

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 150912

Grade 8-4-8

### Statistical Summary

# Analytes: 34

# Labs Reporting: 83

Issue Date : 10/31/2015

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
001	Ammoniacal Nitrogen (%)	17	17	7.070	0.7302	7.181		0.1368	0.0235	1.90%		0.0555	2.97%
003	Water Insoluble Nitrogen (%)	6	6	1.834	2.801	0.8123		0.1846	0.0533	22.73%		0.0385	4.13%
009	Ammoniacal Plus Nitrate Nitrogen (%)	1		7.425									
010	Total Nitrogen (8%)	64	60	8.116	0.2134	8.130	0.5526	0.1091	0.0100	1.34%	3.40%	0.0661	2.92%
020	Total Phosphorus as P2O5 (%)	38	36	4.825	0.2155	4.803		0.1402	0.0165	2.92%		0.0710	3.16%
030	Citrate Insoluble Phosphorus as P2O5 (%)	2	2	0.1350	0.0141								
040	Indirect Available Phosphorus as P2O5 (4%)	4	4	4.605	0.2943	4.605	0.6700	0.2943	0.1040	6.39%	7.27%	0.0600	3.18%
041	Direct Available Phosphorus as P2O5 (4%)	39	38	4.740	0.1880	4.743	0.6700	0.1664	0.0191	3.51%	7.06%	0.0772	3.16%
048	Water Soluble Phosphorus as P2O5 (%)	3	3	3.648	0.4840	3.648		0.4840	0.1976	13.27%		0.0500	3.29%
050	Soluble Potassium as K2O (8%)	78	76	8.088	0.4297	8.086	0.6043	0.2847	0.0231	3.52%	3.74%	0.1437	2.92%
060	Water (Free) (%)	4	4	1.621	0.7131	1.621		0.7131	0.2521	44.00%		0.0736	3.72%
101	Acid Soluble Calcium (%)	17	16	6.523	1.596	6.783		0.2227	0.0394	3.28%		0.1298	3.00%
121	Acid Soluble Magnesium (1.2%)	49	48	3.704	0.5387	3.720	0.3860	0.1944	0.0198	5.23%	5.19%	0.0866	3.28%
131	Water Soluble Magnesium (%)	10	9	1.286	0.4521	1.179		0.0984	0.0232	8.34%		0.0334	3.90%
143	Elemental Sulfur (%)	3	3	9.248	0.1329	9.248		0.1329	0.0542	1.44%		0.2633	2.86%
145	Sulfate Sulfur, HCl soluble (%)	5	5	8.904	0.2135	8.904		0.2135	0.0675	2.40%		0.1240	2.88%
146	Total Sulfur in Liquid (%)	1		9.735									
148	Total Sulfur (5.5%)	34	33	8.583	1.099	8.768	0.6384	0.5910	0.0728	6.74%	3.64%	0.1634	2.88%
151	Acid Soluble Arsenic (ppm)	12	11	2.405	0.9906	2.375		0.9406	0.2005	39.60%		0.3435	14.04%
165	Acid Soluble Boron (0.02%)	30	29	0.0213	0.0080	0.0200	0.0060	0.0047	0.0006	23.48%	15.00%	0.0013	7.21%
181	Acid Soluble Cadmium (ppm)	13	13	1.303	1.007	0.9628		0.3084	0.0605	32.03%		0.1506	16.09%
190	Water Soluble Chlorine (6%)	16	15	4.745	0.4528	4.710	0.4760	0.3070	0.0560	6.52%	5.05%	0.1031	3.17%
191	Acid Soluble Chromium (ppm)	15	14	134.6	26.48	141.9		12.02	2.272	8.48%		5.286	7.59%
202	Acid Soluble Cobalt (ppm)	13	13	11.99	3.371	12.06		3.662	0.7182	30.37%		1.340	11.00%
221	Acid Soluble Copper (0.05%)	47	46	0.0675	0.0155	0.0677	0.0118	0.0045	0.0005	6.66%	8.69%	0.0027	6.00%
241	Acid Soluble Iron (0.5%)	47	46	1.239	0.2456	1.272	0.1322	0.1865	0.0194	14.66%	5.20%	0.0546	3.86%
251	Acid Soluble Lead (ppm)	17	14	6.955	2.234	7.194		1.890	0.3572	26.27%		0.4706	11.89%
261	Acid Soluble Manganese (0.06%)	47	46	0.2174	0.0354	0.2231	0.0273	0.0151	0.0016	6.76%	6.12%	0.0075	5.01%
281	Acid Soluble Mercury (ppm)	3	2	0.2208	0.0025	0.2208		0.0025	0.0012	1.12%		0.0475	20.08%
289	Acid Soluble Molybdenum (5ppm)	17	16	10.00	4.346	10.85	4.2545	3.276	0.5791	30.20%	19.61%	0.5441	11.17%
291	Acid Soluble Nickel (ppm)	16	16	59.69	17.74	65.75		7.899	1.396	12.01%		2.362	8.52%

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
301	Acid Soluble Selenium (ppm)	4	1	0.3600		65.75		7.899	5.585	12.01%		0.0480	8.52%
311	Sodium (%)	10	10	0.1975	0.0366	0.1885		0.0221	0.0049	11.73%		0.0048	5.14%
321	Acid Soluble Zinc (0.05%)	54	53	0.1508	0.0203	0.1541	0.0204	0.0104	0.0010	6.75%	6.62%	0.0050	5.30%

