

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 190711

Grade 3 - 6.9 - 3.6

Statistical Summary

Analytes: 38

Labs Reporting: 96

Issue Date : 08/31/2019

Analyte Code	Analyte Sample # 190711	# 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	Analyte IA Ratio	Average Range (R-bar)	Horwitz %RSD
001	Ammoniacal Nitrogen (%)	7	7	1.898	0.1899	1.882		0.1768	0.0835	9.39%		0.0783	3.64%
003	Water Insoluble Nitrogen (%)	1		1.710									
005	Urea Nitrogen (%)	1		1.765									
009	Ammoniacal Plus Nitrate Nitrogen (%)	1		4.780									
010	Total Nitrogen (3%)	86	85	3.730	0.6405	3.640	0.4900	0.1423	0.0193	3.91%	0.68	0.0534	3.29%
020	Total Phosphorus as P2O5 (%)	54	53	5.401	1.957	5.336		0.7229	0.1241	13.55%		0.1103	3.11%
030	Citrate Insoluble Phosphorus as P2O5 (%)	1		0.3300									
040	Indirect Available Phosphorus as P2O5 (6.9%)	1		5.375									
041	Direct Available Phosphorus as P2O5 (6.9%)	41	40	5.105	0.9926	5.112	0.6700	0.7147	0.1413	13.98%	2.49	0.0780	3.13%
042	Water Soluble OrthoP as P2O5 (%)	1		5.077									
048	Water Soluble Phosphorus as P2O5 (%)	4	4	2.870	2.345	2.870		2.345	1.466	81.72%		0.1200	3.41%
050	Soluble Potassium as K2O (3.6%)	81	80	4.356	0.4283	4.357	0.4171	0.4513	0.0631	10.36%	2.52	0.0887	3.21%
060	Water (Free) (%)	5	5	2.532	1.220	2.532		1.220	0.6819	48.17%		0.0908	3.48%
101	Acid Soluble Calcium (2%)	61	60	4.074	0.8132	4.203	0.4102	0.3538	0.0571	8.42%	2.01	0.0920	3.22%
121	Acid Soluble Magnesium (1.7%)	63	61	1.715	0.1323	1.710	0.2855	0.1008	0.0161	5.89%	0.82	0.0459	3.69%
131	Water Soluble Magnesium (%)	4	4	1.506	0.5725	1.506		0.5725	0.3578	38.01%		0.0690	3.76%
143	Elemental Sulfur (%)	7	7	6.463	2.736	7.246		0.9245	0.4368	12.76%		0.1117	2.97%
145	Sulfate Sulfur, HCl soluble (%)	9	9	6.784	1.504	6.935		0.5562	0.2317	8.02%		0.1096	2.99%
148	Total Sulfur (7%)	47	46	7.222	0.9367	7.343	0.5672	0.4997	0.0921	6.80%	2.05	0.1059	2.96%
149	Sulfur - HNO3 soluble (%)	2	2	7.444	0.6498								
151	Acid Soluble Arsenic (ppm)	20	12	2.094	0.8178	1.991		0.6903	0.2491	34.68%		0.1160	14.42%
165	Acid Soluble Boron (1.5%)	45	42	1.001	0.2005	1.011	0.1546	0.1152	0.0222	11.39%	1.74	0.0263	3.99%
171	Water Soluble Boron (%)	9	9	0.9953	0.3020	0.9953		0.3425	0.1427	34.41%		0.0320	4.00%
181	Acid Soluble Cadmium (ppm)	21	13	0.5730	0.2125	0.5497		0.1366	0.0474	24.85%		0.0478	17.50%
191	Acid Soluble Chromium (ppm)	20	18	27.56	8.257	27.66		7.104	2.093	25.69%		1.598	9.71%
202	Acid Soluble Cobalt (ppm)	24	22	17.22	5.220	17.81	6.3435	4.357	1.161	24.46%	1.60	0.7143	10.37%
221	Acid Soluble Copper (1%)	61	60	0.7682	0.0754	0.7645	0.0815	0.0564	0.0091	7.38%	1.61	0.0206	4.16%
241	Acid Soluble Iron (1%)	65	64	0.9314	0.0822	0.9359	0.0986	0.0671	0.0105	7.17%	1.59	0.0210	4.04%
251	Acid Soluble Lead (ppm)	21	14	3.746	3.028	3.070		1.925	0.6431	62.69%		0.3548	13.51%
261	Acid Soluble Manganese (1.5%)	62	61	1.133	0.1633	1.127	0.1177	0.0972	0.0156	8.63%	1.92	0.0293	3.93%
271	Water Soluble Manganese (%)	2	2	0.7348	0.2118								
281	Acid Soluble Mercury (ppm)	10	3	7.917	13.67	7.917		13.67	9.865	172.66%		0.0715	11.72%
289	Acid Soluble Molybdenum (ppm)	20	16	5.327	1.864	5.494	2.6483	1.378	0.4306	25.08%	1.21	0.5386	12.38%

Analyte Code	Analyte Sample # 190711	# 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	Analyte IA Ratio	Average Range (R-bar)	Horwitz %RSD
291	Acid Soluble Nickel (ppm)	22	21	24.88	14.00	22.52		4.101	1.119	18.21%		1.828	10.01%
301	Acid Soluble Selenium (ppm)	14	9	5.287	3.224	5.287		3.656	1.523	69.15%		0.3837	12.45%
311	Sodium (%)	8	8	1.475	0.0882	1.475	0.1525	0.1000	0.0442	6.78%	1.53	0.0281	3.77%
321	Acid Soluble Zinc (2%)	63	61	1.461	0.1750	1.438	0.1488	0.0960	0.0154	6.67%	1.50	0.0362	3.79%
325	Water Soluble Zinc (%)	4	4	1.209	0.8567	1.209		0.8567	0.5355	70.87%		0.0583	3.89%

The Analyte IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Analyte Assigned Value}$. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting.

