

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 171011

Epsom Salts

Statistical Summary

Analytes: 28

Labs Reporting: 81

Issue Date : 11/30/2017

Analyte Code	Analyte	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
010	Total Nitrogen (%)	4	4	0.1196	0.0821	0.1196		0.0821	0.0513	68.66%		0.0107	5.51%
020	Total Phosphorus as P2O5 (%)	3	2	0.0022	0.0017	0.0022		0.0017	0.0015	74.68%		0.0002	10.03%
041	Direct Available Phosphorus as P2O5 (%)	2	2	0.0855	0.0912								
050	Soluble Potassium as K2O (%)	4	4	0.0730	0.0874	0.0730		0.0874	0.0546	119.75%		0.0005	5.93%
060	Water (Free) (%)	5	5	17.06	17.11	17.06		17.11	9.562	100.27%		0.3719	2.61%
101	Acid Soluble Calcium (%)	10	10	0.0310	0.0204	0.0264		0.0092	0.0037	34.97%		0.0038	6.91%
121	Acid Soluble Magnesium (9.8%)	68	68	9.944	0.7982	9.944	0.6972	0.5857	0.0888	5.89%	3.51%	0.1997	2.83%
131	Water Soluble Magnesium (%)	6	6	10.15	0.3592	10.15		0.4073	0.2079	4.01%		0.2325	2.82%
143	Elemental Sulfur (%)	5	5	10.44	5.843	10.44		5.843	3.267	55.97%		0.2280	2.81%
145	Sulfate Sulfur, HCl soluble (%)	10	9	13.25	0.4787	13.25		0.5429	0.2262	4.10%		0.1094	2.71%
146	Total Sulfur in Liquid (%)	1		12.84									
148	Total Sulfur (13%)	53	51	13.23	0.7931	13.19	0.8594	0.5648	0.0989	4.28%	3.26%	0.1975	2.71%
149	Sulfur - HNO3 soluble (%)	4	4	13.38	0.8676	13.38		0.8676	0.5423	6.48%		0.1575	2.71%
151	Acid Soluble Arsenic (ppm)	9	6	0.5366	0.8662	0.3254		0.4383	0.2237	134.70%		0.1645	18.94%
165	Acid Soluble Boron (%)	4	3	0.0023	0.0019	0.0023		0.0019	0.0014	81.13%		0.0007	9.96%
181	Acid Soluble Cadmium (ppm)	12	6	0.0259	0.0275	0.0259		0.0312	0.0159	120.58%		0.0062	27.72%
191	Acid Soluble Chromium (ppm)	13	10	1.079	1.387	0.7476		0.8232	0.3254	110.11%		0.2116	16.71%
202	Acid Soluble Cobalt (ppm)	11	9	0.3451	0.1836	0.3364		0.1879	0.0783	55.87%		0.0442	18.85%
221	Acid Soluble Copper (%)	13	11	0.0014	0.0029	0.0005		0.0005	0.0002	95.89%		0.0000	12.50%
241	Acid Soluble Iron (%)	9	7	0.0017	0.0011	0.0017		0.0013	0.0006	74.79%		0.0010	10.41%
251	Acid Soluble Lead (ppm)	11	8	0.6124	1.331	0.1720		0.1368	0.0605	79.52%		0.0992	20.85%
261	Acid Soluble Manganese (%)	13	10	0.0016	0.0006	0.0016		0.0007	0.0003	42.35%		0.0001	10.55%
281	Acid Soluble Mercury (ppm)	5	3	0.0062	0.0038	0.0062		0.0038	0.0027	60.86%		0.0010	34.41%
289	Acid Soluble Molybdenum (ppm)	20	18	1.356	0.4976	1.327		0.3498	0.1031	26.36%		0.0841	15.33%
291	Acid Soluble Nickel (ppm)	17	13	0.8122	1.079	0.5518		0.3414	0.1183	61.86%		0.1184	17.49%
301	Acid Soluble Selenium (ppm)	10	7	0.5755	0.5715	0.5745		0.6460	0.3052	112.44%		0.3434	17.39%
311	Sodium (%)	4	4	0.0074	0.0059	0.0074		0.0059	0.0037	79.11%		0.0067	8.37%
321	Acid Soluble Zinc (%)	17	12	0.0014	0.0017	0.0012		0.0014	0.0005	114.12%		0.0002	11.01%

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Analytes: 28

Sample # 171011

Lab Values

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Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total Nitrogen (%)	0524	0.0504	0.0069	0.1196	0.0821	0.0107	4	-0.84	010.99	0
010	Total Nitrogen (%)	0354	0.0895	0.0090	0.1196	0.0821	0.0107	4	-0.37	010.60	0
010	Total Nitrogen (%)	0325	0.1000	0.0000	0.1196	0.0821	0.0107	4	-0.24	010.60	0
010	Total Nitrogen (%)	0472	0.2385	0.0270	0.1196	0.0821	0.0107	4	1.45	010.60	0
020	Total Phosphorus as P2O5 (%)	0524	0.0011	0.0003				2		020.50	0
020	Total Phosphorus as P2O5 (%)	0521	0.0034	0.0000				2		020.50	0
020	Total Phosphorus as P2O5 (%)	0515	0.0000	0.0000				2		020.99	4
041	Direct Available Phosphorus as P2O5 (%)	0354	0.0210	0.0000				2		041.60	0
041	Direct Available Phosphorus as P2O5 (%)	0325	0.1500	0.1000				2		041.50	0
050	Soluble Potassium as K2O (%)	0524	0.0046	0.0000	0.0730	0.0874	0.0005	4	-0.78	050.99	0
050	Soluble Potassium as K2O (%)	0521	0.0302	0.0000	0.0730	0.0874	0.0005	4	-0.49	050.99	0
050	Soluble Potassium as K2O (%)	0354	0.0570	0.0020	0.0730	0.0874	0.0005	4	-0.18	050.52	0
050	Soluble Potassium as K2O (%)	0325	0.2000	0.0000	0.0730	0.0874	0.0005	4	1.45	050.99	0
060	Water (Free) (%)	0416	1.862	0.1155	17.06	17.11	0.3719	5	-0.89	060.00	0
060	Water (Free) (%)	0518	3.300	0.4000	17.06	17.11	0.3719	5	-0.80	060.30	0