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# Analytes: 34

Sample # 150912

Lab Values

# Labs Reporting: 83

Grade 8-4-8

Issue Date : 10/31/2015

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				
001	Ammoniacal Nitrogen (%)	0230	4.405	0.0700	7.181	0.1368	0.0555	17	-20.29	001.10	0
001	Ammoniacal Nitrogen (%)	0027	6.834	0.1630	7.181	0.1368	0.0555	17	-2.54	001.99	0
001	Ammoniacal Nitrogen (%)	0177	7.000	0.0009	7.181	0.1368	0.0555	17	-1.32	001.10	0
001	Ammoniacal Nitrogen (%)	0394	7.095	0.0500	7.181	0.1368	0.0555	17	-0.63	001.99	0
001	Ammoniacal Nitrogen (%)	0371	7.100	0.0200	7.181	0.1368	0.0555	17	-0.59	001.99	0
001	Ammoniacal Nitrogen (%)	0397	7.110	0.0400	7.181	0.1368	0.0555	17	-0.52	001.99	0
001	Ammoniacal Nitrogen (%)	0405	7.155	0.0300	7.181	0.1368	0.0555	17	-0.19	001.10	0
001	Ammoniacal Nitrogen (%)	0513	7.175	0.0300	7.181	0.1368	0.0555	17	-0.04	001.10	0
001	Ammoniacal Nitrogen (%)	0169	7.185	0.0300	7.181	0.1368	0.0555	17	0.03	001.10	0
001	Ammoniacal Nitrogen (%)	0498	7.200	0.0000	7.181	0.1368	0.0555	17	0.14	001.10	0
001	Ammoniacal Nitrogen (%)	0096	7.235	0.1100	7.181	0.1368	0.0555	17	0.40	001.99	0
001	Ammoniacal Nitrogen (%)	0220	7.240	0.1000	7.181	0.1368	0.0555	17	0.43	001.99	0
001	Ammoniacal Nitrogen (%)	0510	7.245	0.0100	7.181	0.1368	0.0555	17	0.47	001.99	0
001	Ammoniacal Nitrogen (%)	0487	7.280	0.0000	7.181	0.1368	0.0555	17	0.73	001.99	0
001	Ammoniacal Nitrogen (%)	0481	7.310	0.1000	7.181	0.1368	0.0555	17	0.95	001.10	0
001	Ammoniacal Nitrogen (%)	0486	7.700	0.0400	7.181	0.1368	0.0555	17	3.80	001.10	0
001	Ammoniacal Nitrogen (%)	0506	7.925	0.1500	7.181	0.1368	0.0555	17	5.44	001.99	0
003	Water Insoluble Nitrogen (%)	0220	0.2250	0.0700	0.8123	0.1846	0.0385	6	-3.18	003.10	0
003	Water Insoluble Nitrogen (%)	0230	0.7050	0.0100	0.8123	0.1846	0.0385	6	-0.58	003.10	0
003	Water Insoluble Nitrogen (%)	0029	0.7820	0.0120	0.8123	0.1846	0.0385	6	-0.16	003.10	0
003	Water Insoluble Nitrogen (%)	0027	0.8450	0.0100	0.8123	0.1846	0.0385	6	0.18	003.99	0
003	Water Insoluble Nitrogen (%)	0117	0.9145	0.0090	0.8123	0.1846	0.0385	6	0.55	003.10	0
003	Water Insoluble Nitrogen (%)	0230	7.530	0.1200	0.8123	0.1846	0.0385	6	36.38	003.99	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0309	7.425	0.4700			0.4700	1			0
010	Total Nitrogen (8%)	0518	7.020*	0.1000	8.130	0.1091	0.0661	60	-10.17	010.99	0
010	Total Nitrogen (8%)	0275	7.615	0.0500	8.130	0.1091	0.0661	60	-4.72	010.60	0
010	Total Nitrogen (8%)	0474	7.730	0.0000	8.130	0.1091	0.0661	60	-3.67	010.11	0
010	Total Nitrogen (8%)	0394	7.900	0.0000	8.130	0.1091	0.0661	60	-2.11	010.60	0
010	Total Nitrogen (8%)	0185	7.910	0.0000	8.130	0.1091	0.0661	60	-2.02	010.12	0
010	Total Nitrogen (8%)	0041	7.915	0.0700	8.130	0.1091	0.0661	60	-1.97	010.60	0
010	Total Nitrogen (8%)	0211	7.995	0.1100	8.130	0.1091	0.0661	60	-1.24	010.11	0
010	Total Nitrogen (8%)	0034	7.998	0.1540	8.130	0.1091	0.0661	60	-1.21	010.60	0
010	Total Nitrogen (8%)	0416	8.015	0.0700	8.130	0.1091	0.0661	60	-1.06	010.11	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				
010	Total Nitrogen (8%)	0377	8.025	0.1900	8.130	0.1091	0.0661	60	-0.96	010.60	0
010	Total Nitrogen (8%)	0025	8.030	0.0200	8.130	0.1091	0.0661	60	-0.92	010.60	0
010	Total Nitrogen (8%)	0234	8.030	0.0200	8.130	0.1091	0.0661	60	-0.92	010.60	0
010	Total Nitrogen (8%)	0023	8.042	0.0065	8.130	0.1091	0.0661	60	-0.81	010.60	0
010	Total Nitrogen (8%)	0007	8.050	0.1000	8.130	0.1091	0.0661	60	-0.74	010.60	0
010	Total Nitrogen (8%)	0351	8.057	0.0030	8.130	0.1091	0.0661	60	-0.67	010.60	0
010	Total Nitrogen (8%)	0481	8.060	0.1200	8.130	0.1091	0.0661	60	-0.64	010.12	0
010	Total Nitrogen (8%)	0102	8.065	0.0900	8.130	0.1091	0.0661	60	-0.60	010.60	0
010	Total Nitrogen (8%)	0402	8.078	0.0030	8.130	0.1091	0.0661	60	-0.48	010.60	0
010	Total Nitrogen (8%)	0043	8.080	0.0200	8.130	0.1091	0.0661	60	-0.46	010.60	0
010	Total Nitrogen (8%)	0231	8.080	0.0400	8.130	0.1091	0.0661	60	-0.46	010.60	0
010	Total Nitrogen (8%)	0220	8.090	0.1000	8.130	0.1091	0.0661	60	-0.37	010.17	0
010	Total Nitrogen (8%)	0105	8.095	0.0300	8.130	0.1091	0.0661	60	-0.32	010.11	0
010	Total Nitrogen (8%)	0105	8.100	0.0200	8.130	0.1091	0.0661	60	-0.28	010.60	0
010	Total Nitrogen (8%)	0371	8.100	0.0600	8.130	0.1091	0.0661	60	-0.28	010.11	0
010	Total Nitrogen (8%)	0096	8.105	0.0500	8.130	0.1091	0.0661	60	-0.23	010.60	0
010	Total Nitrogen (8%)	0162	8.105	0.0300	8.130	0.1091	0.0661	60	-0.23	010.60	0
010	Total Nitrogen (8%)	0090	8.110	0.0600	8.130	0.1091	0.0661	60	-0.19	010.11	0
010	Total Nitrogen (8%)	0487	8.120	0.0000	8.130	0.1091	0.0661	60	-0.09	010.99	0
010	Total Nitrogen (8%)	0405	8.120	0.0600	8.130	0.1091	0.0661	60	-0.09	010.60	0
010	Total Nitrogen (8%)	0452	8.125	0.0300	8.130	0.1091	0.0661	60	-0.05	010.60	0
010	Total Nitrogen (8%)	0324	8.135	0.0100	8.130	0.1091	0.0661	60	0.04	010.60	0
010	Total Nitrogen (8%)	0494	8.140	0.0800	8.130	0.1091	0.0661	60	0.09	010.60	0
010	Total Nitrogen (8%)	0073	8.145	0.0300	8.130	0.1091	0.0661	60	0.14	010.60	0
010	Total Nitrogen (8%)	0233	8.146	0.0100	8.130	0.1091	0.0661	60	0.14	010.60	0
010	Total Nitrogen (8%)	0040	8.150	0.1000	8.130	0.1091	0.0661	60	0.18	010.60	0
010	Total Nitrogen (8%)	0136	8.155	0.0300	8.130	0.1091	0.0661	60	0.23	010.60	0
010	Total Nitrogen (8%)	0472	8.159	0.0080	8.130	0.1091	0.0661	60	0.26	010.60	0
010	Total Nitrogen (8%)	0291	8.165	0.0100	8.130	0.1091	0.0661	60	0.32	010.60	0
010	Total Nitrogen (8%)	0307	8.170	0.1820	8.130	0.1091	0.0661	60	0.36	010.60	0
010	Total Nitrogen (8%)	0360	8.170	0.1400	8.130	0.1091	0.0661	60	0.36	010.60	0
010	Total Nitrogen (8%)	0451	8.176	0.2160	8.130	0.1091	0.0661	60	0.42	010.60	0
010	Total Nitrogen (8%)	0035	8.180	0.0800	8.130	0.1091	0.0661	60	0.46	010.60	0
010	Total Nitrogen (8%)	0049	8.195	0.0100	8.130	0.1091	0.0661	60	0.59	010.60	0
010	Total Nitrogen (8%)	0157	8.195	0.0500	8.130	0.1091	0.0661	60	0.59	010.60	0
010	Total Nitrogen (8%)	0292	8.195	0.0100	8.130	0.1091	0.0661	60	0.59	010.60	0
010	Total Nitrogen (8%)	0510	8.215	0.0100	8.130	0.1091	0.0661	60	0.78	010.11	0
010	Total Nitrogen (8%)	0513	8.215	0.0500	8.130	0.1091	0.0661	60	0.78	010.99	0
010	Total Nitrogen (8%)	0483	8.225	0.0500	8.130	0.1091	0.0661	60	0.87	010.60	0
010	Total Nitrogen (8%)	0354	8.227	0.0170	8.130	0.1091	0.0661	60	0.88	010.60	0
010	Total Nitrogen (8%)	0029	8.233	0.3510	8.130	0.1091	0.0661	60	0.94	010.60	0
010	Total Nitrogen (8%)	0230	8.235	0.1300	8.130	0.1091	0.0661	60	0.96	010.60	0
010	Total Nitrogen (8%)	0482	8.255	0.2500	8.130	0.1091	0.0661	60	1.14	010.60	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				
010	Total Nitrogen (8%)	0055	8.260	0.0600	8.130	0.1091	0.0661	60	1.19	010.60	0
010	Total Nitrogen (8%)	0177	8.263	0.0080	8.130	0.1091	0.0661	60	1.22	010.60	0
010	Total Nitrogen (8%)	0406	8.265	0.0100	8.130	0.1091	0.0661	60	1.23	010.60	0
010	Total Nitrogen (8%)	0042	8.300	0.0000	8.130	0.1091	0.0661	60	1.56	010.60	0
010	Total Nitrogen (8%)	0506	8.430	0.1400	8.130	0.1091	0.0661	60	2.75	010.99	0
010	Total Nitrogen (8%)	0389	8.455	0.0900	8.130	0.1091	0.0661	60	2.98	010.60	0
010	Total Nitrogen (8%)	0309	8.475	0.2100	8.130	0.1091	0.0661	60	3.16	010.11	0
010	Total Nitrogen (8%)	0260	8.660	0.0200	8.130	0.1091	0.0661	60	4.85	010.60	0
010	Total Nitrogen (8%)	0356	8.120	0.4000	8.130	0.1091	0.0661	60	-0.09	010.60	1
010	Total Nitrogen (8%)	0095	8.235	0.4100	8.130	0.1091	0.0661	60	0.96	010.60	1
010	Total Nitrogen (8%)	0325	8.240	0.4200	8.130	0.1091	0.0661	60	1.01	010.60	1
010	Total Nitrogen (8%)	0516	2.355*	0.1100	8.130	0.1091	0.0661	60	-52.92	010.60	2
020	Total Phosphorus as P2O5 (%)	0406	4.495	0.1500	4.803	0.1402	0.0710	36	-2.20	020.20	0
020	Total Phosphorus as P2O5 (%)	0515	4.501	0.0630	4.803	0.1402	0.0710	36	-2.16	020.99	0
020	Total Phosphorus as P2O5 (%)	0428	4.553	0.1072	4.803	0.1402	0.0710	36	-1.79	020.20	0
020	Total Phosphorus as P2O5 (%)	0487	4.600	0.0000	4.803	0.1402	0.0710	36	-1.45	020.99	0
020	Total Phosphorus as P2O5 (%)	0416	4.635	0.0100	4.803	0.1402	0.0710	36	-1.20	020.20	0
020	Total Phosphorus as P2O5 (%)	0292	4.650	0.0000	4.803	0.1402	0.0710	36	-1.09	020.20	0
020	Total Phosphorus as P2O5 (%)	0481	4.665	0.1100	4.803	0.1402	0.0710	36	-0.98	020.20	0
020	Total Phosphorus as P2O5 (%)	0405	4.710	0.0200	4.803	0.1402	0.0710	36	-0.66	020.20	0
020	Total Phosphorus as P2O5 (%)	0510	4.715	0.0100	4.803	0.1402	0.0710	36	-0.63	020.20	0
020	Total Phosphorus as P2O5 (%)	0157	4.730	0.0200	4.803	0.1402	0.0710	36	-0.52	020.10	0
020	Total Phosphorus as P2O5 (%)	0177	4.731	0.0203	4.803	0.1402	0.0710	36	-0.51	020.20	0
020	Total Phosphorus as P2O5 (%)	0211	4.735	0.0100	4.803	0.1402	0.0710	36	-0.48	020.10	0
020	Total Phosphorus as P2O5 (%)	0472	4.735	0.0100	4.803	0.1402	0.0710	36	-0.48	020.50	0
020	Total Phosphorus as P2O5 (%)	0322	4.751	0.0010	4.803	0.1402	0.0710	36	-0.37	020.10	0
020	Total Phosphorus as P2O5 (%)	0096	4.755	0.1500	4.803	0.1402	0.0710	36	-0.34	020.40	0
020	Total Phosphorus as P2O5 (%)	0169	4.760	0.0400	4.803	0.1402	0.0710	36	-0.31	020.20	0
020	Total Phosphorus as P2O5 (%)	0371	4.765	0.0500	4.803	0.1402	0.0710	36	-0.27	020.20	0
020	Total Phosphorus as P2O5 (%)	0090	4.805	0.0500	4.803	0.1402	0.0710	36	0.01	020.10	0
020	Total Phosphorus as P2O5 (%)	0324	4.810	0.0000	4.803	0.1402	0.0710	36	0.05	020.20	0
020	Total Phosphorus as P2O5 (%)	0234	4.815	0.2700	4.803	0.1402	0.0710	36	0.09	020.50	0
020	Total Phosphorus as P2O5 (%)	0482	4.820	0.2600	4.803	0.1402	0.0710	36	0.12	020.50	0
020	Total Phosphorus as P2O5 (%)	0402	4.834	0.0440	4.803	0.1402	0.0710	36	0.22	020.50	0
020	Total Phosphorus as P2O5 (%)	0231	4.835	0.0100	4.803	0.1402	0.0710	36	0.23	020.20	0
020	Total Phosphorus as P2O5 (%)	0307	4.846	0.0520	4.803	0.1402	0.0710	36	0.31	020.50	0
020	Total Phosphorus as P2O5 (%)	0105	4.880	0.0600	4.803	0.1402	0.0710	36	0.55	020.10	0
020	Total Phosphorus as P2O5 (%)	0105	4.885	0.0700	4.803	0.1402	0.0710	36	0.59	020.40	0
020	Total Phosphorus as P2O5 (%)	0389	4.890	0.0600	4.803	0.1402	0.0710	36	0.62	020.50	0
020	Total Phosphorus as P2O5 (%)	0457	4.925	0.0500	4.803	0.1402	0.0710	36	0.87	020.20	0
020	Total Phosphorus as P2O5 (%)	0394	4.930	0.0000	4.803	0.1402	0.0710	36	0.91	020.20	0
020	Total Phosphorus as P2O5 (%)	0474	4.935	0.0700	4.803	0.1402	0.0710	36	0.94	020.20	0
020	Total Phosphorus as P2O5 (%)	0157	4.945	0.1100	4.803	0.1402	0.0710	36	1.01	020.50	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				
020	Total Phosphorus as P2O5 (%)	0506	4.955	0.1100	4.803	0.1402	0.0710	36	1.08	020.20	0
020	Total Phosphorus as P2O5 (%)	0516	5.100	0.0400	4.803	0.1402	0.0710	36	2.12	020.20	0
020	Total Phosphorus as P2O5 (%)	0260	5.145	0.2700	4.803	0.1402	0.0710	36	2.44	020.50	0
020	Total Phosphorus as P2O5 (%)	0451	5.175	0.0300	4.803	0.1402	0.0710	36	2.65	020.50	0
020	Total Phosphorus as P2O5 (%)	0483	5.685	0.2300	4.803	0.1402	0.0710	36	6.29	020.50	0
020	Total Phosphorus as P2O5 (%)	0035	4.090	0.9400	4.803	0.1402	0.0710	36	-5.09	020.40	1
020	Total Phosphorus as P2O5 (%)	0309	4.635	0.6300	4.803	0.1402	0.0710	36	-1.20	020.20	1
030	Citrate Insoluble Phosphorus as P2O5 (%)	0405	0.1250	0.0100	0.1350	0.0141	0.0300	2	-0.71	030.20	0
030	Citrate Insoluble Phosphorus as P2O5 (%)	0096	0.1450	0.0500	0.1350	0.0141	0.0300	2	0.71	030.40	0
040	Indirect Available Phosphorus as P2O5 (4%)	0498	4.250	0.1000	4.605	0.2943	0.0600	4	-1.21	040.20	0
040	Indirect Available Phosphorus as P2O5 (4%)	0405	4.585	0.0300	4.605	0.2943	0.0600	4	-0.07	040.20	0
040	Indirect Available Phosphorus as P2O5 (4%)	0096	4.615	0.0900	4.605	0.2943	0.0600	4	0.03	040.40	0
040	Indirect Available Phosphorus as P2O5 (4%)	0513	4.970	0.0200	4.605	0.2943	0.0600	4	1.24	040.20	0
041	Direct Available Phosphorus as P2O5 (4%)	0027	4.335	0.0700	4.743	0.1664	0.0772	38	-2.45	041.20	0
041	Direct Available Phosphorus as P2O5 (4%)	0325	4.345	0.0100	4.743	0.1664	0.0772	38	-2.39	041.50	0
041	Direct Available Phosphorus as P2O5 (4%)	0397	4.345	0.1700	4.743	0.1664	0.0772	38	-2.39	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0034	4.537	0.1524	4.743	0.1664	0.0772	38	-1.24	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0007	4.550	0.3000	4.743	0.1664	0.0772	38	-1.16	041.50	0
041	Direct Available Phosphorus as P2O5 (4%)	0055	4.585	0.1900	4.743	0.1664	0.0772	38	-0.95	041.21	0
041	Direct Available Phosphorus as P2O5 (4%)	0472	4.595	0.0500	4.743	0.1664	0.0772	38	-0.89	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0102	4.600	0.0000	4.743	0.1664	0.0772	38	-0.86	041.10	0
041	Direct Available Phosphorus as P2O5 (4%)	0493	4.625	0.0500	4.743	0.1664	0.0772	38	-0.71	041.10	0
041	Direct Available Phosphorus as P2O5 (4%)	0043	4.635	0.0500	4.743	0.1664	0.0772	38	-0.65	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0040	4.650	0.1000	4.743	0.1664	0.0772	38	-0.56	041.10	0
041	Direct Available Phosphorus as P2O5 (4%)	0485	4.670	0.0200	4.743	0.1664	0.0772	38	-0.44	041.11	0
041	Direct Available Phosphorus as P2O5 (4%)	0049	4.690	0.0200	4.743	0.1664	0.0772	38	-0.32	041.10	0
041	Direct Available Phosphorus as P2O5 (4%)	0043	4.690	0.1000	4.743	0.1664	0.0772	38	-0.32	041.50	0
041	Direct Available Phosphorus as P2O5 (4%)	0478	4.695	0.0300	4.743	0.1664	0.0772	38	-0.29	041.51	0
041	Direct Available Phosphorus as P2O5 (4%)	0029	4.715	0.0700	4.743	0.1664	0.0772	38	-0.17	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0041	4.720	0.0000	4.743	0.1664	0.0772	38	-0.14	041.10	0
041	Direct Available Phosphorus as P2O5 (4%)	0136	4.720	0.0400	4.743	0.1664	0.0772	38	-0.14	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0105	4.735	0.0300	4.743	0.1664	0.0772	38	-0.05	041.99	0
041	Direct Available Phosphorus as P2O5 (4%)	0377	4.735	0.0900	4.743	0.1664	0.0772	38	-0.05	041.51	0
041	Direct Available Phosphorus as P2O5 (4%)	0185	4.740	0.0400	4.743	0.1664	0.0772	38	-0.02	041.11	0
041	Direct Available Phosphorus as P2O5 (4%)	0220	4.740	0.0400	4.743	0.1664	0.0772	38	-0.02	041.31	0
041	Direct Available Phosphorus as P2O5 (4%)	0095	4.740	0.1000	4.743	0.1664	0.0772	38	-0.02	041.40	0
041	Direct Available Phosphorus as P2O5 (4%)	0233	4.753	0.1070	4.743	0.1664	0.0772	38	0.06	041.51	0
041	Direct Available Phosphorus as P2O5 (4%)	0105	4.765	0.0900	4.743	0.1664	0.0772	38	0.13	041.11	0
041	Direct Available Phosphorus as P2O5 (4%)	0025	4.794	0.0730	4.743	0.1664	0.0772	38	0.30	041.50	0
041	Direct Available Phosphorus as P2O5 (4%)	0055	4.800	0.0600	4.743	0.1664	0.0772	38	0.34	041.11	0
041	Direct Available Phosphorus as P2O5 (4%)	0105	4.815	0.2900	4.743	0.1664	0.0772	38	0.43	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0513	4.875	0.0700	4.743	0.1664	0.0772	38	0.79	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0354	4.885	0.2510	4.743	0.1664	0.0772	38	0.85	041.60	0

