



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3657
Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3657 **SAS No.:** P3657
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
ICV92	Mercury	3.78	4.0	95	90 - 110	CV	08/22/2024	14:26	LB132130

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3657
Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3657 **SAS No.:** P3657
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
CCV11	Mercury	4.95	5.0	99	90 - 110	CV	08/22/2024	14:30	LB132130
CCV12	Mercury	4.83	5.0	96	90 - 110	CV	08/22/2024	14:58	LB132130
CCV13	Mercury	5.05	5.0	101	90 - 110	CV	08/22/2024	15:25	LB132130
CCV14	Mercury	4.60	5.0	92	90 - 110	CV	08/22/2024	15:58	LB132130
CCV15	Mercury	4.92	5.0	98	90 - 110	CV	08/22/2024	16:20	LB132130

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JACOBS Engineering Group, Inc. SDG No.: P3657
Contract: JACO05 Lab Code: CHEM Case No.: P3657 SAS No.: P3657
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
ICV01	Aluminum	536	500	107	90 - 110	P	09/04/2024	13:51	LB132280
	Antimony	196	200	98	90 - 110	P	09/04/2024	13:51	LB132280
	Arsenic	194	200	97	90 - 110	P	09/04/2024	13:51	LB132280
	Barium	97.8	100	98	90 - 110	P	09/04/2024	13:51	LB132280
	Beryllium	101	100	101	90 - 110	P	09/04/2024	13:51	LB132280
	Cadmium	103	100	103	90 - 110	P	09/04/2024	13:51	LB132280
	Calcium	2070	2000	103	90 - 110	P	09/04/2024	13:51	LB132280
	Chromium	97.1	100	97	90 - 110	P	09/04/2024	13:51	LB132280
	Cobalt	99.8	100	100	90 - 110	P	09/04/2024	13:51	LB132280
	Copper	99.7	100	100	90 - 110	P	09/04/2024	13:51	LB132280
	Iron	2110	2000	106	90 - 110	P	09/04/2024	13:51	LB132280
	Lead	190	200	95	90 - 110	P	09/04/2024	13:51	LB132280
	Magnesium	1200	1200	100	90 - 110	P	09/04/2024	13:51	LB132280
	Manganese	102	100	102	90 - 110	P	09/04/2024	13:51	LB132280
	Nickel	108	110	99	90 - 110	P	09/04/2024	13:51	LB132280
	Potassium	2030	2000	102	90 - 110	P	09/04/2024	13:51	LB132280
	Selenium	196	200	98	90 - 110	P	09/04/2024	13:51	LB132280
	Silver	50.3	50.0	101	90 - 110	P	09/04/2024	13:51	LB132280
	Sodium	2140	2000	107	90 - 110	P	09/04/2024	13:51	LB132280
	Thallium	201	210	96	90 - 110	P	09/04/2024	13:51	LB132280
	Vanadium	93.2	100	93	90 - 110	P	09/04/2024	13:51	LB132280
	Zinc	197	200	98	90 - 110	P	09/04/2024	13:51	LB132280

