	LB129894
	Potassium	10200	9900	103	90 - 110	P	03/14/2024	12:40	LB129894
	Selenium	1060	1000	106	90 - 110	P	03/14/2024	12:40	LB129894
	Silver	251	250	100	90 - 110	P	03/14/2024	12:40	LB129894
	Sodium	10000	10000	100	90 - 110	P	03/14/2024	12:40	LB129894
	Thallium	1040	1000	104	90 - 110	P	03/14/2024	12:40	LB129894
	Vanadium	505	500	101	90 - 110	P	03/14/2024	12:40	LB129894
	Zinc	1010	1000	101	90 - 110	P	03/14/2024	12:40	LB129894



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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
LLICV01	Aluminum	88.2	100	88	80 - 120	P	03/14/2024	12:46	LB129894
	Antimony	53.1	50.0	106	80 - 120	P	03/14/2024	12:46	LB129894
	Arsenic	20.1	20.0	100	80 - 120	P	03/14/2024	12:46	LB129894
	Barium	107	100	107	80 - 120	P	03/14/2024	12:46	LB129894
	Beryllium	6.26	6.0	104	80 - 120	P	03/14/2024	12:46	LB129894
	Cadmium	6.22	6.0	104	80 - 120	P	03/14/2024	12:46	LB129894
	Calcium	2180	2000	109	80 - 120	P	03/14/2024	12:46	LB129894
	Chromium	9.89	10.0	99	80 - 120	P	03/14/2024	12:46	LB129894
	Cobalt	29.2	30.0	97	80 - 120	P	03/14/2024	12:46	LB129894
	Copper	22.3	20.0	111	80 - 120	P	03/14/2024	12:46	LB129894
	Iron	95.9	100	96	80 - 120	P	03/14/2024	12:46	LB129894
	Lead	11.7	12.0	97	80 - 120	P	03/14/2024	12:46	LB129894
	Magnesium	2220	2000	111	80 - 120	P	03/14/2024	12:46	LB129894
	Manganese	21.7	20.0	109	80 - 120	P	03/14/2024	12:46	LB129894
	Nickel	39.7	40.0	99	80 - 120	P	03/14/2024	12:46	LB129894
	Potassium	2030	2000	101	80 - 120	P	03/14/2024	12:46	LB129894
	Selenium	19.9	20.0	100	80 - 120	P	03/14/2024	12:46	LB129894
	Silver	10.7	10.0	107	80 - 120	P	03/14/2024	12:46	LB129894
	Sodium	1970	2000	98	80 - 120	P	03/14/2024	12:46	LB129894
	Thallium	41.5	40.0	104	80 - 120	P	03/14/2024	12:46	LB129894
	Vanadium	43.6	40.0	109	80 - 120	P	03/14/2024	12:46	LB129894
	Zinc	43.5	40.0	109	80 - 120	P	03/14/2024	12:46	LB129894



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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	10200	10000	102	90 - 110	P	03/14/2024	13:18	LB129894
	Antimony	5020	5000	100	90 - 110	P	03/14/2024	13:18	LB129894
	Arsenic	4960	5000	99	90 - 110	P	03/14/2024	13:18	LB129894
	Barium	10500	10000	105	90 - 110	P	03/14/2024	13:18	LB129894
	Beryllium	255	250	102	90 - 110	P	03/14/2024	13:18	LB129894
	Cadmium	2430	2500	97	90 - 110	P	03/14/2024	13:18	LB129894
	Calcium	26500	25000	106	90 - 110	P	03/14/2024	13:18	LB129894
	Chromium	956	1000	96	90 - 110	P	03/14/2024	13:18	LB129894
	Cobalt	2440	2500	98	90 - 110	P	03/14/2024	13:18	LB129894
	Copper	1250	1250	100	90 - 110	P	03/14/2024	13:18	LB129894
	Iron	4890	5000	98	90 - 110	P	03/14/2024	13:18	LB129894
	Lead	4920	5000	98	90 - 110	P	03/14/2024	13:18	LB129894
	Magnesium	25100	25000	100	90 - 110	P	03/14/2024	13:18	LB129894
	Manganese	2620	2500	105	90 - 110	P	03/14/2024	13:18	LB129894
	Nickel	2470	2500	99	90 - 110	P	03/14/2024	13:18	LB129894
	Potassium	24800	25000	99	90 - 110	P	03/14/2024	13:18	LB129894
	Selenium	5000	5000	100	90 - 110	P	03/14/2024	13:18	LB129894
	Silver	1270	1250	102	90 - 110	P	03/14/2024	13:18	LB129894
	Sodium	24100	25000	96	90 - 110	P	03/14/2024	13:18	LB129894
	Thallium	4900	5000	98	90 - 110	P	03/14/2024	13:18	LB129894
	Vanadium	2520	2500	101	90 - 110	P	03/14/2024	13:18	LB129894
	Zinc	2590	2500	104	90 - 110	P	03/14/2024	13:18	LB129894
CCV02	Aluminum	9910	10000	99	90 - 110	P	03/14/2024	14:14	LB129894
	Antimony	5060	5000	101	90 - 110	P	03/14/2024	14:14	LB129894
	Arsenic	4970	5000	99	90 - 110	P	03/14/2024	14:14	LB129894
	Barium	10600	10000	106	90 - 110	P	03/14/2024	14:14	LB129894
	Beryllium	247	250	99	90 - 110	P	03/14/2024	14:14	LB129894
	Cadmium	2380	2500	95	90 - 110	P	03/14/2024	14:14	LB129894
	Calcium	26100	25000	104	90 - 110	P	03/14/2024	14:14	LB129894
	Chromium	947	1000	95	90 - 110	P	03/14/2024	14:14	LB129894
	Cobalt	2370	2500	95	90 - 110	P	03/14/2024	14:14	LB129894
	Copper	1250	1250	100	90 - 110	P	03/14/2024	14:14	LB129894
	Iron	5090	5000	102	90 - 110	P	03/14/2024	14:14	LB129894
	Lead	4840	5000	97	90 - 110	P	03/14/2024	14:14	LB129894



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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	Magnesium	24700	25000	99	90 - 110	P	03/14/2024	14:14	LB129894
	Manganese	2620	2500	105	90 - 110	P	03/14/2024	14:14	LB129894
	Nickel	2450	2500	98	90 - 110	P	03/14/2024	14:14	LB129894
	Potassium	25700	25000	103	90 - 110	P	03/14/2024	14:14	LB129894
	Selenium	5040	5000	101	90 - 110	P	03/14/2024	14:14	LB129894
	Silver	1310	1250	104	90 - 110	P	03/14/2024	14:14	LB129894
	Sodium	25100	25000	100	90 - 110	P	03/14/2024	14:14	LB129894
	Thallium	4960	5000	99	90 - 110	P	03/14/2024	14:14	LB129894
	Vanadium	2480	2500	99	90 - 110	P	03/14/2024	14:14	LB129894
	Zinc	2610	2500	104	90 - 110	P	03/14/2024	14:14	LB129894
CCV03	Aluminum	10100	10000	102	90 - 110	P	03/14/2024	15:27	LB129894
	Antimony	5010	5000	100	90 - 110	P	03/14/2024	15:27	LB129894
	Arsenic	4890	5000	98	90 - 110	P	03/14/2024	15:27	LB129894
	Barium	10900	10000	109	90 - 110	P	03/14/2024	15:27	LB129894
	Beryllium	263	250	105	90 - 110	P	03/14/2024	15:27	LB129894
	Cadmium	2330	2500	93	90 - 110	P	03/14/2024	15:27	LB129894
	Calcium	26900	25000	108	90 - 110	P	03/14/2024	15:27	LB129894
	Chromium	946	1000	95	90 - 110	P	03/14/2024	15:27	LB129894
	Cobalt	2300	2500	92	90 - 110	P	03/14/2024	15:27	LB129894
	Copper	1230	1250	98	90 - 110	P	03/14/2024	15:27	LB129894
	Iron	4940	5000	99	90 - 110	P	03/14/2024	15:27	LB129894
	Lead	4780	5000	96	90 - 110	P	03/14/2024	15:27	LB129894
	Magnesium	25800	25000	103	90 - 110	P	03/14/2024	15:27	LB129894
	Manganese	2740	2500	109	90 - 110	P	03/14/2024	15:27	LB129894
	Nickel	2420	2500	97	90 - 110	P	03/14/2024	15:27	LB129894
	Potassium	24700	25000	99	90 - 110	P	03/14/2024	15:27	LB129894
	Selenium	4960	5000	99	90 - 110	P	03/14/2024	15:27	LB129894
	Silver	1300	1250	104	90 - 110	P	03/14/2024	15:27	LB129894
	Sodium	24500	25000	98	90 - 110	P	03/14/2024	15:27	LB129894
	Thallium	4930	5000	99	90 - 110	P	03/14/2024	15:27	LB129894
	Vanadium	2530	2500	101	90 - 110	P	03/14/2024	15:27	LB129894
CCV04	Zinc	2610	2500	104	90 - 110	P	03/14/2024	15:27	LB129894
	Aluminum	9830	10000	98	90 - 110	P	03/14/2024	16:45	LB129894
	Antimony	4980	5000	100	90 - 110	P	03/14/2024	16:45	LB129894