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041	Direct Available Phosphorus as P2O5 (4%)	0117	4.910	0.0800	4.743	0.1664	0.0772	38	1.00	041.11	0
041	Direct Available Phosphorus as P2O5 (4%)	0506	4.950	0.1000	4.743	0.1664	0.0772	38	1.24	041.99	0
041	Direct Available Phosphorus as P2O5 (4%)	0360	4.995	0.0100	4.743	0.1664	0.0772	38	1.52	041.51	0
041	Direct Available Phosphorus as P2O5 (4%)	0023	5.000	0.0000	4.743	0.1664	0.0772	38	1.55	041.51	0
041	Direct Available Phosphorus as P2O5 (4%)	0231	5.005	0.0500	4.743	0.1664	0.0772	38	1.58	041.60	0
041	Direct Available Phosphorus as P2O5 (4%)	0131	5.015	0.0100	4.743	0.1664	0.0772	38	1.64	041.51	0
041	Direct Available Phosphorus as P2O5 (4%)	0291	5.055	0.0100	4.743	0.1664	0.0772	38	1.88	041.50	0
041	Direct Available Phosphorus as P2O5 (4%)	0452	5.115	0.0100	4.743	0.1664	0.0772	38	2.24	041.50	0
041	Direct Available Phosphorus as P2O5 (4%)	0230	4.050*	0.3600	4.743	0.1664	0.0772	38	-4.16	041.99	1
048	Water Soluble Phosphorus as P2O5 (%)	0405	3.295	0.0500	3.648	0.4840	0.0500	3	-0.73	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0096	3.450	0.1000	3.648	0.4840	0.0500	3	-0.41	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0518	4.200	0.0000	3.648	0.4840	0.0500	3	1.14	048.99	0
050	Soluble Potassium as K2O (8%)	0516	5.860*	0.2200	8.086	0.2847	0.1437	76	-7.82	050.30	0
050	Soluble Potassium as K2O (8%)	0518	7.265*	0.0300	8.086	0.2847	0.1437	76	-2.88	050.99	0
050	Soluble Potassium as K2O (8%)	0428	7.533	0.0436	8.086	0.2847	0.1437	76	-1.94	050.30	0
050	Soluble Potassium as K2O (8%)	0485	7.550	0.4400	8.086	0.2847	0.1437	76	-1.88	050.52	0
050	Soluble Potassium as K2O (8%)	0481	7.670	0.1000	8.086	0.2847	0.1437	76	-1.46	050.99	0
050	Soluble Potassium as K2O (8%)	0506	7.695	0.1500	8.086	0.2847	0.1437	76	-1.37	050.99	0
050	Soluble Potassium as K2O (8%)	0025	7.713	0.3750	8.086	0.2847	0.1437	76	-1.31	050.52	0
050	Soluble Potassium as K2O (8%)	0096	7.730	0.0800	8.086	0.2847	0.1437	76	-1.25	050.99	0
050	Soluble Potassium as K2O (8%)	0457	7.735	0.0700	8.086	0.2847	0.1437	76	-1.23	050.99	0
050	Soluble Potassium as K2O (8%)	0007	7.750	0.5000	8.086	0.2847	0.1437	76	-1.18	050.51	0
050	Soluble Potassium as K2O (8%)	0185	7.760	0.0600	8.086	0.2847	0.1437	76	-1.15	050.32	0
050	Soluble Potassium as K2O (8%)	0035	7.760	0.2800	8.086	0.2847	0.1437	76	-1.15	050.61	0
050	Soluble Potassium as K2O (8%)	0055	7.795	0.0500	8.086	0.2847	0.1437	76	-1.02	050.50	0
050	Soluble Potassium as K2O (8%)	0105	7.795	0.2300	8.086	0.2847	0.1437	76	-1.02	050.62	0
050	Soluble Potassium as K2O (8%)	0260	7.835	0.6500	8.086	0.2847	0.1437	76	-0.88	050.99	0
050	Soluble Potassium as K2O (8%)	0157	7.850	0.0800	8.086	0.2847	0.1437	76	-0.83	050.50	0
050	Soluble Potassium as K2O (8%)	0415	7.878	0.0320	8.086	0.2847	0.1437	76	-0.73	050.60	0
050	Soluble Potassium as K2O (8%)	0105	7.880	0.0200	8.086	0.2847	0.1437	76	-0.72	050.60	0
050	Soluble Potassium as K2O (8%)	0095	7.885	0.1300	8.086	0.2847	0.1437	76	-0.71	050.62	0
050	Soluble Potassium as K2O (8%)	0040	7.900	0.0000	8.086	0.2847	0.1437	76	-0.65	050.30	0
050	Soluble Potassium as K2O (8%)	0275	7.955	0.0700	8.086	0.2847	0.1437	76	-0.46	050.99	0
050	Soluble Potassium as K2O (8%)	0478	7.965	0.0700	8.086	0.2847	0.1437	76	-0.43	050.52	0
050	Soluble Potassium as K2O (8%)	0354	7.980	0.0190	8.086	0.2847	0.1437	76	-0.37	050.52	0
050	Soluble Potassium as K2O (8%)	0405	7.980	0.0200	8.086	0.2847	0.1437	76	-0.37	050.00	0
050	Soluble Potassium as K2O (8%)	0105	7.985	0.0700	8.086	0.2847	0.1437	76	-0.36	050.99	0
050	Soluble Potassium as K2O (8%)	0157	7.995	0.2300	8.086	0.2847	0.1437	76	-0.32	050.30	0
050	Soluble Potassium as K2O (8%)	0029	8.000	0.0000	8.086	0.2847	0.1437	76	-0.30	050.62	0
050	Soluble Potassium as K2O (8%)	0042	8.000	0.0000	8.086	0.2847	0.1437	76	-0.30	050.99	0
050	Soluble Potassium as K2O (8%)	0114	8.010	0.0000	8.086	0.2847	0.1437	76	-0.27	050.00	0
050	Soluble Potassium as K2O (8%)	0220	8.015	0.0300	8.086	0.2847	0.1437	76	-0.25	050.00	0
050	Soluble Potassium as K2O (8%)	0322	8.016	0.0360	8.086	0.2847	0.1437	76	-0.25	050.10	0

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050	Soluble Potassium as K2O (8%)	0090	8.040	0.0200	8.086	0.2847	0.1437	76	-0.16	050.00	0
050	Soluble Potassium as K2O (8%)	0510	8.045	0.2700	8.086	0.2847	0.1437	76	-0.14	050.60	0
050	Soluble Potassium as K2O (8%)	0402	8.053	0.0400	8.086	0.2847	0.1437	76	-0.12	050.50	0
050	Soluble Potassium as K2O (8%)	0309	8.055	0.1500	8.086	0.2847	0.1437	76	-0.11	050.60	0
050	Soluble Potassium as K2O (8%)	0231	8.060	0.0000	8.086	0.2847	0.1437	76	-0.09	050.00	0
050	Soluble Potassium as K2O (8%)	0177	8.070	0.0599	8.086	0.2847	0.1437	76	-0.06	050.99	0
050	Soluble Potassium as K2O (8%)	0049	8.070	0.2600	8.086	0.2847	0.1437	76	-0.06	050.00	0
050	Soluble Potassium as K2O (8%)	0325	8.080	0.1200	8.086	0.2847	0.1437	76	-0.02	050.99	0
050	Soluble Potassium as K2O (8%)	0394	8.080	0.0600	8.086	0.2847	0.1437	76	-0.02	050.99	0
050	Soluble Potassium as K2O (8%)	0292	8.090	0.0600	8.086	0.2847	0.1437	76	0.01	050.50	0
050	Soluble Potassium as K2O (8%)	0136	8.095	0.0100	8.086	0.2847	0.1437	76	0.03	050.30	0
050	Soluble Potassium as K2O (8%)	0356	8.095	0.0300	8.086	0.2847	0.1437	76	0.03	050.30	0
050	Soluble Potassium as K2O (8%)	0482	8.100	0.1800	8.086	0.2847	0.1437	76	0.05	050.99	0
050	Soluble Potassium as K2O (8%)	0486	8.105	0.3300	8.086	0.2847	0.1437	76	0.07	050.52	0
050	Soluble Potassium as K2O (8%)	0416	8.115	0.0300	8.086	0.2847	0.1437	76	0.10	050.00	0
050	Soluble Potassium as K2O (8%)	0360	8.125	0.0300	8.086	0.2847	0.1437	76	0.14	050.52	0
050	Soluble Potassium as K2O (8%)	0041	8.145	0.3500	8.086	0.2847	0.1437	76	0.21	050.60	0
050	Soluble Potassium as K2O (8%)	0377	8.165	0.0300	8.086	0.2847	0.1437	76	0.28	050.52	0
050	Soluble Potassium as K2O (8%)	0233	8.167	0.1270	8.086	0.2847	0.1437	76	0.28	050.52	0
050	Soluble Potassium as K2O (8%)	0034	8.176	0.0126	8.086	0.2847	0.1437	76	0.31	050.62	0
050	Soluble Potassium as K2O (8%)	0211	8.190	0.0200	8.086	0.2847	0.1437	76	0.37	050.00	0
050	Soluble Potassium as K2O (8%)	0131	8.195	0.0700	8.086	0.2847	0.1437	76	0.38	050.52	0
050	Soluble Potassium as K2O (8%)	0389	8.195	0.0500	8.086	0.2847	0.1437	76	0.38	050.99	0
050	Soluble Potassium as K2O (8%)	0494	8.210	0.1400	8.086	0.2847	0.1437	76	0.44	050.00	0
050	Soluble Potassium as K2O (8%)	0027	8.232	0.0630	8.086	0.2847	0.1437	76	0.51	050.99	0
050	Soluble Potassium as K2O (8%)	0487	8.250	0.3000	8.086	0.2847	0.1437	76	0.58	050.99	0
050	Soluble Potassium as K2O (8%)	0043	8.320	0.0400	8.086	0.2847	0.1437	76	0.82	050.99	0
050	Soluble Potassium as K2O (8%)	0043	8.325	0.1100	8.086	0.2847	0.1437	76	0.84	050.51	0
050	Soluble Potassium as K2O (8%)	0513	8.325	0.0700	8.086	0.2847	0.1437	76	0.84	050.61	0
050	Soluble Potassium as K2O (8%)	0055	8.335	0.0300	8.086	0.2847	0.1437	76	0.87	050.00	0
050	Soluble Potassium as K2O (8%)	0234	8.340	0.1600	8.086	0.2847	0.1437	76	0.89	050.99	0
050	Soluble Potassium as K2O (8%)	0169	8.375	0.0500	8.086	0.2847	0.1437	76	1.01	050.60	0
050	Soluble Potassium as K2O (8%)	0498	8.400	0.4000	8.086	0.2847	0.1437	76	1.10	050.31	0
050	Soluble Potassium as K2O (8%)	0102	8.450	0.3000	8.086	0.2847	0.1437	76	1.28	050.00	0
050	Soluble Potassium as K2O (8%)	0324	8.460	0.1200	8.086	0.2847	0.1437	76	1.31	050.50	0
050	Soluble Potassium as K2O (8%)	0452	8.475	0.0100	8.086	0.2847	0.1437	76	1.37	050.51	0
050	Soluble Potassium as K2O (8%)	0023	8.520	0.0600	8.086	0.2847	0.1437	76	1.52	050.52	0
050	Soluble Potassium as K2O (8%)	0307	8.584	0.6250	8.086	0.2847	0.1437	76	1.75	050.99	0
050	Soluble Potassium as K2O (8%)	0483	8.585	0.5900	8.086	0.2847	0.1437	76	1.75	050.51	0
050	Soluble Potassium as K2O (8%)	0291	8.590	0.0200	8.086	0.2847	0.1437	76	1.77	050.51	0
050	Soluble Potassium as K2O (8%)	0451	8.650	0.0200	8.086	0.2847	0.1437	76	1.98	050.99	0
050	Soluble Potassium as K2O (8%)	0230	8.730	0.6200	8.086	0.2847	0.1437	76	2.26	050.00	0
050	Soluble Potassium as K2O (8%)	0117	8.850	0.3200	8.086	0.2847	0.1437	76	2.68	050.10	0