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Sample # 190711

Grade 3 - 6.9 - 3.6

Lab Values

Analytes: 38

Labs Reporting: 96

Issue Date : 08/31/2019

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 (%)	0456	1.705	0.1500	1.882	0.1768	0.0783	7	-0.91	001.10	0
001	Ammoniacal Nitrogen (%)	0451	1.710	0.0400	1.882	0.1768	0.0783	7	-0.88	001.10	0
001	Ammoniacal Nitrogen (%)	0524	1.833	0.0582	1.882	0.1768	0.0783	7	-0.25	001.99	0
001	Ammoniacal Nitrogen (%)	0096	1.875	0.0100	1.882	0.1768	0.0783	7	-0.04	001.99	0
001	Ammoniacal Nitrogen (%)	0544	1.920	0.0000	1.882	0.1768	0.0783	7	0.19	001.99	0
001	Ammoniacal Nitrogen (%)	0420	1.985	0.1300	1.882	0.1768	0.0783	7	0.53	001.99	0
001	Ammoniacal Nitrogen (%)	0537	2.260	0.1600	1.882	0.1768	0.0783	7	1.93	001.99	0
003	Water Insoluble Nitrogen (%)	0451	1.710	0.0400				1		003.10	0
005	Urea Nitrogen (%)	0537	1.765	0.0700				1		005.99	0
009	Ammoniacal Plus Nitrate Nitrogen (%)	0537	4.780	0.1200				1		009.10	0
010	Total Nitrogen (3%)	0546	2.115†	0.0300	3.640	0.1423	0.0534	85	-10.72	010.11	0
010	Total Nitrogen (3%)	0309	2.700†	0.1400	3.640	0.1423	0.0534	85	-6.61	010.11	0
010	Total Nitrogen (3%)	0519	2.930†	0.0400	3.640	0.1423	0.0534	85	-4.99	010.99	0
010	Total Nitrogen (3%)	0520	3.025†	0.1900	3.640	0.1423	0.0534	85	-4.33	010.99	0
010	Total Nitrogen (3%)	0532	3.025†	0.1100	3.640	0.1423	0.0534	85	-4.33	010.99	0
010	Total Nitrogen (3%)	0556	3.100†	0.1000	3.640	0.1423	0.0534	85	-3.80	010.99	0
010	Total Nitrogen (3%)	0545	3.125†	0.0500	3.640	0.1423	0.0534	85	-3.62	010.99	0
010	Total Nitrogen (3%)	0456	3.230	0.0800	3.640	0.1423	0.0534	85	-2.89	010.11	0
010	Total Nitrogen (3%)	0493	3.250	0.1000	3.640	0.1423	0.0534	85	-2.74	010.99	0
010	Total Nitrogen (3%)	0555	3.350	0.1000	3.640	0.1423	0.0534	85	-2.04	010.60	0
010	Total Nitrogen (3%)	0476	3.449	0.0406	3.640	0.1423	0.0534	85	-1.35	010.99	0
010	Total Nitrogen (3%)	0307	3.495	0.0100	3.640	0.1423	0.0534	85	-1.02	010.60	0
010	Total Nitrogen (3%)	0485	3.533	0.0230	3.640	0.1423	0.0534	85	-0.76	010.60	0
010	Total Nitrogen (3%)	0117	3.535	0.0100	3.640	0.1423	0.0534	85	-0.74	010.60	0
010	Total Nitrogen (3%)	0291	3.535	0.0100	3.640	0.1423	0.0534	85	-0.74	010.60	0
010	Total Nitrogen (3%)	0481	3.535	0.0700	3.640	0.1423	0.0534	85	-0.74	010.99	0
010	Total Nitrogen (3%)	0522	3.535	0.0500	3.640	0.1423	0.0534	85	-0.74	010.99	0
010	Total Nitrogen (3%)	0521	3.545	0.0000	3.640	0.1423	0.0534	85	-0.67	010.60	0
010	Total Nitrogen (3%)	0513	3.545	0.0100	3.640	0.1423	0.0534	85	-0.67	010.99	0
010	Total Nitrogen (3%)	0043	3.555	0.0100	3.640	0.1423	0.0534	85	-0.60	010.60	0
010	Total Nitrogen (3%)	0325	3.555	0.0100	3.640	0.1423	0.0534	85	-0.60	010.60	0
010	Total Nitrogen (3%)	0300	3.564	0.0340	3.640	0.1423	0.0534	85	-0.54	010.16	0
010	Total Nitrogen (3%)	0220	3.565	0.0100	3.640	0.1423	0.0534	85	-0.53	010.11	0
010	Total Nitrogen (3%)	0106	3.570	0.0000	3.640	0.1423	0.0534	85	-0.50	010.60	0
010	Total Nitrogen (3%)	0354	3.580	0.0200	3.640	0.1423	0.0534	85	-0.42	010.60	0
010	Total Nitrogen (3%)	0452	3.585	0.0300	3.640	0.1423	0.0534	85	-0.39	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 (3%)	0501	3.585	0.0100	3.640	0.1423	0.0534	85	-0.39	010.60	0
010	Total Nitrogen (3%)	0416	3.590	0.0000	3.640	0.1423	0.0534	85	-0.35	010.12	0
010	Total Nitrogen (3%)	0095	3.590	0.0200	3.640	0.1423	0.0534	85	-0.35	010.60	0
010	Total Nitrogen (3%)	0105	3.600	0.0200	3.640	0.1423	0.0534	85	-0.28	010.11	0
010	Total Nitrogen (3%)	0105	3.600	0.0600	3.640	0.1423	0.0534	85	-0.28	010.60	0
010	Total Nitrogen (3%)	0450	3.600	0.4000	3.640	0.1423	0.0534	85	-0.28	010.60	0
010	Total Nitrogen (3%)	0055	3.600	0.2000	3.640	0.1423	0.0534	85	-0.28	010.60	0
010	Total Nitrogen (3%)	0234	3.600	0.0000	3.640	0.1423	0.0534	85	-0.28	010.60	0
010	Total Nitrogen (3%)	0523	3.600	0.0000	3.640	0.1423	0.0534	85	-0.28	010.60	0
010	Total Nitrogen (3%)	0405	3.610	0.0400	3.640	0.1423	0.0534	85	-0.21	010.60	0
010	Total Nitrogen (3%)	0486	3.610	0.0000	3.640	0.1423	0.0534	85	-0.21	010.60	0
010	Total Nitrogen (3%)	0547	3.610	0.0000	3.640	0.1423	0.0534	85	-0.21	010.60	0
010	Total Nitrogen (3%)	0534	3.615	0.0100	3.640	0.1423	0.0534	85	-0.18	010.60	0
010	Total Nitrogen (3%)	0025	3.625	0.0650	3.640	0.1423	0.0534	85	-0.11	010.60	0
010	Total Nitrogen (3%)	0444	3.625	0.0300	3.640	0.1423	0.0534	85	-0.11	010.60	0
010	Total Nitrogen (3%)	0389	3.630	0.0200	3.640	0.1423	0.0534	85	-0.07	010.60	0
010	Total Nitrogen (3%)	0390	3.635	0.0100	3.640	0.1423	0.0534	85	-0.04	010.60	0
010	Total Nitrogen (3%)	0472	3.635	0.0100	3.640	0.1423	0.0534	85	-0.04	010.60	0
010	Total Nitrogen (3%)	0136	3.640	0.0200	3.640	0.1423	0.0534	85	0.00	010.60	0
010	Total Nitrogen (3%)	0561	3.645	0.0100	3.640	0.1423	0.0534	85	0.03	010.60	0
010	Total Nitrogen (3%)	0034	3.650	0.0440	3.640	0.1423	0.0534	85	0.07	010.60	0
010	Total Nitrogen (3%)	0558	3.655	0.0100	3.640	0.1423	0.0534	85	0.10	010.99	0
010	Total Nitrogen (3%)	0451	3.656	0.0700	3.640	0.1423	0.0534	85	0.11	010.60	0
010	Total Nitrogen (3%)	0324	3.665	0.0300	3.640	0.1423	0.0534	85	0.17	010.60	0
010	Total Nitrogen (3%)	0494	3.665	0.0700	3.640	0.1423	0.0534	85	0.17	010.60	0
010	Total Nitrogen (3%)	0086	3.669	0.0549	3.640	0.1423	0.0534	85	0.20	010.60	0
010	Total Nitrogen (3%)	0018	3.670	0.0000	3.640	0.1423	0.0534	85	0.21	010.60	0
010	Total Nitrogen (3%)	0527	3.675	0.0340	3.640	0.1423	0.0534	85	0.24	010.60	0
010	Total Nitrogen (3%)	0233	3.686	0.0060	3.640	0.1423	0.0534	85	0.32	010.60	0
010	Total Nitrogen (3%)	0073	3.690	0.0200	3.640	0.1423	0.0534	85	0.35	010.60	0
010	Total Nitrogen (3%)	0037	3.691	0.0230	3.640	0.1423	0.0534	85	0.35	010.60	0
010	Total Nitrogen (3%)	0035	3.695	0.0100	3.640	0.1423	0.0534	85	0.38	010.60	0
010	Total Nitrogen (3%)	0177	3.695	0.0280	3.640	0.1423	0.0534	85	0.38	010.60	0
010	Total Nitrogen (3%)	0360	3.695	0.0300	3.640	0.1423	0.0534	85	0.38	010.60	0
010	Total Nitrogen (3%)	0421	3.695	0.0100	3.640	0.1423	0.0534	85	0.38	010.60	0
010	Total Nitrogen (3%)	0482	3.700	0.0400	3.640	0.1423	0.0534	85	0.42	010.60	0
010	Total Nitrogen (3%)	0377	3.714	0.0240	3.640	0.1423	0.0534	85	0.52	010.60	0
010	Total Nitrogen (3%)	0524	3.726	0.0427	3.640	0.1423	0.0534	85	0.60	010.99	0
010	Total Nitrogen (3%)	0483	3.730	0.0000	3.640	0.1423	0.0534	85	0.63	010.60	0
010	Total Nitrogen (3%)	0419	3.739	0.0010	3.640	0.1423	0.0534	85	0.69	010.60	0
010	Total Nitrogen (3%)	0070	3.740	0.0600	3.640	0.1423	0.0534	85	0.70	010.60	0
010	Total Nitrogen (3%)	0157	3.745	0.0300	3.640	0.1423	0.0534	85	0.74	010.60	0
010	Total Nitrogen (3%)	0040	3.750	0.1000	3.640	0.1423	0.0534	85	0.77	010.60	0
010	Total Nitrogen (3%)	0027	3.757	0.1140	3.640	0.1423	0.0534	85	0.82	010.60	0
010	Total Nitrogen (3%)	0255	3.770	0.1330	3.640	0.1423	0.0534	85	0.91	010.60	0
010	Total Nitrogen (3%)	0096	3.770	0.0200	3.640	0.1423	0.0534	85	0.91	010.60	0
010	Total Nitrogen (3%)	0029	3.773	0.0070	3.640	0.1423	0.0534	85	0.93	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 (3%)	0368	3.790	0.1170	3.640	0.1423	0.0534	85	1.05	010.60	0
010	Total Nitrogen (3%)	0102	3.850	0.0800	3.640	0.1423	0.0534	85	1.47	010.60	0
010	Total Nitrogen (3%)	0402	3.900	0.0400	3.640	0.1423	0.0534	85	1.82	010.60	0
010	Total Nitrogen (3%)	0042	3.990	0.2000	3.640	0.1423	0.0534	85	2.46	010.60	0
010	Total Nitrogen (3%)	0420	4.000	0.2000	3.640	0.1423	0.0534	85	2.53	010.99	0
010	Total Nitrogen (3%)	0526	4.303‡	0.0000	3.640	0.1423	0.0534	85	4.66	010.17	0
010	Total Nitrogen (3%)	0510	4.419‡	0.1744	3.640	0.1423	0.0534	85	5.47	010.11	0
010	Total Nitrogen (3%)	0559	5.515‡	0.0100	3.640	0.1423	0.0534	85	13.18	010.99	0
010	Total Nitrogen (3%)	0551	5.890‡	0.1400	3.640	0.1423	0.0534	85	15.81	010.11	0
010	Total Nitrogen (3%)	0551	5.910‡	0.1000	3.640	0.1423	0.0534	85	15.95	010.99	0
010	Total Nitrogen (3%)	0535	6.300‡	0.1000	3.640	0.1423	0.0534	85	18.70	010.11	0
010	Total Nitrogen (3%)	0537	6.310‡	0.1600	3.640	0.1423	0.0534	85	18.77	010.99	0
010	Total Nitrogen (3%)	0553	2.870†	1.500	3.640	0.1423	0.0534	85	-5.42	010.99	1
020	Total Phosphorus as P2O5 (%)	0255	1.086	0.0840	5.336	0.7229	0.1103	53	-5.88	020.50	0
020	Total Phosphorus as P2O5 (%)	0553	1.103	0.0150	5.336	0.7229	0.1103	53	-5.86	020.20	0
020	Total Phosphorus as P2O5 (%)	0324	2.300	0.3200	5.336	0.7229	0.1103	53	-4.20	020.20	0
020	Total Phosphorus as P2O5 (%)	0561	2.360	0.0200	5.336	0.7229	0.1103	53	-4.12	020.20	0
020	Total Phosphorus as P2O5 (%)	0542	3.780	0.0200	5.336	0.7229	0.1103	53	-2.15	020.50	0
020	Total Phosphorus as P2O5 (%)	0482	4.195	0.0900	5.336	0.7229	0.1103	53	-1.58	020.50	0
020	Total Phosphorus as P2O5 (%)	0486	4.375	0.0700	5.336	0.7229	0.1103	53	-1.33	020.50	0
020	Total Phosphorus as P2O5 (%)	0420	4.515	0.3100	5.336	0.7229	0.1103	53	-1.14	020.20	0
020	Total Phosphorus as P2O5 (%)	0389	4.785	0.0500	5.336	0.7229	0.1103	53	-0.76	020.50	0
020	Total Phosphorus as P2O5 (%)	0291	4.805	0.0100	5.336	0.7229	0.1103	53	-0.73	020.50	0
020	Total Phosphorus as P2O5 (%)	0524	4.863	0.0482	5.336	0.7229	0.1103	53	-0.65	020.50	0
020	Total Phosphorus as P2O5 (%)	0546	4.911	0.0630	5.336	0.7229	0.1103	53	-0.59	020.50	0
020	Total Phosphorus as P2O5 (%)	0472	4.965	0.0300	5.336	0.7229	0.1103	53	-0.51	020.50	0
020	Total Phosphorus as P2O5 (%)	0523	5.000	0.0000	5.336	0.7229	0.1103	53	-0.46	020.50	0
020	Total Phosphorus as P2O5 (%)	0368	5.021	0.0791	5.336	0.7229	0.1103	53	-0.44	020.50	0
020	Total Phosphorus as P2O5 (%)	0513	5.040	0.0200	5.336	0.7229	0.1103	53	-0.41	020.99	0
020	Total Phosphorus as P2O5 (%)	0300	5.088	0.0060	5.336	0.7229	0.1103	53	-0.34	020.50	0
020	Total Phosphorus as P2O5 (%)	0390	5.100	0.2000	5.336	0.7229	0.1103	53	-0.33	020.50	0
020	Total Phosphorus as P2O5 (%)	0493	5.150	0.1000	5.336	0.7229	0.1103	53	-0.26	020.10	0
020	Total Phosphorus as P2O5 (%)	0220	5.150	0.0600	5.336	0.7229	0.1103	53	-0.26	020.20	0
020	Total Phosphorus as P2O5 (%)	0559	5.150	0.1000	5.336	0.7229	0.1103	53	-0.26	020.99	0
020	Total Phosphorus as P2O5 (%)	0444	5.175	0.0700	5.336	0.7229	0.1103	53	-0.22	020.50	0
020	Total Phosphorus as P2O5 (%)	0027	5.190	0.0400	5.336	0.7229	0.1103	53	-0.20	020.20	0
020	Total Phosphorus as P2O5 (%)	0552	5.190	0.0600	5.336	0.7229	0.1103	53	-0.20	020.50	0