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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. **SDG No.:** P1747
Contract: LIRO01 **Lab Code:** CHEM **Case No.:** P1747 **SAS No.:** P1747
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
CCV04	Arsenic	4820	5000	96	90 - 110	P	03/14/2024	16:45	LB129894
	Barium	10900	10000	109	90 - 110	P	03/14/2024	16:45	LB129894
	Beryllium	239	250	96	90 - 110	P	03/14/2024	16:45	LB129894
	Cadmium	2300	2500	92	90 - 110	P	03/14/2024	16:45	LB129894
	Calcium	27500	25000	110	90 - 110	P	03/14/2024	16:45	LB129894
	Chromium	958	1000	96	90 - 110	P	03/14/2024	16:45	LB129894
	Cobalt	2310	2500	92	90 - 110	P	03/14/2024	16:45	LB129894
	Copper	1220	1250	98	90 - 110	P	03/14/2024	16:45	LB129894
	Iron	4920	5000	98	90 - 110	P	03/14/2024	16:45	LB129894
	Lead	4730	5000	95	90 - 110	P	03/14/2024	16:45	LB129894
	Magnesium	24300	25000	97	90 - 110	P	03/14/2024	16:45	LB129894
	Manganese	2700	2500	108	90 - 110	P	03/14/2024	16:45	LB129894
	Nickel	2400	2500	96	90 - 110	P	03/14/2024	16:45	LB129894
	Potassium	25100	25000	100	90 - 110	P	03/14/2024	16:45	LB129894
	Selenium	4910	5000	98	90 - 110	P	03/14/2024	16:45	LB129894
	Silver	1280	1250	102	90 - 110	P	03/14/2024	16:45	LB129894
	Sodium	23700	25000	95	90 - 110	P	03/14/2024	16:45	LB129894
	Thallium	4750	5000	95	90 - 110	P	03/14/2024	16:45	LB129894
	Vanadium	2460	2500	98	90 - 110	P	03/14/2024	16:45	LB129894
	Zinc	2570	2500	103	90 - 110	P	03/14/2024	16:45	LB129894



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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	2470	2500	99	95 - 105	P	03/18/2024	17:48	LB129934
	Antimony	1010	1000	101	95 - 105	P	03/18/2024	17:48	LB129934
	Arsenic	1020	1000	102	95 - 105	P	03/18/2024	17:48	LB129934
	Barium	510	520	98	95 - 105	P	03/18/2024	17:48	LB129934
	Beryllium	499	510	98	95 - 105	P	03/18/2024	17:48	LB129934
	Cadmium	497	510	98	95 - 105	P	03/18/2024	17:48	LB129934
	Calcium	9930	10000	99	95 - 105	P	03/18/2024	17:48	LB129934
	Chromium	500	520	96	95 - 105	P	03/18/2024	17:48	LB129934
	Cobalt	488	520	94	95 - 105	P	03/18/2024	17:48	LB129934
	Copper	515	510	101	95 - 105	P	03/18/2024	17:48	LB129934
	Iron	9290	10000	93	95 - 105	P	03/18/2024	17:48	LB129934
	Lead	999	1000	100	95 - 105	P	03/18/2024	17:48	LB129934
	Magnesium	6050	6000	101	95 - 105	P	03/18/2024	17:48	LB129934
	Manganese	514	520	99	95 - 105	P	03/18/2024	17:48	LB129934
	Nickel	492	530	93	95 - 105	P	03/18/2024	17:48	LB129934
	Potassium	10200	9900	103	95 - 105	P	03/18/2024	17:48	LB129934
	Selenium	1020	1000	102	95 - 105	P	03/18/2024	17:48	LB129934
	Silver	243	250	97	95 - 105	P	03/18/2024	17:48	LB129934
	Sodium	9940	10000	99	95 - 105	P	03/18/2024	17:48	LB129934
	Thallium	1010	1000	101	95 - 105	P	03/18/2024	17:48	LB129934
	Vanadium	497	500	99	95 - 105	P	03/18/2024	17:48	LB129934
	Zinc	1000	1000	100	95 - 105	P	03/18/2024	17:48	LB129934



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. **SDG No.:** P1747
Contract: LIRO01 **Lab Code:** CHEM **Case No.:** P1747 **SAS No.:** P1747
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
LLICV01	Aluminum	104	100	104	80 - 120	P	03/18/2024	17:54	LB129934
	Antimony	55.3	50.0	111	80 - 120	P	03/18/2024	17:54	LB129934
	Arsenic	22.1	20.0	111	80 - 120	P	03/18/2024	17:54	LB129934
	Barium	110	100	110	80 - 120	P	03/18/2024	17:54	LB129934
	Beryllium	6.45	6.0	108	80 - 120	P	03/18/2024	17:54	LB129934
	Cadmium	6.60	6.0	110	80 - 120	P	03/18/2024	17:54	LB129934
	Calcium	2240	2000	112	80 - 120	P	03/18/2024	17:54	LB129934
	Chromium	10.8	10.0	108	80 - 120	P	03/18/2024	17:54	LB129934
	Cobalt	31.1	30.0	104	80 - 120	P	03/18/2024	17:54	LB129934
	Copper	23.8	20.0	119	80 - 120	P	03/18/2024	17:54	LB129934
	Iron	104	100	104	80 - 120	P	03/18/2024	17:54	LB129934
	Lead	11.1	12.0	92	80 - 120	P	03/18/2024	17:54	LB129934
	Magnesium	2280	2000	114	80 - 120	P	03/18/2024	17:54	LB129934
	Manganese	22.6	20.0	113	80 - 120	P	03/18/2024	17:54	LB129934
	Nickel	41.9	40.0	105	80 - 120	P	03/18/2024	17:54	LB129934
	Potassium	2050	2000	103	80 - 120	P	03/18/2024	17:54	LB129934
	Selenium	21.2	20.0	106	80 - 120	P	03/18/2024	17:54	LB129934
	Silver	10.8	10.0	108	80 - 120	P	03/18/2024	17:54	LB129934
	Sodium	2020	2000	101	80 - 120	P	03/18/2024	17:54	LB129934
	Thallium	44.3	40.0	111	80 - 120	P	03/18/2024	17:54	LB129934
	Vanadium	43.1	40.0	108	80 - 120	P	03/18/2024	17:54	LB129934
	Zinc	45.1	40.0	113	80 - 120	P	03/18/2024	17:54	LB129934



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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	10000	10000	100	90 - 110	P	03/18/2024	18:34	LB129934
	Antimony	4960	5000	99	90 - 110	P	03/18/2024	18:34	LB129934
	Arsenic	4970	5000	99	90 - 110	P	03/18/2024	18:34	LB129934
	Barium	9960	10000	100	90 - 110	P	03/18/2024	18:34	LB129934
	Beryllium	254	250	102	90 - 110	P	03/18/2024	18:34	LB129934
	Cadmium	2500	2500	100	90 - 110	P	03/18/2024	18:34	LB129934
	Calcium	25500	25000	102	90 - 110	P	03/18/2024	18:34	LB129934
	Chromium	1000	1000	100	90 - 110	P	03/18/2024	18:34	LB129934
	Cobalt	2480	2500	99	90 - 110	P	03/18/2024	18:34	LB129934
	Copper	1250	1250	100	90 - 110	P	03/18/2024	18:34	LB129934
	Iron	4900	5000	98	90 - 110	P	03/18/2024	18:34	LB129934
	Lead	4990	5000	100	90 - 110	P	03/18/2024	18:34	LB129934
	Magnesium	25300	25000	101	90 - 110	P	03/18/2024	18:34	LB129934
	Manganese	2540	2500	102	90 - 110	P	03/18/2024	18:34	LB129934
	Nickel	2490	2500	100	90 - 110	P	03/18/2024	18:34	LB129934
	Potassium	24000	25000	96	90 - 110	P	03/18/2024	18:34	LB129934
	Selenium	4970	5000	99	90 - 110	P	03/18/2024	18:34	LB129934
	Silver	1240	1250	100	90 - 110	P	03/18/2024	18:34	LB129934
	Sodium	23900	25000	96	90 - 110	P	03/18/2024	18:34	LB129934
	Thallium	5000	5000	100	90 - 110	P	03/18/2024	18:34	LB129934
	Vanadium	2520	2500	101	90 - 110	P	03/18/2024	18:34	LB129934
	Zinc	2550	2500	102	90 - 110	P	03/18/2024	18:34	LB129934
CCV02	Aluminum	10200	10000	102	90 - 110	P	03/18/2024	19:48	LB129934
	Antimony	5200	5000	104	90 - 110	P	03/18/2024	19:48	LB129934
	Arsenic	5150	5000	103	90 - 110	P	03/18/2024	19:48	LB129934
	Barium	10800	10000	108	90 - 110	P	03/18/2024	19:48	LB129934
	Beryllium	241	250	96	90 - 110	P	03/18/2024	19:48	LB129934
	Cadmium	2280	2500	91	90 - 110	P	03/18/2024	19:48	LB129934
	Calcium	24800	25000	99	90 - 110	P	03/18/2024	19:48	LB129934
	Chromium	985	1000	98	90 - 110	P	03/18/2024	19:48	LB129934
	Cobalt	2260	2500	90	90 - 110	P	03/18/2024	19:48	LB129934
	Copper	1280	1250	102	90 - 110	P	03/18/2024	19:48	LB129934
	Iron	5100	5000	102	90 - 110	P	03/18/2024	19:48	LB129934
	Lead	4590	5000	92	90 - 110	P	03/18/2024	19:48	LB129934