060	Water (Free) (%)	0510	9.002	0.2340	17.06	17.11	0.3719	5	-0.47	060.99	0
060	Water (Free) (%)	0055	35.40	0.8000	17.06	17.11	0.3719	5	1.07	060.30	0
060	Water (Free) (%)	0055	35.74	0.3100	17.06	17.11	0.3719	5	1.09	060.99	0
101	Acid Soluble Calcium (%)	0105	0.0125	0.0130	0.0264	0.0092	0.0038	10	-1.40	101.03	0
101	Acid Soluble Calcium (%)	0105	0.0145	0.0070	0.0264	0.0092	0.0038	10	-1.20	101.00	0
101	Acid Soluble Calcium (%)	0521	0.0232	0.0000	0.0264	0.0092	0.0038	10	-0.33	101.32	0
101	Acid Soluble Calcium (%)	0117	0.0249	0.0000	0.0264	0.0092	0.0038	10	-0.15	101.33	0
101	Acid Soluble Calcium (%)	0494	0.0274	0.0054	0.0264	0.0092	0.0038	10	0.10	101.33	0
101	Acid Soluble Calcium (%)	0482	0.0300	0.0000	0.0264	0.0092	0.0038	10	0.36	101.30	0
101	Acid Soluble Calcium (%)	0535	0.0305	0.0010	0.0264	0.0092	0.0038	10	0.41	101.00	0
101	Acid Soluble Calcium (%)	0096	0.0305	0.0010	0.0264	0.0092	0.0038	10	0.41	101.30	0
101	Acid Soluble Calcium (%)	0527	0.0305	0.0030	0.0264	0.0092	0.0038	10	0.41	101.33	0
101	Acid Soluble Calcium (%)	0354	0.0860	0.0080	0.0264	0.0092	0.0038	10	5.99	101.30	0
121	Acid Soluble Magnesium (9.8%)	0535	6.325*	0.1500	9.944	0.5857	0.1997	68	-6.18	121.00	0
121	Acid Soluble Magnesium (9.8%)	0106	8.590*	0.6998	9.944	0.5857	0.1997	68	-2.31	121.33	0
121	Acid Soluble Magnesium (9.8%)	0501	8.720*	0.0000	9.944	0.5857	0.1997	68	-2.09	121.99	0
121	Acid Soluble Magnesium (9.8%)	0117	8.769*	0.0390	9.944	0.5857	0.1997	68	-2.01	121.33	0
121	Acid Soluble Magnesium (9.8%)	0415	9.049*	0.2093	9.944	0.5857	0.1997	68	-1.53	121.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121	Acid Soluble Magnesium (9.8%)	0541	9.105*	0.1700	9.944	0.5857	0.1997	68	-1.43	121.32	0
121	Acid Soluble Magnesium (9.8%)	0486	9.225*	0.1300	9.944	0.5857	0.1997	68	-1.23	121.33	0
121	Acid Soluble Magnesium (9.8%)	0481	9.395	0.1700	9.944	0.5857	0.1997	68	-0.94	121.00	0
121	Acid Soluble Magnesium (9.8%)	0516	9.415	0.0060	9.944	0.5857	0.1997	68	-0.90	121.00	0
121	Acid Soluble Magnesium (9.8%)	0102	9.451	0.0650	9.944	0.5857	0.1997	68	-0.84	121.30	0
121	Acid Soluble Magnesium (9.8%)	0515	9.454	0.5916	9.944	0.5857	0.1997	68	-0.84	121.99	0
121	Acid Soluble Magnesium (9.8%)	0534	9.500	0.0800	9.944	0.5857	0.1997	68	-0.76	121.00	0
121	Acid Soluble Magnesium (9.8%)	0230	9.500	0.0600	9.944	0.5857	0.1997	68	-0.76	121.30	0
121	Acid Soluble Magnesium (9.8%)	0041	9.510	0.7800	9.944	0.5857	0.1997	68	-0.74	121.30	0
121	Acid Soluble Magnesium (9.8%)	0157	9.525	0.0700	9.944	0.5857	0.1997	68	-0.72	121.30	0
121	Acid Soluble Magnesium (9.8%)	0255	9.551	0.0140	9.944	0.5857	0.1997	68	-0.67	121.30	0
121	Acid Soluble Magnesium (9.8%)	0096	9.580	0.0300	9.944	0.5857	0.1997	68	-0.62	121.30	0
121	Acid Soluble Magnesium (9.8%)	0043	9.615	0.0700	9.944	0.5857	0.1997	68	-0.56	121.00	0
121	Acid Soluble Magnesium (9.8%)	0157	9.635	0.1700	9.944	0.5857	0.1997	68	-0.53	121.00	0
121	Acid Soluble Magnesium (9.8%)	0040	9.640	0.1200	9.944	0.5857	0.1997	68	-0.52	121.00	0
121	Acid Soluble Magnesium (9.8%)	0037	9.650	0.0300	9.944	0.5857	0.1997	68	-0.50	121.33	0
121	Acid Soluble Magnesium (9.8%)	0307	9.654	0.3320	9.944	0.5857	0.1997	68	-0.50	121.30	0
121	Acid Soluble Magnesium (9.8%)	0360	9.690	0.0000	9.944	0.5857	0.1997	68	-0.43	121.30	0
121	Acid Soluble Magnesium (9.8%)	0390	9.690	0.3400	9.944	0.5857	0.1997	68	-0.43	121.30	0
121	Acid Soluble Magnesium (9.8%)	0169	9.700	0.0800	9.944	0.5857	0.1997	68	-0.42	121.00	0
121	Acid Soluble Magnesium (9.8%)	0231	9.700	0.0200	9.944	0.5857	0.1997	68	-0.42	121.30	0
121	Acid Soluble Magnesium (9.8%)	0177	9.723	0.1632	9.944	0.5857	0.1997	68	-0.38	121.33	0
121	Acid Soluble Magnesium (9.8%)	0416	9.725	0.0100	9.944	0.5857	0.1997	68	-0.37	121.70	0
121	Acid Soluble Magnesium (9.8%)	0519	9.785	0.0700	9.944	0.5857	0.1997	68	-0.27	121.99	0
121	Acid Soluble Magnesium (9.8%)	0055	9.790	0.0200	9.944	0.5857	0.1997	68	-0.26	121.33	0
121	Acid Soluble Magnesium (9.8%)	0515	9.804	0.4662	9.944	0.5857	0.1997	68	-0.24	121.33	0
121	Acid Soluble Magnesium (9.8%)	0233	9.831	0.2310	9.944	0.5857	0.1997	68	-0.19	121.33	0
121	Acid Soluble Magnesium (9.8%)	0433	9.890	0.1800	9.944	0.5857	0.1997	68	-0.09	121.30	0