020	Total Phosphorus as P2O5 (%)	0419	5.217	0.0320	5.336	0.7229	0.1103	53	-0.16	020.20	0
020	Total Phosphorus as P2O5 (%)	0547	5.220	0.1800	5.336	0.7229	0.1103	53	-0.16	020.50	0
020	Total Phosphorus as P2O5 (%)	0136	5.240	0.0600	5.336	0.7229	0.1103	53	-0.13	020.10	0
020	Total Phosphorus as P2O5 (%)	0416	5.250	0.0400	5.336	0.7229	0.1103	53	-0.12	020.20	0
020	Total Phosphorus as P2O5 (%)	0526	5.340	0.0000	5.336	0.7229	0.1103	53	0.01	020.20	0
020	Total Phosphorus as P2O5 (%)	0510	5.377	0.0403	5.336	0.7229	0.1103	53	0.06	020.20	0
020	Total Phosphorus as P2O5 (%)	0035	5.435	0.1300	5.336	0.7229	0.1103	53	0.14	020.40	0
020	Total Phosphorus as P2O5 (%)	0234	5.450	0.1000	5.336	0.7229	0.1103	53	0.16	020.50	0
020	Total Phosphorus as P2O5 (%)	0117	5.464	0.0060	5.336	0.7229	0.1103	53	0.18	020.50	0
020	Total Phosphorus as P2O5 (%)	0450	5.510	0.0200	5.336	0.7229	0.1103	53	0.24	020.20	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 (%)	0157	5.545	0.0500	5.336	0.7229	0.1103	53	0.29	020.50	0
020	Total Phosphorus as P2O5 (%)	0042	5.600	0.2400	5.336	0.7229	0.1103	53	0.37	020.50	0
020	Total Phosphorus as P2O5 (%)	0096	5.700	0.2000	5.336	0.7229	0.1103	53	0.50	020.40	0
020	Total Phosphorus as P2O5 (%)	0402	5.700	0.0000	5.336	0.7229	0.1103	53	0.50	020.50	0
020	Total Phosphorus as P2O5 (%)	0558	5.710	0.1600	5.336	0.7229	0.1103	53	0.52	020.20	0
020	Total Phosphorus as P2O5 (%)	0527	5.730	0.0149	5.336	0.7229	0.1103	53	0.54	020.50	0
020	Total Phosphorus as P2O5 (%)	0534	5.765	0.0900	5.336	0.7229	0.1103	53	0.59	020.20	0
020	Total Phosphorus as P2O5 (%)	0481	5.945	0.2700	5.336	0.7229	0.1103	53	0.84	020.20	0
020	Total Phosphorus as P2O5 (%)	0483	5.950	0.3000	5.336	0.7229	0.1103	53	0.85	020.50	0
020	Total Phosphorus as P2O5 (%)	0555	5.954	0.2670	5.336	0.7229	0.1103	53	0.85	020.50	0
020	Total Phosphorus as P2O5 (%)	0476	5.961	0.0306	5.336	0.7229	0.1103	53	0.86	020.20	0
020	Total Phosphorus as P2O5 (%)	0405	6.090	0.1400	5.336	0.7229	0.1103	53	1.04	020.20	0
020	Total Phosphorus as P2O5 (%)	0456	6.150	0.5000	5.336	0.7229	0.1103	53	1.13	020.40	0
020	Total Phosphorus as P2O5 (%)	0309	6.480	0.0000	5.336	0.7229	0.1103	53	1.58	020.20	0
020	Total Phosphorus as P2O5 (%)	0544	6.490	0.0000	5.336	0.7229	0.1103	53	1.60	020.20	0
020	Total Phosphorus as P2O5 (%)	0522	6.530	0.8400	5.336	0.7229	0.1103	53	1.65	020.20	0
020	Total Phosphorus as P2O5 (%)	0521	6.933	0.0000	5.336	0.7229	0.1103	53	2.21	020.50	0
020	Total Phosphorus as P2O5 (%)	0433	11.21	0.0700	5.336	0.7229	0.1103	53	8.12	020.50	0
020	Total Phosphorus as P2O5 (%)	0520	15.00	0.2000	5.336	0.7229	0.1103	53	13.37	020.99	0
020	Total Phosphorus as P2O5 (%)	0515	5.720	2.284	5.336	0.7229	0.1103	53	0.53	020.99	1
030	Citrate Insoluble Phosphorus as P2O5 (%)	0096	0.3300	0.0000				1		030.40	0
040	Indirect Available Phosphorus as P2O5 (6.9%)	0096	5.375±	0.1900				1		040.40	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0519	1.885†	0.0100	5.112	0.7147	0.0780	40	-4.51	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0377	2.775†	0.0300	5.112	0.7147	0.0780	40	-3.27	041.51	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0325	4.100†	0.0000	5.112	0.7147	0.0780	40	-1.42	041.50	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0472	4.130†	0.0200	5.112	0.7147	0.0780	40	-1.37	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0177	4.251†	0.0267	5.112	0.7147	0.0780	40	-1.20	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0027	4.505	0.2300	5.112	0.7147	0.0780	40	-0.85	041.20	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0106	4.665	0.0100	5.112	0.7147	0.0780	40	-0.63	041.21	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0494	4.670	0.2200	5.112	0.7147	0.0780	40	-0.62	041.10	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0095	4.705	0.1100	5.112	0.7147	0.0780	40	-0.57	041.40	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0177	4.754	0.0908	5.112	0.7147	0.0780	40	-0.50	041.10	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0220	4.795	0.0100	5.112	0.7147	0.0780	40	-0.44	041.11	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0086	4.802	0.0386	5.112	0.7147	0.0780	40	-0.43	041.10	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0070	4.810	0.0400	5.112	0.7147	0.0780	40	-0.42	041.50	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0055	4.860	0.0600	5.112	0.7147	0.0780	40	-0.35	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0233	4.889	0.1860	5.112	0.7147	0.0780	40	-0.31	041.51	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0452	4.890	0.0000	5.112	0.7147	0.0780	40	-0.31	041.50	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0307	4.915	0.1100	5.112	0.7147	0.0780	40	-0.28	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0485	4.921	0.0980	5.112	0.7147	0.0780	40	-0.27	041.11	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0360	4.950	0.0200	5.112	0.7147	0.0780	40	-0.23	041.51	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0055	4.970	0.0200	5.112	0.7147	0.0780	40	-0.20	041.10	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0513	4.980	0.0200	5.112	0.7147	0.0780	40	-0.18	041.11	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0522	4.985	0.0500	5.112	0.7147	0.0780	40	-0.18	041.21	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0025	4.985	0.0900	5.112	0.7147	0.0780	40	-0.18	041.51	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0105	5.005	0.1100	5.112	0.7147	0.0780	40	-0.15	041.11	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0131	5.067	0.0640	5.112	0.7147	0.0780	40	-0.06	041.50	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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041	Direct Available Phosphorus as P2O5 (6.9%)	0494	5.195	0.0700	5.112	0.7147	0.0780	40	0.12	041.51	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0544	5.215	0.0300	5.112	0.7147	0.0780	40	0.14	041.21	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0029	5.340	0.0800	5.112	0.7147	0.0780	40	0.32	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0354	5.535	0.1100	5.112	0.7147	0.0780	40	0.59	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0037	5.598	0.2280	5.112	0.7147	0.0780	40	0.68	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0018	5.630	0.0200	5.112	0.7147	0.0780	40	0.73	041.40	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0034	5.644	0.0166	5.112	0.7147	0.0780	40	0.74	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0421	5.650	0.1000	5.112	0.7147	0.0780	40	0.75	041.50	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0102	5.950‡	0.3000	5.112	0.7147	0.0780	40	1.17	041.10	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0105	6.120‡	0.1400	5.112	0.7147	0.0780	40	1.41	041.60	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0551	6.175‡	0.0500	5.112	0.7147	0.0780	40	1.49	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0545	6.685‡	0.0100	5.112	0.7147	0.0780	40	2.20	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0532	6.975‡	0.0700	5.112	0.7147	0.0780	40	2.61	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0535	7.055‡	0.0900	5.112	0.7147	0.0780	40	2.72	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0536	7.170‡	0.1400	5.112	0.7147	0.0780	40	2.88	041.99	0
041	Direct Available Phosphorus as P2O5 (6.9%)	0537	6.800‡	0.4200	5.112	0.7147	0.0780	40	2.36	041.99	1
042	Water Soluble OrthoP as P2O5 (%)	0553	5.077	0.0000				1		042.10	0
048	Water Soluble Phosphorus as P2O5 (%)	0096	1.385	0.1100	2.870	2.345	0.1200	4	-0.63	048.40	0
048	Water Soluble Phosphorus as P2O5 (%)	0444	1.635	0.0300	2.870	2.345	0.1200	4	-0.53	048.50	0
048	Water Soluble Phosphorus as P2O5 (%)	0420	2.100	0.1600	2.870	2.345	0.1200	4	-0.33	048.20	0
048	Water Soluble Phosphorus as P2O5 (%)	0556	6.360	0.1800	2.870	2.345	0.1200	4	1.49	048.99	0
050	Soluble Potassium as K2O (3.6%)	0558	3.405†	0.0100	4.357	0.4513	0.0887	80	-2.11	050.99	0
050	Soluble Potassium as K2O (3.6%)	0533	3.580†	0.1200	4.357	0.4513	0.0887	80	-1.72	050.99	0
050	Soluble Potassium as K2O (3.6%)	0493	3.600†	0.1000	4.357	0.4513	0.0887	80	-1.68	050.99	0
050	Soluble Potassium as K2O (3.6%)	0519	3.630†	0.0200	4.357	0.4513	0.0887	80	-1.61	050.99	0
050	Soluble Potassium as K2O (3.6%)	0481	3.640†	0.0600	4.357	0.4513	0.0887	80	-1.59	050.99	0
050	Soluble Potassium as K2O (3.6%)	0532	3.640†	0.1600	4.357	0.4513	0.0887	80	-1.59	050.99	0
050	Soluble Potassium as K2O (3.6%)	0419	3.649†	0.0330	4.357	0.4513	0.0887	80	-1.57	050.99	0
050	Soluble Potassium as K2O (3.6%)	0498	3.650†	0.1000	4.357	0.4513	0.0887	80	-1.57	050.10	0
050	Soluble Potassium as K2O (3.6%)	0309	3.670†	0.0200	4.357	0.4513	0.0887	80	-1.52	050.30	0
050	Soluble Potassium as K2O (3.6%)	0537	3.680†	0.1200	4.357	0.4513	0.0887	80	-1.50	050.99	0
050	Soluble Potassium as K2O (3.6%)	0255	3.697†	0.0780	4.357	0.4513	0.0887	80	-1.46	050.99	0
050	Soluble Potassium as K2O (3.6%)	0555	3.805†	0.1700	4.357	0.4513	0.0887	80	-1.22	050.51	0
050	Soluble Potassium as K2O (3.6%)	0556	3.845†	0.1900	4.357	0.4513	0.0887	80	-1.13	050.99	0
050	Soluble Potassium as K2O (3.6%)	0131	3.866†	0.0560	4.357	0.4513	0.0887	80	-1.09	050.51	0
050	Soluble Potassium as K2O (3.6%)	0561	3.965	0.0300	4.357	0.4513	0.0887	80	-0.87	050.99	0
050	Soluble Potassium as K2O (3.6%)	0545	3.970	0.0400	4.357	0.4513	0.0887	80	-0.86	050.99	0
050	Soluble Potassium as K2O (3.6%)	0535	4.000	0.0000	4.357	0.4513	0.0887	80	-0.79	050.99	0
050	Soluble Potassium as K2O (3.6%)	0220	4.020	0.0000	4.357	0.4513	0.0887	80	-0.75	050.00	0
050	Soluble Potassium as K2O (3.6%)	0472	4.040	0.1800	4.357	0.4513	0.0887	80	-0.70	050.31	0
050	Soluble Potassium as K2O (3.6%)	0102	4.050	0.3000	4.357	0.4513	0.0887	80	-0.68	050.00	0
050	Soluble Potassium as K2O (3.6%)	0535	4.050	0.1000	4.357	0.4513	0.0887	80	-0.68	050.61	0
050	Soluble Potassium as K2O (3.6%)	0535	4.050	0.1000	4.357	0.4513	0.0887	80	-0.68	050.62	0
050	Soluble Potassium as K2O (3.6%)	0551	4.060	0.0600	4.357	0.4513	0.0887	80	-0.66	050.99	0
050	Soluble Potassium as K2O (3.6%)	0552	4.090	0.1000	4.357	0.4513	0.0887	80	-0.59	050.99	0
050	Soluble Potassium as K2O (3.6%)	0547	4.100	0.0200	4.357	0.4513	0.0887	80	-0.57	050.51	0
050	Soluble Potassium as K2O (3.6%)	0405	4.215	0.1300	4.357	0.4513	0.0887	80	-0.31	050.00	0