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050	Soluble Potassium as K2O (8%)	0474	8.980	0.1800	8.086	0.2847	0.1437	76	3.14	050.99	0
050	Soluble Potassium as K2O (8%)	0300	9.480	0.3000	8.086	0.2847	0.1437	76	4.90	050.99	0
050	Soluble Potassium as K2O (8%)	0406	7.735	0.9300	8.086	0.2847	0.1437	76	-1.23	050.50	1
050	Soluble Potassium as K2O (8%)	0472	8.775	0.9500	8.086	0.2847	0.1437	76	2.42	050.31	1
060	Water (Free) (%)	0510	1.105	0.0300	1.621	0.7131	0.0736	4	-0.72	060.99	0
060	Water (Free) (%)	0007	1.165	0.0300	1.621	0.7131	0.0736	4	-0.64	060.00	0
060	Water (Free) (%)	0416	1.568	0.0444	1.621	0.7131	0.0736	4	-0.07	060.00	0
060	Water (Free) (%)	0096	2.645	0.1900	1.621	0.7131	0.0736	4	1.44	060.00	0
101	Acid Soluble Calcium (%)	0035	0.7900	0.0060	6.783	0.2227	0.1298	16	-26.90	101.30	0
101	Acid Soluble Calcium (%)	0457	6.453	0.0090	6.783	0.2227	0.1298	16	-1.48	101.00	0
101	Acid Soluble Calcium (%)	0389	6.580	0.1600	6.783	0.2227	0.1298	16	-0.91	101.99	0
101	Acid Soluble Calcium (%)	0354	6.622	0.2040	6.783	0.2227	0.1298	16	-0.72	101.30	0
101	Acid Soluble Calcium (%)	0041	6.680	0.0000	6.783	0.2227	0.1298	16	-0.46	101.30	0
101	Acid Soluble Calcium (%)	0102	6.729	0.0260	6.783	0.2227	0.1298	16	-0.24	101.30	0
101	Acid Soluble Calcium (%)	0482	6.730	0.2800	6.783	0.2227	0.1298	16	-0.24	101.30	0
101	Acid Soluble Calcium (%)	0307	6.739	0.0160	6.783	0.2227	0.1298	16	-0.20	101.30	0
101	Acid Soluble Calcium (%)	0049	6.780	0.0800	6.783	0.2227	0.1298	16	-0.01	101.30	0
101	Acid Soluble Calcium (%)	0474	6.790	0.1200	6.783	0.2227	0.1298	16	0.03	101.30	0
101	Acid Soluble Calcium (%)	0105	6.879	0.1920	6.783	0.2227	0.1298	16	0.43	101.03	0
101	Acid Soluble Calcium (%)	0472	6.885	0.1100	6.783	0.2227	0.1298	16	0.46	101.30	0
101	Acid Soluble Calcium (%)	0478	7.034	0.0293	6.783	0.2227	0.1298	16	1.13	101.32	0
101	Acid Soluble Calcium (%)	0096	7.040	0.5400	6.783	0.2227	0.1298	16	1.15	101.30	0
101	Acid Soluble Calcium (%)	0105	7.165	0.0740	6.783	0.2227	0.1298	16	1.72	101.00	0
101	Acid Soluble Calcium (%)	0483	8.475	0.2300	6.783	0.2227	0.1298	16	7.60	101.30	0
101	Acid Soluble Calcium (%)	0494	6.778	0.7687	6.783	0.2227	0.1298	16	-0.02	101.33	1
121	Acid Soluble Magnesium (1.2%)	0035	1.080*	0.0400	3.720	0.1944	0.0866	48	-13.58	121.30	0
121	Acid Soluble Magnesium (1.2%)	0474	2.740*	0.0000	3.720	0.1944	0.0866	48	-5.04	121.30	0
121	Acid Soluble Magnesium (1.2%)	0394	3.300*	0.2000	3.720	0.1944	0.0866	48	-2.16	121.32	0
121	Acid Soluble Magnesium (1.2%)	0506	3.325*	0.1700	3.720	0.1944	0.0866	48	-2.03	121.99	0
121	Acid Soluble Magnesium (1.2%)	0515	3.369	0.1054	3.720	0.1944	0.0866	48	-1.80	121.33	0
121	Acid Soluble Magnesium (1.2%)	0498	3.400	0.2000	3.720	0.1944	0.0866	48	-1.64	121.00	0
121	Acid Soluble Magnesium (1.2%)	0117	3.425	0.1100	3.720	0.1944	0.0866	48	-1.52	121.33	0
121	Acid Soluble Magnesium (1.2%)	0029	3.442	0.0710	3.720	0.1944	0.0866	48	-1.43	121.00	0
121	Acid Soluble Magnesium (1.2%)	0230	3.450	0.0800	3.720	0.1944	0.0866	48	-1.39	121.30	0
121	Acid Soluble Magnesium (1.2%)	0354	3.518	0.1190	3.720	0.1944	0.0866	48	-1.04	121.30	0
121	Acid Soluble Magnesium (1.2%)	0043	3.540	0.0400	3.720	0.1944	0.0866	48	-0.92	121.00	0
121	Acid Soluble Magnesium (1.2%)	0485	3.575	0.1100	3.720	0.1944	0.0866	48	-0.74	121.00	0
121	Acid Soluble Magnesium (1.2%)	0482	3.630	0.1200	3.720	0.1944	0.0866	48	-0.46	121.30	0
121	Acid Soluble Magnesium (1.2%)	0515	3.640	0.0864	3.720	0.1944	0.0866	48	-0.41	121.99	0
121	Acid Soluble Magnesium (1.2%)	0478	3.642	0.2044	3.720	0.1944	0.0866	48	-0.40	121.32	0
121	Acid Soluble Magnesium (1.2%)	0324	3.645	0.1500	3.720	0.1944	0.0866	48	-0.38	121.30	0
121	Acid Soluble Magnesium (1.2%)	0041	3.655	0.2100	3.720	0.1944	0.0866	48	-0.33	121.30	0
121	Acid Soluble Magnesium (1.2%)	0457	3.655	0.0300	3.720	0.1944	0.0866	48	-0.33	121.00	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 (1.2%)	0169	3.670	0.0200	3.720	0.1944	0.0866	48	-0.26	121.00	0
121	Acid Soluble Magnesium (1.2%)	0096	3.680	0.0600	3.720	0.1944	0.0866	48	-0.20	121.30	0
121	Acid Soluble Magnesium (1.2%)	0105	3.684	0.0170	3.720	0.1944	0.0866	48	-0.19	121.03	0
121	Acid Soluble Magnesium (1.2%)	0157	3.685	0.0900	3.720	0.1944	0.0866	48	-0.18	121.30	0
121	Acid Soluble Magnesium (1.2%)	0034	3.709	0.0260	3.720	0.1944	0.0866	48	-0.05	121.33	0
121	Acid Soluble Magnesium (1.2%)	0040	3.720	0.1000	3.720	0.1944	0.0866	48	0.00	121.00	0
121	Acid Soluble Magnesium (1.2%)	0102	3.723	0.0450	3.720	0.1944	0.0866	48	0.01	121.30	0
121	Acid Soluble Magnesium (1.2%)	0481	3.755	0.0500	3.720	0.1944	0.0866	48	0.18	121.00	0
121	Acid Soluble Magnesium (1.2%)	0157	3.765	0.1900	3.720	0.1944	0.0866	48	0.23	121.00	0
121	Acid Soluble Magnesium (1.2%)	0049	3.765	0.1300	3.720	0.1944	0.0866	48	0.23	121.30	0
121	Acid Soluble Magnesium (1.2%)	0433	3.781	0.0027	3.720	0.1944	0.0866	48	0.32	121.30	0
121	Acid Soluble Magnesium (1.2%)	0307	3.784	0.1310	3.720	0.1944	0.0866	48	0.33	121.30	0
121	Acid Soluble Magnesium (1.2%)	0105	3.789	0.0170	3.720	0.1944	0.0866	48	0.35	121.00	0
121	Acid Soluble Magnesium (1.2%)	0023	3.797	0.0110	3.720	0.1944	0.0866	48	0.40	121.33	0
121	Acid Soluble Magnesium (1.2%)	0360	3.800	0.0400	3.720	0.1944	0.0866	48	0.41	121.30	0
121	Acid Soluble Magnesium (1.2%)	0055	3.800	0.1200	3.720	0.1944	0.0866	48	0.41	121.32	0
121	Acid Soluble Magnesium (1.2%)	0220	3.805	0.0100	3.720	0.1944	0.0866	48	0.44	121.30	0
121	Acid Soluble Magnesium (1.2%)	0177	3.831	0.0718	3.720	0.1944	0.0866	48	0.57	121.33	0
121	Acid Soluble Magnesium (1.2%)	0028	3.840	0.0400	3.720	0.1944	0.0866	48	0.62	121.00	0
121	Acid Soluble Magnesium (1.2%)	0234	3.875	0.0100	3.720	0.1944	0.0866	48	0.80	121.30	0
121	Acid Soluble Magnesium (1.2%)	0233	3.893	0.2270	3.720	0.1944	0.0866	48	0.89	121.30	0
121	Acid Soluble Magnesium (1.2%)	0389	3.915	0.0300	3.720	0.1944	0.0866	48	1.00	121.99	0
121	Acid Soluble Magnesium (1.2%)	0494	3.950	0.2445	3.720	0.1944	0.0866	48	1.19	121.33	0
121	Acid Soluble Magnesium (1.2%)	0516	4.045	0.1900	3.720	0.1944	0.0866	48	1.67	121.00	0
121	Acid Soluble Magnesium (1.2%)	0231	4.120	0.0400	3.720	0.1944	0.0866	48	2.06	121.30	0
121	Acid Soluble Magnesium (1.2%)	0025	4.199	0.0270	3.720	0.1944	0.0866	48	2.46	121.02	0
121	Acid Soluble Magnesium (1.2%)	0371	4.200	0.0400	3.720	0.1944	0.0866	48	2.47	121.30	0
121	Acid Soluble Magnesium (1.2%)	0452	4.270	0.0200	3.720	0.1944	0.0866	48	2.83	121.30	0
121	Acid Soluble Magnesium (1.2%)	0483	4.430	0.0000	3.720	0.1944	0.0866	48	3.65	121.30	0
121	Acid Soluble Magnesium (1.2%)	0472	5.465	0.1100	3.720	0.1944	0.0866	48	8.98	121.30	0
121	Acid Soluble Magnesium (1.2%)	0512	3.650	1.019	3.720	0.1944	0.0866	48	-0.36	121.99	1
131	Water Soluble Magnesium (%)	0394	0.8850	0.0500	1.179	0.0984	0.0334	9	-2.99	131.30	0
131	Water Soluble Magnesium (%)	0029	1.085	0.0470	1.179	0.0984	0.0334	9	-0.96	131.00	0
131	Water Soluble Magnesium (%)	0231	1.120	0.0400	1.179	0.0984	0.0334	9	-0.60	131.30	0
131	Water Soluble Magnesium (%)	0275	1.150	0.1000	1.179	0.0984	0.0334	9	-0.29	131.30	0
131	Water Soluble Magnesium (%)	0230	1.200	0.0000	1.179	0.0984	0.0334	9	0.21	131.30	0
131	Water Soluble Magnesium (%)	0485	1.205	0.0300	1.179	0.0984	0.0334	9	0.27	131.00	0
131	Water Soluble Magnesium (%)	0220	1.205	0.0100	1.179	0.0984	0.0334	9	0.27	131.30	0
131	Water Soluble Magnesium (%)	0027	1.266	0.0140	1.179	0.0984	0.0334	9	0.89	131.30	0
131	Water Soluble Magnesium (%)	0510	2.455	0.0100	1.179	0.0984	0.0334	9	12.97	131.70	0
131	Water Soluble Magnesium (%)	0498	3.400	0.2000	1.179	0.0984	0.0334	9	22.58	131.00	1
143	Elemental Sulfur (%)	0055	9.095	0.2300	9.248	0.1329	0.2633	3	-1.15	143.00	0
143	Elemental Sulfur (%)	0114	9.320	0.5400	9.248	0.1329	0.2633	3	0.54	143.00	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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143	Elemental Sulfur (%)	0389	9.330	0.0200	9.248	0.1329	0.2633	3	0.61	143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0405	8.705	0.0100	8.904	0.2135	0.1240	5	-0.93	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0397	8.790	0.3800	8.904	0.2135	0.1240	5	-0.53	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0027	8.850	0.1000	8.904	0.2135	0.1240	5	-0.25	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0485	8.915	0.0100	8.904	0.2135	0.1240	5	0.05	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0043	9.260	0.1200	8.904	0.2135	0.1240	5	1.67	145.00	0
146	Total Sulfur in Liquid (%)	0292	9.735	0.0100			0.0100	1			0
148	Total Sulfur (5.5%)	0474	3.953*	0.0220	8.768	0.5910	0.1634	33	-8.15	148.00	0
148	Total Sulfur (5.5%)	0506	7.095*	0.3500	8.768	0.5910	0.1634	33	-2.83	148.99	0
148	Total Sulfur (5.5%)	0394	7.265*	0.1900	8.768	0.5910	0.1634	33	-2.54	148.04	0