121	Acid Soluble Magnesium (9.8%)	0423	9.893	0.0550	9.944	0.5857	0.1997	68	-0.09	121.32	0
121	Acid Soluble Magnesium (9.8%)	0397	9.907	0.2685	9.944	0.5857	0.1997	68	-0.06	121.33	0
121	Acid Soluble Magnesium (9.8%)	0421	9.920	0.0600	9.944	0.5857	0.1997	68	-0.04	121.33	0
121	Acid Soluble Magnesium (9.8%)	0368	9.938	0.1296	9.944	0.5857	0.1997	68	-0.01	121.99	0
121	Acid Soluble Magnesium (9.8%)	0371	9.950	0.0200	9.944	0.5857	0.1997	68	0.01	121.30	0
121	Acid Soluble Magnesium (9.8%)	0324	9.955	0.6900	9.944	0.5857	0.1997	68	0.02	121.30	0
121	Acid Soluble Magnesium (9.8%)	0377	9.970	0.1000	9.944	0.5857	0.1997	68	0.04	121.30	0
121	Acid Soluble Magnesium (9.8%)	0136	9.970	0.4200	9.944	0.5857	0.1997	68	0.04	121.33	0
121	Acid Soluble Magnesium (9.8%)	0485	9.981	0.6180	9.944	0.5857	0.1997	68	0.06	121.00	0
121	Acid Soluble Magnesium (9.8%)	0292	10.00	0.0200	9.944	0.5857	0.1997	68	0.10	121.32	0
121	Acid Soluble Magnesium (9.8%)	0482	10.01	0.1900	9.944	0.5857	0.1997	68	0.10	121.30	0
121	Acid Soluble Magnesium (9.8%)	0027	10.07	0.2900	9.944	0.5857	0.1997	68	0.21	121.99	0
121	Acid Soluble Magnesium (9.8%)	0476	10.10	0.0901	9.944	0.5857	0.1997	68	0.27	121.70	0
121	Acid Soluble Magnesium (9.8%)	0023	10.12	0.2460	9.944	0.5857	0.1997	68	0.30	121.33	0
121	Acid Soluble Magnesium (9.8%)	0291	10.21	0.0100	9.944	0.5857	0.1997	68	0.45	121.30	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
121	Acid Soluble Magnesium (9.8%)	0354	10.28	0.1250	9.944	0.5857	0.1997	68	0.58	121.30	0
121	Acid Soluble Magnesium (9.8%)	0494	10.30	0.5896	9.944	0.5857	0.1997	68	0.61	121.33	0
121	Acid Soluble Magnesium (9.8%)	0029	10.32	0.2400	9.944	0.5857	0.1997	68	0.64	121.00	0
121	Acid Soluble Magnesium (9.8%)	0444	10.39	0.2500	9.944	0.5857	0.1997	68	0.75	121.30	0
121	Acid Soluble Magnesium (9.8%)	0527	10.41	0.2520	9.944	0.5857	0.1997	68	0.79	121.33	0
121	Acid Soluble Magnesium (9.8%)	0523	10.46	0.5200	9.944	0.5857	0.1997	68	0.88	121.99	0
121	Acid Soluble Magnesium (9.8%)	0105	10.47	0.3600	9.944	0.5857	0.1997	68	0.90	121.00	0
121	Acid Soluble Magnesium (9.8%)	0035	10.50	0.2000	9.944	0.5857	0.1997	68	0.95	121.30	0
121	Acid Soluble Magnesium (9.8%)	0105	10.51	0.3400	9.944	0.5857	0.1997	68	0.97	121.03	0
121	Acid Soluble Magnesium (9.8%)	0234	10.55	0.1000	9.944	0.5857	0.1997	68	1.03	121.30	0
121	Acid Soluble Magnesium (9.8%)	0493	10.70	0.1000	9.944	0.5857	0.1997	68	1.29	121.99	0
121	Acid Soluble Magnesium (9.8%)	0524	10.71	0.0069	9.944	0.5857	0.1997	68	1.31	121.99	0
121	Acid Soluble Magnesium (9.8%)	0394	10.80	0.0000	9.944	0.5857	0.1997	68	1.46	121.32	0
121	Acid Soluble Magnesium (9.8%)	0521	10.95	0.0000	9.944	0.5857	0.1997	68	1.71	121.32	0
121	Acid Soluble Magnesium (9.8%)	0042	11.08	0.2900	9.944	0.5857	0.1997	68	1.93	121.99	0
121	Acid Soluble Magnesium (9.8%)	0452	11.10	0.0600	9.944	0.5857	0.1997	68	1.97	121.30	0
121	Acid Soluble Magnesium (9.8%)	0049	11.16	0.1807	9.944	0.5857	0.1997	68	2.08	121.30	0
121	Acid Soluble Magnesium (9.8%)	0483	11.30	0.4000	9.944	0.5857	0.1997	68	2.32	121.30	0
121	Acid Soluble Magnesium (9.8%)	0472	11.97	0.0900	9.944	0.5857	0.1997	68	3.45	121.30	0
121	Acid Soluble Magnesium (9.8%)	0325	12.05	0.7000	9.944	0.5857	0.1997	68	3.60	121.30	0
131	Water Soluble Magnesium (%)	0506	9.850	0.3000	10.15	0.4073	0.2325	6	-0.66	131.99	0
131	Water Soluble Magnesium (%)	0518	9.850	0.1000	10.15	0.4073	0.2325	6	-0.66	131.70	0
131	Water Soluble Magnesium (%)	0543	9.874	0.6160	10.15	0.4073	0.2325	6	-0.60	131.30	0
131	Water Soluble Magnesium (%)	0510	10.22	0.0287	10.15	0.4073	0.2325	6	0.16	131.70	0
131	Water Soluble Magnesium (%)	0500	10.38	0.0000	10.15	0.4073	0.2325	6	0.50	131.00	0
131	Water Soluble Magnesium (%)	0444	10.73	0.3500	10.15	0.4073	0.2325	6	1.26	131.30	0
143	Elemental Sulfur (%)	0405	0.0165	0.0000	10.44	5.843	0.2280	5	-1.78	143.00	0
143	Elemental Sulfur (%)	0390	12.45	0.7400	10.44	5.843	0.2280	5	0.34	143.99	0
143	Elemental Sulfur (%)	0472	12.80	0.0100	10.44	5.843	0.2280	5	0.40	143.99	0
143	Elemental Sulfur (%)	0255	13.40	0.3700	10.44	5.843	0.2280	5	0.51	143.99	0