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050	Soluble Potassium as K2O (3.6%)	0521	4.226	0.0000	4.357	0.4513	0.0887	80	-0.29	050.99	0
050	Soluble Potassium as K2O (3.6%)	0055	4.230	0.1200	4.357	0.4513	0.0887	80	-0.28	050.50	0
050	Soluble Potassium as K2O (3.6%)	0476	4.240	0.0442	4.357	0.4513	0.0887	80	-0.26	050.60	0
050	Soluble Potassium as K2O (3.6%)	0526	4.276	0.0000	4.357	0.4513	0.0887	80	-0.18	050.60	0
050	Soluble Potassium as K2O (3.6%)	0494	4.325	0.0300	4.357	0.4513	0.0887	80	-0.07	050.00	0
050	Soluble Potassium as K2O (3.6%)	0136	4.325	0.0500	4.357	0.4513	0.0887	80	-0.07	050.30	0
050	Soluble Potassium as K2O (3.6%)	0559	4.365	0.0100	4.357	0.4513	0.0887	80	0.02	050.99	0
050	Soluble Potassium as K2O (3.6%)	0402	4.370	0.0200	4.357	0.4513	0.0887	80	0.03	050.99	0
050	Soluble Potassium as K2O (3.6%)	0106	4.375	0.0300	4.357	0.4513	0.0887	80	0.04	050.50	0
050	Soluble Potassium as K2O (3.6%)	0307	4.385	0.2100	4.357	0.4513	0.0887	80	0.06	050.99	0
050	Soluble Potassium as K2O (3.6%)	0324	4.400	0.1000	4.357	0.4513	0.0887	80	0.10	050.50	0
050	Soluble Potassium as K2O (3.6%)	0055	4.405	0.3500	4.357	0.4513	0.0887	80	0.11	050.00	0
050	Soluble Potassium as K2O (3.6%)	0070	4.430	0.0000	4.357	0.4513	0.0887	80	0.16	050.51	0
050	Soluble Potassium as K2O (3.6%)	0510	4.431	0.1649	4.357	0.4513	0.0887	80	0.16	050.60	0
050	Soluble Potassium as K2O (3.6%)	0444	4.445	0.0700	4.357	0.4513	0.0887	80	0.20	050.50	0
050	Soluble Potassium as K2O (3.6%)	0234	4.450	0.3000	4.357	0.4513	0.0887	80	0.21	050.99	0
050	Soluble Potassium as K2O (3.6%)	0325	4.450	0.3000	4.357	0.4513	0.0887	80	0.21	050.99	0
050	Soluble Potassium as K2O (3.6%)	0523	4.450	0.1000	4.357	0.4513	0.0887	80	0.21	050.99	0
050	Soluble Potassium as K2O (3.6%)	0035	4.455	0.0100	4.357	0.4513	0.0887	80	0.22	050.61	0
050	Soluble Potassium as K2O (3.6%)	0018	4.455	0.0700	4.357	0.4513	0.0887	80	0.22	050.62	0
050	Soluble Potassium as K2O (3.6%)	0105	4.460	0.0800	4.357	0.4513	0.0887	80	0.23	050.60	0
050	Soluble Potassium as K2O (3.6%)	0377	4.460	0.0400	4.357	0.4513	0.0887	80	0.23	050.52	0
050	Soluble Potassium as K2O (3.6%)	0027	4.485	0.0100	4.357	0.4513	0.0887	80	0.28	050.99	0
050	Soluble Potassium as K2O (3.6%)	0105	4.515	0.0300	4.357	0.4513	0.0887	80	0.35	050.62	0
050	Soluble Potassium as K2O (3.6%)	0034	4.525	0.0438	4.357	0.4513	0.0887	80	0.37	050.62	0
050	Soluble Potassium as K2O (3.6%)	0416	4.535	0.0300	4.357	0.4513	0.0887	80	0.40	050.00	0
050	Soluble Potassium as K2O (3.6%)	0300	4.539	0.0250	4.357	0.4513	0.0887	80	0.40	050.99	0
050	Soluble Potassium as K2O (3.6%)	0494	4.555	0.0500	4.357	0.4513	0.0887	80	0.44	050.52	0
050	Soluble Potassium as K2O (3.6%)	0354	4.590	0.0200	4.357	0.4513	0.0887	80	0.52	050.52	0
050	Soluble Potassium as K2O (3.6%)	0513	4.590	0.0800	4.357	0.4513	0.0887	80	0.52	050.62	0
050	Soluble Potassium as K2O (3.6%)	0025	4.595	0.0500	4.357	0.4513	0.0887	80	0.53	050.52	0
050	Soluble Potassium as K2O (3.6%)	0433	4.635	0.0100	4.357	0.4513	0.0887	80	0.62	050.99	0
050	Soluble Potassium as K2O (3.6%)	0482	4.650	0.0200	4.357	0.4513	0.0887	80	0.65	050.99	0
050	Soluble Potassium as K2O (3.6%)	0086	4.655	0.0759	4.357	0.4513	0.0887	80	0.66	050.50	0
050	Soluble Potassium as K2O (3.6%)	0527	4.689	0.1321	4.357	0.4513	0.0887	80	0.74	050.99	0
050	Soluble Potassium as K2O (3.6%)	0029	4.710	0.0400	4.357	0.4513	0.0887	80	0.78	050.62	0
050	Soluble Potassium as K2O (3.6%)	0450	4.715	0.1100	4.357	0.4513	0.0887	80	0.79	050.99	0
050	Soluble Potassium as K2O (3.6%)	0452	4.720	0.0000	4.357	0.4513	0.0887	80	0.81	050.51	0
050	Soluble Potassium as K2O (3.6%)	0360	4.720	0.0200	4.357	0.4513	0.0887	80	0.81	050.52	0
050	Soluble Potassium as K2O (3.6%)	0037	4.728	0.1170	4.357	0.4513	0.0887	80	0.82	050.62	0
050	Soluble Potassium as K2O (3.6%)	0233	4.738	0.3260	4.357	0.4513	0.0887	80	0.85	050.52	0
050	Soluble Potassium as K2O (3.6%)	0520	4.760	0.4200	4.357	0.4513	0.0887	80	0.89	050.99	0
050	Soluble Potassium as K2O (3.6%)	0546	4.790‡	0.1500	4.357	0.4513	0.0887	80	0.96	050.99	0
050	Soluble Potassium as K2O (3.6%)	0420	4.793‡	0.2290	4.357	0.4513	0.0887	80	0.97	050.50	0
050	Soluble Potassium as K2O (3.6%)	0389	4.810‡	0.0400	4.357	0.4513	0.0887	80	1.00	050.99	0
050	Soluble Potassium as K2O (3.6%)	0291	4.815‡	0.0100	4.357	0.4513	0.0887	80	1.02	050.51	0
050	Soluble Potassium as K2O (3.6%)	0095	4.850‡	0.0200	4.357	0.4513	0.0887	80	1.09	050.62	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				
050	Soluble Potassium as K2O (3.6%)	0390	4.880‡	0.0400	4.357	0.4513	0.0887	80	1.16	050.50	0
050	Soluble Potassium as K2O (3.6%)	0421	4.925‡	0.0500	4.357	0.4513	0.0887	80	1.26	050.99	0
050	Soluble Potassium as K2O (3.6%)	0368	4.944‡	0.1537	4.357	0.4513	0.0887	80	1.30	050.51	0
050	Soluble Potassium as K2O (3.6%)	0522	4.950‡	0.0600	4.357	0.4513	0.0887	80	1.31	050.00	0
050	Soluble Potassium as K2O (3.6%)	0542	5.150‡	0.0400	4.357	0.4513	0.0887	80	1.76	050.99	0
050	Soluble Potassium as K2O (3.6%)	0524	5.184‡	0.0292	4.357	0.4513	0.0887	80	1.83	050.99	0
050	Soluble Potassium as K2O (3.6%)	0483	5.385‡	0.2700	4.357	0.4513	0.0887	80	2.28	050.51	0
050	Soluble Potassium as K2O (3.6%)	0042	5.215‡	0.5100	4.357	0.4513	0.0887	80	1.90	050.99	1
060	Water (Free) (%)	0513	0.6050	0.0100	2.532	1.220	0.0908	5	-1.58	060.00	0
060	Water (Free) (%)	0456	2.405	0.0300	2.532	1.220	0.0908	5	-0.10	060.00	0
060	Water (Free) (%)	0416	2.579	0.0291	2.532	1.220	0.0908	5	0.04	060.00	0
060	Water (Free) (%)	0510	3.218	0.2350	2.532	1.220	0.0908	5	0.56	060.99	0
060	Water (Free) (%)	0096	3.855	0.1500	2.532	1.220	0.0908	5	1.08	060.00	0
101	Acid Soluble Calcium (2%)	0535	0.4500†	0.1000	4.203	0.3538	0.0920	60	-10.61	101.00	0
101	Acid Soluble Calcium (2%)	0420	1.965†	0.0410	4.203	0.3538	0.0920	60	-6.33	101.30	0
101	Acid Soluble Calcium (2%)	0519	2.020†	0.0200	4.203	0.3538	0.0920	60	-6.17	101.99	0
101	Acid Soluble Calcium (2%)	0534	2.100†	0.0400	4.203	0.3538	0.0920	60	-5.95	101.00	0
101	Acid Soluble Calcium (2%)	0555	2.405†	0.1300	4.203	0.3538	0.0920	60	-5.08	101.33	0
101	Acid Soluble Calcium (2%)	0255	3.325†	0.0220	4.203	0.3538	0.0920	60	-2.48	101.30	0
101	Acid Soluble Calcium (2%)	0405	3.710†	0.1800	4.203	0.3538	0.0920	60	-1.39	101.99	0
101	Acid Soluble Calcium (2%)	0558	3.750†	0.0600	4.203	0.3538	0.0920	60	-1.28	101.99	0
101	Acid Soluble Calcium (2%)	0481	3.760†	0.0000	4.203	0.3538	0.0920	60	-1.25	101.99	0
101	Acid Soluble Calcium (2%)	0042	3.800	0.1000	4.203	0.3538	0.0920	60	-1.14	101.99	0
101	Acid Soluble Calcium (2%)	0510	3.826	0.0864	4.203	0.3538	0.0920	60	-1.07	101.70	0
101	Acid Soluble Calcium (2%)	0234	3.850	0.1000	4.203	0.3538	0.0920	60	-1.00	101.30	0
101	Acid Soluble Calcium (2%)	0520	3.900	0.1000	4.203	0.3538	0.0920	60	-0.86	101.99	0
101	Acid Soluble Calcium (2%)	0485	3.950	0.1600	4.203	0.3538	0.0920	60	-0.72	101.00	0
101	Acid Soluble Calcium (2%)	0389	4.000	0.0600	4.203	0.3538	0.0920	60	-0.57	101.99	0
101	Acid Soluble Calcium (2%)	0561	4.010	0.0400	4.203	0.3538	0.0920	60	-0.55	101.33	0
101	Acid Soluble Calcium (2%)	0040	4.060	0.1400	4.203	0.3538	0.0920	60	-0.40	101.33	0
101	Acid Soluble Calcium (2%)	0421	4.085	0.0100	4.203	0.3538	0.0920	60	-0.33	101.33	0
101	Acid Soluble Calcium (2%)	0523	4.100	0.0000	4.203	0.3538	0.0920	60	-0.29	101.99	0
101	Acid Soluble Calcium (2%)	0106	4.101	0.0103	4.203	0.3538	0.0920	60	-0.29	101.33	0
101	Acid Soluble Calcium (2%)	0055	4.105	0.0300	4.203	0.3538	0.0920	60	-0.28	101.33	0
101	Acid Soluble Calcium (2%)	0177	4.111	0.1160	4.203	0.3538	0.0920	60	-0.26	101.33	0
101	Acid Soluble Calcium (2%)	0027	4.125	0.1270	4.203	0.3538	0.0920	60	-0.22	101.99	0
101	Acid Soluble Calcium (2%)	0157	4.135	0.1500	4.203	0.3538	0.0920	60	-0.19	101.00	0
101	Acid Soluble Calcium (2%)	0034	4.168	0.2300	4.203	0.3538	0.0920	60	-0.10	101.33	0
101	Acid Soluble Calcium (2%)	0105	4.176	0.0170	4.203	0.3538	0.0920	60	-0.08	101.00	0
101	Acid Soluble Calcium (2%)	0368	4.186	0.0472	4.203	0.3538	0.0920	60	-0.05	101.99	0
101	Acid Soluble Calcium (2%)	0377	4.200	0.0400	4.203	0.3538	0.0920	60	-0.01	101.30	0
101	Acid Soluble Calcium (2%)	0553	4.205	0.3700	4.203	0.3538	0.0920	60	0.00	101.00	0
101	Acid Soluble Calcium (2%)	0300	4.221	0.0450	4.203	0.3538	0.0920	60	0.05	101.32	0
101	Acid Soluble Calcium (2%)	0073	4.240	0.0600	4.203	0.3538	0.0920	60	0.10	101.00	0
101	Acid Soluble Calcium (2%)	0419	4.245	0.1940	4.203	0.3538	0.0920	60	0.12	101.30	0
101	Acid Soluble Calcium (2%)	0117	4.264	0.0177	4.203	0.3538	0.0920	60	0.17	101.33	0
101	Acid Soluble Calcium (2%)	0444	4.275	0.0500	4.203	0.3538	0.0920	60	0.20	101.30	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				
101	Acid Soluble Calcium (2%)	0073	4.280	0.0400	4.203	0.3538	0.0920	60	0.22	101.30	0
101	Acid Soluble Calcium (2%)	0102	4.281	0.3800	4.203	0.3538	0.0920	60	0.22	101.30	0
101	Acid Soluble Calcium (2%)	0035	4.285	0.0500	4.203	0.3538	0.0920	60	0.23	101.30	0
101	Acid Soluble Calcium (2%)	0472	4.295	0.0100	4.203	0.3538	0.0920	60	0.26	101.30	0
101	Acid Soluble Calcium (2%)	0521	4.320	0.0000	4.203	0.3538	0.0920	60	0.33	101.32	0
101	Acid Soluble Calcium (2%)	0482	4.350	0.1600	4.203	0.3538	0.0920	60	0.41	101.30	0
101	Acid Soluble Calcium (2%)	0233	4.362	0.1510	4.203	0.3538	0.0920	60	0.45	101.33	0
101	Acid Soluble Calcium (2%)	0360	4.365	0.0500	4.203	0.3538	0.0920	60	0.46	101.30	0
101	Acid Soluble Calcium (2%)	0354	4.370	0.1400	4.203	0.3538	0.0920	60	0.47	101.30	0
101	Acid Soluble Calcium (2%)	0220	4.400	0.0400	4.203	0.3538	0.0920	60	0.56	101.32	0
101	Acid Soluble Calcium (2%)	0433	4.401	0.0080	4.203	0.3538	0.0920	60	0.56	101.30	0
101	Acid Soluble Calcium (2%)	0390	4.410	0.0400	4.203	0.3538	0.0920	60	0.58	101.99	0
101	Acid Soluble Calcium (2%)	0037	4.435	0.0490	4.203	0.3538	0.0920	60	0.65	101.33	0
101	Acid Soluble Calcium (2%)	0095	4.485	0.0500	4.203	0.3538	0.0920	60	0.80	101.32	0
101	Acid Soluble Calcium (2%)	0049	4.525	0.2000	4.203	0.3538	0.0920	60	0.91	101.30	0
101	Acid Soluble Calcium (2%)	0552	4.565	0.3100	4.203	0.3538	0.0920	60	1.02	101.99	0
101	Acid Soluble Calcium (2%)	0486	4.565	0.2500	4.203	0.3538	0.0920	60	1.02	101.33	0
101	Acid Soluble Calcium (2%)	0324	4.575	0.2100	4.203	0.3538	0.0920	60	1.05	101.30	0
101	Acid Soluble Calcium (2%)	0513	4.585	0.0300	4.203	0.3538	0.0920	60	1.08	101.00	0
101	Acid Soluble Calcium (2%)	0527	4.615‡	0.0143	4.203	0.3538	0.0920	60	1.16	101.33	0
101	Acid Soluble Calcium (2%)	0402	4.640‡	0.0400	4.203	0.3538	0.0920	60	1.23	101.30	0
101	Acid Soluble Calcium (2%)	0546	4.645‡	0.0010	4.203	0.3538	0.0920	60	1.25	101.33	0
101	Acid Soluble Calcium (2%)	0029	4.650‡	0.3460	4.203	0.3538	0.0920	60	1.26	101.00	0
101	Acid Soluble Calcium (2%)	0544	5.175‡	0.0300	4.203	0.3538	0.0920	60	2.75	101.70	0
101	Acid Soluble Calcium (2%)	0291	5.410‡	0.0000	4.203	0.3538	0.0920	60	3.41	101.30	0
101	Acid Soluble Calcium (2%)	0483	5.655‡	0.0300	4.203	0.3538	0.0920	60	4.10	101.30	0
101	Acid Soluble Calcium (2%)	0105	4.425	0.4520	4.203	0.3538	0.0920	60	0.63	101.03	1
121	Acid Soluble Magnesium (1.7%)	0526	1.370†	0.3268	1.710	0.1008	0.0459	61	-3.37	121.03	0
121	Acid Soluble Magnesium (1.7%)	0481	1.450	0.0000	1.710	0.1008	0.0459	61	-2.58	121.99	0
121	Acid Soluble Magnesium (1.7%)	0106	1.505	0.0150	1.710	0.1008	0.0459	61	-2.04	121.33	0
121	Acid Soluble Magnesium (1.7%)	0405	1.530	0.0800	1.710	0.1008	0.0459	61	-1.79	121.99	0
121	Acid Soluble Magnesium (1.7%)	0498	1.550	0.1000	1.710	0.1008	0.0459	61	-1.59	121.03	0
121	Acid Soluble Magnesium (1.7%)	0552	1.555	0.0500	1.710	0.1008	0.0459	61	-1.54	121.99	0
121	Acid Soluble Magnesium (1.7%)	0485	1.590	0.0640	1.710	0.1008	0.0459	61	-1.19	121.00	0
121	Acid Soluble Magnesium (1.7%)	0486	1.590	0.0200	1.710	0.1008	0.0459	61	-1.19	121.33	0
121	Acid Soluble Magnesium (1.7%)	0255	1.591	0.0020	1.710	0.1008	0.0459	61	-1.18	121.30	0
121	Acid Soluble Magnesium (1.7%)	0558	1.610	0.0200	1.710	0.1008	0.0459	61	-0.99	121.99	0
121	Acid Soluble Magnesium (1.7%)	0421	1.625	0.0500	1.710	0.1008	0.0459	61	-0.84	121.33	0
121	Acid Soluble Magnesium (1.7%)	0521	1.643	0.0000	1.710	0.1008	0.0459	61	-0.67	121.32	0
121	Acid Soluble Magnesium (1.7%)	0444	1.645	0.0100	1.710	0.1008	0.0459	61	-0.65	121.30	0
121	Acid Soluble Magnesium (1.7%)	0535	1.650	0.1000	1.710	0.1008	0.0459	61	-0.60	121.00	0
121	Acid Soluble Magnesium (1.7%)	0234	1.650	0.1000	1.710	0.1008	0.0459	61	-0.60	121.30	0
121	Acid Soluble Magnesium (1.7%)	0102	1.661	0.0500	1.710	0.1008	0.0459	61	-0.49	121.30	0
121	Acid Soluble Magnesium (1.7%)	0105	1.663	0.0180	1.710	0.1008	0.0459	61	-0.47	121.03	0
121	Acid Soluble Magnesium (1.7%)	0034	1.664	0.0880	1.710	0.1008	0.0459	61	-0.46	121.33	0
121	Acid Soluble Magnesium (1.7%)	0377	1.675	0.0300	1.710	0.1008	0.0459	61	-0.35	121.30	0
121	Acid Soluble Magnesium (1.7%)	0519	1.675	0.0500	1.710	0.1008	0.0459	61	-0.35	121.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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121	Acid Soluble Magnesium (1.7%)	0534	1.680	0.0400	1.710	0.1008	0.0459	61	-0.30	121.00	0
121	Acid Soluble Magnesium (1.7%)	0307	1.680	0.0800	1.710	0.1008	0.0459	61	-0.30	121.99	0
121	Acid Soluble Magnesium (1.7%)	0555	1.685	0.0700	1.710	0.1008	0.0459	61	-0.25	121.33	0
121	Acid Soluble Magnesium (1.7%)	0042	1.685	0.0700	1.710	0.1008	0.0459	61	-0.25	121.99	0
121	Acid Soluble Magnesium (1.7%)	0553	1.688	0.1850	1.710	0.1008	0.0459	61	-0.22	121.00	0
121	Acid Soluble Magnesium (1.7%)	0055	1.690	0.0400	1.710	0.1008	0.0459	61	-0.20	121.33	0
121	Acid Soluble Magnesium (1.7%)	0561	1.690	0.0000	1.710	0.1008	0.0459	61	-0.20	121.33	0
121	Acid Soluble Magnesium (1.7%)	0105	1.694	0.0140	1.710	0.1008	0.0459	61	-0.16	121.00	0
121	Acid Soluble Magnesium (1.7%)	0040	1.700	0.0200	1.710	0.1008	0.0459	61	-0.10	121.00	0
121	Acid Soluble Magnesium (1.7%)	0420	1.703	0.0350	1.710	0.1008	0.0459	61	-0.08	121.30	0
121	Acid Soluble Magnesium (1.7%)	0117	1.707	0.0100	1.710	0.1008	0.0459	61	-0.04	121.33	0
121	Acid Soluble Magnesium (1.7%)	0220	1.710	0.0000	1.710	0.1008	0.0459	61	0.00	121.32	0
121	Acid Soluble Magnesium (1.7%)	0233	1.711	0.0620	1.710	0.1008	0.0459	61	0.01	121.33	0
121	Acid Soluble Magnesium (1.7%)	0368	1.714	0.0013	1.710	0.1008	0.0459	61	0.04	121.99	0
121	Acid Soluble Magnesium (1.7%)	0035	1.715	0.0300	1.710	0.1008	0.0459	61	0.05	121.30	0
121	Acid Soluble Magnesium (1.7%)	0389	1.715	0.0300	1.710	0.1008	0.0459	61	0.05	121.99	0
121	Acid Soluble Magnesium (1.7%)	0524	1.721	0.0730	1.710	0.1008	0.0459	61	0.11	121.99	0
121	Acid Soluble Magnesium (1.7%)	0360	1.730	0.0000	1.710	0.1008	0.0459	61	0.20	121.30	0
121	Acid Soluble Magnesium (1.7%)	0419	1.731	0.0020	1.710	0.1008	0.0459	61	0.21	121.30	0
121	Acid Soluble Magnesium (1.7%)	0037	1.735	0.0240	1.710	0.1008	0.0459	61	0.25	121.33	0
121	Acid Soluble Magnesium (1.7%)	0177	1.740	0.0553	1.710	0.1008	0.0459	61	0.30	121.33	0
121	Acid Soluble Magnesium (1.7%)	0433	1.745	0.0030	1.710	0.1008	0.0459	61	0.34	121.30	0
121	Acid Soluble Magnesium (1.7%)	0095	1.750	0.0400	1.710	0.1008	0.0459	61	0.40	121.30	0
121	Acid Soluble Magnesium (1.7%)	0515	1.753	0.0323	1.710	0.1008	0.0459	61	0.42	121.99	0
121	Acid Soluble Magnesium (1.7%)	0300	1.753	0.0060	1.710	0.1008	0.0459	61	0.43	121.32	0
121	Acid Soluble Magnesium (1.7%)	0354	1.760	0.0400	1.710	0.1008	0.0459	61	0.50	121.30	0
121	Acid Soluble Magnesium (1.7%)	0482	1.770	0.0200	1.710	0.1008	0.0459	61	0.59	121.30	0
121	Acid Soluble Magnesium (1.7%)	0027	1.773	0.1460	1.710	0.1008	0.0459	61	0.62	121.99	0
121	Acid Soluble Magnesium (1.7%)	0390	1.775	0.0300	1.710	0.1008	0.0459	61	0.64	121.30	0
121	Acid Soluble Magnesium (1.7%)	0049	1.784	0.0310	1.710	0.1008	0.0459	61	0.73	121.30	0
121	Acid Soluble Magnesium (1.7%)	0523	1.800	0.0000	1.710	0.1008	0.0459	61	0.89	121.99	0
121	Acid Soluble Magnesium (1.7%)	0450	1.830	0.3000	1.710	0.1008	0.0459	61	1.19	121.99	0
121	Acid Soluble Magnesium (1.7%)	0527	1.840	0.0044	1.710	0.1008	0.0459	61	1.29	121.33	0
121	Acid Soluble Magnesium (1.7%)	0546	1.846	0.0100	1.710	0.1008	0.0459	61	1.35	121.03	0
121	Acid Soluble Magnesium (1.7%)	0291	1.875	0.0100	1.710	0.1008	0.0459	61	1.64	121.30	0
121	Acid Soluble Magnesium (1.7%)	0029	1.884	0.0340	1.710	0.1008	0.0459	61	1.73	121.00	0
121	Acid Soluble Magnesium (1.7%)	0324	1.890	0.0200	1.710	0.1008	0.0459	61	1.79	121.30	0
121	Acid Soluble Magnesium (1.7%)	0513	1.905	0.0100	1.710	0.1008	0.0459	61	1.93	121.00	0
121	Acid Soluble Magnesium (1.7%)	0309	1.940	0.0200	1.710	0.1008	0.0459	61	2.28	121.00	0
121	Acid Soluble Magnesium (1.7%)	0472	1.990	0.0200	1.710	0.1008	0.0459	61	2.78	121.30	0
121	Acid Soluble Magnesium (1.7%)	0483	2.265‡	0.0100	1.710	0.1008	0.0459	61	5.51	121.30	0
121	Acid Soluble Magnesium (1.7%)	0515	2.468‡	0.8518	1.710	0.1008	0.0459	61	7.52	121.33	1
121	Acid Soluble Magnesium (1.7%)	0520	3.125‡	0.1900	1.710	0.1008	0.0459	61	14.04	121.99	2
131	Water Soluble Magnesium (%)	0553	1.170	0.1500	1.506	0.5725	0.0690	4	-0.59	131.00	0
131	Water Soluble Magnesium (%)	0444	1.185	0.0300	1.506	0.5725	0.0690	4	-0.56	131.30	0
131	Water Soluble Magnesium (%)	0027	1.310	0.0000	1.506	0.5725	0.0690	4	-0.34	131.30	0
131	Water Soluble Magnesium (%)	0510	2.360	0.0958	1.506	0.5725	0.0690	4	1.49	131.70	0