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Client: JACOBS Engineering Group, Inc. SDG No.: P3657
Contract: JACO05 Lab Code: CHEM Case No.: P3657 SAS No.: P3657
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
LLICV	Aluminum	20.2	20.0	101	80 - 120	P	09/04/2024	14:06	LB132280
	Antimony	2.02	2.0	101	80 - 120	P	09/04/2024	14:06	LB132280
	Arsenic	1.06	1.0	106	80 - 120	P	09/04/2024	14:06	LB132280
	Barium	9.79	10.0	98	80 - 120	P	09/04/2024	14:06	LB132280
	Beryllium	1.02	1.0	102	80 - 120	P	09/04/2024	14:06	LB132280
	Cadmium	1.03	1.0	103	80 - 120	P	09/04/2024	14:06	LB132280
	Calcium	508	500	102	80 - 120	P	09/04/2024	14:06	LB132280
	Chromium	1.84	2.0	92	80 - 120	P	09/04/2024	14:06	LB132280
	Cobalt	1.11	1.0	111	80 - 120	P	09/04/2024	14:06	LB132280
	Copper	2.05	2.0	102	80 - 120	P	09/04/2024	14:06	LB132280
	Iron	49.1	50.0	98	80 - 120	P	09/04/2024	14:06	LB132280
	Lead	0.90	1.0	90	80 - 120	P	09/04/2024	14:06	LB132280
	Magnesium	541	500	108	80 - 120	P	09/04/2024	14:06	LB132280
	Manganese	0.96	1.0	96	80 - 120	P	09/04/2024	14:06	LB132280
	Nickel	0.93	1.0	93	80 - 120	P	09/04/2024	14:06	LB132280
	Potassium	524	500	105	80 - 120	P	09/04/2024	14:06	LB132280
	Selenium	4.28	5.0	86	80 - 120	P	09/04/2024	14:06	LB132280
	Silver	0.97	1.0	97	80 - 120	P	09/04/2024	14:06	LB132280
	Sodium	560	500	112	80 - 120	P	09/04/2024	14:06	LB132280
	Thallium	0.90	1.0	90	80 - 120	P	09/04/2024	14:06	LB132280
	Vanadium	5.08	5.0	102	80 - 120	P	09/04/2024	14:06	LB132280
	Zinc	5.19	5.0	104	80 - 120	P	09/04/2024	14:06	LB132280

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Client: JACOBS Engineering Group, Inc. **SDG No.:** P3657

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3657 **SAS No.:** P3657

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
CCV01	Aluminum	50200	50000	100	90 - 110	P	09/04/2024	14:20	LB132280
	Antimony	501	500	100	90 - 110	P	09/04/2024	14:20	LB132280
	Arsenic	518	500	104	90 - 110	P	09/04/2024	14:20	LB132280
	Barium	2530	2500	101	90 - 110	P	09/04/2024	14:20	LB132280
	Beryllium	519	500	104	90 - 110	P	09/04/2024	14:20	LB132280
	Cadmium	498	500	100	90 - 110	P	09/04/2024	14:20	LB132280
	Calcium	254000	250000	102	90 - 110	P	09/04/2024	14:20	LB132280
	Chromium	507	500	101	90 - 110	P	09/04/2024	14:20	LB132280
	Cobalt	501	500	100	90 - 110	P	09/04/2024	14:20	LB132280
	Copper	4900	5000	98	90 - 110	P	09/04/2024	14:20	LB132280
	Iron	128000	125000	103	90 - 110	P	09/04/2024	14:20	LB132280
	Lead	2520	2500	101	90 - 110	P	09/04/2024	14:20	LB132280
	Magnesium	254000	250000	101	90 - 110	P	09/04/2024	14:20	LB132280
	Manganese	5060	5000	101	90 - 110	P	09/04/2024	14:20	LB132280
	Nickel	497	500	99	90 - 110	P	09/04/2024	14:20	LB132280
	Potassium	133000	125000	107	90 - 110	P	09/04/2024	14:20	LB132280
	Selenium	501	500	100	90 - 110	P	09/04/2024	14:20	LB132280
	Silver	494	500	99	90 - 110	P	09/04/2024	14:20	LB132280
	Sodium	256000	250000	102	90 - 110	P	09/04/2024	14:20	LB132280
	Thallium	512	500	102	90 - 110	P	09/04/2024	14:20	LB132280
	Vanadium	508	500	102	90 - 110	P	09/04/2024	14:20	LB132280
	Zinc	4890	5000	98	90 - 110	P	09/04/2024	14:20	LB132280
CCV02	Aluminum	52300	50000	105	90 - 110	P	09/04/2024	15:47	LB132280
	Antimony	498	500	100	90 - 110	P	09/04/2024	15:47	LB132280
	Arsenic	502	500	100	90 - 110	P	09/04/2024	15:47	LB132280
	Barium	2510	2500	100	90 - 110	P	09/04/2024	15:47	LB132280
	Beryllium	526	500	105	90 - 110	P	09/04/2024	15:47	LB132280
	Cadmium	493	500	99	90 - 110	P	09/04/2024	15:47	LB132280
	Calcium	256000	250000	102	90 - 110	P	09/04/2024	15:47	LB132280
	Chromium	512	500	102	90 - 110	P	09/04/2024	15:47	LB132280
	Cobalt	504	500	101	90 - 110	P	09/04/2024	15:47	LB132280
	Copper	5210	5000	104	90 - 110	P	09/04/2024	15:47	LB132280
	Iron	130000	125000	104	90 - 110	P	09/04/2024	15:47	LB132280
	Lead	2520	2500	101	90 - 110	P	09/04/2024	15:47	LB132280