143	Elemental Sulfur (%)	0291	13.54	0.0200	10.44	5.843	0.2280	5	0.53	143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0444	12.68	0.3000	13.25	0.5429	0.1094	9	-0.96	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0444	12.71	0.0300	13.25	0.5429	0.1094	9	-0.92	145.99	0
145	Sulfate Sulfur, HCl soluble (%)	0106	12.82	0.1400	13.25	0.5429	0.1094	9	-0.73	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0544	13.18	0.2300	13.25	0.5429	0.1094	9	-0.12	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0405	13.20	0.0047	13.25	0.5429	0.1094	9	-0.09	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0518	13.20	0.2000	13.25	0.5429	0.1094	9	-0.08	145.99	0
145	Sulfate Sulfur, HCl soluble (%)	0220	13.70	0.0100	13.25	0.5429	0.1094	9	0.76	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0043	13.76	0.0500	13.25	0.5429	0.1094	9	0.86	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0027	14.00	0.0200	13.25	0.5429	0.1094	9	1.28	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0233	12.93	0.9200	13.25	0.5429	0.1094	9	-0.54	145.00	1
146	Total Sulfur in Liquid (%)	0131	12.84	0.0200				1		146.99	0
148	Total Sulfur (13%)	0360	11.65*	0.2500	13.19	0.5648	0.1975	51	-2.73	148.00	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
148	Total Sulfur (13%)	0523	11.69*	0.0000	13.19	0.5648	0.1975	51	-2.65	148.99	0
148	Total Sulfur (13%)	0501	12.19*	0.4770	13.19	0.5648	0.1975	51	-1.77	148.99	0
148	Total Sulfur (13%)	0506	12.30*	0.2000	13.19	0.5648	0.1975	51	-1.57	148.99	0
148	Total Sulfur (13%)	0451	12.45	0.5000	13.19	0.5648	0.1975	51	-1.31	148.00	0
148	Total Sulfur (13%)	0117	12.55	0.1100	13.19	0.5648	0.1975	51	-1.14	148.07	0
148	Total Sulfur (13%)	0444	12.57	0.5300	13.19	0.5648	0.1975	51	-1.10	148.07	0
148	Total Sulfur (13%)	0230	12.70	0.0000	13.19	0.5648	0.1975	51	-0.86	148.01	0
148	Total Sulfur (13%)	0025	12.75	0.2200	13.19	0.5648	0.1975	51	-0.77	148.00	0
148	Total Sulfur (13%)	0486	12.76	0.2100	13.19	0.5648	0.1975	51	-0.77	148.07	0
148	Total Sulfur (13%)	0177	12.78	0.2147	13.19	0.5648	0.1975	51	-0.71	148.07	0
148	Total Sulfur (13%)	0493	12.80	0.2000	13.19	0.5648	0.1975	51	-0.69	148.00	0
148	Total Sulfur (13%)	0292	12.83	0.0100	13.19	0.5648	0.1975	51	-0.64	148.07	0
148	Total Sulfur (13%)	0368	12.83	0.1520	13.19	0.5648	0.1975	51	-0.63	148.99	0
148	Total Sulfur (13%)	0096	12.92	0.0400	13.19	0.5648	0.1975	51	-0.47	148.99	0
148	Total Sulfur (13%)	0444	12.96	0.0000	13.19	0.5648	0.1975	51	-0.40	148.01	0
148	Total Sulfur (13%)	0508	12.96	0.0400	13.19	0.5648	0.1975	51	-0.40	148.99	0
148	Total Sulfur (13%)	0231	12.98	0.1600	13.19	0.5648	0.1975	51	-0.37	148.01	0
148	Total Sulfur (13%)	0494	12.98	0.0106	13.19	0.5648	0.1975	51	-0.36	148.07	0
148	Total Sulfur (13%)	0371	13.00	0.0100	13.19	0.5648	0.1975	51	-0.34	148.01	0
148	Total Sulfur (13%)	0029	13.00	0.0800	13.19	0.5648	0.1975	51	-0.33	148.00	0
148	Total Sulfur (13%)	0481	13.00	0.2000	13.19	0.5648	0.1975	51	-0.33	148.01	0
148	Total Sulfur (13%)	0073	13.02	0.4100	13.19	0.5648	0.1975	51	-0.31	148.01	0
148	Total Sulfur (13%)	0541	13.06	0.2100	13.19	0.5648	0.1975	51	-0.23	148.07	0
148	Total Sulfur (13%)	0500	13.09	0.0200	13.19	0.5648	0.1975	51	-0.17	148.01	0
148	Total Sulfur (13%)	0105	13.12	0.3300	13.19	0.5648	0.1975	51	-0.13	148.01	0
148	Total Sulfur (13%)	0037	13.18	0.0680	13.19	0.5648	0.1975	51	-0.01	148.07	0
148	Total Sulfur (13%)	0405	13.21	0.0000	13.19	0.5648	0.1975	51	0.04	148.01	0
148	Total Sulfur (13%)	0023	13.26	0.0960	13.19	0.5648	0.1975	51	0.12	148.07	0
148	Total Sulfur (13%)	0136	13.28	0.0600	13.19	0.5648	0.1975	51	0.16	148.00	0
148	Total Sulfur (13%)	0029	13.29	0.0200	13.19	0.5648	0.1975	51	0.18	148.01	0
148	Total Sulfur (13%)	0157	13.30	0.2000	13.19	0.5648	0.1975	51	0.20	148.00	0
148	Total Sulfur (13%)	0394	13.30	0.0000	13.19	0.5648	0.1975	51	0.20	148.04	0
148	Total Sulfur (13%)	0040	13.35	0.1000	13.19	0.5648	0.1975	51	0.29	148.01	0
148	Total Sulfur (13%)	0433	13.36	0.0300	13.19	0.5648	0.1975	51	0.30	148.99	0
148	Total Sulfur (13%)	0157	13.40	0.4000	13.19	0.5648	0.1975	51	0.38	148.01	0
148	Total Sulfur (13%)	0049	13.41	0.3600	13.19	0.5648	0.1975	51	0.39	148.00	0
148	Total Sulfur (13%)	0482	13.60	0.6000	13.19	0.5648	0.1975	51	0.73	148.99	0