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143	Elemental Sulfur (%)	0095	0.3800	0.3200	7.246	0.9245	0.1117	7	-6.72	143.00	0
143	Elemental Sulfur (%)	0481	6.745	0.0500	7.246	0.9245	0.1117	7	-0.49	143.99	0
143	Elemental Sulfur (%)	0472	6.970	0.0000	7.246	0.9245	0.1117	7	-0.27	143.99	0
143	Elemental Sulfur (%)	0255	7.414	0.2420	7.246	0.9245	0.1117	7	0.16	143.99	0
143	Elemental Sulfur (%)	0390	7.495	0.0300	7.246	0.9245	0.1117	7	0.24	143.99	0
143	Elemental Sulfur (%)	0389	7.875	0.1300	7.246	0.9245	0.1117	7	0.61	143.99	0
143	Elemental Sulfur (%)	0291	8.365	0.0100	7.246	0.9245	0.1117	7	1.09	143.99	0
145	Sulfate Sulfur, HCl soluble (%)	0220	3.355	0.0900	6.935	0.5562	0.1096	9	-5.94	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0444	6.435	0.0700	6.935	0.5562	0.1096	9	-0.83	145.99	0
145	Sulfate Sulfur, HCl soluble (%)	0405	6.745	0.0700	6.935	0.5562	0.1096	9	-0.31	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0544	6.780	0.0200	6.935	0.5562	0.1096	9	-0.26	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0561	6.980	0.0600	6.935	0.5562	0.1096	9	0.08	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0522	7.115	0.0100	6.935	0.5562	0.1096	9	0.30	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0095	7.170	0.2000	6.935	0.5562	0.1096	9	0.39	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0485	7.317	0.0875	6.935	0.5562	0.1096	9	0.64	145.00	0
145	Sulfate Sulfur, HCl soluble (%)	0510	9.159	0.3792	6.935	0.5562	0.1096	9	3.69	145.00	0
148	Total Sulfur (7%)	0476	2.878†	0.0507	7.343	0.4997	0.1059	46	-8.94	148.01	0
148	Total Sulfur (7%)	0450	4.180†	0.3200	7.343	0.4997	0.1059	46	-6.33	148.99	0
148	Total Sulfur (7%)	0558	6.240†	0.1000	7.343	0.4997	0.1059	46	-2.21	148.99	0
148	Total Sulfur (7%)	0444	6.560†	0.0000	7.343	0.4997	0.1059	46	-1.57	148.07	0
148	Total Sulfur (7%)	0545	6.650†	0.1000	7.343	0.4997	0.1059	46	-1.39	148.01	0
148	Total Sulfur (7%)	0526	6.691†	0.0000	7.343	0.4997	0.1059	46	-1.31	148.01	0
148	Total Sulfur (7%)	0486	6.845	0.0900	7.343	0.4997	0.1059	46	-1.00	148.07	0
148	Total Sulfur (7%)	0073	6.860	0.0800	7.343	0.4997	0.1059	46	-0.97	148.01	0
148	Total Sulfur (7%)	0553	6.872	0.0500	7.343	0.4997	0.1059	46	-0.94	148.99	0
148	Total Sulfur (7%)	0354	6.990	0.0200	7.343	0.4997	0.1059	46	-0.71	148.99	0
148	Total Sulfur (7%)	0405	6.990	0.0000	7.343	0.4997	0.1059	46	-0.71	148.99	0
148	Total Sulfur (7%)	0029	7.010	0.0600	7.343	0.4997	0.1059	46	-0.67	148.01	0
148	Total Sulfur (7%)	0501	7.040	0.0600	7.343	0.4997	0.1059	46	-0.61	148.99	0
148	Total Sulfur (7%)	0534	7.105	0.1700	7.343	0.4997	0.1059	46	-0.48	148.01	0
148	Total Sulfur (7%)	0055	7.140	0.2000	7.343	0.4997	0.1059	46	-0.41	148.01	0
148	Total Sulfur (7%)	0520	7.160	0.1200	7.343	0.4997	0.1059	46	-0.37	148.99	0
148	Total Sulfur (7%)	0421	7.175	0.0500	7.343	0.4997	0.1059	46	-0.34	148.07	0
148	Total Sulfur (7%)	0307	7.190	0.1200	7.343	0.4997	0.1059	46	-0.31	148.99	0
148	Total Sulfur (7%)	0324	7.240	0.1800	7.343	0.4997	0.1059	46	-0.21	148.01	0
148	Total Sulfur (7%)	0131	7.264	0.0310	7.343	0.4997	0.1059	46	-0.16	148.00	0
148	Total Sulfur (7%)	0485	7.317	0.0875	7.343	0.4997	0.1059	46	-0.05	148.01	0
148	Total Sulfur (7%)	0072	7.350	0.2600	7.343	0.4997	0.1059	46	0.01	148.99	0
148	Total Sulfur (7%)	0555	7.370	0.0600	7.343	0.4997	0.1059	46	0.05	148.00	0
148	Total Sulfur (7%)	0117	7.407	0.0131	7.343	0.4997	0.1059	46	0.13	148.07	0
148	Total Sulfur (7%)	0300	7.429	0.0650	7.343	0.4997	0.1059	46	0.17	148.99	0
148	Total Sulfur (7%)	0025	7.458	0.1340	7.343	0.4997	0.1059	46	0.23	148.00	0
148	Total Sulfur (7%)	0419	7.465	0.1070	7.343	0.4997	0.1059	46	0.24	148.00	0
148	Total Sulfur (7%)	0402	7.525	0.0300	7.343	0.4997	0.1059	46	0.36	148.07	0
148	Total Sulfur (7%)	0037	7.535	0.0210	7.343	0.4997	0.1059	46	0.38	148.07	0
148	Total Sulfur (7%)	0233	7.550	0.0550	7.343	0.4997	0.1059	46	0.41	148.07	0
148	Total Sulfur (7%)	0040	7.550	0.1000	7.343	0.4997	0.1059	46	0.41	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 (7%)	0095	7.550	0.1200	7.343	0.4997	0.1059	46	0.41	148.01	0
148	Total Sulfur (7%)	0029	7.553	0.0350	7.343	0.4997	0.1059	46	0.42	148.00	0
148	Total Sulfur (7%)	0546	7.564	0.1888	7.343	0.4997	0.1059	46	0.44	148.07	0
148	Total Sulfur (7%)	0136	7.570	0.0400	7.343	0.4997	0.1059	46	0.45	148.00	0
148	Total Sulfur (7%)	0521	7.576	0.0000	7.343	0.4997	0.1059	46	0.46	148.07	0
148	Total Sulfur (7%)	0515	7.619	0.5341	7.343	0.4997	0.1059	46	0.55	148.07	0
148	Total Sulfur (7%)	0105	7.775	0.1100	7.343	0.4997	0.1059	46	0.86	148.01	0
148	Total Sulfur (7%)	0433	7.936‡	0.0320	7.343	0.4997	0.1059	46	1.19	148.99	0
148	Total Sulfur (7%)	0451	7.950‡	0.0200	7.343	0.4997	0.1059	46	1.21	148.00	0
148	Total Sulfur (7%)	0523	7.950‡	0.0200	7.343	0.4997	0.1059	46	1.21	148.99	0
148	Total Sulfur (7%)	0177	7.954‡	0.2528	7.343	0.4997	0.1059	46	1.22	148.07	0
148	Total Sulfur (7%)	0527	8.020‡	0.0263	7.343	0.4997	0.1059	46	1.35	148.07	0
148	Total Sulfur (7%)	0220	8.040‡	0.0000	7.343	0.4997	0.1059	46	1.39	148.99	0
148	Total Sulfur (7%)	0482	8.385‡	0.2300	7.343	0.4997	0.1059	46	2.08	148.99	0
148	Total Sulfur (7%)	0483	8.735‡	0.5300	7.343	0.4997	0.1059	46	2.79	148.07	0
148	Total Sulfur (7%)	0102	7.362	1.365	7.343	0.4997	0.1059	46	0.04	148.07	1
149	Sulfur - HNO3 soluble (%)	0519	6.985	0.0100				2		149.04	0
149	Sulfur - HNO3 soluble (%)	0524	7.904	0.1609				2		149.04	0
151	Acid Soluble Arsenic (ppm)	0481	1.095	0.0100	1.991	0.6903	0.1160	12	-1.30	151.99	0
151	Acid Soluble Arsenic (ppm)	0498	1.300	0.0000	1.991	0.6903	0.1160	12	-1.00	151.00	0
151	Acid Soluble Arsenic (ppm)	0136	1.575	0.0700	1.991	0.6903	0.1160	12	-0.60	151.33	0
151	Acid Soluble Arsenic (ppm)	0450	1.600	0.0000	1.991	0.6903	0.1160	12	-0.57	151.30	0
151	Acid Soluble Arsenic (ppm)	0519	1.760	0.0200	1.991	0.6903	0.1160	12	-0.33	151.99	0
151	Acid Soluble Arsenic (ppm)	0527	1.892	0.0284	1.991	0.6903	0.1160	12	-0.14	151.33	0
151	Acid Soluble Arsenic (ppm)	0523	1.915	0.0700	1.991	0.6903	0.1160	12	-0.11	151.30	0
151	Acid Soluble Arsenic (ppm)	0405	2.000	0.0000	1.991	0.6903	0.1160	12	0.01	151.99	0
151	Acid Soluble Arsenic (ppm)	0037	2.322	0.2120	1.991	0.6903	0.1160	12	0.48	151.33	0
151	Acid Soluble Arsenic (ppm)	0255	2.377	0.1670	1.991	0.6903	0.1160	12	0.56	151.30	0
151	Acid Soluble Arsenic (ppm)	0102	3.481	0.3950	1.991	0.6903	0.1160	12	2.16	151.30	0
151	Acid Soluble Arsenic (ppm)	0524	3.817	0.4190	1.991	0.6903	0.1160	12	2.64	151.30	0
151	Acid Soluble Arsenic (ppm)	0368	3.325	0.6774	1.991	0.6903	0.1160	12	1.93	151.34	1
151	Acid Soluble Arsenic (ppm)	0555	0.0000	0.0000	1.991	0.6903	0.1160	12		151.30	4
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	1.991	0.6903	0.1160	12		151.33	4
151	Acid Soluble Arsenic (ppm)	0515	0.0000	0.0000	1.991	0.6903	0.1160	12		151.34	4
151	Acid Soluble Arsenic (ppm)	0520	< 0.04		1.991	0.6903	0.1160	12		151.99	5
151	Acid Soluble Arsenic (ppm)	0220	< 1		1.991	0.6903	0.1160	12		151.33	5
151	Acid Soluble Arsenic (ppm)	0300	< 4		1.991	0.6903	0.1160	12		151.32	5
151	Acid Soluble Arsenic (ppm)	0117	< 10		1.991	0.6903	0.1160	12		151.33	5
165	Acid Soluble Boron (1.5%)	0524	0.00040†	0.0000	1.011	0.1152	0.0263	42	-8.77	165.99	0
165	Acid Soluble Boron (1.5%)	0486	0.8000†	0.0000	1.011	0.1152	0.0263	42	-1.83	165.99	0
165	Acid Soluble Boron (1.5%)	0324	0.8130†	0.0560	1.011	0.1152	0.0263	42	-1.72	165.30	0
165	Acid Soluble Boron (1.5%)	0389	0.8850	0.1300	1.011	0.1152	0.0263	42	-1.09	165.30	0
165	Acid Soluble Boron (1.5%)	0255	0.8910	0.0020	1.011	0.1152	0.0263	42	-1.04	165.99	0
165	Acid Soluble Boron (1.5%)	0055	0.8975	0.0470	1.011	0.1152	0.0263	42	-0.99	165.00	0
165	Acid Soluble Boron (1.5%)	0472	0.9000	0.0000	1.011	0.1152	0.0263	42	-0.96	165.99	0
165	Acid Soluble Boron (1.5%)	0307	0.9150	0.0900	1.011	0.1152	0.0263	42	-0.83	165.99	0
165	Acid Soluble Boron (1.5%)	0552	0.9150	0.0100	1.011	0.1152	0.0263	42	-0.83	165.99	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				
165	Acid Soluble Boron (1.5%)	0481	0.9400	0.0400	1.011	0.1152	0.0263	42	-0.62	165.00	0
165	Acid Soluble Boron (1.5%)	0421	0.9450	0.0100	1.011	0.1152	0.0263	42	-0.57	165.99	0
165	Acid Soluble Boron (1.5%)	0444	0.9450	0.0300	1.011	0.1152	0.0263	42	-0.57	165.30	0
165	Acid Soluble Boron (1.5%)	0117	0.9548	0.0071	1.011	0.1152	0.0263	42	-0.49	165.99	0
165	Acid Soluble Boron (1.5%)	0377	0.9670	0.0560	1.011	0.1152	0.0263	42	-0.38	165.30	0
165	Acid Soluble Boron (1.5%)	0049	0.9696	0.0096	1.011	0.1152	0.0263	42	-0.36	165.99	0
165	Acid Soluble Boron (1.5%)	0300	0.9743	0.0057	1.011	0.1152	0.0263	42	-0.32	165.99	0
165	Acid Soluble Boron (1.5%)	0390	0.9775	0.0250	1.011	0.1152	0.0263	42	-0.29	165.99	0
165	Acid Soluble Boron (1.5%)	0106	0.9908	0.0035	1.011	0.1152	0.0263	42	-0.18	165.30	0
165	Acid Soluble Boron (1.5%)	0234	1.000	0.0000	1.011	0.1152	0.0263	42	-0.10	165.30	0
165	Acid Soluble Boron (1.5%)	0354	1.000	0.0000	1.011	0.1152	0.0263	42	-0.10	165.30	0
165	Acid Soluble Boron (1.5%)	0513	1.005	0.0100	1.011	0.1152	0.0263	42	-0.05	165.99	0
165	Acid Soluble Boron (1.5%)	0534	1.010	0.0200	1.011	0.1152	0.0263	42	-0.01	165.00	0
165	Acid Soluble Boron (1.5%)	0368	1.014	0.0173	1.011	0.1152	0.0263	42	0.03	165.99	0
165	Acid Soluble Boron (1.5%)	0546	1.014	0.0034	1.011	0.1152	0.0263	42	0.03	165.99	0
165	Acid Soluble Boron (1.5%)	0360	1.017	0.0040	1.011	0.1152	0.0263	42	0.05	165.99	0
165	Acid Soluble Boron (1.5%)	0433	1.019	0.0020	1.011	0.1152	0.0263	42	0.07	165.30	0
165	Acid Soluble Boron (1.5%)	0482	1.020	0.0000	1.011	0.1152	0.0263	42	0.08	165.99	0
165	Acid Soluble Boron (1.5%)	0558	1.035	0.0100	1.011	0.1152	0.0263	42	0.21	165.00	0
165	Acid Soluble Boron (1.5%)	0527	1.036	0.0041	1.011	0.1152	0.0263	42	0.22	165.99	0
165	Acid Soluble Boron (1.5%)	0136	1.040	0.0000	1.011	0.1152	0.0263	42	0.25	165.30	0
165	Acid Soluble Boron (1.5%)	0291	1.045	0.0100	1.011	0.1152	0.0263	42	0.30	165.99	0
165	Acid Soluble Boron (1.5%)	0535	1.050	0.1000	1.011	0.1152	0.0263	42	0.34	165.00	0
165	Acid Soluble Boron (1.5%)	0494	1.071	0.0114	1.011	0.1152	0.0263	42	0.52	165.30	0
165	Acid Soluble Boron (1.5%)	0553	1.105	0.0100	1.011	0.1152	0.0263	42	0.82	165.00	0
165	Acid Soluble Boron (1.5%)	0042	1.115	0.0300	1.011	0.1152	0.0263	42	0.90	165.99	0
165	Acid Soluble Boron (1.5%)	0483	1.180‡	0.0200	1.011	0.1152	0.0263	42	1.47	165.99	0
165	Acid Soluble Boron (1.5%)	0029	1.188‡	0.0490	1.011	0.1152	0.0263	42	1.53	165.00	0
165	Acid Soluble Boron (1.5%)	0521	1.240‡	0.0000	1.011	0.1152	0.0263	42	1.99	165.30	0
165	Acid Soluble Boron (1.5%)	0498	1.250‡	0.1000	1.011	0.1152	0.0263	42	2.07	165.00	0
165	Acid Soluble Boron (1.5%)	0556	1.275‡	0.1500	1.011	0.1152	0.0263	42	2.29	165.00	0
165	Acid Soluble Boron (1.5%)	0309	1.285‡	0.0100	1.011	0.1152	0.0263	42	2.38	165.00	0
165	Acid Soluble Boron (1.5%)	0559	1.340‡	0.0200	1.011	0.1152	0.0263	42	2.86	165.99	0
165	Acid Soluble Boron (1.5%)	0520	1.500‡	0.2000	1.011	0.1152	0.0263	42	4.25	165.99	1
165	Acid Soluble Boron (1.5%)	0515	1.633‡	0.1949	1.011	0.1152	0.0263	42	5.40	165.99	1
165	Acid Soluble Boron (1.5%)	0220	3.355‡	0.0900	1.011	0.1152	0.0263	42	20.35	165.00	2
171	Water Soluble Boron (%)	0533	0.5350	0.0300	0.9953	0.3425	0.0320	9	-1.24	171.10	0
171	Water Soluble Boron (%)	0444	0.7600	0.0000	0.9953	0.3425	0.0320	9	-0.63	171.99	0
171	Water Soluble Boron (%)	0027	0.8630	0.0380	0.9953	0.3425	0.0320	9	-0.36	171.99	0
171	Water Soluble Boron (%)	0536	0.9550	0.0100	0.9953	0.3425	0.0320	9	-0.11	171.00	0
171	Water Soluble Boron (%)	0531	0.9600	0.0400	0.9953	0.3425	0.0320	9	-0.10	171.10	0
171	Water Soluble Boron (%)	0535	0.9700	0.0200	0.9953	0.3425	0.0320	9	-0.07	171.10	0
171	Water Soluble Boron (%)	0551	0.9850	0.0300	0.9953	0.3425	0.0320	9	-0.03	171.10	0
171	Water Soluble Boron (%)	0519	1.460	0.0400	0.9953	0.3425	0.0320	9	1.25	171.99	0
171	Water Soluble Boron (%)	0532	1.470	0.0800	0.9953	0.3425	0.0320	9	1.28	171.10	0
181	Acid Soluble Cadmium (ppm)	0368	0.2126	0.0305	0.5497	0.1366	0.0478	13	-2.47	181.34	0
181	Acid Soluble Cadmium (ppm)	0405	0.4450	0.0100	0.5497	0.1366	0.0478	13	-0.77	181.99	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				
181	Acid Soluble Cadmium (ppm)	0450	0.4500	0.1000	0.5497	0.1366	0.0478	13	-0.73	181.30	0
181	Acid Soluble Cadmium (ppm)	0389	0.4745	0.0650	0.5497	0.1366	0.0478	13	-0.55	181.30	0