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	Magnesium	24800	25000	99	90 - 110	P	03/18/2024	19:48	LB129934
	Manganese	2560	2500	102	90 - 110	P	03/18/2024	19:48	LB129934
	Nickel	2330	2500	93	90 - 110	P	03/18/2024	19:48	LB129934
	Potassium	26500	25000	106	90 - 110	P	03/18/2024	19:48	LB129934
	Selenium	5180	5000	104	90 - 110	P	03/18/2024	19:48	LB129934
	Silver	1260	1250	101	90 - 110	P	03/18/2024	19:48	LB129934
	Sodium	26800	25000	107	90 - 110	P	03/18/2024	19:48	LB129934
	Thallium	4630	5000	93	90 - 110	P	03/18/2024	19:48	LB129934
	Vanadium	2550	2500	102	90 - 110	P	03/18/2024	19:48	LB129934
	Zinc	2640	2500	106	90 - 110	P	03/18/2024	19:48	LB129934
CCV03	Aluminum	9990	10000	100	90 - 110	P	03/18/2024	21:09	LB129934
	Antimony	5270	5000	105	90 - 110	P	03/18/2024	21:09	LB129934
	Arsenic	5200	5000	104	90 - 110	P	03/18/2024	21:09	LB129934
	Barium	11000	10000	110	90 - 110	P	03/18/2024	21:09	LB129934
	Beryllium	240	250	96	90 - 110	P	03/18/2024	21:09	LB129934
	Cadmium	2400	2500	96	90 - 110	P	03/18/2024	21:09	LB129934
	Calcium	25300	25000	101	90 - 110	P	03/18/2024	21:09	LB129934
	Chromium	953	1000	95	90 - 110	P	03/18/2024	21:09	LB129934
	Cobalt	2360	2500	94	90 - 110	P	03/18/2024	21:09	LB129934
	Copper	1280	1250	102	90 - 110	P	03/18/2024	21:09	LB129934
	Iron	5040	5000	101	90 - 110	P	03/18/2024	21:09	LB129934
	Lead	4740	5000	95	90 - 110	P	03/18/2024	21:09	LB129934
	Magnesium	24900	25000	100	90 - 110	P	03/18/2024	21:09	LB129934
	Manganese	2610	2500	104	90 - 110	P	03/18/2024	21:09	LB129934
	Nickel	2340	2500	94	90 - 110	P	03/18/2024	21:09	LB129934
	Potassium	26000	25000	104	90 - 110	P	03/18/2024	21:09	LB129934
	Selenium	5230	5000	105	90 - 110	P	03/18/2024	21:09	LB129934
	Silver	1270	1250	101	90 - 110	P	03/18/2024	21:09	LB129934
	Sodium	25800	25000	103	90 - 110	P	03/18/2024	21:09	LB129934
	Thallium	4910	5000	98	90 - 110	P	03/18/2024	21:09	LB129934
	Vanadium	2530	2500	101	90 - 110	P	03/18/2024	21:09	LB129934
CCV04	Zinc	2660	2500	107	90 - 110	P	03/18/2024	21:09	LB129934
	Aluminum	9990	10000	100	90 - 110	P	03/18/2024	22:27	LB129934
	Antimony	5110	5000	102	90 - 110	P	03/18/2024	22:27	LB129934



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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
CCV04	Arsenic	5060	5000	101	90 - 110	P	03/18/2024	22:27	LB129934
	Barium	10900	10000	109	90 - 110	P	03/18/2024	22:27	LB129934
	Beryllium	249	250	100	90 - 110	P	03/18/2024	22:27	LB129934
	Cadmium	2360	2500	94	90 - 110	P	03/18/2024	22:27	LB129934
	Calcium	25400	25000	102	90 - 110	P	03/18/2024	22:27	LB129934
	Chromium	961	1000	96	90 - 110	P	03/18/2024	22:27	LB129934
	Cobalt	2310	2500	92	90 - 110	P	03/18/2024	22:27	LB129934
	Copper	1240	1250	99	90 - 110	P	03/18/2024	22:27	LB129934
	Iron	4950	5000	99	90 - 110	P	03/18/2024	22:27	LB129934
	Lead	4650	5000	93	90 - 110	P	03/18/2024	22:27	LB129934
	Magnesium	25200	25000	101	90 - 110	P	03/18/2024	22:27	LB129934
	Manganese	2620	2500	105	90 - 110	P	03/18/2024	22:27	LB129934
	Nickel	2350	2500	94	90 - 110	P	03/18/2024	22:27	LB129934
	Potassium	25000	25000	100	90 - 110	P	03/18/2024	22:27	LB129934
	Selenium	5090	5000	102	90 - 110	P	03/18/2024	22:27	LB129934
	Silver	1250	1250	100	90 - 110	P	03/18/2024	22:27	LB129934
	Sodium	25000	25000	100	90 - 110	P	03/18/2024	22:27	LB129934
	Thallium	4850	5000	97	90 - 110	P	03/18/2024	22:27	LB129934
	Vanadium	2550	2500	102	90 - 110	P	03/18/2024	22:27	LB129934
	Zinc	2580	2500	103	90 - 110	P	03/18/2024	22:27	LB129934
CCV05	Aluminum	9540	10000	95	90 - 110	P	03/18/2024	23:20	LB129934
	Antimony	4840	5000	97	90 - 110	P	03/18/2024	23:20	LB129934
	Arsenic	4850	5000	97	90 - 110	P	03/18/2024	23:20	LB129934
	Barium	9860	10000	99	90 - 110	P	03/18/2024	23:20	LB129934
	Beryllium	252	250	101	90 - 110	P	03/18/2024	23:20	LB129934
	Cadmium	2560	2500	102	90 - 110	P	03/18/2024	23:20	LB129934
	Calcium	24700	25000	99	90 - 110	P	03/18/2024	23:20	LB129934
	Chromium	995	1000	100	90 - 110	P	03/18/2024	23:20	LB129934
	Cobalt	2500	2500	100	90 - 110	P	03/18/2024	23:20	LB129934
	Copper	1210	1250	96	90 - 110	P	03/18/2024	23:20	LB129934
	Iron	4820	5000	96	90 - 110	P	03/18/2024	23:20	LB129934
	Lead	4940	5000	99	90 - 110	P	03/18/2024	23:20	LB129934
	Magnesium	24700	25000	99	90 - 110	P	03/18/2024	23:20	LB129934
	Manganese	2500	2500	100	90 - 110	P	03/18/2024	23:20	LB129934



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	Nickel	2500	2500	100	90 - 110	P	03/18/2024	23:20	LB129934
	Potassium	23400	25000	94	90 - 110	P	03/18/2024	23:20	LB129934
	Selenium	4820	5000	96	90 - 110	P	03/18/2024	23:20	LB129934
	Silver	1240	1250	99	90 - 110	P	03/18/2024	23:20	LB129934
	Sodium	23300	25000	93	90 - 110	P	03/18/2024	23:20	LB129934
	Thallium	4970	5000	99	90 - 110	P	03/18/2024	23:20	LB129934
	Vanadium	2430	2500	97	90 - 110	P	03/18/2024	23:20	LB129934
	Zinc	2560	2500	102	90 - 110	P	03/18/2024	23:20	LB129934
CCV06	Aluminum	9850	10000	98	90 - 110	P	03/19/2024	00:42	LB129934
	Antimony	4820	5000	96	90 - 110	P	03/19/2024	00:42	LB129934
	Arsenic	4850	5000	97	90 - 110	P	03/19/2024	00:42	LB129934
	Barium	9970	10000	100	90 - 110	P	03/19/2024	00:42	LB129934
	Beryllium	252	250	101	90 - 110	P	03/19/2024	00:42	LB129934
	Cadmium	2630	2500	105	90 - 110	P	03/19/2024	00:42	LB129934
	Calcium	25000	25000	100	90 - 110	P	03/19/2024	00:42	LB129934
	Chromium	1000	1000	100	90 - 110	P	03/19/2024	00:42	LB129934
	Cobalt	2580	2500	103	90 - 110	P	03/19/2024	00:42	LB129934
	Copper	1210	1250	97	90 - 110	P	03/19/2024	00:42	LB129934
	Iron	5490	5000	110	90 - 110	P	03/19/2024	00:42	LB129934
	Lead	5010	5000	100	90 - 110	P	03/19/2024	00:42	LB129934
	Magnesium	25200	25000	101	90 - 110	P	03/19/2024	00:42	LB129934
	Manganese	2530	2500	101	90 - 110	P	03/19/2024	00:42	LB129934
	Nickel	2630	2500	105	90 - 110	P	03/19/2024	00:42	LB129934
	Potassium	25400	25000	101	90 - 110	P	03/19/2024	00:42	LB129934
	Selenium	4790	5000	96	90 - 110	P	03/19/2024	00:42	LB129934
	Silver	1230	1250	98	90 - 110	P	03/19/2024	00:42	LB129934
	Sodium	25500	25000	102	90 - 110	P	03/19/2024	00:42	LB129934
	Thallium	4720	5000	94	90 - 110	P	03/19/2024	00:42	LB129934
	Vanadium	2510	2500	101	90 - 110	P	03/19/2024	00:42	LB129934
	Zinc	2490	2500	100	90 - 110	P	03/19/2024	00:42	LB129934
CCV07	Aluminum	9820	10000	98	90 - 110	P	03/19/2024	01:53	LB129934
	Antimony	4780	5000	96	90 - 110	P	03/19/2024	01:53	LB129934
	Arsenic	4800	5000	96	90 - 110	P	03/19/2024	01:53	LB129934
	Barium	9640	10000	96	90 - 110	P	03/19/2024	01:53	LB129934



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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
CCV07	Beryllium	259	250	104	90 - 110	P	03/19/2024	01:53	LB129934
	Cadmium	2740	2500	110	90 - 110	P	03/19/2024	01:53	LB129934
	Calcium	25400	25000	101	90 - 110	P	03/19/2024	01:53	LB129934
	Chromium	1000	1000	100	90 - 110	P	03/19/2024	01:53	LB129934
	Cobalt	2710	2500	108	90 - 110	P	03/19/2024	01:53	LB129934
	Copper	1210	1250	97	90 - 110	P	03/19/2024	01:53	LB129934
	Iron	5390	5000	108	90 - 110	P	03/19/2024	01:53	LB129934
	Lead	5240	5000	105	90 - 110	P	03/19/2024	01:53	LB129934
	Magnesium	25200	25000	101	90 - 110	P	03/19/2024	01:53	LB129934
	Manganese	2520	2500	101	90 - 110	P	03/19/2024	01:53	LB129934
	Nickel	2730	2500	109	90 - 110	P	03/19/2024	01:53	LB129934
	Potassium	24700	25000	99	90 - 110	P	03/19/2024	01:53	LB129934
	Selenium	4760	5000	95	90 - 110	P	03/19/2024	01:53	LB129934
	Silver	1240	1250	99	90 - 110	P	03/19/2024	01:53	LB129934
	Sodium	24500	25000	98	90 - 110	P	03/19/2024	01:53	LB129934
	Thallium	4920	5000	98	90 - 110	P	03/19/2024	01:53	LB129934
	Vanadium	2470	2500	99	90 - 110	P	03/19/2024	01:53	LB129934
	Zinc	2460	2500	98	90 - 110	P	03/19/2024	01:53	LB129934