148	Total Sulfur (13%)	0452	13.65	0.0200	13.19	0.5648	0.1975	51	0.82	148.99	0
148	Total Sulfur (13%)	0377	13.66	0.2400	13.19	0.5648	0.1975	51	0.84	148.99	0
148	Total Sulfur (13%)	0354	13.70	0.1430	13.19	0.5648	0.1975	51	0.91	148.99	0
148	Total Sulfur (13%)	0055	13.73	0.0500	13.19	0.5648	0.1975	51	0.95	148.01	0
148	Total Sulfur (13%)	0102	13.73	0.1336	13.19	0.5648	0.1975	51	0.97	148.07	0
148	Total Sulfur (13%)	0421	13.75	0.3000	13.19	0.5648	0.1975	51	1.00	148.07	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
148	Total Sulfur (13%)	0534	13.92	0.0600	13.19	0.5648	0.1975	51	1.30	148.01	0
148	Total Sulfur (13%)	0220	13.93	0.0500	13.19	0.5648	0.1975	51	1.31	148.99	0
148	Total Sulfur (13%)	0324	14.00	0.2000	13.19	0.5648	0.1975	51	1.44	148.01	0
148	Total Sulfur (13%)	0476	14.03	0.1287	13.19	0.5648	0.1975	51	1.49	148.01	0
148	Total Sulfur (13%)	0527	14.27	0.1780	13.19	0.5648	0.1975	51	1.91	148.07	0
148	Total Sulfur (13%)	0483	14.40	0.6000	13.19	0.5648	0.1975	51	2.15	148.07	0
148	Total Sulfur (13%)	0307	17.07	1.449	13.19	0.5648	0.1975	51	6.88	148.99	0
148	Total Sulfur (13%)	0515	11.23*	1.892	13.19	0.5648	0.1975	51	-3.46	148.07	1
148	Total Sulfur (13%)	0114	13.74	2.350	13.19	0.5648	0.1975	51	0.97	148.01	1
149	Sulfur - HNO3 soluble (%)	0423	12.80	0.1000	13.38	0.8676	0.1575	4	-0.67	149.04	0
149	Sulfur - HNO3 soluble (%)	0521	13.02	0.0000	13.38	0.8676	0.1575	4	-0.42	149.04	0
149	Sulfur - HNO3 soluble (%)	0519	13.03	0.2000	13.38	0.8676	0.1575	4	-0.40	149.04	0
149	Sulfur - HNO3 soluble (%)	0524	14.67	0.3300	13.38	0.8676	0.1575	4	1.49	149.04	0
151	Acid Soluble Arsenic (ppm)	0501	0.0150	0.0020	0.3254	0.4383	0.1645	6	-0.63	151.30	0
151	Acid Soluble Arsenic (ppm)	0394	0.0400	0.0000	0.3254	0.4383	0.1645	6	-0.58	151.30	0
151	Acid Soluble Arsenic (ppm)	0255	0.0900	0.0220	0.3254	0.4383	0.1645	6	-0.48	151.30	0
151	Acid Soluble Arsenic (ppm)	0519	0.2300	0.0600	0.3254	0.4383	0.1645	6	-0.19	151.99	0
151	Acid Soluble Arsenic (ppm)	0527	0.5945	0.0030	0.3254	0.4383	0.1645	6	0.55	151.33	0
151	Acid Soluble Arsenic (ppm)	0368	2.250	0.9000	0.3254	0.4383	0.1645	6	3.91	151.30	0
151	Acid Soluble Arsenic (ppm)	0541	2.885	2.230	0.3254	0.4383	0.1645	6	5.20	151.30	1
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	0.3254	0.4383	0.1645	6		151.34	4
151	Acid Soluble Arsenic (ppm)	0515	0.2015	0.4029	0.3254	0.4383	0.1645	6		151.33	4
165	Acid Soluble Boron (%)	0521	0.0010	0.0000	0.0023	0.0019	0.0007	3	-0.70	165.30	0
165	Acid Soluble Boron (%)	0527	0.0015	0.0010	0.0023	0.0019	0.0007	3	-0.44	165.99	0
165	Acid Soluble Boron (%)	0354	0.0045	0.0010	0.0023	0.0019	0.0007	3	1.14	165.30	0
165	Acid Soluble Boron (%)	0515	0.0000	0.0000	0.0023	0.0019	0.0007	3		165.99	4
181	Acid Soluble Cadmium (ppm)	0501	0.0035	0.0010	0.0259	0.0312	0.0062	6	-0.72	181.30	0
181	Acid Soluble Cadmium (ppm)	0527	0.0040	0.0000	0.0259	0.0312	0.0062	6	-0.70	181.33	0
181	Acid Soluble Cadmium (ppm)	0519	0.0100	0.0000	0.0259	0.0312	0.0062	6	-0.51	181.99	0
181	Acid Soluble Cadmium (ppm)	0524	0.0184	0.0130	0.0259	0.0312	0.0062	6	-0.24	181.30	0
181	Acid Soluble Cadmium (ppm)	0037	0.0495	0.0030	0.0259	0.0312	0.0062	6	0.76	181.00	0
181	Acid Soluble Cadmium (ppm)	0394	0.0700	0.0200	0.0259	0.0312	0.0062	6	1.41	181.30	0
181	Acid Soluble Cadmium (ppm)	0368	0.0000	0.0000	0.0259	0.0312	0.0062	6		181.30	4
181	Acid Soluble Cadmium (ppm)	0377	0.0000	0.0000	0.0259	0.0312	0.0062	6		181.30	4
181	Acid Soluble Cadmium (ppm)	0515	0.0000	0.0000	0.0259	0.0312	0.0062	6		181.34	4
181	Acid Soluble Cadmium (ppm)	0255	0.0120	0.0240	0.0259	0.0312	0.0062	6		181.30	4
181	Acid Soluble Cadmium (ppm)	0541	0.0230	0.0460	0.0259	0.0312	0.0062	6		181.30	4
181	Acid Soluble Cadmium (ppm)	0515	0.2018	0.4035	0.0259	0.0312	0.0062	6		181.33	4
191	Acid Soluble Chromium (ppm)	0501	0.0545	0.0050	0.7476	0.8232	0.2116	10	-0.84	191.30	0
191	Acid Soluble Chromium (ppm)	0037	0.1510	0.0120	0.7476	0.8232	0.2116	10	-0.72	191.33	0
191	Acid Soluble Chromium (ppm)	0368	0.3000	0.0000	0.7476	0.8232	0.2116	10	-0.54	191.30	0
191	Acid Soluble Chromium (ppm)	0220	0.3500	0.5000	0.7476	0.8232	0.2116	10	-0.48	191.99	0