148	Total Sulfur (5.5%)	0486	7.510*	0.0400	8.768	0.5910	0.1634	33	-2.13	148.07	0
148	Total Sulfur (5.5%)	0515	7.636*	0.2960	8.768	0.5910	0.1634	33	-1.92	148.07	0
148	Total Sulfur (5.5%)	0117	7.690*	0.4800	8.768	0.5910	0.1634	33	-1.82	148.07	0
148	Total Sulfur (5.5%)	0230	7.795*	0.3500	8.768	0.5910	0.1634	33	-1.65	148.01	0
148	Total Sulfur (5.5%)	0157	8.255	0.2500	8.768	0.5910	0.1634	33	-0.87	148.00	0
148	Total Sulfur (5.5%)	0360	8.445	0.2300	8.768	0.5910	0.1634	33	-0.55	148.00	0
148	Total Sulfur (5.5%)	0354	8.524	0.2280	8.768	0.5910	0.1634	33	-0.41	148.99	0
148	Total Sulfur (5.5%)	0096	8.595	0.0100	8.768	0.5910	0.1634	33	-0.29	148.99	0
148	Total Sulfur (5.5%)	0029	8.645	0.0700	8.768	0.5910	0.1634	33	-0.21	148.01	0
148	Total Sulfur (5.5%)	0157	8.735	0.0900	8.768	0.5910	0.1634	33	-0.06	148.01	0
148	Total Sulfur (5.5%)	0405	8.745	0.0100	8.768	0.5910	0.1634	33	-0.04	148.01	0
148	Total Sulfur (5.5%)	0040	8.750	0.1000	8.768	0.5910	0.1634	33	-0.03	148.01	0
148	Total Sulfur (5.5%)	0102	8.792	0.0300	8.768	0.5910	0.1634	33	0.04	148.01	0
148	Total Sulfur (5.5%)	0478	8.810	0.3613	8.768	0.5910	0.1634	33	0.07	148.07	0
148	Total Sulfur (5.5%)	0457	8.855	0.4700	8.768	0.5910	0.1634	33	0.15	148.01	0
148	Total Sulfur (5.5%)	0025	8.862	0.0020	8.768	0.5910	0.1634	33	0.16	148.00	0
148	Total Sulfur (5.5%)	0485	8.915	0.0100	8.768	0.5910	0.1634	33	0.25	148.01	0
148	Total Sulfur (5.5%)	0481	8.930	0.0000	8.768	0.5910	0.1634	33	0.27	148.01	0
148	Total Sulfur (5.5%)	0307	8.945	0.0860	8.768	0.5910	0.1634	33	0.30	148.99	0
148	Total Sulfur (5.5%)	0023	8.975	0.1530	8.768	0.5910	0.1634	33	0.35	148.07	0
148	Total Sulfur (5.5%)	0451	9.055	0.0700	8.768	0.5910	0.1634	33	0.49	148.00	0
148	Total Sulfur (5.5%)	0177	9.073	0.0185	8.768	0.5910	0.1634	33	0.52	148.07	0
148	Total Sulfur (5.5%)	0105	9.205	0.1700	8.768	0.5910	0.1634	33	0.74	148.01	0
148	Total Sulfur (5.5%)	0029	9.252	0.4490	8.768	0.5910	0.1634	33	0.82	148.00	0
148	Total Sulfur (5.5%)	0102	9.306	0.1120	8.768	0.5910	0.1634	33	0.91	148.07	0
148	Total Sulfur (5.5%)	0220	9.315	0.0300	8.768	0.5910	0.1634	33	0.92	148.99	0
148	Total Sulfur (5.5%)	0452	9.520	0.0200	8.768	0.5910	0.1634	33	1.27	148.99	0
148	Total Sulfur (5.5%)	0095	9.800	0.3000	8.768	0.5910	0.1634	33	1.75	148.01	0
148	Total Sulfur (5.5%)	0482	9.800	0.0400	8.768	0.5910	0.1634	33	1.75	148.99	0
148	Total Sulfur (5.5%)	0494	10.20	0.3555	8.768	0.5910	0.1634	33	2.43	148.07	0
148	Total Sulfur (5.5%)	0483	9.860	1.080	8.768	0.5910	0.1634	33	1.85	148.07	1
151	Acid Soluble Arsenic (ppm)	0515	0.7944	1.345	2.375	0.9406	0.3435	11	-1.68	151.33	0
151	Acid Soluble Arsenic (ppm)	0102	1.387	0.2730	2.375	0.9406	0.3435	11	-1.05	151.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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151	Acid Soluble Arsenic (ppm)	0515	1.768	0.1300	2.375	0.9406	0.3435	11	-0.65	151.34	0
151	Acid Soluble Arsenic (ppm)	0220	1.850	1.100	2.375	0.9406	0.3435	11	-0.56	151.34	0
151	Acid Soluble Arsenic (ppm)	0394	2.225	0.0500	2.375	0.9406	0.3435	11	-0.16	151.30	0
151	Acid Soluble Arsenic (ppm)	0230	2.475	0.0700	2.375	0.9406	0.3435	11	0.11	151.30	0
151	Acid Soluble Arsenic (ppm)	0481	2.555	0.0700	2.375	0.9406	0.3435	11	0.19	151.99	0
151	Acid Soluble Arsenic (ppm)	0136	2.750	0.1000	2.375	0.9406	0.3435	11	0.40	151.00	0
151	Acid Soluble Arsenic (ppm)	0096	2.750	0.1000	2.375	0.9406	0.3435	11	0.40	151.30	0
151	Acid Soluble Arsenic (ppm)	0494	3.496	0.1398	2.375	0.9406	0.3435	11	1.19	151.33	0
151	Acid Soluble Arsenic (ppm)	0474	4.400	0.4000	2.375	0.9406	0.3435	11	2.15	151.30	0
151	Acid Soluble Arsenic (ppm)	0478	1.278	2.555	2.375	0.9406	0.3435	11	-1.17	151.33	4
165	Acid Soluble Boron (0.02%)	0230	0.0139*	0.0003	0.0200	0.0047	0.0013	29	-1.31	165.99	0
165	Acid Soluble Boron (0.02%)	0055	0.0140	0.0000	0.0200	0.0047	0.0013	29	-1.28	165.00	0
165	Acid Soluble Boron (0.02%)	0457	0.0145	0.0010	0.0200	0.0047	0.0013	29	-1.17	165.99	0
165	Acid Soluble Boron (0.02%)	0117	0.0159	0.0004	0.0200	0.0047	0.0013	29	-0.87	165.99	0
165	Acid Soluble Boron (0.02%)	0394	0.0160	0.0000	0.0200	0.0047	0.0013	29	-0.85	165.30	0
165	Acid Soluble Boron (0.02%)	0486	0.0160	0.0000	0.0200	0.0047	0.0013	29	-0.85	165.99	0
165	Acid Soluble Boron (0.02%)	0515	0.0160	0.0000	0.0200	0.0047	0.0013	29	-0.85	165.99	0
165	Acid Soluble Boron (0.02%)	0494	0.0163	0.0003	0.0200	0.0047	0.0013	29	-0.80	165.30	0
165	Acid Soluble Boron (0.02%)	0220	0.0170	0.0000	0.0200	0.0047	0.0013	29	-0.64	165.00	0
165	Acid Soluble Boron (0.02%)	0485	0.0171	0.0003	0.0200	0.0047	0.0013	29	-0.63	165.30	0
165	Acid Soluble Boron (0.02%)	0498	0.0180	0.0000	0.0200	0.0047	0.0013	29	-0.43	165.00	0
165	Acid Soluble Boron (0.02%)	0452	0.0180	0.0000	0.0200	0.0047	0.0013	29	-0.43	165.30	0
165	Acid Soluble Boron (0.02%)	0025	0.0186	0.0026	0.0200	0.0047	0.0013	29	-0.30	165.30	0
165	Acid Soluble Boron (0.02%)	0506	0.0200	0.0000	0.0200	0.0047	0.0013	29	0.00	165.00	0
165	Acid Soluble Boron (0.02%)	0360	0.0200	0.0000	0.0200	0.0047	0.0013	29	0.00	165.99	0
165	Acid Soluble Boron (0.02%)	0472	0.0200	0.0000	0.0200	0.0047	0.0013	29	0.00	165.99	0
165	Acid Soluble Boron (0.02%)	0482	0.0200	0.0000	0.0200	0.0047	0.0013	29	0.00	165.99	0
165	Acid Soluble Boron (0.02%)	0324	0.0205	0.0030	0.0200	0.0047	0.0013	29	0.11	165.30	0
165	Acid Soluble Boron (0.02%)	0231	0.0205	0.0010	0.0200	0.0047	0.0013	29	0.11	165.99	0
165	Acid Soluble Boron (0.02%)	0389	0.0215	0.0018	0.0200	0.0047	0.0013	29	0.32	165.30	0
165	Acid Soluble Boron (0.02%)	0029	0.0225	0.0010	0.0200	0.0047	0.0013	29	0.53	165.00	0
165	Acid Soluble Boron (0.02%)	0433	0.0227	0.0004	0.0200	0.0047	0.0013	29	0.58	165.30	0
165	Acid Soluble Boron (0.02%)	0481	0.0235	0.0010	0.0200	0.0047	0.0013	29	0.75	165.00	0
165	Acid Soluble Boron (0.02%)	0354	0.0250	0.0040	0.0200	0.0047	0.0013	29	1.06	165.30	0
165	Acid Soluble Boron (0.02%)	0095	0.0250	0.0100	0.0200	0.0047	0.0013	29	1.06	165.99	0
165	Acid Soluble Boron (0.02%)	0397	0.0265	0.0010	0.0200	0.0047	0.0013	29	1.38	165.00	0
165	Acid Soluble Boron (0.02%)	0105	0.0310	0.0060	0.0200	0.0047	0.0013	29	2.34	165.00	0
165	Acid Soluble Boron (0.02%)	0043	0.0335	0.0030	0.0200	0.0047	0.0013	29	2.87	165.99	0
165	Acid Soluble Boron (0.02%)	0402	0.0544	0.0008	0.0200	0.0047	0.0013	29	7.32	165.30	0
165	Acid Soluble Boron (0.02%)	0483	0.0873	0.0249	0.0200	0.0047	0.0013	29	14.32	165.99	1
181	Acid Soluble Cadmium (ppm)	0481	0.5800	0.0400	0.9628	0.3084	0.1506	13	-1.24	181.99	0
181	Acid Soluble Cadmium (ppm)	0474	0.5850	0.0500	0.9628	0.3084	0.1506	13	-1.22	181.30	0
181	Acid Soluble Cadmium (ppm)	0136	0.8000	0.0000	0.9628	0.3084	0.1506	13	-0.53	181.00	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				
181	Acid Soluble Cadmium (ppm)	0389	0.8000	0.0000	0.9628	0.3084	0.1506	13	-0.53	181.30	0
181	Acid Soluble Cadmium (ppm)	0515	0.8001	0.0103	0.9628	0.3084	0.1506	13	-0.53	181.34	0
181	Acid Soluble Cadmium (ppm)	0102	0.8525	0.0410	0.9628	0.3084	0.1506	13	-0.36	181.30	0
181	Acid Soluble Cadmium (ppm)	0230	0.8550	0.0020	0.9628	0.3084	0.1506	13	-0.35	181.30	0
181	Acid Soluble Cadmium (ppm)	0494	0.9397	0.0449	0.9628	0.3084	0.1506	13	-0.08	181.33	0
181	Acid Soluble Cadmium (ppm)	0498	1.060	0.0400	0.9628	0.3084	0.1506	13	0.32	181.99	0
181	Acid Soluble Cadmium (ppm)	0478	1.473	0.3400	0.9628	0.3084	0.1506	13	1.65	181.33	0
181	Acid Soluble Cadmium (ppm)	0220	1.500	0.6000	0.9628	0.3084	0.1506	13	1.74	181.34	0
181	Acid Soluble Cadmium (ppm)	0515	2.531	0.6600	0.9628	0.3084	0.1506	13	5.08	181.33	0
181	Acid Soluble Cadmium (ppm)	0035	4.165	0.1300	0.9628	0.3084	0.1506	13	10.38	181.30	0
190	Water Soluble Chlorine (6%)	0220	3.860*	0.0800	4.710	0.3070	0.1031	15	-2.77	190.00	0
190	Water Soluble Chlorine (6%)	0029	4.280	0.1400	4.710	0.3070	0.1031	15	-1.40	190.99	0
190	Water Soluble Chlorine (6%)	0481	4.460	0.1600	4.710	0.3070	0.1031	15	-0.81	190.00	0
190	Water Soluble Chlorine (6%)	0102	4.483	0.0260	4.710	0.3070	0.1031	15	-0.74	190.00	0
190	Water Soluble Chlorine (6%)	0498	4.550	0.1000	4.710	0.3070	0.1031	15	-0.52	190.00	0
190	Water Soluble Chlorine (6%)	0055	4.650	0.1000	4.710	0.3070	0.1031	15	-0.19	190.00	0
190	Water Soluble Chlorine (6%)	0494	4.650	0.0400	4.710	0.3070	0.1031	15	-0.19	190.00	0
190	Water Soluble Chlorine (6%)	0043	4.705	0.0900	4.710	0.3070	0.1031	15	-0.01	190.00	0
190	Water Soluble Chlorine (6%)	0105	4.730	0.0200	4.710	0.3070	0.1031	15	0.07	190.00	0
190	Water Soluble Chlorine (6%)	0029	4.770	0.0000	4.710	0.3070	0.1031	15	0.20	190.00	0
190	Water Soluble Chlorine (6%)	0028	4.840	0.1000	4.710	0.3070	0.1031	15	0.43	190.00	0
190	Water Soluble Chlorine (6%)	0394	4.890	0.2000	4.710	0.3070	0.1031	15	0.59	190.00	0