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	2440	2500	98	95 - 105	P	03/21/2024	11:59	LB129987
	Antimony	1000	1000	100	95 - 105	P	03/21/2024	11:59	LB129987
	Arsenic	1020	1000	102	95 - 105	P	03/21/2024	11:59	LB129987
	Barium	516	520	99	95 - 105	P	03/21/2024	11:59	LB129987
	Beryllium	483	510	95	95 - 105	P	03/21/2024	11:59	LB129987
	Cadmium	513	510	101	95 - 105	P	03/21/2024	11:59	LB129987
	Calcium	9680	10000	97	95 - 105	P	03/21/2024	11:59	LB129987
	Chromium	505	520	97	95 - 105	P	03/21/2024	11:59	LB129987
	Cobalt	482	520	93	95 - 105	P	03/21/2024	11:59	LB129987
	Copper	524	510	103	95 - 105	P	03/21/2024	11:59	LB129987
	Iron	9290	10000	93	95 - 105	P	03/21/2024	11:59	LB129987
	Lead	1000	1000	100	95 - 105	P	03/21/2024	11:59	LB129987
	Magnesium	6150	6000	102	95 - 105	P	03/21/2024	11:59	LB129987
	Manganese	492	520	95	95 - 105	P	03/21/2024	11:59	LB129987
	Nickel	520	530	98	95 - 105	P	03/21/2024	11:59	LB129987
	Potassium	9820	9900	99	95 - 105	P	03/21/2024	11:59	LB129987
	Selenium	1030	1000	103	95 - 105	P	03/21/2024	11:59	LB129987
	Silver	245	250	98	95 - 105	P	03/21/2024	11:59	LB129987
	Sodium	10400	10000	104	95 - 105	P	03/21/2024	11:59	LB129987
	Thallium	1050	1000	105	95 - 105	P	03/21/2024	11:59	LB129987
	Vanadium	483	500	97	95 - 105	P	03/21/2024	11:59	LB129987
	Zinc	1000	1000	100	95 - 105	P	03/21/2024	11:59	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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
LLICV01	Aluminum	94.0	100	94	80 - 120	P	03/21/2024	12:03	LB129987
	Antimony	56.3	50.0	113	80 - 120	P	03/21/2024	12:03	LB129987
	Arsenic	22.0	20.0	110	80 - 120	P	03/21/2024	12:03	LB129987
	Barium	105	100	105	80 - 120	P	03/21/2024	12:03	LB129987
	Beryllium	6.14	6.0	102	80 - 120	P	03/21/2024	12:03	LB129987
	Cadmium	6.55	6.0	109	80 - 120	P	03/21/2024	12:03	LB129987
	Calcium	2140	2000	107	80 - 120	P	03/21/2024	12:03	LB129987
	Chromium	10.7	10.0	107	80 - 120	P	03/21/2024	12:03	LB129987
	Cobalt	30.7	30.0	102	80 - 120	P	03/21/2024	12:03	LB129987
	Copper	24.1	20.0	121	80 - 120	P	03/21/2024	12:03	LB129987
	Iron	102	100	102	80 - 120	P	03/21/2024	12:03	LB129987
	Lead	10.2	12.0	85	80 - 120	P	03/21/2024	12:03	LB129987
	Magnesium	2190	2000	110	80 - 120	P	03/21/2024	12:03	LB129987
	Manganese	21.5	20.0	108	80 - 120	P	03/21/2024	12:03	LB129987
	Nickel	41.5	40.0	104	80 - 120	P	03/21/2024	12:03	LB129987
	Potassium	2050	2000	103	80 - 120	P	03/21/2024	12:03	LB129987
	Selenium	22.3	20.0	112	80 - 120	P	03/21/2024	12:03	LB129987
	Silver	11.2	10.0	112	80 - 120	P	03/21/2024	12:03	LB129987
	Sodium	2010	2000	100	80 - 120	P	03/21/2024	12:03	LB129987
	Thallium	46.9	40.0	117	80 - 120	P	03/21/2024	12:03	LB129987
	Vanadium	42.7	40.0	107	80 - 120	P	03/21/2024	12:03	LB129987
	Zinc	45.2	40.0	113	80 - 120	P	03/21/2024	12:03	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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	10100	10000	101	90 - 110	P	03/21/2024	12:34	LB129987
	Antimony	5010	5000	100	90 - 110	P	03/21/2024	12:34	LB129987
	Arsenic	4940	5000	99	90 - 110	P	03/21/2024	12:34	LB129987
	Barium	10000	10000	100	90 - 110	P	03/21/2024	12:34	LB129987
	Beryllium	248	250	99	90 - 110	P	03/21/2024	12:34	LB129987
	Cadmium	2490	2500	100	90 - 110	P	03/21/2024	12:34	LB129987
	Calcium	25200	25000	101	90 - 110	P	03/21/2024	12:34	LB129987
	Chromium	1020	1000	102	90 - 110	P	03/21/2024	12:34	LB129987
	Cobalt	2480	2500	99	90 - 110	P	03/21/2024	12:34	LB129987
	Copper	1240	1250	99	90 - 110	P	03/21/2024	12:34	LB129987
	Iron	5070	5000	101	90 - 110	P	03/21/2024	12:34	LB129987
	Lead	5020	5000	100	90 - 110	P	03/21/2024	12:34	LB129987
	Magnesium	25000	25000	100	90 - 110	P	03/21/2024	12:34	LB129987
	Manganese	2490	2500	100	90 - 110	P	03/21/2024	12:34	LB129987
	Nickel	2500	2500	100	90 - 110	P	03/21/2024	12:34	LB129987
	Potassium	25200	25000	101	90 - 110	P	03/21/2024	12:34	LB129987
	Selenium	5000	5000	100	90 - 110	P	03/21/2024	12:34	LB129987
	Silver	1270	1250	101	90 - 110	P	03/21/2024	12:34	LB129987
	Sodium	24900	25000	100	90 - 110	P	03/21/2024	12:34	LB129987
	Thallium	5170	5000	103	90 - 110	P	03/21/2024	12:34	LB129987
	Vanadium	2520	2500	101	90 - 110	P	03/21/2024	12:34	LB129987
	Zinc	2560	2500	102	90 - 110	P	03/21/2024	12:34	LB129987
CCV02	Aluminum	10300	10000	102	90 - 110	P	03/21/2024	13:34	LB129987
	Antimony	5150	5000	103	90 - 110	P	03/21/2024	13:34	LB129987
	Arsenic	5040	5000	101	90 - 110	P	03/21/2024	13:34	LB129987
	Barium	10100	10000	101	90 - 110	P	03/21/2024	13:34	LB129987
	Beryllium	251	250	100	90 - 110	P	03/21/2024	13:34	LB129987
	Cadmium	2550	2500	102	90 - 110	P	03/21/2024	13:34	LB129987
	Calcium	25600	25000	102	90 - 110	P	03/21/2024	13:34	LB129987
	Chromium	1030	1000	103	90 - 110	P	03/21/2024	13:34	LB129987
	Cobalt	2530	2500	101	90 - 110	P	03/21/2024	13:34	LB129987
	Copper	1260	1250	101	90 - 110	P	03/21/2024	13:34	LB129987
	Iron	5120	5000	102	90 - 110	P	03/21/2024	13:34	LB129987
	Lead	5140	5000	103	90 - 110	P	03/21/2024	13:34	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	Magnesium	25300	25000	101	90 - 110	P	03/21/2024	13:34	LB129987
	Manganese	2520	2500	101	90 - 110	P	03/21/2024	13:34	LB129987
	Nickel	2560	2500	102	90 - 110	P	03/21/2024	13:34	LB129987
	Potassium	25400	25000	102	90 - 110	P	03/21/2024	13:34	LB129987
	Selenium	5110	5000	102	90 - 110	P	03/21/2024	13:34	LB129987
	Silver	1290	1250	103	90 - 110	P	03/21/2024	13:34	LB129987
	Sodium	25200	25000	101	90 - 110	P	03/21/2024	13:34	LB129987
	Thallium	5450	5000	109	90 - 110	P	03/21/2024	13:34	LB129987
	Vanadium	2540	2500	102	90 - 110	P	03/21/2024	13:34	LB129987
	Zinc	2580	2500	103	90 - 110	P	03/21/2024	13:34	LB129987
CCV03	Aluminum	10000	10000	100	90 - 110	P	03/21/2024	14:27	LB129987
	Antimony	5050	5000	101	90 - 110	P	03/21/2024	14:27	LB129987
	Arsenic	4940	5000	99	90 - 110	P	03/21/2024	14:27	LB129987
	Barium	9980	10000	100	90 - 110	P	03/21/2024	14:27	LB129987
	Beryllium	242	250	97	90 - 110	P	03/21/2024	14:27	LB129987
	Cadmium	2490	2500	100	90 - 110	P	03/21/2024	14:27	LB129987
	Calcium	25100	25000	100	90 - 110	P	03/21/2024	14:27	LB129987
	Chromium	1030	1000	103	90 - 110	P	03/21/2024	14:27	LB129987
	Cobalt	2480	2500	99	90 - 110	P	03/21/2024	14:27	LB129987
	Copper	1240	1250	99	90 - 110	P	03/21/2024	14:27	LB129987
	Iron	5210	5000	104	90 - 110	P	03/21/2024	14:27	LB129987
	Lead	5030	5000	101	90 - 110	P	03/21/2024	14:27	LB129987
	Magnesium	24700	25000	99	90 - 110	P	03/21/2024	14:27	LB129987
	Manganese	2470	2500	99	90 - 110	P	03/21/2024	14:27	LB129987
	Nickel	2510	2500	100	90 - 110	P	03/21/2024	14:27	LB129987
	Potassium	26200	25000	105	90 - 110	P	03/21/2024	14:27	LB129987
	Selenium	5010	5000	100	90 - 110	P	03/21/2024	14:27	LB129987
	Silver	1290	1250	103	90 - 110	P	03/21/2024	14:27	LB129987
	Sodium	26300	25000	105	90 - 110	P	03/21/2024	14:27	LB129987
	Thallium	5320	5000	106	90 - 110	P	03/21/2024	14:27	LB129987
	Vanadium	2500	2500	100	90 - 110	P	03/21/2024	14:27	LB129987
CCV04	Zinc	2590	2500	104	90 - 110	P	03/21/2024	14:27	LB129987
	Aluminum	10400	10000	104	90 - 110	P	03/21/2024	15:23	LB129987
	Antimony	5140	5000	103	90 - 110	P	03/21/2024	15:23	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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
CCV04	Arsenic	5000	5000	100	90 - 110	P	03/21/2024	15:23	LB129987
	Barium	10300	10000	103	90 - 110	P	03/21/2024	15:23	LB129987
	Beryllium	245	250	98	90 - 110	P	03/21/2024	15:23	LB129987
	Cadmium	2520	2500	101	90 - 110	P	03/21/2024	15:23	LB129987
	Calcium	25600	25000	102	90 - 110	P	03/21/2024	15:23	LB129987
	Chromium	1040	1000	104	90 - 110	P	03/21/2024	15:23	LB129987
	Cobalt	2510	2500	100	90 - 110	P	03/21/2024	15:23	LB129987
	Copper	1250	1250	100	90 - 110	P	03/21/2024	15:23	LB129987
	Iron	5310	5000	106	90 - 110	P	03/21/2024	15:23	LB129987
	Lead	5070	5000	101	90 - 110	P	03/21/2024	15:23	LB129987
	Magnesium	25000	25000	100	90 - 110	P	03/21/2024	15:23	LB129987
	Manganese	2530	2500	101	90 - 110	P	03/21/2024	15:23	LB129987
	Nickel	2540	2500	102	90 - 110	P	03/21/2024	15:23	LB129987
	Potassium	26500	25000	106	90 - 110	P	03/21/2024	15:23	LB129987
	Selenium	5090	5000	102	90 - 110	P	03/21/2024	15:23	LB129987
	Silver	1310	1250	105	90 - 110	P	03/21/2024	15:23	LB129987
	Sodium	26300	25000	105	90 - 110	P	03/21/2024	15:23	LB129987
	Thallium	5290	5000	106	90 - 110	P	03/21/2024	15:23	LB129987
	Vanadium	2570	2500	103	90 - 110	P	03/21/2024	15:23	LB129987
	Zinc	2630	2500	105	90 - 110	P	03/21/2024	15:23	LB129987
CCV05	Aluminum	10300	10000	103	90 - 110	P	03/21/2024	16:29	LB129987
	Antimony	5160	5000	103	90 - 110	P	03/21/2024	16:29	LB129987
	Arsenic	5020	5000	100	90 - 110	P	03/21/2024	16:29	LB129987
	Barium	10100	10000	101	90 - 110	P	03/21/2024	16:29	LB129987
	Beryllium	247	250	99	90 - 110	P	03/21/2024	16:29	LB129987
	Cadmium	2530	2500	101	90 - 110	P	03/21/2024	16:29	LB129987
	Calcium	25500	25000	102	90 - 110	P	03/21/2024	16:29	LB129987
	Chromium	1030	1000	103	90 - 110	P	03/21/2024	16:29	LB129987
	Cobalt	2510	2500	101	90 - 110	P	03/21/2024	16:29	LB129987
	Copper	1260	1250	100	90 - 110	P	03/21/2024	16:29	LB129987
	Iron	5200	5000	104	90 - 110	P	03/21/2024	16:29	LB129987
	Lead	5110	5000	102	90 - 110	P	03/21/2024	16:29	LB129987
	Magnesium	25200	25000	101	90 - 110	P	03/21/2024	16:29	LB129987
	Manganese	2520	2500	101	90 - 110	P	03/21/2024	16:29	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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	Nickel	2550	2500	102	90 - 110	P	03/21/2024	16:29	LB129987
	Potassium	25900	25000	104	90 - 110	P	03/21/2024	16:29	LB129987
	Selenium	5110	5000	102	90 - 110	P	03/21/2024	16:29	LB129987
	Silver	1300	1250	104	90 - 110	P	03/21/2024	16:29	LB129987
	Sodium	25700	25000	103	90 - 110	P	03/21/2024	16:29	LB129987
	Thallium	5370	5000	107	90 - 110	P	03/21/2024	16:29	LB129987
	Vanadium	2550	2500	102	90 - 110	P	03/21/2024	16:29	LB129987
	Zinc	2600	2500	104	90 - 110	P	03/21/2024	16:29	LB129987
CCV06	Aluminum	10300	10000	103	90 - 110	P	03/21/2024	17:52	LB129987
	Antimony	5000	5000	100	90 - 110	P	03/21/2024	17:52	LB129987
	Arsenic	4790	5000	96	90 - 110	P	03/21/2024	17:52	LB129987
	Barium	10300	10000	103	90 - 110	P	03/21/2024	17:52	LB129987
	Beryllium	244	250	98	90 - 110	P	03/21/2024	17:52	LB129987
	Cadmium	2470	2500	99	90 - 110	P	03/21/2024	17:52	LB129987
	Calcium	25700	25000	103	90 - 110	P	03/21/2024	17:52	LB129987
	Chromium	1020	1000	102	90 - 110	P	03/21/2024	17:52	LB129987
	Cobalt	2450	2500	98	90 - 110	P	03/21/2024	17:52	LB129987
	Copper	1190	1250	95	90 - 110	P	03/21/2024	17:52	LB129987
	Iron	5250	5000	105	90 - 110	P	03/21/2024	17:52	LB129987
	Lead	5000	5000	100	90 - 110	P	03/21/2024	17:52	LB129987
	Magnesium	25100	25000	101	90 - 110	P	03/21/2024	17:52	LB129987
	Manganese	2550	2500	102	90 - 110	P	03/21/2024	17:52	LB129987
	Nickel	2510	2500	100	90 - 110	P	03/21/2024	17:52	LB129987
	Potassium	26400	25000	106	90 - 110	P	03/21/2024	17:52	LB129987
	Selenium	4870	5000	97	90 - 110	P	03/21/2024	17:52	LB129987
	Silver	1310	1250	105	90 - 110	P	03/21/2024	17:52	LB129987
	Sodium	26600	25000	107	90 - 110	P	03/21/2024	17:52	LB129987
	Thallium	5170	5000	103	90 - 110	P	03/21/2024	17:52	LB129987
	Vanadium	2540	2500	102	90 - 110	P	03/21/2024	17:52	LB129987
	Zinc	2560	2500	102	90 - 110	P	03/21/2024	17:52	LB129987
CCV07	Aluminum	10300	10000	103	90 - 110	P	03/21/2024	18:56	LB129987
	Antimony	4860	5000	97	90 - 110	P	03/21/2024	18:56	LB129987
	Arsenic	4600	5000	92	90 - 110	P	03/21/2024	18:56	LB129987
	Barium	10200	10000	102	90 - 110	P	03/21/2024	18:56	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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
CCV07	Beryllium	245	250	98	90 - 110	P	03/21/2024	18:56	LB129987
	Cadmium	2410	2500	96	90 - 110	P	03/21/2024	18:56	LB129987
	Calcium	25500	25000	102	90 - 110	P	03/21/2024	18:56	LB129987
	Chromium	1010	1000	101	90 - 110	P	03/21/2024	18:56	LB129987
	Cobalt	2380	2500	95	90 - 110	P	03/21/2024	18:56	LB129987
	Copper	1140	1250	91	90 - 110	P	03/21/2024	18:56	LB129987
	Iron	5130	5000	103	90 - 110	P	03/21/2024	18:56	LB129987
	Lead	4890	5000	98	90 - 110	P	03/21/2024	18:56	LB129987
	Magnesium	24900	25000	100	90 - 110	P	03/21/2024	18:56	LB129987
	Manganese	2510	2500	100	90 - 110	P	03/21/2024	18:56	LB129987
	Nickel	2450	2500	98	90 - 110	P	03/21/2024	18:56	LB129987
	Potassium	25500	25000	102	90 - 110	P	03/21/2024	18:56	LB129987
	Selenium	4700	5000	94	90 - 110	P	03/21/2024	18:56	LB129987
	Silver	1300	1250	104	90 - 110	P	03/21/2024	18:56	LB129987
	Sodium	25600	25000	102	90 - 110	P	03/21/2024	18:56	LB129987
	Thallium	5170	5000	103	90 - 110	P	03/21/2024	18:56	LB129987
	Vanadium	2500	2500	100	90 - 110	P	03/21/2024	18:56	LB129987
	Zinc	2540	2500	102	90 - 110	P	03/21/2024	18:56	LB129987
CCV08	Aluminum	10700	10000	107	90 - 110	P	03/21/2024	20:03	LB129987
	Antimony	4910	5000	98	90 - 110	P	03/21/2024	20:03	LB129987
	Arsenic	4930	5000	99	90 - 110	P	03/21/2024	20:03	LB129987
	Barium	10500	10000	105	90 - 110	P	03/21/2024	20:03	LB129987
	Beryllium	258	250	103	90 - 110	P	03/21/2024	20:03	LB129987
	Cadmium	2440	2500	97	90 - 110	P	03/21/2024	20:03	LB129987
	Calcium	26400	25000	106	90 - 110	P	03/21/2024	20:03	LB129987
	Chromium	1010	1000	101	90 - 110	P	03/21/2024	20:03	LB129987
	Cobalt	2410	2500	96	90 - 110	P	03/21/2024	20:03	LB129987
	Copper	1160	1250	93	90 - 110	P	03/21/2024	20:03	LB129987
	Iron	5070	5000	101	90 - 110	P	03/21/2024	20:03	LB129987
	Lead	4930	5000	99	90 - 110	P	03/21/2024	20:03	LB129987
	Magnesium	26000	25000	104	90 - 110	P	03/21/2024	20:03	LB129987
	Manganese	2590	2500	104	90 - 110	P	03/21/2024	20:03	LB129987
	Nickel	2480	2500	99	90 - 110	P	03/21/2024	20:03	LB129987
	Potassium	25100	25000	100	90 - 110	P	03/21/2024	20:03	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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	Selenium	4770	5000	95	90 - 110	P	03/21/2024	20:03	LB129987
	Silver	1300	1250	104	90 - 110	P	03/21/2024	20:03	LB129987
	Sodium	25100	25000	100	90 - 110	P	03/21/2024	20:03	LB129987
	Thallium	5290	5000	106	90 - 110	P	03/21/2024	20:03	LB129987
	Vanadium	2590	2500	104	90 - 110	P	03/21/2024	20:03	LB129987
	Zinc	2530	2500	101	90 - 110	P	03/21/2024	20:03	LB129987
CCV09	Aluminum	10400	10000	104	90 - 110	P	03/21/2024	21:03	LB129987
	Antimony	4860	5000	97	90 - 110	P	03/21/2024	21:03	LB129987
	Arsenic	4840	5000	97	90 - 110	P	03/21/2024	21:03	LB129987
	Barium	10200	10000	102	90 - 110	P	03/21/2024	21:03	LB129987
	Beryllium	256	250	102	90 - 110	P	03/21/2024	21:03	LB129987
	Cadmium	2440	2500	98	90 - 110	P	03/21/2024	21:03	LB129987
	Calcium	26100	25000	104	90 - 110	P	03/21/2024	21:03	LB129987
	Chromium	1030	1000	102	90 - 110	P	03/21/2024	21:03	LB129987
	Cobalt	2410	2500	96	90 - 110	P	03/21/2024	21:03	LB129987
	Copper	1140	1250	91	90 - 110	P	03/21/2024	21:03	LB129987
	Iron	5040	5000	101	90 - 110	P	03/21/2024	21:03	LB129987
	Lead	4950	5000	99	90 - 110	P	03/21/2024	21:03	LB129987
	Magnesium	25700	25000	103	90 - 110	P	03/21/2024	21:03	LB129987
	Manganese	2560	2500	102	90 - 110	P	03/21/2024	21:03	LB129987
	Nickel	2490	2500	100	90 - 110	P	03/21/2024	21:03	LB129987
	Potassium	25000	25000	100	90 - 110	P	03/21/2024	21:03	LB129987
	Selenium	4680	5000	94	90 - 110	P	03/21/2024	21:03	LB129987
	Silver	1310	1250	105	90 - 110	P	03/21/2024	21:03	LB129987
	Sodium	25100	25000	100	90 - 110	P	03/21/2024	21:03	LB129987
	Thallium	5200	5000	104	90 - 110	P	03/21/2024	21:03	LB129987
	Vanadium	2540	2500	102	90 - 110	P	03/21/2024	21:03	LB129987
	Zinc	2550	2500	102	90 - 110	P	03/21/2024	21:03	LB129987
CCV10	Aluminum	10300	10000	103	90 - 110	P	03/21/2024	21:58	LB129987
	Antimony	4780	5000	96	90 - 110	P	03/21/2024	21:58	LB129987
	Arsenic	4740	5000	95	90 - 110	P	03/21/2024	21:58	LB129987
	Barium	10000	10000	100	90 - 110	P	03/21/2024	21:58	LB129987
	Beryllium	249	250	100	90 - 110	P	03/21/2024	21:58	LB129987
	Cadmium	2390	2500	96	90 - 110	P	03/21/2024	21:58	LB129987