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Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3657 **SAS No.:** P3657

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
CCV02	Magnesium	261000	250000	104	90 - 110	P	09/04/2024	15:47	LB132280
	Manganese	5160	5000	103	90 - 110	P	09/04/2024	15:47	LB132280
	Nickel	495	500	99	90 - 110	P	09/04/2024	15:47	LB132280
	Potassium	129000	125000	103	90 - 110	P	09/04/2024	15:47	LB132280
	Selenium	504	500	101	90 - 110	P	09/04/2024	15:47	LB132280
	Silver	485	500	97	90 - 110	P	09/04/2024	15:47	LB132280
	Sodium	263000	250000	105	90 - 110	P	09/04/2024	15:47	LB132280
	Thallium	519	500	104	90 - 110	P	09/04/2024	15:47	LB132280
	Vanadium	514	500	103	90 - 110	P	09/04/2024	15:47	LB132280
	Zinc	5150	5000	103	90 - 110	P	09/04/2024	15:47	LB132280
CCV03	Aluminum	51400	50000	103	90 - 110	P	09/04/2024	16:30	LB132280
	Antimony	494	500	99	90 - 110	P	09/04/2024	16:30	LB132280
	Arsenic	499	500	100	90 - 110	P	09/04/2024	16:30	LB132280
	Barium	2510	2500	100	90 - 110	P	09/04/2024	16:30	LB132280
	Beryllium	516	500	103	90 - 110	P	09/04/2024	16:30	LB132280
	Cadmium	490	500	98	90 - 110	P	09/04/2024	16:30	LB132280
	Calcium	249000	250000	100	90 - 110	P	09/04/2024	16:30	LB132280
	Chromium	500	500	100	90 - 110	P	09/04/2024	16:30	LB132280
	Cobalt	496	500	99	90 - 110	P	09/04/2024	16:30	LB132280
	Copper	5020	5000	100	90 - 110	P	09/04/2024	16:30	LB132280
	Iron	130000	125000	104	90 - 110	P	09/04/2024	16:30	LB132280
	Lead	2560	2500	102	90 - 110	P	09/04/2024	16:30	LB132280
	Magnesium	256000	250000	102	90 - 110	P	09/04/2024	16:30	LB132280
	Manganese	5080	5000	102	90 - 110	P	09/04/2024	16:30	LB132280
	Nickel	489	500	98	90 - 110	P	09/04/2024	16:30	LB132280
	Potassium	128000	125000	102	90 - 110	P	09/04/2024	16:30	LB132280
	Selenium	494	500	99	90 - 110	P	09/04/2024	16:30	LB132280
	Silver	492	500	98	90 - 110	P	09/04/2024	16:30	LB132280
	Sodium	258000	250000	103	90 - 110	P	09/04/2024	16:30	LB132280
	Thallium	514	500	103	90 - 110	P	09/04/2024	16:30	LB132280
	Vanadium	504	500	101	90 - 110	P	09/04/2024	16:30	LB132280
	Zinc	4900	5000	98	90 - 110	P	09/04/2024	16:30	LB132280
CCV04	Aluminum	53100	50000	106	90 - 110	P	09/04/2024	17:28	LB132280
	Antimony	497	500	99	90 - 110	P	09/04/2024	17:28	LB132280

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Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3657 **SAS No.:** P3657