181	Acid Soluble Cadmium (ppm)	0035	0.4830	0.0280	0.5497	0.1366	0.0478	13	-0.49	181.30	0
181	Acid Soluble Cadmium (ppm)	0521	0.5013	0.0000	0.5497	0.1366	0.0478	13	-0.35	181.33	0
181	Acid Soluble Cadmium (ppm)	0527	0.5393	0.0195	0.5497	0.1366	0.0478	13	-0.08	181.33	0
181	Acid Soluble Cadmium (ppm)	0523	0.5650	0.0180	0.5497	0.1366	0.0478	13	0.11	181.30	0
181	Acid Soluble Cadmium (ppm)	0524	0.5878	0.0439	0.5497	0.1366	0.0478	13	0.28	181.30	0
181	Acid Soluble Cadmium (ppm)	0519	0.5900	0.0200	0.5497	0.1366	0.0478	13	0.29	181.99	0
181	Acid Soluble Cadmium (ppm)	0255	0.6565	0.0530	0.5497	0.1366	0.0478	13	0.78	181.30	0
181	Acid Soluble Cadmium (ppm)	0498	0.8500	0.1000	0.5497	0.1366	0.0478	13	2.20	181.00	0
181	Acid Soluble Cadmium (ppm)	0102	1.095	0.1330	0.5497	0.1366	0.0478	13	3.99	181.30	0
181	Acid Soluble Cadmium (ppm)	0555	0.0000	0.0000	0.5497	0.1366	0.0478	13		181.30	4
181	Acid Soluble Cadmium (ppm)	0515	0.0000	0.0000	0.5497	0.1366	0.0478	13		181.33	4
181	Acid Soluble Cadmium (ppm)	0515	0.0000	0.0000	0.5497	0.1366	0.0478	13		181.34	4
181	Acid Soluble Cadmium (ppm)	0520	< 0.04		0.5497	0.1366	0.0478	13		181.99	5
181	Acid Soluble Cadmium (ppm)	0220	< 0.1		0.5497	0.1366	0.0478	13		181.33	5
181	Acid Soluble Cadmium (ppm)	0300	< 0.5		0.5497	0.1366	0.0478	13		181.32	5
181	Acid Soluble Cadmium (ppm)	0481	< 0.5		0.5497	0.1366	0.0478	13		181.99	5
181	Acid Soluble Cadmium (ppm)	0117	< 5		0.5497	0.1366	0.0478	13		181.33	5
191	Acid Soluble Chromium (ppm)	0524	11.48	0.0100	27.66	7.104	1.598	18	-2.28	191.30	0
191	Acid Soluble Chromium (ppm)	0519	12.81	0.0200	27.66	7.104	1.598	18	-2.09	191.99	0
191	Acid Soluble Chromium (ppm)	0102	21.06	0.5010	27.66	7.104	1.598	18	-0.93	191.30	0
191	Acid Soluble Chromium (ppm)	0368	22.73	0.5316	27.66	7.104	1.598	18	-0.69	191.34	0
191	Acid Soluble Chromium (ppm)	0405	23.00	2.000	27.66	7.104	1.598	18	-0.66	191.99	0
191	Acid Soluble Chromium (ppm)	0523	24.12	0.1000	27.66	7.104	1.598	18	-0.50	191.30	0
191	Acid Soluble Chromium (ppm)	0482	24.35	3.300	27.66	7.104	1.598	18	-0.47	191.30	0
191	Acid Soluble Chromium (ppm)	0520	25.15	1.300	27.66	7.104	1.598	18	-0.35	191.99	0
191	Acid Soluble Chromium (ppm)	0035	28.40	2.200	27.66	7.104	1.598	18	0.10	191.30	0
191	Acid Soluble Chromium (ppm)	0481	28.55	0.3000	27.66	7.104	1.598	18	0.13	191.99	0
191	Acid Soluble Chromium (ppm)	0300	29.07	0.7900	27.66	7.104	1.598	18	0.20	191.32	0
191	Acid Soluble Chromium (ppm)	0450	29.50	1.000	27.66	7.104	1.598	18	0.26	191.30	0
191	Acid Soluble Chromium (ppm)	0527	32.20	0.4143	27.66	7.104	1.598	18	0.64	191.33	0
191	Acid Soluble Chromium (ppm)	0117	33.65	0.4590	27.66	7.104	1.598	18	0.84	191.33	0
191	Acid Soluble Chromium (ppm)	0037	33.99	0.1540	27.66	7.104	1.598	18	0.89	191.33	0
191	Acid Soluble Chromium (ppm)	0515	34.67	0.1120	27.66	7.104	1.598	18	0.99	191.34	0
191	Acid Soluble Chromium (ppm)	0220	35.05	2.700	27.66	7.104	1.598	18	1.04	191.33	0
191	Acid Soluble Chromium (ppm)	0515	46.38	12.87	27.66	7.104	1.598	18	2.63	191.33	0
191	Acid Soluble Chromium (ppm)	0389	12.26	21.02	27.66	7.104	1.598	18	-2.17	191.30	1
191	Acid Soluble Chromium (ppm)	0555	0.0000	0.0000	27.66	7.104	1.598	18		191.30	4
202	Acid Soluble Cobalt (ppm)	0498	2.000	0.0000	17.81	4.357	0.7143	22	-3.63	202.00	0
202	Acid Soluble Cobalt (ppm)	0519	7.545	0.0100	17.81	4.357	0.7143	22	-2.36	202.99	0
202	Acid Soluble Cobalt (ppm)	0521	12.78	0.0000	17.81	4.357	0.7143	22	-1.15	202.33	0
202	Acid Soluble Cobalt (ppm)	0481	14.20	0.4000	17.81	4.357	0.7143	22	-0.83	202.99	0
202	Acid Soluble Cobalt (ppm)	0520	15.04	0.9200	17.81	4.357	0.7143	22	-0.64	202.99	0
202	Acid Soluble Cobalt (ppm)	0482	15.10	1.600	17.81	4.357	0.7143	22	-0.62	202.30	0
202	Acid Soluble Cobalt (ppm)	0102	15.21	2.731	17.81	4.357	0.7143	22	-0.60	202.30	0
202	Acid Soluble Cobalt (ppm)	0524	15.65	0.9062	17.81	4.357	0.7143	22	-0.50	202.30	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				
202	Acid Soluble Cobalt (ppm)	0368	16.32	0.8453	17.81	4.357	0.7143	22	-0.34	202.34	0
202	Acid Soluble Cobalt (ppm)	0405	17.25	0.5000	17.81	4.357	0.7143	22	-0.13	202.99	0
202	Acid Soluble Cobalt (ppm)	0035	17.40	0.2000	17.81	4.357	0.7143	22	-0.09	202.30	0
202	Acid Soluble Cobalt (ppm)	0523	17.62	0.3000	17.81	4.357	0.7143	22	-0.04	202.30	0
202	Acid Soluble Cobalt (ppm)	0389	17.67	0.2000	17.81	4.357	0.7143	22	-0.03	202.30	0
202	Acid Soluble Cobalt (ppm)	0515	19.42	2.637	17.81	4.357	0.7143	22	0.37	202.34	0
202	Acid Soluble Cobalt (ppm)	0220	19.65	0.3000	17.81	4.357	0.7143	22	0.42	202.33	0
202	Acid Soluble Cobalt (ppm)	0515	20.12	2.343	17.81	4.357	0.7143	22	0.53	202.33	0
202	Acid Soluble Cobalt (ppm)	0300	21.14	0.0300	17.81	4.357	0.7143	22	0.76	202.32	0
202	Acid Soluble Cobalt (ppm)	0233	21.80	0.1500	17.81	4.357	0.7143	22	0.91	202.33	0
202	Acid Soluble Cobalt (ppm)	0527	22.33	0.6589	17.81	4.357	0.7143	22	1.04	202.33	0
202	Acid Soluble Cobalt (ppm)	0117	23.41	0.1920	17.81	4.357	0.7143	22	1.28	202.33	0
202	Acid Soluble Cobalt (ppm)	0255	23.56	0.4720	17.81	4.357	0.7143	22	1.32	202.99	0
202	Acid Soluble Cobalt (ppm)	0037	23.65	0.3190	17.81	4.357	0.7143	22	1.34	202.33	0
202	Acid Soluble Cobalt (ppm)	0546	23.06	4.061	17.81	4.357	0.7143	22	1.21	202.33	1
202	Acid Soluble Cobalt (ppm)	0555	0.0000	0.0000	17.81	4.357	0.7143	22		202.30	4
221	Acid Soluble Copper (1%)	0526	0.5538†	0.0254	0.7645	0.0564	0.0206	60	-3.74	221.03	0
221	Acid Soluble Copper (1%)	0552	0.6150†	0.0300	0.7645	0.0564	0.0206	60	-2.65	221.30	0
221	Acid Soluble Copper (1%)	0255	0.6505†	0.0050	0.7645	0.0564	0.0206	60	-2.02	221.30	0
221	Acid Soluble Copper (1%)	0055	0.6550†	0.0100	0.7645	0.0564	0.0206	60	-1.94	221.33	0
221	Acid Soluble Copper (1%)	0486	0.6800†	0.0000	0.7645	0.0564	0.0206	60	-1.50	221.33	0
221	Acid Soluble Copper (1%)	0324	0.6845	0.0110	0.7645	0.0564	0.0206	60	-1.42	221.30	0
221	Acid Soluble Copper (1%)	0444	0.6850	0.0500	0.7645	0.0564	0.0206	60	-1.41	221.30	0
221	Acid Soluble Copper (1%)	0405	0.7005	0.0390	0.7645	0.0564	0.0206	60	-1.13	221.99	0
221	Acid Soluble Copper (1%)	0481	0.7100	0.0200	0.7645	0.0564	0.0206	60	-0.97	221.99	0
221	Acid Soluble Copper (1%)	0559	0.7100	0.0200	0.7645	0.0564	0.0206	60	-0.97	221.99	0
221	Acid Soluble Copper (1%)	0402	0.7150	0.0100	0.7645	0.0564	0.0206	60	-0.88	221.30	0
221	Acid Soluble Copper (1%)	0513	0.7200	0.0200	0.7645	0.0564	0.0206	60	-0.79	221.00	0
221	Acid Soluble Copper (1%)	0472	0.7200	0.0000	0.7645	0.0564	0.0206	60	-0.79	221.30	0
221	Acid Soluble Copper (1%)	0485	0.7245	0.0118	0.7645	0.0564	0.0206	60	-0.71	221.00	0
221	Acid Soluble Copper (1%)	0106	0.7261	0.0033	0.7645	0.0564	0.0206	60	-0.68	221.33	0
221	Acid Soluble Copper (1%)	0551	0.7300	0.0200	0.7645	0.0564	0.0206	60	-0.61	221.00	0
221	Acid Soluble Copper (1%)	0523	0.7330	0.0060	0.7645	0.0564	0.0206	60	-0.56	221.99	0
221	Acid Soluble Copper (1%)	0233	0.7391	0.0032	0.7645	0.0564	0.0206	60	-0.45	221.33	0
221	Acid Soluble Copper (1%)	0558	0.7400	0.0200	0.7645	0.0564	0.0206	60	-0.43	221.99	0
221	Acid Soluble Copper (1%)	0450	0.7450	0.0700	0.7645	0.0564	0.0206	60	-0.35	221.30	0
221	Acid Soluble Copper (1%)	0433	0.7470	0.0020	0.7645	0.0564	0.0206	60	-0.31	221.30	0
221	Acid Soluble Copper (1%)	0105	0.7495	0.0030	0.7645	0.0564	0.0206	60	-0.27	221.00	0
221	Acid Soluble Copper (1%)	0177	0.7497	0.0137	0.7645	0.0564	0.0206	60	-0.26	221.33	0
221	Acid Soluble Copper (1%)	0300	0.7497	0.0042	0.7645	0.0564	0.0206	60	-0.26	221.32	0
221	Acid Soluble Copper (1%)	0360	0.7505	0.0170	0.7645	0.0564	0.0206	60	-0.25	221.30	0
221	Acid Soluble Copper (1%)	0040	0.7538	0.0191	0.7645	0.0564	0.0206	60	-0.19	221.00	0
221	Acid Soluble Copper (1%)	0531	0.7600	0.0400	0.7645	0.0564	0.0206	60	-0.08	221.00	0
221	Acid Soluble Copper (1%)	0029	0.7614	0.0047	0.7645	0.0564	0.0206	60	-0.06	221.00	0
221	Acid Soluble Copper (1%)	0220	0.7635	0.0030	0.7645	0.0564	0.0206	60	-0.02	221.32	0
221	Acid Soluble Copper (1%)	0390	0.7635	0.0150	0.7645	0.0564	0.0206	60	-0.02	221.99	0
221	Acid Soluble Copper (1%)	0354	0.7650	0.0100	0.7645	0.0564	0.0206	60	0.01	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 (1%)	0368	0.7672	0.0034	0.7645	0.0564	0.0206	60	0.05	221.99	0
221	Acid Soluble Copper (1%)	0102	0.7682	0.0992	0.7645	0.0564	0.0206	60	0.07	221.30	0
221	Acid Soluble Copper (1%)	0105	0.7695	0.0230	0.7645	0.0564	0.0206	60	0.09	221.03	0
221	Acid Soluble Copper (1%)	0535	0.7700	0.0400	0.7645	0.0564	0.0206	60	0.10	221.00	0
221	Acid Soluble Copper (1%)	0095	0.7750	0.0100	0.7645	0.0564	0.0206	60	0.19	221.30	0
221	Acid Soluble Copper (1%)	0389	0.7800	0.0000	0.7645	0.0564	0.0206	60	0.27	221.99	0
221	Acid Soluble Copper (1%)	0377	0.7820	0.0060	0.7645	0.0564	0.0206	60	0.31	221.30	0
221	Acid Soluble Copper (1%)	0546	0.7840	0.0000	0.7645	0.0564	0.0206	60	0.35	221.33	0
221	Acid Soluble Copper (1%)	0534	0.7850	0.0100	0.7645	0.0564	0.0206	60	0.36	221.00	0
221	Acid Soluble Copper (1%)	0524	0.7870	0.0052	0.7645	0.0564	0.0206	60	0.40	221.99	0
221	Acid Soluble Copper (1%)	0527	0.7905	0.0355	0.7645	0.0564	0.0206	60	0.46	221.33	0
221	Acid Soluble Copper (1%)	0027	0.7910	0.0600	0.7645	0.0564	0.0206	60	0.47	221.99	0
221	Acid Soluble Copper (1%)	0037	0.7940	0.0100	0.7645	0.0564	0.0206	60	0.52	221.33	0
221	Acid Soluble Copper (1%)	0117	0.7983	0.0081	0.7645	0.0564	0.0206	60	0.60	221.33	0
221	Acid Soluble Copper (1%)	0234	0.8000	0.0000	0.7645	0.0564	0.0206	60	0.63	221.30	0
221	Acid Soluble Copper (1%)	0136	0.8000	0.0000	0.7645	0.0564	0.0206	60	0.63	221.33	0
221	Acid Soluble Copper (1%)	0035	0.8145	0.0290	0.7645	0.0564	0.0206	60	0.89	221.30	0
221	Acid Soluble Copper (1%)	0553	0.8150	0.0200	0.7645	0.0564	0.0206	60	0.90	221.00	0
221	Acid Soluble Copper (1%)	0482	0.8150	0.0100	0.7645	0.0564	0.0206	60	0.90	221.30	0
221	Acid Soluble Copper (1%)	0555	0.8150	0.0700	0.7645	0.0564	0.0206	60	0.90	221.33	0
221	Acid Soluble Copper (1%)	0049	0.8182	0.0851	0.7645	0.0564	0.0206	60	0.95	221.30	0
221	Acid Soluble Copper (1%)	0157	0.8210	0.0480	0.7645	0.0564	0.0206	60	1.00	221.30	0
221	Acid Soluble Copper (1%)	0042	0.8400	0.0200	0.7645	0.0564	0.0206	60	1.34	221.99	0
221	Acid Soluble Copper (1%)	0521	0.8675‡	0.0000	0.7645	0.0564	0.0206	60	1.83	221.32	0
221	Acid Soluble Copper (1%)	0520	0.8800‡	0.0200	0.7645	0.0564	0.0206	60	2.05	221.99	0
221	Acid Soluble Copper (1%)	0291	0.9250‡	0.0100	0.7645	0.0564	0.0206	60	2.85	221.30	0
221	Acid Soluble Copper (1%)	0483	0.9285‡	0.0050	0.7645	0.0564	0.0206	60	2.91	221.30	0
221	Acid Soluble Copper (1%)	0519	0.9700‡	0.0400	0.7645	0.0564	0.0206	60	3.64	221.99	0
221	Acid Soluble Copper (1%)	0532	0.9900‡	0.0600	0.7645	0.0564	0.0206	60	4.00	221.99	0
221	Acid Soluble Copper (1%)	0515	1.127‡	0.2384	0.7645	0.0564	0.0206	60	6.43	221.33	1
241	Acid Soluble Iron (1%)	0513	0.6350†	0.0500	0.9359	0.0671	0.0210	64	-4.48	241.00	0
241	Acid Soluble Iron (1%)	0552	0.7450†	0.0700	0.9359	0.0671	0.0210	64	-2.84	241.30	0
241	Acid Soluble Iron (1%)	0486	0.7600†	0.0000	0.9359	0.0671	0.0210	64	-2.62	241.33	0
241	Acid Soluble Iron (1%)	0558	0.7900†	0.0200	0.9359	0.0671	0.0210	64	-2.17	241.99	0
241	Acid Soluble Iron (1%)	0498	0.8000†	0.0000	0.9359	0.0671	0.0210	64	-2.03	241.03	0
241	Acid Soluble Iron (1%)	0520	0.8150†	0.0100	0.9359	0.0671	0.0210	64	-1.80	241.99	0
241	Acid Soluble Iron (1%)	0405	0.8250†	0.0500	0.9359	0.0671	0.0210	64	-1.65	241.99	0
241	Acid Soluble Iron (1%)	0481	0.8350†	0.0100	0.9359	0.0671	0.0210	64	-1.50	241.99	0
241	Acid Soluble Iron (1%)	0377	0.8475	0.0110	0.9359	0.0671	0.0210	64	-1.32	241.30	0
241	Acid Soluble Iron (1%)	0034	0.8475	0.0370	0.9359	0.0671	0.0210	64	-1.32	241.33	0
241	Acid Soluble Iron (1%)	0106	0.8639	0.0076	0.9359	0.0671	0.0210	64	-1.07	241.33	0
241	Acid Soluble Iron (1%)	0485	0.8756	0.0048	0.9359	0.0671	0.0210	64	-0.90	241.00	0
241	Acid Soluble Iron (1%)	0105	0.8760	0.0140	0.9359	0.0671	0.0210	64	-0.89	241.03	0
241	Acid Soluble Iron (1%)	0055	0.8800	0.0000	0.9359	0.0671	0.0210	64	-0.83	241.33	0
241	Acid Soluble Iron (1%)	0472	0.8850	0.0100	0.9359	0.0671	0.0210	64	-0.76	241.30	0
241	Acid Soluble Iron (1%)	0444	0.8900	0.0200	0.9359	0.0671	0.0210	64	-0.68	241.30	0
241	Acid Soluble Iron (1%)	0234	0.9000	0.0000	0.9359	0.0671	0.0210	64	-0.54	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 (1%)	0027	0.9010	0.0660	0.9359	0.0671	0.0210	64	-0.52	241.99	0