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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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
CCV10	Calcium	25700	25000	103	90 - 110	P	03/21/2024	21:58	LB129987
	Chromium	1010	1000	101	90 - 110	P	03/21/2024	21:58	LB129987
	Cobalt	2360	2500	94	90 - 110	P	03/21/2024	21:58	LB129987
	Copper	1160	1250	93	90 - 110	P	03/21/2024	21:58	LB129987
	Iron	5070	5000	101	90 - 110	P	03/21/2024	21:58	LB129987
	Lead	4870	5000	97	90 - 110	P	03/21/2024	21:58	LB129987
	Magnesium	25100	25000	100	90 - 110	P	03/21/2024	21:58	LB129987
	Manganese	2510	2500	100	90 - 110	P	03/21/2024	21:58	LB129987
	Nickel	2450	2500	98	90 - 110	P	03/21/2024	21:58	LB129987
	Potassium	25400	25000	102	90 - 110	P	03/21/2024	21:58	LB129987
	Selenium	4580	5000	92	90 - 110	P	03/21/2024	21:58	LB129987
	Silver	1310	1250	105	90 - 110	P	03/21/2024	21:58	LB129987
	Sodium	25700	25000	103	90 - 110	P	03/21/2024	21:58	LB129987
	Thallium	5010	5000	100	90 - 110	P	03/21/2024	21:58	LB129987
	Vanadium	2500	2500	100	90 - 110	P	03/21/2024	21:58	LB129987
	Zinc	2550	2500	102	90 - 110	P	03/21/2024	21:58	LB129987
CCV11	Aluminum	10700	10000	107	90 - 110	P	03/21/2024	22:51	LB129987
	Antimony	4860	5000	97	90 - 110	P	03/21/2024	22:51	LB129987
	Arsenic	4550	5000	91	90 - 110	P	03/21/2024	22:51	LB129987
	Barium	10200	10000	102	90 - 110	P	03/21/2024	22:51	LB129987
	Beryllium	261	250	104	90 - 110	P	03/21/2024	22:51	LB129987
	Cadmium	2440	2500	98	90 - 110	P	03/21/2024	22:51	LB129987
	Calcium	26600	25000	106	90 - 110	P	03/21/2024	22:51	LB129987
	Chromium	1030	1000	103	90 - 110	P	03/21/2024	22:51	LB129987
	Cobalt	2400	2500	96	90 - 110	P	03/21/2024	22:51	LB129987
	Copper	1170	1250	94	90 - 110	P	03/21/2024	22:51	LB129987
	Iron	5130	5000	103	90 - 110	P	03/21/2024	22:51	LB129987
	Lead	4960	5000	99	90 - 110	P	03/21/2024	22:51	LB129987
	Magnesium	26100	25000	105	90 - 110	P	03/21/2024	22:51	LB129987
	Manganese	2600	2500	104	90 - 110	P	03/21/2024	22:51	LB129987
	Nickel	2490	2500	100	90 - 110	P	03/21/2024	22:51	LB129987
	Potassium	25600	25000	102	90 - 110	P	03/21/2024	22:51	LB129987
	Selenium	4630	5000	93	90 - 110	P	03/21/2024	22:51	LB129987
	Silver	1340	1250	107	90 - 110	P	03/21/2024	22:51	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747

Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747

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
CCV11	Sodium	26100	25000	104	90 - 110	P	03/21/2024	22:51	LB129987
	Thallium	5160	5000	103	90 - 110	P	03/21/2024	22:51	LB129987
	Vanadium	2580	2500	103	90 - 110	P	03/21/2024	22:51	LB129987
	Zinc	2600	2500	104	90 - 110	P	03/21/2024	22:51	LB129987
CCV12	Aluminum	10400	10000	104	90 - 110	P	03/21/2024	23:43	LB129987
	Antimony	4800	5000	96	90 - 110	P	03/21/2024	23:43	LB129987
	Arsenic	4630	5000	93	90 - 110	P	03/21/2024	23:43	LB129987
	Barium	10100	10000	101	90 - 110	P	03/21/2024	23:43	LB129987
	Beryllium	257	250	103	90 - 110	P	03/21/2024	23:43	LB129987
	Cadmium	2430	2500	97	90 - 110	P	03/21/2024	23:43	LB129987
	Calcium	26000	25000	104	90 - 110	P	03/21/2024	23:43	LB129987
	Chromium	1010	1000	101	90 - 110	P	03/21/2024	23:43	LB129987
	Cobalt	2390	2500	96	90 - 110	P	03/21/2024	23:43	LB129987
	Copper	1180	1250	94	90 - 110	P	03/21/2024	23:43	LB129987
	Iron	4950	5000	99	90 - 110	P	03/21/2024	23:43	LB129987
	Lead	4920	5000	98	90 - 110	P	03/21/2024	23:43	LB129987
	Magnesium	25700	25000	103	90 - 110	P	03/21/2024	23:43	LB129987
	Manganese	2550	2500	102	90 - 110	P	03/21/2024	23:43	LB129987
	Nickel	2470	2500	99	90 - 110	P	03/21/2024	23:43	LB129987
	Potassium	24600	25000	98	90 - 110	P	03/21/2024	23:43	LB129987
	Selenium	4600	5000	92	90 - 110	P	03/21/2024	23:43	LB129987
	Silver	1300	1250	104	90 - 110	P	03/21/2024	23:43	LB129987
	Sodium	24900	25000	100	90 - 110	P	03/21/2024	23:43	LB129987
	Thallium	5000	5000	100	90 - 110	P	03/21/2024	23:43	LB129987
CCV13	Vanadium	2530	2500	101	90 - 110	P	03/21/2024	23:43	LB129987
	Zinc	2530	2500	101	90 - 110	P	03/21/2024	23:43	LB129987
	Aluminum	10500	10000	105	90 - 110	P	03/22/2024	00:37	LB129987
	Antimony	4840	5000	97	90 - 110	P	03/22/2024	00:37	LB129987
	Arsenic	4710	5000	94	90 - 110	P	03/22/2024	00:37	LB129987
	Barium	10100	10000	101	90 - 110	P	03/22/2024	00:37	LB129987
	Beryllium	260	250	104	90 - 110	P	03/22/2024	00:37	LB129987
	Cadmium	2460	2500	98	90 - 110	P	03/22/2024	00:37	LB129987
	Calcium	26200	25000	105	90 - 110	P	03/22/2024	00:37	LB129987
	Chromium	997	1000	100	90 - 110	P	03/22/2024	00:37	LB129987