191	Acid Soluble Chromium (ppm)	0394	0.3650	0.1100	0.7476	0.8232	0.2116	10	-0.46	191.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
191	Acid Soluble Chromium (ppm)	0541	0.4550	0.7100	0.7476	0.8232	0.2116	10	-0.36	191.30	0
191	Acid Soluble Chromium (ppm)	0519	0.5950	0.0700	0.7476	0.8232	0.2116	10	-0.19	191.99	0
191	Acid Soluble Chromium (ppm)	0476	1.241	0.1588	0.7476	0.8232	0.2116	10	0.60	191.99	0
191	Acid Soluble Chromium (ppm)	0527	3.628	0.1500	0.7476	0.8232	0.2116	10	3.50	191.33	0
191	Acid Soluble Chromium (ppm)	0035	3.650	0.4000	0.7476	0.8232	0.2116	10	3.53	191.30	0
191	Acid Soluble Chromium (ppm)	0377	0.0000	0.0000	0.7476	0.8232	0.2116	10		191.30	4
191	Acid Soluble Chromium (ppm)	0515	0.1617	0.3234	0.7476	0.8232	0.2116	10		191.34	4
191	Acid Soluble Chromium (ppm)	0515	2.357	4.714	0.7476	0.8232	0.2116	10		191.33	4
202	Acid Soluble Cobalt (ppm)	0377	0.2000	0.0000	0.3364	0.1879	0.0442	9	-0.67	202.30	0
202	Acid Soluble Cobalt (ppm)	0476	0.2025	0.0022	0.3364	0.1879	0.0442	9	-0.66	202.99	0
202	Acid Soluble Cobalt (ppm)	0255	0.2260	0.0920	0.3364	0.1879	0.0442	9	-0.54	202.99	0
202	Acid Soluble Cobalt (ppm)	0519	0.2400	0.0400	0.3364	0.1879	0.0442	9	-0.47	202.99	0
202	Acid Soluble Cobalt (ppm)	0501	0.2470	0.0200	0.3364	0.1879	0.0442	9	-0.44	202.34	0
202	Acid Soluble Cobalt (ppm)	0527	0.2575	0.0170	0.3364	0.1879	0.0442	9	-0.39	202.33	0
202	Acid Soluble Cobalt (ppm)	0524	0.4862	0.0023	0.3364	0.1879	0.0442	9	0.74	202.30	0
202	Acid Soluble Cobalt (ppm)	0368	0.5500	0.1000	0.3364	0.1879	0.0442	9	1.05	202.30	0
202	Acid Soluble Cobalt (ppm)	0035	0.6970	0.1240	0.3364	0.1879	0.0442	9	1.77	202.30	0
202	Acid Soluble Cobalt (ppm)	0515	0.0000	0.0000	0.3364	0.1879	0.0442	9		202.33	4
202	Acid Soluble Cobalt (ppm)	0515	0.0000	0.0000	0.3364	0.1879	0.0442	9		202.34	4
221	Acid Soluble Copper (%)	0521	0.0001	0.0000	0.0005	0.0005	0.0000	11	-0.84	221.32	0
221	Acid Soluble Copper (%)	0515	0.0002	0.0001	0.0005	0.0005	0.0000	11	-0.74	221.33	0
221	Acid Soluble Copper (%)	0043	0.0002	0.0000	0.0005	0.0005	0.0000	11	-0.64	221.00	0
221	Acid Soluble Copper (%)	0531	0.0003	0.0000	0.0005	0.0005	0.0000	11	-0.43	221.00	0
221	Acid Soluble Copper (%)	0394	0.0003	0.0000	0.0005	0.0005	0.0000	11	-0.43	221.32	0
221	Acid Soluble Copper (%)	0377	0.0004	0.0001	0.0005	0.0005	0.0000	11	-0.33	221.30	0
221	Acid Soluble Copper (%)	0527	0.0004	0.0001	0.0005	0.0005	0.0000	11	-0.33	221.33	0
221	Acid Soluble Copper (%)	0368	0.0004	0.0002	0.0005	0.0005	0.0000	11	-0.23	221.99	0
221	Acid Soluble Copper (%)	0255	0.0010	0.0000	0.0005	0.0005	0.0000	11	0.98	221.30	0
221	Acid Soluble Copper (%)	0354	0.0020	0.0000	0.0005	0.0005	0.0000	11	3.01	221.30	0
221	Acid Soluble Copper (%)	0519	0.0100	0.0000	0.0005	0.0005	0.0000	11	19.23	221.99	0
221	Acid Soluble Copper (%)	0541	0.0000	0.0000	0.0005	0.0005	0.0000	11		221.30	4
221	Acid Soluble Copper (%)	0515	0.0001	0.0002	0.0005	0.0005	0.0000	11		221.99	4
241	Acid Soluble Iron (%)	0524	0.0005	0.0000	0.0017	0.0013	0.0010	7	-0.86	241.99	0
241	Acid Soluble Iron (%)	0521	0.0006	0.0000	0.0017	0.0013	0.0010	7	-0.79	241.32	0
241	Acid Soluble Iron (%)	0354	0.0010	0.0000	0.0017	0.0013	0.0010	7	-0.51	241.30	0
241	Acid Soluble Iron (%)	0035	0.0016	0.0008	0.0017	0.0013	0.0010	7	-0.09	241.30	0
241	Acid Soluble Iron (%)	0531	0.0023	0.0001	0.0017	0.0013	0.0010	7	0.36	241.00	0
241	Acid Soluble Iron (%)	0494	0.0026	0.0004	0.0017	0.0013	0.0010	7	0.60	241.33	0
241	Acid Soluble Iron (%)	0515	0.0036	0.0056	0.0017	0.0013	0.0010	7	1.30	241.33	0
241	Acid Soluble Iron (%)	0105	0.0003	0.0005	0.0017	0.0013	0.0010	7		241.00	4
241	Acid Soluble Iron (%)	0515	0.0030	0.0060	0.0017	0.0013	0.0010	7		241.99	4
251	Acid Soluble Lead (ppm)	0501	0.0335	0.0030	0.1720	0.1368	0.0992	8	-0.93	251.30	0
251	Acid Soluble Lead (ppm)	0527	0.0360	0.0020	0.1720	0.1368	0.0992	8	-0.91	251.33	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
251	Acid Soluble Lead (ppm)	0255	0.0920	0.0460	0.1720	0.1368	0.0992	8	-0.54	251.30	0
251	Acid Soluble Lead (ppm)	0524	0.1724	0.0724	0.1720	0.1368	0.0992	8	0.00	251.30	0
251	Acid Soluble Lead (ppm)	0394	0.1750	0.0300	0.1720	0.1368	0.0992	8	0.02	251.30	0