190	Water Soluble Chlorine (6%)	0513	5.095	0.0100	4.710	0.3070	0.1031	15	1.26	190.00	0
190	Water Soluble Chlorine (6%)	0506	5.480	0.3600	4.710	0.3070	0.1031	15	2.51	190.00	0
190	Water Soluble Chlorine (6%)	0397	5.730	0.1200	4.710	0.3070	0.1031	15	3.32	190.00	0
190	Water Soluble Chlorine (6%)	0230	5.645	1.610	4.710	0.3070	0.1031	15	3.05	190.00	1
191	Acid Soluble Chromium (ppm)	0474	64.00	2.000	141.9	12.02	5.286	14	-6.48	191.30	0
191	Acid Soluble Chromium (ppm)	0035	90.15	4.100	141.9	12.02	5.286	14	-4.30	191.30	0
191	Acid Soluble Chromium (ppm)	0482	119.5	3.000	141.9	12.02	5.286	14	-1.86	191.30	0
191	Acid Soluble Chromium (ppm)	0230	133.5	3.000	141.9	12.02	5.286	14	-0.70	191.30	0
191	Acid Soluble Chromium (ppm)	0389	142.0	2.000	141.9	12.02	5.286	14	0.01	191.30	0
191	Acid Soluble Chromium (ppm)	0478	142.2	16.00	141.9	12.02	5.286	14	0.03	191.33	0
191	Acid Soluble Chromium (ppm)	0102	142.9	0.2190	141.9	12.02	5.286	14	0.09	191.30	0
191	Acid Soluble Chromium (ppm)	0506	143.0	0.0000	141.9	12.02	5.286	14	0.09	191.99	0
191	Acid Soluble Chromium (ppm)	0515	148.4	3.099	141.9	12.02	5.286	14	0.54	191.33	0
191	Acid Soluble Chromium (ppm)	0515	150.8	7.926	141.9	12.02	5.286	14	0.74	191.34	0
191	Acid Soluble Chromium (ppm)	0220	151.0	16.00	141.9	12.02	5.286	14	0.76	191.34	0
191	Acid Soluble Chromium (ppm)	0481	151.0	4.000	141.9	12.02	5.286	14	0.76	191.99	0
191	Acid Soluble Chromium (ppm)	0494	151.1	7.960	141.9	12.02	5.286	14	0.77	191.33	0
191	Acid Soluble Chromium (ppm)	0096	155.0	4.700	141.9	12.02	5.286	14	1.09	191.30	0
191	Acid Soluble Chromium (ppm)	0512	83.46	31.66	141.9	12.02	5.286	14	-4.86	191.99	1
202	Acid Soluble Cobalt (ppm)	0035	5.620	0.0400	12.06	3.662	1.340	13	-1.76	202.30	0
202	Acid Soluble Cobalt (ppm)	0515	8.254	0.7246	12.06	3.662	1.340	13	-1.04	202.33	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				
202	Acid Soluble Cobalt (ppm)	0515	8.692	0.3040	12.06	3.662	1.340	13	-0.92	202.34	0
202	Acid Soluble Cobalt (ppm)	0512	9.705	2.090	12.06	3.662	1.340	13	-0.64	202.99	0
202	Acid Soluble Cobalt (ppm)	0102	10.45	0.6210	12.06	3.662	1.340	13	-0.44	202.30	0
202	Acid Soluble Cobalt (ppm)	0506	11.63	4.750	12.06	3.662	1.340	13	-0.12	202.99	0
202	Acid Soluble Cobalt (ppm)	0230	12.00	0.4000	12.06	3.662	1.340	13	-0.02	202.30	0
202	Acid Soluble Cobalt (ppm)	0482	12.70	0.0000	12.06	3.662	1.340	13	0.17	202.30	0
202	Acid Soluble Cobalt (ppm)	0220	13.45	2.300	12.06	3.662	1.340	13	0.38	202.34	0
202	Acid Soluble Cobalt (ppm)	0389	15.15	0.1000	12.06	3.662	1.340	13	0.84	202.30	0
202	Acid Soluble Cobalt (ppm)	0494	15.54	1.408	12.06	3.662	1.340	13	0.95	202.33	0
202	Acid Soluble Cobalt (ppm)	0478	15.78	4.116	12.06	3.662	1.340	13	1.02	202.33	0
202	Acid Soluble Cobalt (ppm)	0096	16.85	0.5600	12.06	3.662	1.340	13	1.31	202.30	0
221	Acid Soluble Copper (0.05%)	0035	0.0031*	0.0001	0.0677	0.0045	0.0027	46	-14.33	221.30	0
221	Acid Soluble Copper (0.05%)	0506	0.0500*	0.0400	0.0677	0.0045	0.0027	46	-3.93	221.99	0
221	Acid Soluble Copper (0.05%)	0230	0.0553*	0.0007	0.0677	0.0045	0.0027	46	-2.77	221.30	0
221	Acid Soluble Copper (0.05%)	0481	0.0580	0.0000	0.0677	0.0045	0.0027	46	-2.16	221.00	0
221	Acid Soluble Copper (0.05%)	0029	0.0613	0.0015	0.0677	0.0045	0.0027	46	-1.44	221.00	0
221	Acid Soluble Copper (0.05%)	0512	0.0613	0.0083	0.0677	0.0045	0.0027	46	-1.44	221.99	0
221	Acid Soluble Copper (0.05%)	0055	0.0619	0.0007	0.0677	0.0045	0.0027	46	-1.30	221.32	0
221	Acid Soluble Copper (0.05%)	0394	0.0620	0.0020	0.0677	0.0045	0.0027	46	-1.27	221.32	0
221	Acid Soluble Copper (0.05%)	0041	0.0630	0.0000	0.0677	0.0045	0.0027	46	-1.05	221.30	0
221	Acid Soluble Copper (0.05%)	0043	0.0643	0.0015	0.0677	0.0045	0.0027	46	-0.77	221.00	0
221	Acid Soluble Copper (0.05%)	0027	0.0645	0.0050	0.0677	0.0045	0.0027	46	-0.72	221.30	0
221	Acid Soluble Copper (0.05%)	0515	0.0647	0.0009	0.0677	0.0045	0.0027	46	-0.68	221.33	0
221	Acid Soluble Copper (0.05%)	0324	0.0650	0.0020	0.0677	0.0045	0.0027	46	-0.61	221.30	0
221	Acid Soluble Copper (0.05%)	0117	0.0652	0.0027	0.0677	0.0045	0.0027	46	-0.57	221.33	0
221	Acid Soluble Copper (0.05%)	0478	0.0653	0.0013	0.0677	0.0045	0.0027	46	-0.55	221.32	0
221	Acid Soluble Copper (0.05%)	0049	0.0655	0.0050	0.0677	0.0045	0.0027	46	-0.50	221.30	0
221	Acid Soluble Copper (0.05%)	0498	0.0660	0.0020	0.0677	0.0045	0.0027	46	-0.39	221.00	0
221	Acid Soluble Copper (0.05%)	0307	0.0660	0.0028	0.0677	0.0045	0.0027	46	-0.39	221.30	0
221	Acid Soluble Copper (0.05%)	0452	0.0660	0.0000	0.0677	0.0045	0.0027	46	-0.39	221.30	0
221	Acid Soluble Copper (0.05%)	0389	0.0674	0.0022	0.0677	0.0045	0.0027	46	-0.08	221.99	0
221	Acid Soluble Copper (0.05%)	0220	0.0675	0.0030	0.0677	0.0045	0.0027	46	-0.05	221.33	0
221	Acid Soluble Copper (0.05%)	0515	0.0678	0.0036	0.0677	0.0045	0.0027	46	0.01	221.99	0
221	Acid Soluble Copper (0.05%)	0023	0.0685	0.0010	0.0677	0.0045	0.0027	46	0.17	221.03	0
221	Acid Soluble Copper (0.05%)	0354	0.0685	0.0050	0.0677	0.0045	0.0027	46	0.17	221.30	0
221	Acid Soluble Copper (0.05%)	0402	0.0687	0.0013	0.0677	0.0045	0.0027	46	0.20	221.30	0
221	Acid Soluble Copper (0.05%)	0105	0.0694	0.0003	0.0677	0.0045	0.0027	46	0.36	221.03	0
221	Acid Soluble Copper (0.05%)	0360	0.0695	0.0010	0.0677	0.0045	0.0027	46	0.39	221.30	0
221	Acid Soluble Copper (0.05%)	0485	0.0699	0.0037	0.0677	0.0045	0.0027	46	0.47	221.00	0
221	Acid Soluble Copper (0.05%)	0095	0.0700	0.0000	0.0677	0.0045	0.0027	46	0.50	221.30	0
221	Acid Soluble Copper (0.05%)	0231	0.0700	0.0040	0.0677	0.0045	0.0027	46	0.50	221.30	0
221	Acid Soluble Copper (0.05%)	0371	0.0700	0.0000	0.0677	0.0045	0.0027	46	0.50	221.30	0
221	Acid Soluble Copper (0.05%)	0472	0.0700	0.0000	0.0677	0.0045	0.0027	46	0.50	221.30	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				
221	Acid Soluble Copper (0.05%)	0482	0.0700	0.0000	0.0677	0.0045	0.0027	46	0.50	221.30	0
221	Acid Soluble Copper (0.05%)	0486	0.0700	0.0000	0.0677	0.0045	0.0027	46	0.50	221.33	0
221	Acid Soluble Copper (0.05%)	0105	0.0706	0.0018	0.0677	0.0045	0.0027	46	0.63	221.00	0
221	Acid Soluble Copper (0.05%)	0040	0.0707	0.0008	0.0677	0.0045	0.0027	46	0.66	221.00	0
221	Acid Soluble Copper (0.05%)	0433	0.0709	0.0002	0.0677	0.0045	0.0027	46	0.70	221.30	0
221	Acid Soluble Copper (0.05%)	0516	0.0715	0.0010	0.0677	0.0045	0.0027	46	0.83	221.00	0
221	Acid Soluble Copper (0.05%)	0233	0.0716	0.0004	0.0677	0.0045	0.0027	46	0.86	221.30	0
221	Acid Soluble Copper (0.05%)	0096	0.0718	0.0008	0.0677	0.0045	0.0027	46	0.90	221.30	0
221	Acid Soluble Copper (0.05%)	0028	0.0721	0.0039	0.0677	0.0045	0.0027	46	0.95	221.00	0
221	Acid Soluble Copper (0.05%)	0494	0.0724	0.0027	0.0677	0.0045	0.0027	46	1.02	221.33	0
221	Acid Soluble Copper (0.05%)	0474	0.0745	0.0010	0.0677	0.0045	0.0027	46	1.50	221.30	0
221	Acid Soluble Copper (0.05%)	0102	0.0765	0.0010	0.0677	0.0045	0.0027	46	1.94	221.30	0
221	Acid Soluble Copper (0.05%)	0483	0.0769	0.0048	0.0677	0.0045	0.0027	46	2.03	221.30	0
221	Acid Soluble Copper (0.05%)	0513	0.1415	0.0030	0.0677	0.0045	0.0027	46	16.34	221.00	0
221	Acid Soluble Copper (0.05%)	0114	522.0	14.00	0.0677	0.0045	0.0027	46	115619.73	221.30	2
241	Acid Soluble Iron (0.5%)	0512	0.5192*	0.0393	1.272	0.1865	0.0546	46	-4.04	241.99	0
241	Acid Soluble Iron (0.5%)	0025	0.6062*	0.0097	1.272	0.1865	0.0546	46	-3.57	241.32	0
241	Acid Soluble Iron (0.5%)	0474	0.6150*	0.0500	1.272	0.1865	0.0546	46	-3.52	241.30	0
241	Acid Soluble Iron (0.5%)	0513	0.7400*	0.0200	1.272	0.1865	0.0546	46	-2.85	241.00	0
241	Acid Soluble Iron (0.5%)	0515	0.9788*	0.2532	1.272	0.1865	0.0546	46	-1.57	241.99	0
241	Acid Soluble Iron (0.5%)	0472	1.005*	0.1100	1.272	0.1865	0.0546	46	-1.43	241.30	0
241	Acid Soluble Iron (0.5%)	0457	1.025*	0.0060	1.272	0.1865	0.0546	46	-1.33	241.00	0
241	Acid Soluble Iron (0.5%)	0486	1.030*	0.0600	1.272	0.1865	0.0546	46	-1.30	241.33	0
241	Acid Soluble Iron (0.5%)	0023	1.038*	0.0680	1.272	0.1865	0.0546	46	-1.26	241.33	0
241	Acid Soluble Iron (0.5%)	0516	1.055*	0.0700	1.272	0.1865	0.0546	46	-1.17	241.00	0
241	Acid Soluble Iron (0.5%)	0230	1.070*	0.0200	1.272	0.1865	0.0546	46	-1.09	241.30	0
241	Acid Soluble Iron (0.5%)	0498	1.150	0.1000	1.272	0.1865	0.0546	46	-0.66	241.00	0
241	Acid Soluble Iron (0.5%)	0482	1.190	0.0400	1.272	0.1865	0.0546	46	-0.44	241.30	0
241	Acid Soluble Iron (0.5%)	0234	1.215	0.1300	1.272	0.1865	0.0546	46	-0.31	241.30	0
241	Acid Soluble Iron (0.5%)	0515	1.236	0.0732	1.272	0.1865	0.0546	46	-0.20	241.33	0
241	Acid Soluble Iron (0.5%)	0389	1.240	0.0600	1.272	0.1865	0.0546	46	-0.17	241.99	0
241	Acid Soluble Iron (0.5%)	0102	1.241	0.0860	1.272	0.1865	0.0546	46	-0.17	241.30	0
241	Acid Soluble Iron (0.5%)	0402	1.246	0.0070	1.272	0.1865	0.0546	46	-0.14	241.30	0