241	Acid Soluble Iron (1%)	0300	0.9011	0.0029	0.9359	0.0671	0.0210	64	-0.52	241.32	0
241	Acid Soluble Iron (1%)	0555	0.9100	0.0600	0.9359	0.0671	0.0210	64	-0.39	241.33	0
241	Acid Soluble Iron (1%)	0561	0.9150	0.0100	0.9359	0.0671	0.0210	64	-0.31	241.33	0
241	Acid Soluble Iron (1%)	0136	0.9200	0.0200	0.9359	0.0671	0.0210	64	-0.24	241.33	0
241	Acid Soluble Iron (1%)	0324	0.9220	0.0120	0.9359	0.0671	0.0210	64	-0.21	241.30	0
241	Acid Soluble Iron (1%)	0042	0.9350	0.0100	0.9359	0.0671	0.0210	64	-0.01	241.99	0
241	Acid Soluble Iron (1%)	0233	0.9365	0.0240	0.9359	0.0671	0.0210	64	0.01	241.33	0
241	Acid Soluble Iron (1%)	0419	0.9370	0.0160	0.9359	0.0671	0.0210	64	0.02	241.30	0
241	Acid Soluble Iron (1%)	0433	0.9370	0.0000	0.9359	0.0671	0.0210	64	0.02	241.30	0
241	Acid Soluble Iron (1%)	0102	0.9398	0.0365	0.9359	0.0671	0.0210	64	0.06	241.30	0
241	Acid Soluble Iron (1%)	0534	0.9400	0.0000	0.9359	0.0671	0.0210	64	0.06	241.00	0
241	Acid Soluble Iron (1%)	0389	0.9400	0.0200	0.9359	0.0671	0.0210	64	0.06	241.99	0
241	Acid Soluble Iron (1%)	0117	0.9409	0.0090	0.9359	0.0671	0.0210	64	0.07	241.33	0
241	Acid Soluble Iron (1%)	0526	0.9427	0.0607	0.9359	0.0671	0.0210	64	0.10	241.03	0
241	Acid Soluble Iron (1%)	0255	0.9435	0.0110	0.9359	0.0671	0.0210	64	0.11	241.30	0
241	Acid Soluble Iron (1%)	0523	0.9480	0.0280	0.9359	0.0671	0.0210	64	0.18	241.99	0
241	Acid Soluble Iron (1%)	0390	0.9490	0.0140	0.9359	0.0671	0.0210	64	0.19	241.30	0
241	Acid Soluble Iron (1%)	0177	0.9512	0.0049	0.9359	0.0671	0.0210	64	0.23	241.33	0
241	Acid Soluble Iron (1%)	0360	0.9530	0.0060	0.9359	0.0671	0.0210	64	0.25	241.30	0
241	Acid Soluble Iron (1%)	0037	0.9535	0.0010	0.9359	0.0671	0.0210	64	0.26	241.33	0
241	Acid Soluble Iron (1%)	0546	0.9550	0.0137	0.9359	0.0671	0.0210	64	0.28	241.33	0
241	Acid Soluble Iron (1%)	0402	0.9550	0.0100	0.9359	0.0671	0.0210	64	0.28	241.30	0
241	Acid Soluble Iron (1%)	0368	0.9577	0.0085	0.9359	0.0671	0.0210	64	0.32	241.99	0
241	Acid Soluble Iron (1%)	0354	0.9600	0.0200	0.9359	0.0671	0.0210	64	0.36	241.30	0
241	Acid Soluble Iron (1%)	0524	0.9638	0.0007	0.9359	0.0671	0.0210	64	0.41	241.99	0
241	Acid Soluble Iron (1%)	0040	0.9650	0.0100	0.9359	0.0671	0.0210	64	0.43	241.00	0
241	Acid Soluble Iron (1%)	0535	0.9650	0.0300	0.9359	0.0671	0.0210	64	0.43	241.00	0
241	Acid Soluble Iron (1%)	0095	0.9650	0.0300	0.9359	0.0671	0.0210	64	0.43	241.30	0
241	Acid Soluble Iron (1%)	0049	0.9659	0.0085	0.9359	0.0671	0.0210	64	0.45	241.30	0
241	Acid Soluble Iron (1%)	0531	0.9700	0.0200	0.9359	0.0671	0.0210	64	0.51	241.00	0
241	Acid Soluble Iron (1%)	0536	0.9700	0.0400	0.9359	0.0671	0.0210	64	0.51	241.00	0
241	Acid Soluble Iron (1%)	0220	0.9700	0.0000	0.9359	0.0671	0.0210	64	0.51	241.32	0
241	Acid Soluble Iron (1%)	0551	0.9800	0.0400	0.9359	0.0671	0.0210	64	0.66	241.00	0
241	Acid Soluble Iron (1%)	0559	0.9800	0.0200	0.9359	0.0671	0.0210	64	0.66	241.99	0
241	Acid Soluble Iron (1%)	0105	0.9931	0.0438	0.9359	0.0671	0.0210	64	0.85	241.00	0
241	Acid Soluble Iron (1%)	0035	0.9970	0.0260	0.9359	0.0671	0.0210	64	0.91	241.30	0
241	Acid Soluble Iron (1%)	0519	1.000	0.0200	0.9359	0.0671	0.0210	64	0.95	241.99	0
241	Acid Soluble Iron (1%)	0515	1.001	0.0231	0.9359	0.0671	0.0210	64	0.97	241.99	0
241	Acid Soluble Iron (1%)	0029	1.006	0.0525	0.9359	0.0671	0.0210	64	1.04	241.00	0
241	Acid Soluble Iron (1%)	0482	1.020	0.0400	0.9359	0.0671	0.0210	64	1.25	241.30	0
241	Acid Soluble Iron (1%)	0527	1.024	0.0386	0.9359	0.0671	0.0210	64	1.31	241.33	0
241	Acid Soluble Iron (1%)	0521	1.027	0.0000	0.9359	0.0671	0.0210	64	1.35	241.32	0
241	Acid Soluble Iron (1%)	0553	1.045‡	0.0200	0.9359	0.0671	0.0210	64	1.63	241.00	0
241	Acid Soluble Iron (1%)	0532	1.055‡	0.0300	0.9359	0.0671	0.0210	64	1.77	241.99	0
241	Acid Soluble Iron (1%)	0291	1.090‡	0.0400	0.9359	0.0671	0.0210	64	2.30	241.30	0
241	Acid Soluble Iron (1%)	0483	1.145‡	0.0300	0.9359	0.0671	0.0210	64	3.12	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 (1%)	0515	1.544±	1.224	0.9359	0.0671	0.0210	64	9.06	241.33	2
251	Acid Soluble Lead (ppm)	0389	1.681	0.5980	3.070	1.925	0.3548	14	-0.72	251.30	0
251	Acid Soluble Lead (ppm)	0481	1.740	0.1200	3.070	1.925	0.3548	14	-0.69	251.99	0
251	Acid Soluble Lead (ppm)	0450	1.850	0.3000	3.070	1.925	0.3548	14	-0.63	251.30	0
251	Acid Soluble Lead (ppm)	0515	1.883	0.1020	3.070	1.925	0.3548	14	-0.62	251.34	0
251	Acid Soluble Lead (ppm)	0405	2.050	0.3000	3.070	1.925	0.3548	14	-0.53	251.99	0
251	Acid Soluble Lead (ppm)	0527	2.078	0.0542	3.070	1.925	0.3548	14	-0.52	251.33	0
251	Acid Soluble Lead (ppm)	0519	2.080	0.0400	3.070	1.925	0.3548	14	-0.51	251.99	0
251	Acid Soluble Lead (ppm)	0037	2.253	0.2720	3.070	1.925	0.3548	14	-0.42	251.33	0
251	Acid Soluble Lead (ppm)	0255	2.517	0.0520	3.070	1.925	0.3548	14	-0.29	251.30	0
251	Acid Soluble Lead (ppm)	0524	2.621	0.0753	3.070	1.925	0.3548	14	-0.23	251.30	0
251	Acid Soluble Lead (ppm)	0523	4.360	0.0400	3.070	1.925	0.3548	14	0.67	251.30	0
251	Acid Soluble Lead (ppm)	0035	7.580	0.3800	3.070	1.925	0.3548	14	2.34	251.30	0
251	Acid Soluble Lead (ppm)	0482	9.565	0.3100	3.070	1.925	0.3548	14	3.37	251.30	0
251	Acid Soluble Lead (ppm)	0102	10.18	2.323	3.070	1.925	0.3548	14	3.70	251.30	0
251	Acid Soluble Lead (ppm)	0515	3.721	2.805	3.070	1.925	0.3548	14	0.34	251.33	1
251	Acid Soluble Lead (ppm)	0555	0.0000	0.0000	3.070	1.925	0.3548	14		251.30	4
251	Acid Soluble Lead (ppm)	0520	< 0.04		3.070	1.925	0.3548	14		251.99	5
251	Acid Soluble Lead (ppm)	0368	< 0.8		3.070	1.925	0.3548	14		251.34	5
251	Acid Soluble Lead (ppm)	0220	< 1		3.070	1.925	0.3548	14		251.33	5
251	Acid Soluble Lead (ppm)	0117	< 5		3.070	1.925	0.3548	14		251.33	5
251	Acid Soluble Lead (ppm)	0300	< 10		3.070	1.925	0.3548	14		251.32	5
261	Acid Soluble Manganese (1.5%)	0481	0.5750†	0.0300	1.127	0.0972	0.0293	61	-5.68	261.99	0
261	Acid Soluble Manganese (1.5%)	0526	0.6882†	0.0000	1.127	0.0972	0.0293	61	-4.51	261.15	0
261	Acid Soluble Manganese (1.5%)	0486	0.8750†	0.0100	1.127	0.0972	0.0293	61	-2.59	261.35	0
261	Acid Soluble Manganese (1.5%)	0552	0.9250†	0.0500	1.127	0.0972	0.0293	61	-2.07	261.32	0
261	Acid Soluble Manganese (1.5%)	0405	0.9432†	0.0495	1.127	0.0972	0.0293	61	-1.89	261.99	0
261	Acid Soluble Manganese (1.5%)	0531	0.9700†	0.0600	1.127	0.0972	0.0293	61	-1.61	261.12	0
261	Acid Soluble Manganese (1.5%)	0513	1.025	0.0100	1.127	0.0972	0.0293	61	-1.05	261.12	0
261	Acid Soluble Manganese (1.5%)	0055	1.030	0.0400	1.127	0.0972	0.0293	61	-0.99	261.35	0
261	Acid Soluble Manganese (1.5%)	0106	1.031	0.0051	1.127	0.0972	0.0293	61	-0.99	261.35	0
261	Acid Soluble Manganese (1.5%)	0551	1.035	0.0300	1.127	0.0972	0.0293	61	-0.94	261.12	0
261	Acid Soluble Manganese (1.5%)	0536	1.045	0.0900	1.127	0.0972	0.0293	61	-0.84	261.12	0
261	Acid Soluble Manganese (1.5%)	0535	1.050	0.1000	1.127	0.0972	0.0293	61	-0.79	261.12	0
261	Acid Soluble Manganese (1.5%)	0558	1.055	0.0500	1.127	0.0972	0.0293	61	-0.74	261.99	0
261	Acid Soluble Manganese (1.5%)	0034	1.065	0.0620	1.127	0.0972	0.0293	61	-0.63	261.35	0
261	Acid Soluble Manganese (1.5%)	0559	1.070	0.0200	1.127	0.0972	0.0293	61	-0.58	261.99	0
261	Acid Soluble Manganese (1.5%)	0102	1.073	0.1410	1.127	0.0972	0.0293	61	-0.56	261.30	0
261	Acid Soluble Manganese (1.5%)	0444	1.085	0.0500	1.127	0.0972	0.0293	61	-0.43	261.30	0
261	Acid Soluble Manganese (1.5%)	0220	1.090	0.0000	1.127	0.0972	0.0293	61	-0.38	261.34	0
261	Acid Soluble Manganese (1.5%)	0561	1.090	0.0000	1.127	0.0972	0.0293	61	-0.38	261.35	0
261	Acid Soluble Manganese (1.5%)	0255	1.099	0.0080	1.127	0.0972	0.0293	61	-0.28	261.99	0
261	Acid Soluble Manganese (1.5%)	0233	1.099	0.0100	1.127	0.0972	0.0293	61	-0.28	261.35	0
261	Acid Soluble Manganese (1.5%)	0433	1.100	0.0020	1.127	0.0972	0.0293	61	-0.27	261.30	0
261	Acid Soluble Manganese (1.5%)	0300	1.100	0.0060	1.127	0.0972	0.0293	61	-0.27	261.32	0
261	Acid Soluble Manganese (1.5%)	0136	1.100	0.0000	1.127	0.0972	0.0293	61	-0.27	261.35	0
261	Acid Soluble Manganese (1.5%)	0324	1.110	0.0200	1.127	0.0972	0.0293	61	-0.17	261.31	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 (1.5%)	0368	1.111	0.0214	1.127	0.0972	0.0293	61	-0.16	261.99	0
261	Acid Soluble Manganese (1.5%)	0027	1.115	0.0600	1.127	0.0972	0.0293	61	-0.12	261.99	0
261	Acid Soluble Manganese (1.5%)	0095	1.115	0.0300	1.127	0.0972	0.0293	61	-0.12	261.99	0
261	Acid Soluble Manganese (1.5%)	0029	1.116	0.0110	1.127	0.0972	0.0293	61	-0.11	261.12	0
261	Acid Soluble Manganese (1.5%)	0523	1.119	0.0100	1.127	0.0972	0.0293	61	-0.08	261.99	0
261	Acid Soluble Manganese (1.5%)	0042	1.120	0.0200	1.127	0.0972	0.0293	61	-0.07	261.99	0
261	Acid Soluble Manganese (1.5%)	0546	1.124	0.0089	1.127	0.0972	0.0293	61	-0.02	261.35	0
261	Acid Soluble Manganese (1.5%)	0472	1.125	0.0100	1.127	0.0972	0.0293	61	-0.02	261.30	0
261	Acid Soluble Manganese (1.5%)	0360	1.126	0.0010	1.127	0.0972	0.0293	61	-0.01	261.31	0
261	Acid Soluble Manganese (1.5%)	0037	1.126	0.0030	1.127	0.0972	0.0293	61	-0.01	261.35	0
261	Acid Soluble Manganese (1.5%)	0105	1.133	0.0180	1.127	0.0972	0.0293	61	0.07	261.12	0
261	Acid Soluble Manganese (1.5%)	0390	1.135	0.0100	1.127	0.0972	0.0293	61	0.09	261.30	0
261	Acid Soluble Manganese (1.5%)	0389	1.140	0.0000	1.127	0.0972	0.0293	61	0.14	261.99	0
261	Acid Soluble Manganese (1.5%)	0527	1.144	0.0394	1.127	0.0972	0.0293	61	0.17	261.35	0
261	Acid Soluble Manganese (1.5%)	0177	1.145	0.0460	1.127	0.0972	0.0293	61	0.19	261.35	0
261	Acid Soluble Manganese (1.5%)	0354	1.145	0.0100	1.127	0.0972	0.0293	61	0.19	261.30	0
261	Acid Soluble Manganese (1.5%)	0485	1.149	0.0190	1.127	0.0972	0.0293	61	0.23	261.12	0
261	Acid Soluble Manganese (1.5%)	0117	1.149	0.0303	1.127	0.0972	0.0293	61	0.23	261.35	0
261	Acid Soluble Manganese (1.5%)	0040	1.150	0.0050	1.127	0.0972	0.0293	61	0.24	261.12	0
261	Acid Soluble Manganese (1.5%)	0234	1.150	0.1000	1.127	0.0972	0.0293	61	0.24	261.31	0
261	Acid Soluble Manganese (1.5%)	0402	1.165	0.0300	1.127	0.0972	0.0293	61	0.39	261.32	0
261	Acid Soluble Manganese (1.5%)	0049	1.172	0.0140	1.127	0.0972	0.0293	61	0.47	261.32	0
261	Acid Soluble Manganese (1.5%)	0377	1.180	0.0070	1.127	0.0972	0.0293	61	0.54	261.32	0
261	Acid Soluble Manganese (1.5%)	0524	1.185	0.0247	1.127	0.0972	0.0293	61	0.60	261.99	0
261	Acid Soluble Manganese (1.5%)	0534	1.220	0.0000	1.127	0.0972	0.0293	61	0.96	261.12	0
261	Acid Soluble Manganese (1.5%)	0035	1.225	0.0900	1.127	0.0972	0.0293	61	1.01	261.30	0
261	Acid Soluble Manganese (1.5%)	0482	1.255‡	0.0500	1.127	0.0972	0.0293	61	1.32	261.31	0
261	Acid Soluble Manganese (1.5%)	0105	1.284‡	0.0120	1.127	0.0972	0.0293	61	1.62	261.15	0
261	Acid Soluble Manganese (1.5%)	0291	1.315‡	0.0100	1.127	0.0972	0.0293	61	1.94	261.30	0
261	Acid Soluble Manganese (1.5%)	0555	1.375‡	0.0700	1.127	0.0972	0.0293	61	2.56	261.35	0
261	Acid Soluble Manganese (1.5%)	0520	1.375‡	0.0700	1.127	0.0972	0.0293	61	2.56	261.99	0
261	Acid Soluble Manganese (1.5%)	0483	1.410‡	0.0200	1.127	0.0972	0.0293	61	2.92	261.32	0
261	Acid Soluble Manganese (1.5%)	0521	1.426‡	0.0000	1.127	0.0972	0.0293	61	3.08	261.34	0
261	Acid Soluble Manganese (1.5%)	0519	1.500‡	0.0200	1.127	0.0972	0.0293	61	3.84	261.99	0
261	Acid Soluble Manganese (1.5%)	0532	1.505‡	0.0500	1.127	0.0972	0.0293	61	3.89	261.99	0
261	Acid Soluble Manganese (1.5%)	0553	1.558‡	0.0250	1.127	0.0972	0.0293	61	4.43	261.00	0
261	Acid Soluble Manganese (1.5%)	0515	1.539‡	0.6280	1.127	0.0972	0.0293	61	4.24	261.35	1
271	Water Soluble Manganese (%)	0444	0.5850	0.0100				2		271.30	0
271	Water Soluble Manganese (%)	0027	0.8845	0.0670				2		271.00	0
281	Acid Soluble Mercury (ppm)	0519	0.0150	0.0100	7.917	13.67	0.0715	3	-0.47	281.99	0
281	Acid Soluble Mercury (ppm)	0368	0.0347	0.0046	7.917	13.67	0.0715	3	-0.47	281.99	0
281	Acid Soluble Mercury (ppm)	0035	23.70	0.2000	7.917	13.67	0.0715	3	0.94	281.99	0
281	Acid Soluble Mercury (ppm)	0515	0.0000	0.0000	7.917	13.67	0.0715	3		281.30	4
281	Acid Soluble Mercury (ppm)	0450	0.0150	0.0300	7.917	13.67	0.0715	3		281.30	4
281	Acid Soluble Mercury (ppm)	0527	< 0.0001		7.917	13.67	0.0715	3		281.30	5
281	Acid Soluble Mercury (ppm)	0520	< 0.007		7.917	13.67	0.0715	3		281.99	5
281	Acid Soluble Mercury (ppm)	0405	< 0.01		7.917	13.67	0.0715	3		281.99	5