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
CCV04	Arsenic	504	500	101	90 - 110	P	09/04/2024	17:28	LB132280
	Barium	2540	2500	102	90 - 110	P	09/04/2024	17:28	LB132280
	Beryllium	520	500	104	90 - 110	P	09/04/2024	17:28	LB132280
	Cadmium	495	500	99	90 - 110	P	09/04/2024	17:28	LB132280
	Calcium	250000	250000	100	90 - 110	P	09/04/2024	17:28	LB132280
	Chromium	509	500	102	90 - 110	P	09/04/2024	17:28	LB132280
	Cobalt	503	500	100	90 - 110	P	09/04/2024	17:28	LB132280
	Copper	4980	5000	100	90 - 110	P	09/04/2024	17:28	LB132280
	Iron	133000	125000	106	90 - 110	P	09/04/2024	17:28	LB132280
	Lead	2520	2500	101	90 - 110	P	09/04/2024	17:28	LB132280
	Magnesium	262000	250000	105	90 - 110	P	09/04/2024	17:28	LB132280
	Manganese	5180	5000	104	90 - 110	P	09/04/2024	17:28	LB132280
	Nickel	493	500	99	90 - 110	P	09/04/2024	17:28	LB132280
	Potassium	130000	125000	104	90 - 110	P	09/04/2024	17:28	LB132280
	Selenium	487	500	97	90 - 110	P	09/04/2024	17:28	LB132280
	Silver	488	500	98	90 - 110	P	09/04/2024	17:28	LB132280
	Sodium	261000	250000	104	90 - 110	P	09/04/2024	17:28	LB132280
	Thallium	520	500	104	90 - 110	P	09/04/2024	17:28	LB132280
	Vanadium	509	500	102	90 - 110	P	09/04/2024	17:28	LB132280
	Zinc	4890	5000	98	90 - 110	P	09/04/2024	17:28	LB132280
CCV05	Aluminum	52800	50000	106	90 - 110	P	09/04/2024	18:17	LB132280
	Antimony	508	500	102	90 - 110	P	09/04/2024	18:17	LB132280
	Arsenic	512	500	102	90 - 110	P	09/04/2024	18:17	LB132280
	Barium	2640	2500	106	90 - 110	P	09/04/2024	18:17	LB132280
	Beryllium	528	500	106	90 - 110	P	09/04/2024	18:17	LB132280
	Cadmium	505	500	101	90 - 110	P	09/04/2024	18:17	LB132280
	Calcium	258000	250000	103	90 - 110	P	09/04/2024	18:17	LB132280
	Chromium	510	500	102	90 - 110	P	09/04/2024	18:17	LB132280
	Cobalt	506	500	101	90 - 110	P	09/04/2024	18:17	LB132280
	Copper	5040	5000	101	90 - 110	P	09/04/2024	18:17	LB132280
	Iron	134000	125000	108	90 - 110	P	09/04/2024	18:17	LB132280
	Lead	2540	2500	102	90 - 110	P	09/04/2024	18:17	LB132280
	Magnesium	264000	250000	106	90 - 110	P	09/04/2024	18:17	LB132280
	Manganese	5120	5000	102	90 - 110	P	09/04/2024	18:17	LB132280

Metals

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Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3657 **SAS No.:** P3657
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
CCV05	Nickel	493	500	99	90 - 110	P	09/04/2024	18:17	LB132280
	Potassium	132000	125000	106	90 - 110	P	09/04/2024	18:17	LB132280
	Selenium	498	500	100	90 - 110	P	09/04/2024	18:17	LB132280
	Silver	512	500	102	90 - 110	P	09/04/2024	18:17	LB132280
	Sodium	264000	250000	105	90 - 110	P	09/04/2024	18:17	LB132280
	Thallium	520	500	104	90 - 110	P	09/04/2024	18:17	LB132280
	Vanadium	515	500	103	90 - 110	P	09/04/2024	18:17	LB132280
	Zinc	4930	5000	99	90 - 110	P	09/04/2024	18:17	LB132280