241	Acid Soluble Iron (0.5%)	0481	1.250	0.0600	1.272	0.1865	0.0546	46	-0.12	241.00	0
241	Acid Soluble Iron (0.5%)	0394	1.255	0.0100	1.272	0.1865	0.0546	46	-0.09	241.32	0
241	Acid Soluble Iron (0.5%)	0506	1.255	0.1500	1.272	0.1865	0.0546	46	-0.09	241.99	0
241	Acid Soluble Iron (0.5%)	0041	1.270	0.0600	1.272	0.1865	0.0546	46	-0.01	241.30	0
241	Acid Soluble Iron (0.5%)	0035	1.280	0.0600	1.272	0.1865	0.0546	46	0.04	241.30	0
241	Acid Soluble Iron (0.5%)	0478	1.296	0.0308	1.272	0.1865	0.0546	46	0.13	241.33	0
241	Acid Soluble Iron (0.5%)	0169	1.305	0.0500	1.272	0.1865	0.0546	46	0.18	241.00	0
241	Acid Soluble Iron (0.5%)	0028	1.315	0.0700	1.272	0.1865	0.0546	46	0.23	241.00	0
241	Acid Soluble Iron (0.5%)	0043	1.330	0.0200	1.272	0.1865	0.0546	46	0.31	241.00	0
241	Acid Soluble Iron (0.5%)	0157	1.365	0.0100	1.272	0.1865	0.0546	46	0.50	241.30	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				
241	Acid Soluble Iron (0.5%)	0049	1.375	0.1100	1.272	0.1865	0.0546	46	0.55	241.30	0
241	Acid Soluble Iron (0.5%)	0220	1.375	0.0100	1.272	0.1865	0.0546	46	0.55	241.33	0
241	Acid Soluble Iron (0.5%)	0095	1.380	0.0400	1.272	0.1865	0.0546	46	0.58	241.30	0
241	Acid Soluble Iron (0.5%)	0354	1.382	0.0530	1.272	0.1865	0.0546	46	0.59	241.30	0
241	Acid Soluble Iron (0.5%)	0096	1.390	0.0400	1.272	0.1865	0.0546	46	0.63	241.30	0
241	Acid Soluble Iron (0.5%)	0105	1.406	0.0000	1.272	0.1865	0.0546	46	0.72	241.03	0
241	Acid Soluble Iron (0.5%)	0231	1.410	0.0200	1.272	0.1865	0.0546	46	0.74	241.30	0
241	Acid Soluble Iron (0.5%)	0433	1.412	0.0634	1.272	0.1865	0.0546	46	0.75	241.30	0
241	Acid Soluble Iron (0.5%)	0034	1.421	0.0080	1.272	0.1865	0.0546	46	0.80	241.33	0
241	Acid Soluble Iron (0.5%)	0177	1.425	0.0106	1.272	0.1865	0.0546	46	0.82	241.33	0
241	Acid Soluble Iron (0.5%)	0105	1.425	0.0960	1.272	0.1865	0.0546	46	0.82	241.00	0
241	Acid Soluble Iron (0.5%)	0360	1.435	0.0300	1.272	0.1865	0.0546	46	0.87	241.30	0
241	Acid Soluble Iron (0.5%)	0485	1.439	0.0140	1.272	0.1865	0.0546	46	0.89	241.00	0
241	Acid Soluble Iron (0.5%)	0452	1.455	0.0100	1.272	0.1865	0.0546	46	0.98	241.30	0
241	Acid Soluble Iron (0.5%)	0324	1.470	0.0400	1.272	0.1865	0.0546	46	1.06	241.30	0
241	Acid Soluble Iron (0.5%)	0494	1.481	0.1338	1.272	0.1865	0.0546	46	1.12	241.33	0
241	Acid Soluble Iron (0.5%)	0055	1.568	0.0190	1.272	0.1865	0.0546	46	1.58	241.32	0
241	Acid Soluble Iron (0.5%)	0483	1.635	0.0900	1.272	0.1865	0.0546	46	1.94	241.30	0
241	Acid Soluble Iron (0.5%)	0114	13,930	556.0	1.272	0.1865	0.0546	46	74691.18	241.30	2
251	Acid Soluble Lead (ppm)	0498	1.105	0.0500	7.194	1.890	0.4706	14	-3.22	251.99	0
251	Acid Soluble Lead (ppm)	0481	5.000	0.0000	7.194	1.890	0.4706	14	-1.16	251.99	0
251	Acid Soluble Lead (ppm)	0035	5.845	1.090	7.194	1.890	0.4706	14	-0.71	251.30	0
251	Acid Soluble Lead (ppm)	0230	6.040	0.0800	7.194	1.890	0.4706	14	-0.61	251.30	0
251	Acid Soluble Lead (ppm)	0389	6.100	1.000	7.194	1.890	0.4706	14	-0.58	251.30	0
251	Acid Soluble Lead (ppm)	0136	6.500	1.000	7.194	1.890	0.4706	14	-0.37	251.00	0
251	Acid Soluble Lead (ppm)	0394	6.510	0.2200	7.194	1.890	0.4706	14	-0.36	251.30	0
251	Acid Soluble Lead (ppm)	0096	7.450	0.5000	7.194	1.890	0.4706	14	0.14	251.30	0
251	Acid Soluble Lead (ppm)	0102	7.667	0.1110	7.194	1.890	0.4706	14	0.25	251.30	0
251	Acid Soluble Lead (ppm)	0494	8.115	0.6597	7.194	1.890	0.4706	14	0.49	251.33	0
251	Acid Soluble Lead (ppm)	0474	8.800	0.6000	7.194	1.890	0.4706	14	0.85	251.30	0
251	Acid Soluble Lead (ppm)	0515	9.287	0.1770	7.194	1.890	0.4706	14	1.11	251.34	0
251	Acid Soluble Lead (ppm)	0220	9.450	1.100	7.194	1.890	0.4706	14	1.19	251.34	0
251	Acid Soluble Lead (ppm)	0506	9.500	0.0000	7.194	1.890	0.4706	14	1.22	251.99	0
251	Acid Soluble Lead (ppm)	0512	101.5	3.020	7.194	1.890	0.4706	14	49.91	251.99	2
251	Acid Soluble Lead (ppm)	0478	4.312	8.623	7.194	1.890	0.4706	14	-1.53	251.33	4
251	Acid Soluble Lead (ppm)	0515	4.433	8.865	7.194	1.890	0.4706	14	-1.46	251.33	4
261	Acid Soluble Manganese (0.06%)	0035	0.0143*	0.0002	0.2231	0.0151	0.0075	46	-13.85	261.30	0
261	Acid Soluble Manganese (0.06%)	0498	0.1700*	0.0200	0.2231	0.0151	0.0075	46	-3.52	261.11	0
261	Acid Soluble Manganese (0.06%)	0230	0.1790*	0.0060	0.2231	0.0151	0.0075	46	-2.92	261.31	0
261	Acid Soluble Manganese (0.06%)	0486	0.1850*	0.0100	0.2231	0.0151	0.0075	46	-2.53	261.35	0
261	Acid Soluble Manganese (0.06%)	0394	0.1950*	0.0100	0.2231	0.0151	0.0075	46	-1.86	261.34	0
261	Acid Soluble Manganese (0.06%)	0512	0.1956*	0.0267	0.2231	0.0151	0.0075	46	-1.83	261.99	0
261	Acid Soluble Manganese (0.06%)	0117	0.1995	0.0130	0.2231	0.0151	0.0075	46	-1.56	261.35	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				
261	Acid Soluble Manganese (0.06%)	0515	0.2058	0.0054	0.2231	0.0151	0.0075	46	-1.15	261.99	0
261	Acid Soluble Manganese (0.06%)	0515	0.2080	0.0058	0.2231	0.0151	0.0075	46	-1.00	261.35	0
261	Acid Soluble Manganese (0.06%)	0481	0.2100	0.0000	0.2231	0.0151	0.0075	46	-0.87	261.11	0
261	Acid Soluble Manganese (0.06%)	0049	0.2100	0.0200	0.2231	0.0151	0.0075	46	-0.87	261.32	0
261	Acid Soluble Manganese (0.06%)	0389	0.2105	0.0010	0.2231	0.0151	0.0075	46	-0.83	261.99	0
261	Acid Soluble Manganese (0.06%)	0478	0.2116	0.0090	0.2231	0.0151	0.0075	46	-0.76	261.15	0
261	Acid Soluble Manganese (0.06%)	0234	0.2150	0.0100	0.2231	0.0151	0.0075	46	-0.54	261.31	0
261	Acid Soluble Manganese (0.06%)	0513	0.2190	0.0080	0.2231	0.0151	0.0075	46	-0.27	261.12	0
261	Acid Soluble Manganese (0.06%)	0041	0.2200	0.0000	0.2231	0.0151	0.0075	46	-0.20	261.30	0
261	Acid Soluble Manganese (0.06%)	0452	0.2200	0.0000	0.2231	0.0151	0.0075	46	-0.20	261.30	0
261	Acid Soluble Manganese (0.06%)	0474	0.2200	0.0000	0.2231	0.0151	0.0075	46	-0.20	261.35	0
261	Acid Soluble Manganese (0.06%)	0506	0.2200	0.0200	0.2231	0.0151	0.0075	46	-0.20	261.99	0
261	Acid Soluble Manganese (0.06%)	0457	0.2215	0.0050	0.2231	0.0151	0.0075	46	-0.10	261.12	0
261	Acid Soluble Manganese (0.06%)	0354	0.2220	0.0020	0.2231	0.0151	0.0075	46	-0.07	261.30	0
261	Acid Soluble Manganese (0.06%)	0043	0.2240	0.0080	0.2231	0.0151	0.0075	46	0.06	261.00	0
261	Acid Soluble Manganese (0.06%)	0220	0.2240	0.0000	0.2231	0.0151	0.0075	46	0.06	261.35	0
261	Acid Soluble Manganese (0.06%)	0023	0.2245	0.0050	0.2231	0.0151	0.0075	46	0.09	261.35	0
261	Acid Soluble Manganese (0.06%)	0034	0.2245	0.0010	0.2231	0.0151	0.0075	46	0.09	261.35	0
261	Acid Soluble Manganese (0.06%)	0472	0.2250	0.0100	0.2231	0.0151	0.0075	46	0.13	261.30	0
261	Acid Soluble Manganese (0.06%)	0402	0.2273	0.0011	0.2231	0.0151	0.0075	46	0.28	261.32	0
261	Acid Soluble Manganese (0.06%)	0105	0.2275	0.0060	0.2231	0.0151	0.0075	46	0.29	261.15	0
261	Acid Soluble Manganese (0.06%)	0433	0.2278	0.0007	0.2231	0.0151	0.0075	46	0.31	261.30	0
261	Acid Soluble Manganese (0.06%)	0096	0.2287	0.0006	0.2231	0.0151	0.0075	46	0.37	261.30	0
261	Acid Soluble Manganese (0.06%)	0095	0.2300	0.0000	0.2231	0.0151	0.0075	46	0.46	261.99	0
261	Acid Soluble Manganese (0.06%)	0029	0.2301	0.0269	0.2231	0.0151	0.0075	46	0.46	261.12	0
261	Acid Soluble Manganese (0.06%)	0040	0.2305	0.0070	0.2231	0.0151	0.0075	46	0.49	261.12	0
261	Acid Soluble Manganese (0.06%)	0233	0.2323	0.0000	0.2231	0.0151	0.0075	46	0.61	261.32	0
261	Acid Soluble Manganese (0.06%)	0102	0.2335	0.0010	0.2231	0.0151	0.0075	46	0.69	261.30	0
261	Acid Soluble Manganese (0.06%)	0494	0.2339	0.0079	0.2231	0.0151	0.0075	46	0.71	261.35	0
261	Acid Soluble Manganese (0.06%)	0028	0.2340	0.0060	0.2231	0.0151	0.0075	46	0.72	261.00	0
261	Acid Soluble Manganese (0.06%)	0485	0.2360	0.0020	0.2231	0.0151	0.0075	46	0.86	261.12	0
261	Acid Soluble Manganese (0.06%)	0360	0.2385	0.0190	0.2231	0.0151	0.0075	46	1.02	261.31	0
261	Acid Soluble Manganese (0.06%)	0324	0.2400	0.0020	0.2231	0.0151	0.0075	46	1.12	261.31	0
261	Acid Soluble Manganese (0.06%)	0231	0.2400	0.0000	0.2231	0.0151	0.0075	46	1.12	261.32	0
261	Acid Soluble Manganese (0.06%)	0055	0.2401	0.0302	0.2231	0.0151	0.0075	46	1.13	261.32	0
261	Acid Soluble Manganese (0.06%)	0105	0.2402	0.0027	0.2231	0.0151	0.0075	46	1.13	261.12	0
261	Acid Soluble Manganese (0.06%)	0025	0.2500	0.0076	0.2231	0.0151	0.0075	46	1.79	261.34	0
261	Acid Soluble Manganese (0.06%)	0483	0.2515	0.0190	0.2231	0.0151	0.0075	46	1.88	261.32	0
261	Acid Soluble Manganese (0.06%)	0482	0.2550	0.0100	0.2231	0.0151	0.0075	46	2.12	261.31	0
261	Acid Soluble Manganese (0.06%)	0114	2,172	103.0	0.2231	0.0151	0.0075	46	144016.58	261.30	2
281	Acid Soluble Mercury (ppm)	0394	0.2190	0.0300	0.2208	0.0025	0.0475	2	-0.71	281.30	0
281	Acid Soluble Mercury (ppm)	0230	0.2225	0.0650	0.2208	0.0025	0.0475	2	0.71	281.00	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	0.2208	0.0025	0.0475	2	-89.20	281.30	4