251	Acid Soluble Lead (ppm)	0519	0.1950	0.0500	0.1720	0.1368	0.0992	8	0.15	251.99	0
251	Acid Soluble Lead (ppm)	0541	0.2950	0.3900	0.1720	0.1368	0.0992	8	0.82	251.30	0
251	Acid Soluble Lead (ppm)	0481	3.900	0.2000	0.1720	0.1368	0.0992	8	24.93	251.00	0
251	Acid Soluble Lead (ppm)	0515	0.0000	0.0000	0.1720	0.1368	0.0992	8		251.33	4
251	Acid Soluble Lead (ppm)	0515	0.0000	0.0000	0.1720	0.1368	0.0992	8		251.34	4
251	Acid Soluble Lead (ppm)	0368	0.4500	0.9000	0.1720	0.1368	0.0992	8		251.30	4
261	Acid Soluble Manganese (%)	0531	0.0006	0.0000	0.0016	0.0007	0.0001	10	-1.47	261.12	0
261	Acid Soluble Manganese (%)	0527	0.0010	0.0000	0.0016	0.0007	0.0001	10	-0.88	261.35	0
261	Acid Soluble Manganese (%)	0521	0.0012	0.0000	0.0016	0.0007	0.0001	10	-0.58	261.34	0
261	Acid Soluble Manganese (%)	0096	0.0014	0.0001	0.0016	0.0007	0.0001	10	-0.36	261.30	0
261	Acid Soluble Manganese (%)	0524	0.0015	0.0001	0.0016	0.0007	0.0001	10	-0.21	261.99	0
261	Acid Soluble Manganese (%)	0494	0.0016	0.0002	0.0016	0.0007	0.0001	10	0.01	261.35	0
261	Acid Soluble Manganese (%)	0035	0.0020	0.0002	0.0016	0.0007	0.0001	10	0.61	261.30	0
261	Acid Soluble Manganese (%)	0501	0.0020	0.0000	0.0016	0.0007	0.0001	10	0.61	261.99	0
261	Acid Soluble Manganese (%)	0105	0.0021	0.0000	0.0016	0.0007	0.0001	10	0.76	261.15	0
261	Acid Soluble Manganese (%)	0105	0.0027	0.0000	0.0016	0.0007	0.0001	10	1.65	261.12	0
261	Acid Soluble Manganese (%)	0354	0.0015	0.0010	0.0016	0.0007	0.0001	10	-0.13	261.30	1
261	Acid Soluble Manganese (%)	0515	0.0000	0.0000	0.0016	0.0007	0.0001	10		261.35	4
261	Acid Soluble Manganese (%)	0515	0.0000	0.0000	0.0016	0.0007	0.0001	10		261.99	4
281	Acid Soluble Mercury (ppm)	0527	0.0025	0.0010	0.0062	0.0038	0.0010	3	-0.98	281.30	0
281	Acid Soluble Mercury (ppm)	0394	0.0060	0.0020	0.0062	0.0038	0.0010	3	-0.04	281.30	0
281	Acid Soluble Mercury (ppm)	0519	0.0100	0.0000	0.0062	0.0038	0.0010	3	1.02	281.99	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	0.0062	0.0038	0.0010	3		281.30	4
281	Acid Soluble Mercury (ppm)	0541	0.3000	0.6000	0.0062	0.0038	0.0010	3		281.30	4
289	Acid Soluble Molybdenum (ppm)	0433	0.3360	0.0320	1.327	0.3498	0.0841	18	-2.83	289.30	0
289	Acid Soluble Molybdenum (ppm)	0368	0.8000	0.0000	1.327	0.3498	0.0841	18	-1.51	289.30	0
289	Acid Soluble Molybdenum (ppm)	0106	1.000	0.0000	1.327	0.3498	0.0841	18	-0.94	289.33	0
289	Acid Soluble Molybdenum (ppm)	0494	1.074	0.0776	1.327	0.3498	0.0841	18	-0.72	289.33	0
289	Acid Soluble Molybdenum (ppm)	0035	1.215	0.0700	1.327	0.3498	0.0841	18	-0.32	289.30	0
289	Acid Soluble Molybdenum (ppm)	0377	1.215	0.2500	1.327	0.3498	0.0841	18	-0.32	289.30	0
289	Acid Soluble Molybdenum (ppm)	0394	1.221	0.1700	1.327	0.3498	0.0841	18	-0.30	289.32	0
289	Acid Soluble Molybdenum (ppm)	0521	1.229	0.0000	1.327	0.3498	0.0841	18	-0.28	289.30	0
289	Acid Soluble Molybdenum (ppm)	0524	1.295	0.0191	1.327	0.3498	0.0841	18	-0.09	289.30	0
289	Acid Soluble Molybdenum (ppm)	0476	1.305	0.0338	1.327	0.3498	0.0841	18	-0.06	289.99	0
289	Acid Soluble Molybdenum (ppm)	0096	1.350	0.1000	1.327	0.3498	0.0841	18	0.07	289.30	0
289	Acid Soluble Molybdenum (ppm)	0527	1.364	0.0660	1.327	0.3498	0.0841	18	0.11	289.33	0
289	Acid Soluble Molybdenum (ppm)	0037	1.476	0.0710	1.327	0.3498	0.0841	18	0.42	289.33	0
289	Acid Soluble Molybdenum (ppm)	0501	1.488	0.0710	1.327	0.3498	0.0841	18	0.46	289.34	0
289	Acid Soluble Molybdenum (ppm)	0519	1.600	0.0400	1.327	0.3498	0.0841	18	0.78	289.30	0
289	Acid Soluble Molybdenum (ppm)	0220	1.750	0.1000	1.327	0.3498	0.0841	18	1.21	289.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
289	Acid Soluble Molybdenum (ppm)	0541	1.905	0.4100	1.327	0.3498	0.0841	18	1.65	289.30	0
289	Acid Soluble Molybdenum (ppm)	0255	2.779	0.0040	1.327	0.3498	0.0841	18	4.15	289.30	0
289	Acid Soluble Molybdenum (ppm)	0515	3.527	5.013	1.327	0.3498	0.0841	18	6.29	289.34	1
289	Acid Soluble Molybdenum (ppm)	0515	0.8985	1.797	1.327	0.3498	0.0841	18		289.33	4
291	Acid Soluble Nickel (ppm)	0521	0.0384	0.0000	0.5518	0.3414	0.1184	13	-1.50	291.30	0
291	Acid Soluble Nickel (ppm)	0377	0.2500	0.1000	0.5518	0.3414	0.1184	13	-0.88	291.30	0