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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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
CCV13	Cobalt	2420	2500	97	90 - 110	P	03/22/2024	00:37	LB129987
	Copper	1200	1250	96	90 - 110	P	03/22/2024	00:37	LB129987
	Iron	4830	5000	97	90 - 110	P	03/22/2024	00:37	LB129987
	Lead	4960	5000	99	90 - 110	P	03/22/2024	00:37	LB129987
	Magnesium	26000	25000	104	90 - 110	P	03/22/2024	00:37	LB129987
	Manganese	2560	2500	102	90 - 110	P	03/22/2024	00:37	LB129987
	Nickel	2490	2500	100	90 - 110	P	03/22/2024	00:37	LB129987
	Potassium	23900	25000	96	90 - 110	P	03/22/2024	00:37	LB129987
	Selenium	4670	5000	93	90 - 110	P	03/22/2024	00:37	LB129987
	Silver	1270	1250	101	90 - 110	P	03/22/2024	00:37	LB129987
	Sodium	23900	25000	96	90 - 110	P	03/22/2024	00:37	LB129987
	Thallium	5020	5000	100	90 - 110	P	03/22/2024	00:37	LB129987
	Vanadium	2560	2500	102	90 - 110	P	03/22/2024	00:37	LB129987
	Zinc	2470	2500	99	90 - 110	P	03/22/2024	00:37	LB129987



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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	2540	2500	102	90 - 110	P	03/26/2024	11:09	LB130043
	Antimony	1040	1000	104	90 - 110	P	03/26/2024	11:09	LB130043
	Arsenic	1050	1000	105	90 - 110	P	03/26/2024	11:09	LB130043
	Barium	516	520	99	90 - 110	P	03/26/2024	11:09	LB130043
	Beryllium	510	510	100	90 - 110	P	03/26/2024	11:09	LB130043
	Cadmium	499	510	98	90 - 110	P	03/26/2024	11:09	LB130043
	Calcium	10300	10000	103	90 - 110	P	03/26/2024	11:09	LB130043
	Chromium	530	520	102	90 - 110	P	03/26/2024	11:09	LB130043
	Cobalt	497	520	96	90 - 110	P	03/26/2024	11:09	LB130043
	Copper	523	510	102	90 - 110	P	03/26/2024	11:09	LB130043
	Iron	9740	10000	97	90 - 110	P	03/26/2024	11:09	LB130043
	Lead	1020	1000	102	90 - 110	P	03/26/2024	11:09	LB130043
	Magnesium	5750	6000	96	90 - 110	P	03/26/2024	11:09	LB130043
	Manganese	529	520	102	90 - 110	P	03/26/2024	11:09	LB130043
	Nickel	503	530	95	90 - 110	P	03/26/2024	11:09	LB130043
	Potassium	9450	9900	96	90 - 110	P	03/26/2024	11:09	LB130043
	Selenium	1030	1000	103	90 - 110	P	03/26/2024	11:09	LB130043
	Silver	257	250	103	90 - 110	P	03/26/2024	11:09	LB130043
	Sodium	9010	10000	90	95 - 105	P	03/26/2024	11:09	LB130043
	Thallium	1070	1000	107	90 - 110	P	03/26/2024	11:09	LB130043
	Vanadium	511	500	102	90 - 110	P	03/26/2024	11:09	LB130043
	Zinc	1040	1000	104	90 - 110	P	03/26/2024	11:09	LB130043



Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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
LLICV01	Aluminum	104	100	104	80 - 120	P	03/26/2024	11:14	LB130043
	Antimony	52.7	50.0	106	80 - 120	P	03/26/2024	11:14	LB130043
	Arsenic	20.6	20.0	103	80 - 120	P	03/26/2024	11:14	LB130043
	Barium	105	100	105	80 - 120	P	03/26/2024	11:14	LB130043
	Beryllium	6.29	6.0	105	80 - 120	P	03/26/2024	11:14	LB130043
	Cadmium	6.13	6.0	102	80 - 120	P	03/26/2024	11:14	LB130043
	Calcium	2220	2000	111	80 - 120	P	03/26/2024	11:14	LB130043
	Chromium	10.6	10.0	106	80 - 120	P	03/26/2024	11:14	LB130043
	Cobalt	29.5	30.0	98	80 - 120	P	03/26/2024	11:14	LB130043
	Copper	24.1	20.0	120	80 - 120	P	03/26/2024	11:14	LB130043
	Iron	101	100	102	80 - 120	P	03/26/2024	11:14	LB130043
	Lead	10.1	12.0	84	80 - 120	P	03/26/2024	11:14	LB130043
	Magnesium	2110	2000	106	80 - 120	P	03/26/2024	11:14	LB130043
	Manganese	22.2	20.0	111	80 - 120	P	03/26/2024	11:14	LB130043
	Nickel	39.7	40.0	99	80 - 120	P	03/26/2024	11:14	LB130043
	Potassium	1940	2000	97	80 - 120	P	03/26/2024	11:14	LB130043
	Selenium	19.6	20.0	98	80 - 120	P	03/26/2024	11:14	LB130043
	Silver	10.5	10.0	105	80 - 120	P	03/26/2024	11:14	LB130043
	Sodium	1810	2000	90	80 - 120	P	03/26/2024	11:14	LB130043
	Thallium	42.0	40.0	105	80 - 120	P	03/26/2024	11:14	LB130043
	Vanadium	42.1	40.0	105	80 - 120	P	03/26/2024	11:14	LB130043
	Zinc	44.9	40.0	112	80 - 120	P	03/26/2024	11:14	LB130043



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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	9620	10000	96	90 - 110	P	03/26/2024	13:26	LB130043
	Antimony	4960	5000	99	90 - 110	P	03/26/2024	13:26	LB130043
	Arsenic	4890	5000	98	90 - 110	P	03/26/2024	13:26	LB130043
	Barium	9670	10000	97	90 - 110	P	03/26/2024	13:26	LB130043
	Beryllium	236	250	95	90 - 110	P	03/26/2024	13:26	LB130043
	Cadmium	2350	2500	94	90 - 110	P	03/26/2024	13:26	LB130043
	Calcium	24700	25000	99	90 - 110	P	03/26/2024	13:26	LB130043
	Chromium	998	1000	100	90 - 110	P	03/26/2024	13:26	LB130043
	Cobalt	2370	2500	95	90 - 110	P	03/26/2024	13:26	LB130043
	Copper	1240	1250	99	90 - 110	P	03/26/2024	13:26	LB130043
	Iron	5420	5000	108	90 - 110	P	03/26/2024	13:26	LB130043
	Lead	4650	5000	93	90 - 110	P	03/26/2024	13:26	LB130043
	Magnesium	19500	25000	78	90 - 110	P	03/26/2024	13:26	LB130043
	Manganese	2470	2500	99	90 - 110	P	03/26/2024	13:26	LB130043
	Nickel	2420	2500	97	90 - 110	P	03/26/2024	13:26	LB130043
	Potassium	27700	25000	111	90 - 110	P	03/26/2024	13:26	LB130043
	Selenium	4780	5000	96	90 - 110	P	03/26/2024	13:26	LB130043
	Silver	1330	1250	107	90 - 110	P	03/26/2024	13:26	LB130043
	Sodium	23900	25000	96	90 - 110	P	03/26/2024	13:26	LB130043
	Thallium	4560	5000	91	90 - 110	P	03/26/2024	13:26	LB130043
	Vanadium	2430	2500	97	90 - 110	P	03/26/2024	13:26	LB130043
	Zinc	2630	2500	105	90 - 110	P	03/26/2024	13:26	LB130043
CCV02	Aluminum	9560	10000	96	90 - 110	P	03/26/2024	15:07	LB130043
	Antimony	5100	5000	102	90 - 110	P	03/26/2024	15:07	LB130043
	Arsenic	4990	5000	100	90 - 110	P	03/26/2024	15:07	LB130043
	Barium	9730	10000	97	90 - 110	P	03/26/2024	15:07	LB130043
	Beryllium	241	250	96	90 - 110	P	03/26/2024	15:07	LB130043
	Cadmium	2370	2500	95	90 - 110	P	03/26/2024	15:07	LB130043
	Calcium	25300	25000	101	90 - 110	P	03/26/2024	15:07	LB130043
	Chromium	985	1000	98	90 - 110	P	03/26/2024	15:07	LB130043
	Cobalt	2390	2500	96	90 - 110	P	03/26/2024	15:07	LB130043
	Copper	1260	1250	101	90 - 110	P	03/26/2024	15:07	LB130043
	Iron	4720	5000	94	90 - 110	P	03/26/2024	15:07	LB130043
	Lead	4720	5000	94	90 - 110	P	03/26/2024	15:07	LB130043