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 (5ppm)	0486	0.0012*	0.0001	10.85	3.276	0.5441	16	-3.31	289.33	0
289	Acid Soluble Molybdenum (5ppm)	0478	3.158*	0.1460	10.85	3.276	0.5441	16	-2.35	289.33	0
289	Acid Soluble Molybdenum (5ppm)	0394	6.000*	0.0000	10.85	3.276	0.5441	16	-1.48	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0474	6.150*	0.3000	10.85	3.276	0.5441	16	-1.43	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0035	6.795	0.1900	10.85	3.276	0.5441	16	-1.24	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0049	9.510	0.9200	10.85	3.276	0.5441	16	-0.41	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0220	10.65	0.7000	10.85	3.276	0.5441	16	-0.06	289.34	0
289	Acid Soluble Molybdenum (5ppm)	0096	11.80	0.6000	10.85	3.276	0.5441	16	0.29	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0220	12.00	2.000	10.85	3.276	0.5441	16	0.35	289.33	0
289	Acid Soluble Molybdenum (5ppm)	0515	12.13	1.055	10.85	3.276	0.5441	16	0.39	289.33	0
289	Acid Soluble Molybdenum (5ppm)	0230	12.60	0.0000	10.85	3.276	0.5441	16	0.53	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0515	12.78	0.5210	10.85	3.276	0.5441	16	0.59	289.34	0
289	Acid Soluble Molybdenum (5ppm)	0102	13.71	0.3640	10.85	3.276	0.5441	16	0.87	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0452	14.03	0.0400	10.85	3.276	0.5441	16	0.97	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0433	14.06	0.2734	10.85	3.276	0.5441	16	0.98	289.30	0
289	Acid Soluble Molybdenum (5ppm)	0494	14.69	1.596	10.85	3.276	0.5441	16	1.17	289.33	0
289	Acid Soluble Molybdenum (5ppm)	0506	21.40	7.200	10.85	3.276	0.5441	16	3.22	289.99	1
291	Acid Soluble Nickel (ppm)	0512	24.16	3.060	65.75	7.899	2.362	16	-5.27	291.99	0
291	Acid Soluble Nickel (ppm)	0474	25.00	2.000	65.75	7.899	2.362	16	-5.16	291.30	0
291	Acid Soluble Nickel (ppm)	0035	29.30	0.8000	65.75	7.899	2.362	16	-4.62	291.30	0
291	Acid Soluble Nickel (ppm)	0394	53.60	0.4000	65.75	7.899	2.362	16	-1.54	291.30	0
291	Acid Soluble Nickel (ppm)	0482	56.20	9.000	65.75	7.899	2.362	16	-1.21	291.30	0
291	Acid Soluble Nickel (ppm)	0230	60.55	0.5000	65.75	7.899	2.362	16	-0.66	291.30	0
291	Acid Soluble Nickel (ppm)	0481	64.00	2.000	65.75	7.899	2.362	16	-0.22	291.99	0
291	Acid Soluble Nickel (ppm)	0515	67.59	0.0325	65.75	7.899	2.362	16	0.23	291.33	0
291	Acid Soluble Nickel (ppm)	0478	68.77	2.255	65.75	7.899	2.362	16	0.38	291.33	0
291	Acid Soluble Nickel (ppm)	0494	69.84	3.852	65.75	7.899	2.362	16	0.52	291.33	0
291	Acid Soluble Nickel (ppm)	0102	70.81	0.1090	65.75	7.899	2.362	16	0.64	291.30	0
291	Acid Soluble Nickel (ppm)	0220	72.50	7.000	65.75	7.899	2.362	16	0.85	291.34	0
291	Acid Soluble Nickel (ppm)	0515	72.82	3.676	65.75	7.899	2.362	16	0.89	291.34	0
291	Acid Soluble Nickel (ppm)	0506	73.00	0.0000	65.75	7.899	2.362	16	0.92	291.99	0
291	Acid Soluble Nickel (ppm)	0096	73.35	2.100	65.75	7.899	2.362	16	0.96	291.30	0
291	Acid Soluble Nickel (ppm)	0136	73.50	1.000	65.75	7.899	2.362	16	0.98	291.00	0
301	Acid Soluble Selenium (ppm)	0485	0.3600	0.0480	65.75	7.899	0.0480	1	-8.28	301.99	0
301	Acid Soluble Selenium (ppm)	0230	0.0000	0.0000	65.75	7.899	0.0480	1	-8.32	301.30	4
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	65.75	7.899	0.0480	1	-8.32	301.33	4
301	Acid Soluble Selenium (ppm)	0515	0.0721	0.1441	65.75	7.899	0.0480	1	-8.32	301.34	4
311	Sodium (%)	0043	0.1600	0.0040	0.1885	0.0221	0.0048	10	-1.29	311.00	0
311	Sodium (%)	0494	0.1708	0.0090	0.1885	0.0221	0.0048	10	-0.80	311.33	0
311	Sodium (%)	0482	0.1750	0.0100	0.1885	0.0221	0.0048	10	-0.61	311.99	0
311	Sodium (%)	0102	0.1755	0.0030	0.1885	0.0221	0.0048	10	-0.59	311.33	0
311	Sodium (%)	0474	0.1800	0.0000	0.1885	0.0221	0.0048	10	-0.38	311.32	0
311	Sodium (%)	0096	0.1900	0.0000	0.1885	0.0221	0.0048	10	0.07	311.99	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				
311	Sodium (%)	0035	0.1995	0.0070	0.1885	0.0221	0.0048	10	0.50	311.99	0
311	Sodium (%)	0510	0.2000	0.0000	0.1885	0.0221	0.0048	10	0.52	311.30	0
311	Sodium (%)	0354	0.2525	0.0050	0.1885	0.0221	0.0048	10	2.90	311.99	0
311	Sodium (%)	0478	0.2719	0.0097	0.1885	0.0221	0.0048	10	3.77	311.33	0
321	Acid Soluble Zinc (0.05%)	0428	0.0415*	0.0059	0.1541	0.0104	0.0050	53	-10.82	321.00	0
321	Acid Soluble Zinc (0.05%)	0230	0.1145*	0.0010	0.1541	0.0104	0.0050	53	-3.81	321.30	0
321	Acid Soluble Zinc (0.05%)	0486	0.1150*	0.0100	0.1541	0.0104	0.0050	53	-3.76	321.33	0
321	Acid Soluble Zinc (0.05%)	0027	0.1195*	0.0070	0.1541	0.0104	0.0050	53	-3.33	321.30	0
321	Acid Soluble Zinc (0.05%)	0055	0.1308*	0.0032	0.1541	0.0104	0.0050	53	-2.24	321.32	0
321	Acid Soluble Zinc (0.05%)	0234	0.1350	0.0100	0.1541	0.0104	0.0050	53	-1.84	321.30	0
321	Acid Soluble Zinc (0.05%)	0025	0.1386	0.0029	0.1541	0.0104	0.0050	53	-1.49	321.02	0
321	Acid Soluble Zinc (0.05%)	0035	0.1389	0.0013	0.1541	0.0104	0.0050	53	-1.47	321.30	0
321	Acid Soluble Zinc (0.05%)	0394	0.1400	0.0000	0.1541	0.0104	0.0050	53	-1.36	321.32	0
321	Acid Soluble Zinc (0.05%)	0220	0.1440	0.0000	0.1541	0.0104	0.0050	53	-0.97	321.33	0
321	Acid Soluble Zinc (0.05%)	0478	0.1448	0.0022	0.1541	0.0104	0.0050	53	-0.89	321.33	0
321	Acid Soluble Zinc (0.05%)	0049	0.1450	0.0100	0.1541	0.0104	0.0050	53	-0.87	321.30	0
321	Acid Soluble Zinc (0.05%)	0506	0.1450	0.0100	0.1541	0.0104	0.0050	53	-0.87	321.99	0
321	Acid Soluble Zinc (0.05%)	0402	0.1480	0.0026	0.1541	0.0104	0.0050	53	-0.59	321.30	0
321	Acid Soluble Zinc (0.05%)	0043	0.1485	0.0070	0.1541	0.0104	0.0050	53	-0.54	321.00	0
321	Acid Soluble Zinc (0.05%)	0029	0.1494	0.0061	0.1541	0.0104	0.0050	53	-0.46	321.00	0
321	Acid Soluble Zinc (0.05%)	0515	0.1498	0.0058	0.1541	0.0104	0.0050	53	-0.41	321.33	0
321	Acid Soluble Zinc (0.05%)	0371	0.1500	0.0000	0.1541	0.0104	0.0050	53	-0.39	321.30	0
321	Acid Soluble Zinc (0.05%)	0452	0.1500	0.0000	0.1541	0.0104	0.0050	53	-0.39	321.30	0
321	Acid Soluble Zinc (0.05%)	0472	0.1500	0.0000	0.1541	0.0104	0.0050	53	-0.39	321.30	0
321	Acid Soluble Zinc (0.05%)	0389	0.1500	0.0080	0.1541	0.0104	0.0050	53	-0.39	321.99	0
321	Acid Soluble Zinc (0.05%)	0498	0.1500	0.0200	0.1541	0.0104	0.0050	53	-0.39	321.00	0
321	Acid Soluble Zinc (0.05%)	0307	0.1512	0.0011	0.1541	0.0104	0.0050	53	-0.28	321.30	0
321	Acid Soluble Zinc (0.05%)	0117	0.1515	0.0030	0.1541	0.0104	0.0050	53	-0.25	321.33	0
321	Acid Soluble Zinc (0.05%)	0034	0.1540	0.0020	0.1541	0.0104	0.0050	53	-0.01	321.33	0
321	Acid Soluble Zinc (0.05%)	0433	0.1549	0.0028	0.1541	0.0104	0.0050	53	0.08	321.30	0
321	Acid Soluble Zinc (0.05%)	0354	0.1550	0.0080	0.1541	0.0104	0.0050	53	0.09	321.30	0
321	Acid Soluble Zinc (0.05%)	0040	0.1560	0.0080	0.1541	0.0104	0.0050	53	0.18	321.00	0
321	Acid Soluble Zinc (0.05%)	0023	0.1560	0.0000	0.1541	0.0104	0.0050	53	0.18	321.33	0
321	Acid Soluble Zinc (0.05%)	0515	0.1563	0.0137	0.1541	0.0104	0.0050	53	0.21	321.99	0
321	Acid Soluble Zinc (0.05%)	0485	0.1570	0.0100	0.1541	0.0104	0.0050	53	0.28	321.00	0
321	Acid Soluble Zinc (0.05%)	0324	0.1570	0.0040	0.1541	0.0104	0.0050	53	0.28	321.30	0
321	Acid Soluble Zinc (0.05%)	0028	0.1575	0.0010	0.1541	0.0104	0.0050	53	0.33	321.00	0
321	Acid Soluble Zinc (0.05%)	0513	0.1580	0.0080	0.1541	0.0104	0.0050	53	0.37	321.00	0
321	Acid Soluble Zinc (0.05%)	0105	0.1587	0.0127	0.1541	0.0104	0.0050	53	0.44	321.00	0
321	Acid Soluble Zinc (0.05%)	0102	0.1590	0.0020	0.1541	0.0104	0.0050	53	0.47	321.30	0
321	Acid Soluble Zinc (0.05%)	0041	0.1600	0.0000	0.1541	0.0104	0.0050	53	0.57	321.30	0
321	Acid Soluble Zinc (0.05%)	0095	0.1600	0.0000	0.1541	0.0104	0.0050	53	0.57	321.30	0
321	Acid Soluble Zinc (0.05%)	0292	0.1600	0.0000	0.1541	0.0104	0.0050	53	0.57	321.30	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				
321	Acid Soluble Zinc (0.05%)	0105	0.1611	0.0146	0.1541	0.0104	0.0050	53	0.67	321.03	0
321	Acid Soluble Zinc (0.05%)	0096	0.1613	0.0040	0.1541	0.0104	0.0050	53	0.69	321.30	0
321	Acid Soluble Zinc (0.05%)	0494	0.1616	0.0123	0.1541	0.0104	0.0050	53	0.72	321.33	0
321	Acid Soluble Zinc (0.05%)	0231	0.1625	0.0070	0.1541	0.0104	0.0050	53	0.81	321.30	0
321	Acid Soluble Zinc (0.05%)	0360	0.1625	0.0010	0.1541	0.0104	0.0050	53	0.81	321.30	0
321	Acid Soluble Zinc (0.05%)	0512	0.1642	0.0023	0.1541	0.0104	0.0050	53	0.97	321.99	0
321	Acid Soluble Zinc (0.05%)	0474	0.1650	0.0100	0.1541	0.0104	0.0050	53	1.05	321.30	0
321	Acid Soluble Zinc (0.05%)	0482	0.1650	0.0100	0.1541	0.0104	0.0050	53	1.05	321.30	0
321	Acid Soluble Zinc (0.05%)	0233	0.1660	0.0021	0.1541	0.0104	0.0050	53	1.14	321.30	0
321	Acid Soluble Zinc (0.05%)	0457	0.1695	0.0030	0.1541	0.0104	0.0050	53	1.48	321.00	0
321	Acid Soluble Zinc (0.05%)	0516	0.1695	0.0010	0.1541	0.0104	0.0050	53	1.48	321.00	0
321	Acid Soluble Zinc (0.05%)	0481	0.1700	0.0000	0.1541	0.0104	0.0050	53	1.53	321.00	0
321	Acid Soluble Zinc (0.05%)	0169	0.1735	0.0010	0.1541	0.0104	0.0050	53	1.86	321.00	0
321	Acid Soluble Zinc (0.05%)	0483	0.1805	0.0050	0.1541	0.0104	0.0050	53	2.54	321.30	0
321	Acid Soluble Zinc (0.05%)	0114	1,348	48.00	0.1541	0.0104	0.0050	53	129506.45	321.30	2

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. 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 astrix 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.