291	Acid Soluble Nickel (ppm)	0476	0.2767	0.0129	0.5518	0.3414	0.1184	13	-0.81	291.99	0
291	Acid Soluble Nickel (ppm)	0501	0.3665	0.0450	0.5518	0.3414	0.1184	13	-0.54	291.34	0
291	Acid Soluble Nickel (ppm)	0527	0.4270	0.0060	0.5518	0.3414	0.1184	13	-0.37	291.33	0
291	Acid Soluble Nickel (ppm)	0220	0.4500	0.1000	0.5518	0.3414	0.1184	13	-0.30	291.99	0
291	Acid Soluble Nickel (ppm)	0394	0.5700	0.0600	0.5518	0.3414	0.1184	13	0.05	291.30	0
291	Acid Soluble Nickel (ppm)	0519	0.6000	0.0600	0.5518	0.3414	0.1184	13	0.14	291.99	0
291	Acid Soluble Nickel (ppm)	0524	0.6171	0.0219	0.5518	0.3414	0.1184	13	0.19	291.30	0
291	Acid Soluble Nickel (ppm)	0037	0.6635	0.0530	0.5518	0.3414	0.1184	13	0.33	291.33	0
291	Acid Soluble Nickel (ppm)	0541	0.7850	0.2300	0.5518	0.3414	0.1184	13	0.68	291.30	0
291	Acid Soluble Nickel (ppm)	0368	1.250	0.3000	0.5518	0.3414	0.1184	13	2.05	291.30	0
291	Acid Soluble Nickel (ppm)	0506	4.265	0.5500	0.5518	0.3414	0.1184	13	10.88	291.99	0
291	Acid Soluble Nickel (ppm)	0035	1.625	1.090	0.5518	0.3414	0.1184	13	3.14	291.30	1
291	Acid Soluble Nickel (ppm)	0515	0.0000	0.0000	0.5518	0.3414	0.1184	13		291.33	4
291	Acid Soluble Nickel (ppm)	0255	0.0015	0.0030	0.5518	0.3414	0.1184	13		291.99	4
291	Acid Soluble Nickel (ppm)	0515	0.1334	0.2668	0.5518	0.3414	0.1184	13		291.34	4
301	Acid Soluble Selenium (ppm)	0501	0.0075	0.0010	0.5745	0.6460	0.3434	7	-0.79	301.30	0
301	Acid Soluble Selenium (ppm)	0255	0.1585	0.0530	0.5745	0.6460	0.3434	7	-0.58	301.99	0
301	Acid Soluble Selenium (ppm)	0527	0.2675	0.0550	0.5745	0.6460	0.3434	7	-0.43	301.33	0
301	Acid Soluble Selenium (ppm)	0519	0.2700	0.0200	0.5745	0.6460	0.3434	7	-0.43	301.99	0
301	Acid Soluble Selenium (ppm)	0515	0.6315	0.1710	0.5745	0.6460	0.3434	7	0.08	301.34	0
301	Acid Soluble Selenium (ppm)	0515	1.143	1.644	0.5745	0.6460	0.3434	7	0.80	301.33	0
301	Acid Soluble Selenium (ppm)	0524	1.550	0.4600	0.5745	0.6460	0.3434	7	1.37	301.30	0
301	Acid Soluble Selenium (ppm)	0506	112.0	6.000	0.5745	0.6460	0.3434	7	155.95	301.99	2
301	Acid Soluble Selenium (ppm)	0368	0.0000	0.0000	0.5745	0.6460	0.3434	7		301.30	4
301	Acid Soluble Selenium (ppm)	0541	0.1500	0.3000	0.5745	0.6460	0.3434	7		301.30	4
311	Sodium (%)	0494	0.0025	0.0008	0.0074	0.0059	0.0067	4	-0.84	311.33	0
311	Sodium (%)	0521	0.0031	0.0000	0.0074	0.0059	0.0067	4	-0.73	311.32	0
311	Sodium (%)	0354	0.0090	0.0160	0.0074	0.0059	0.0067	4	0.27	311.99	0
311	Sodium (%)	0096	0.0150	0.0100	0.0074	0.0059	0.0067	4	1.30	311.99	0
321	Acid Soluble Zinc (%)	0494	0.0001	0.0000	0.0012	0.0014	0.0002	12	-0.80	321.33	0
321	Acid Soluble Zinc (%)	0501	0.0001	0.0000	0.0012	0.0014	0.0002	12	-0.80	321.99	0
321	Acid Soluble Zinc (%)	0515	0.0002	0.0001	0.0012	0.0014	0.0002	12	-0.77	321.33	0
321	Acid Soluble Zinc (%)	0521	0.0003	0.0000	0.0012	0.0014	0.0002	12	-0.66	321.32	0
321	Acid Soluble Zinc (%)	0105	0.0005	0.0007	0.0012	0.0014	0.0002	12	-0.55	321.00	0
321	Acid Soluble Zinc (%)	0394	0.0006	0.0000	0.0012	0.0014	0.0002	12	-0.44	321.32	0
321	Acid Soluble Zinc (%)	0220	0.0008	0.0001	0.0012	0.0014	0.0002	12	-0.33	321.99	0
321	Acid Soluble Zinc (%)	0527	0.0010	0.0000	0.0012	0.0014	0.0002	12	-0.14	321.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321	Acid Soluble Zinc (%)	0354	0.0020	0.0000	0.0012	0.0014	0.0002	12	0.59	321.30	0
321	Acid Soluble Zinc (%)	0531	0.0024	0.0002	0.0012	0.0014	0.0002	12	0.89	321.00	0
321	Acid Soluble Zinc (%)	0428	0.0033	0.0003	0.0012	0.0014	0.0002	12	1.51	321.00	0
321	Acid Soluble Zinc (%)	0043	0.0056	0.0005	0.0012	0.0014	0.0002	12	3.20	321.00	0
321	Acid Soluble Zinc (%)	0255	0.0000	0.0000	0.0012	0.0014	0.0002	12		321.30	4
321	Acid Soluble Zinc (%)	0377	0.0000	0.0000	0.0012	0.0014	0.0002	12		321.30	4
321	Acid Soluble Zinc (%)	0541	0.0000	0.0000	0.0012	0.0014	0.0002	12		321.32	4
321	Acid Soluble Zinc (%)	0515	0.0001	0.0002	0.0012	0.0014	0.0002	12		321.99	4
321	Acid Soluble Zinc (%)	0368	0.0008	0.0016	0.0012	0.0014	0.0002	12		321.99	4

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an astrich indicates that the value is lower than the Analyte value less the IA. Method or Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.