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

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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	Magnesium	24100	25000	96	90 - 110	P	03/26/2024	15:07	LB130043
	Manganese	2480	2500	99	90 - 110	P	03/26/2024	15:07	LB130043
	Nickel	2450	2500	98	90 - 110	P	03/26/2024	15:07	LB130043
	Potassium	24600	25000	98	90 - 110	P	03/26/2024	15:07	LB130043
	Selenium	4900	5000	98	90 - 110	P	03/26/2024	15:07	LB130043
	Silver	1190	1250	95	90 - 110	P	03/26/2024	15:07	LB130043
	Sodium	23600	25000	94	90 - 110	P	03/26/2024	15:07	LB130043
	Thallium	4700	5000	94	90 - 110	P	03/26/2024	15:07	LB130043
	Vanadium	2380	2500	95	90 - 110	P	03/26/2024	15:07	LB130043
	Zinc	2310	2500	92	90 - 110	P	03/26/2024	15:07	LB130043
CCV03	Aluminum	9390	10000	94	90 - 110	P	03/26/2024	16:36	LB130043
	Antimony	5170	5000	103	90 - 110	P	03/26/2024	16:36	LB130043
	Arsenic	4990	5000	100	90 - 110	P	03/26/2024	16:36	LB130043
	Barium	9900	10000	99	90 - 110	P	03/26/2024	16:36	LB130043
	Beryllium	247	250	99	90 - 110	P	03/26/2024	16:36	LB130043
	Cadmium	2340	2500	94	90 - 110	P	03/26/2024	16:36	LB130043
	Calcium	25700	25000	103	90 - 110	P	03/26/2024	16:36	LB130043
	Chromium	957	1000	96	90 - 110	P	03/26/2024	16:36	LB130043
	Cobalt	2390	2500	95	90 - 110	P	03/26/2024	16:36	LB130043
	Copper	1280	1250	102	90 - 110	P	03/26/2024	16:36	LB130043
	Iron	4660	5000	93	90 - 110	P	03/26/2024	16:36	LB130043
	Lead	4720	5000	94	90 - 110	P	03/26/2024	16:36	LB130043
	Magnesium	25200	25000	101	90 - 110	P	03/26/2024	16:36	LB130043
	Manganese	2470	2500	99	90 - 110	P	03/26/2024	16:36	LB130043
	Nickel	2420	2500	97	90 - 110	P	03/26/2024	16:36	LB130043
	Potassium	24200	25000	97	90 - 110	P	03/26/2024	16:36	LB130043
	Selenium	4950	5000	99	90 - 110	P	03/26/2024	16:36	LB130043
	Silver	1190	1250	95	90 - 110	P	03/26/2024	16:36	LB130043
	Sodium	23700	25000	95	90 - 110	P	03/26/2024	16:36	LB130043
	Thallium	4740	5000	95	90 - 110	P	03/26/2024	16:36	LB130043
	Vanadium	2340	2500	94	90 - 110	P	03/26/2024	16:36	LB130043
CCV04	Zinc	2340	2500	94	90 - 110	P	03/26/2024	16:36	LB130043
	Aluminum	9550	10000	96	90 - 110	P	03/26/2024	17:23	LB130043
	Antimony	4900	5000	98	90 - 110	P	03/26/2024	17:23	LB130043



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

Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc. SDG No.: P1747
Contract: LIRO01 Lab Code: CHEM Case No.: P1747 SAS No.: P1747
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
CCV04	Arsenic	4730	5000	95	90 - 110	P	03/26/2024	17:23	LB130043
	Barium	9980	10000	100	90 - 110	P	03/26/2024	17:23	LB130043
	Beryllium	259	250	104	90 - 110	P	03/26/2024	17:23	LB130043
	Cadmium	2220	2500	89	90 - 110	P	03/26/2024	17:23	LB130043
	Calcium	26500	25000	106	90 - 110	P	03/26/2024	17:23	LB130043
	Chromium	968	1000	97	90 - 110	P	03/26/2024	17:23	LB130043
	Cobalt	2280	2500	91	90 - 110	P	03/26/2024	17:23	LB130043
	Copper	1220	1250	97	90 - 110	P	03/26/2024	17:23	LB130043
	Iron	4630	5000	93	90 - 110	P	03/26/2024	17:23	LB130043
	Lead	4520	5000	90	90 - 110	P	03/26/2024	17:23	LB130043
	Magnesium	26700	25000	107	90 - 110	P	03/26/2024	17:23	LB130043
	Manganese	2510	2500	100	90 - 110	P	03/26/2024	17:23	LB130043
	Nickel	2310	2500	92	90 - 110	P	03/26/2024	17:23	LB130043
	Potassium	23900	25000	96	90 - 110	P	03/26/2024	17:23	LB130043
	Selenium	4670	5000	94	90 - 110	P	03/26/2024	17:23	LB130043
	Silver	1210	1250	96	90 - 110	P	03/26/2024	17:23	LB130043
	Sodium	23600	25000	95	90 - 110	P	03/26/2024	17:23	LB130043
	Thallium	4360	5000	87	90 - 110	P	03/26/2024	17:23	LB130043
	Vanadium	2350	2500	94	90 - 110	P	03/26/2024	17:23	LB130043
	Zinc	2420	2500	97	90 - 110	P	03/26/2024	17:23	LB130043
CCV05	Aluminum	9660	10000	97	90 - 110	P	03/26/2024	18:12	LB130043
	Antimony	4910	5000	98	90 - 110	P	03/26/2024	18:12	LB130043
	Arsenic	4790	5000	96	90 - 110	P	03/26/2024	18:12	LB130043
	Barium	10100	10000	101	90 - 110	P	03/26/2024	18:12	LB130043
	Beryllium	266	250	106	90 - 110	P	03/26/2024	18:12	LB130043
	Cadmium	2280	2500	91	90 - 110	P	03/26/2024	18:12	LB130043
	Calcium	27100	25000	108	90 - 110	P	03/26/2024	18:12	LB130043
	Chromium	986	1000	99	90 - 110	P	03/26/2024	18:12	LB130043
	Cobalt	2330	2500	93	90 - 110	P	03/26/2024	18:12	LB130043
	Copper	1230	1250	98	90 - 110	P	03/26/2024	18:12	LB130043
	Iron	4640	5000	93	90 - 110	P	03/26/2024	18:12	LB130043
	Lead	4640	5000	93	90 - 110	P	03/26/2024	18:12	LB130043
	Magnesium	27800	25000	111	90 - 110	P	03/26/2024	18:12	LB130043
	Manganese	2560	2500	102	90 - 110	P	03/26/2024	18:12	LB130043



Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LiRo Engineers, Inc.

SDG No.: P1747

Contract: LIRO01

Lab Code: CHEM

Case No.: P1747

SAS No.: P1747

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	Nickel	2350	2500	94	90 - 110	P	03/26/2024	18:12	LB130043
	Potassium	23800	25000	95	90 - 110	P	03/26/2024	18:12	LB130043
	Selenium	4730	5000	94	90 - 110	P	03/26/2024	18:12	LB130043
	Silver	1220	1250	97	90 - 110	P	03/26/2024	18:12	LB130043
	Sodium	23700	25000	95	90 - 110	P	03/26/2024	18:12	LB130043
	Thallium	4570	5000	91	90 - 110	P	03/26/2024	18:12	LB130043
	Vanadium	2400	2500	96	90 - 110	P	03/26/2024	18:12	LB130043
	Zinc	2450	2500	98	90 - 110	P	03/26/2024	18:12	LB130043
CCV06	Aluminum	9750	10000	98	90 - 110	P	03/26/2024	18:48	LB130043
	Antimony	4790	5000	96	90 - 110	P	03/26/2024	18:48	LB130043
	Arsenic	4670	5000	93	90 - 110	P	03/26/2024	18:48	LB130043
	Barium	10200	10000	102	90 - 110	P	03/26/2024	18:48	LB130043
	Beryllium	270	250	108	90 - 110	P	03/26/2024	18:48	LB130043
	Cadmium	2250	2500	90	90 - 110	P	03/26/2024	18:48	LB130043
	Calcium	27300	25000	109	90 - 110	P	03/26/2024	18:48	LB130043
	Chromium	985	1000	98	90 - 110	P	03/26/2024	18:48	LB130043
	Cobalt	2300	2500	92	90 - 110	P	03/26/2024	18:48	LB130043
	Copper	1200	1250	96	90 - 110	P	03/26/2024	18:48	LB130043
	Iron	4620	5000	92	90 - 110	P	03/26/2024	18:48	LB130043
	Lead	4570	5000	92	90 - 110	P	03/26/2024	18:48	LB130043
	Magnesium	28400	25000	114	90 - 110	P	03/26/2024	18:48	LB130043
	Manganese	2580	2500	103	90 - 110	P	03/26/2024	18:48	LB130043
	Nickel	2310	2500	93	90 - 110	P	03/26/2024	18:48	LB130043
	Potassium	23700	25000	95	90 - 110	P	03/26/2024	18:48	LB130043
	Selenium	4610	5000	92	90 - 110	P	03/26/2024	18:48	LB130043
	Silver	1210	1250	97	90 - 110	P	03/26/2024	18:48	LB130043
	Sodium	23800	25000	95	90 - 110	P	03/26/2024	18:48	LB130043
	Thallium	4580	5000	92	90 - 110	P	03/26/2024	18:48	LB130043
	Vanadium	2410	2500	96	90 - 110	P	03/26/2024	18:48	LB130043
	Zinc	2450	2500	98	90 - 110	P	03/26/2024	18:48	LB130043