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				
281	Acid Soluble Mercury (ppm)	0117	< 0.2		7.917	13.67	0.0715	3		281.00	5
281	Acid Soluble Mercury (ppm)	0481	< 0.5		7.917	13.67	0.0715	3		281.99	5
289	Acid Soluble Molybdenum (ppm)	0106	0.0006	0.0000	5.494	1.378	0.5386	16	-3.99	289.33	0
289	Acid Soluble Molybdenum (ppm)	0519	3.345	0.0900	5.494	1.378	0.5386	16	-1.56	289.30	0
289	Acid Soluble Molybdenum (ppm)	0368	4.484	0.3788	5.494	1.378	0.5386	16	-0.73	289.34	0
289	Acid Soluble Molybdenum (ppm)	0515	4.508	0.7460	5.494	1.378	0.5386	16	-0.72	289.34	0
289	Acid Soluble Molybdenum (ppm)	0102	4.805	0.6410	5.494	1.378	0.5386	16	-0.50	289.30	0
289	Acid Soluble Molybdenum (ppm)	0520	5.025	0.2900	5.494	1.378	0.5386	16	-0.34	289.99	0
289	Acid Soluble Molybdenum (ppm)	0524	5.092	0.3242	5.494	1.378	0.5386	16	-0.29	289.30	0
289	Acid Soluble Molybdenum (ppm)	0220	5.450	0.3000	5.494	1.378	0.5386	16	-0.03	289.33	0
289	Acid Soluble Molybdenum (ppm)	0255	5.689	0.8870	5.494	1.378	0.5386	16	0.14	289.30	0
289	Acid Soluble Molybdenum (ppm)	0405	5.765	0.2300	5.494	1.378	0.5386	16	0.20	289.99	0
289	Acid Soluble Molybdenum (ppm)	0300	5.974	0.1090	5.494	1.378	0.5386	16	0.35	289.32	0
289	Acid Soluble Molybdenum (ppm)	0546	6.046	1.157	5.494	1.378	0.5386	16	0.40	289.33	0
289	Acid Soluble Molybdenum (ppm)	0117	6.812	0.2300	5.494	1.378	0.5386	16	0.96	289.33	0
289	Acid Soluble Molybdenum (ppm)	0037	6.824	0.1380	5.494	1.378	0.5386	16	0.97	289.33	0
289	Acid Soluble Molybdenum (ppm)	0527	7.020	0.4059	5.494	1.378	0.5386	16	1.11	289.33	0
289	Acid Soluble Molybdenum (ppm)	0035	8.395	2.690	5.494	1.378	0.5386	16	2.11	289.30	0
289	Acid Soluble Molybdenum (ppm)	0515	6.333	3.283	5.494	1.378	0.5386	16	0.61	289.33	1
289	Acid Soluble Molybdenum (ppm)	0555	0.0000	0.0000	5.494	1.378	0.5386	16		289.30	4
289	Acid Soluble Molybdenum (ppm)	0049	< 5		5.494	1.378	0.5386	16		289.30	5
289	Acid Soluble Molybdenum (ppm)	0481	< 50		5.494	1.378	0.5386	16		289.99	5
291	Acid Soluble Nickel (ppm)	0521	11.00	0.0000	22.52	4.101	1.828	21	-2.81	291.30	0
291	Acid Soluble Nickel (ppm)	0482	16.75	1.100	22.52	4.101	1.828	21	-1.41	291.30	0
291	Acid Soluble Nickel (ppm)	0520	16.90	0.6000	22.52	4.101	1.828	21	-1.37	291.99	0
291	Acid Soluble Nickel (ppm)	0524	17.29	1.164	22.52	4.101	1.828	21	-1.28	291.30	0
291	Acid Soluble Nickel (ppm)	0102	18.69	3.852	22.52	4.101	1.828	21	-0.94	291.30	0
291	Acid Soluble Nickel (ppm)	0519	20.31	0.0100	22.52	4.101	1.828	21	-0.54	291.99	0
291	Acid Soluble Nickel (ppm)	0368	21.61	0.2064	22.52	4.101	1.828	21	-0.22	291.34	0
291	Acid Soluble Nickel (ppm)	0405	21.80	1.400	22.52	4.101	1.828	21	-0.18	291.99	0
291	Acid Soluble Nickel (ppm)	0035	22.30	3.400	22.52	4.101	1.828	21	-0.05	291.30	0
291	Acid Soluble Nickel (ppm)	0300	23.10	0.4900	22.52	4.101	1.828	21	0.14	291.32	0
291	Acid Soluble Nickel (ppm)	0481	23.20	1.000	22.52	4.101	1.828	21	0.17	291.99	0
291	Acid Soluble Nickel (ppm)	0515	23.23	0.6510	22.52	4.101	1.828	21	0.17	291.34	0
291	Acid Soluble Nickel (ppm)	0535	24.00	2.000	22.52	4.101	1.828	21	0.36	291.00	0
291	Acid Soluble Nickel (ppm)	0117	24.06	0.1520	22.52	4.101	1.828	21	0.37	291.33	0
291	Acid Soluble Nickel (ppm)	0220	24.80	1.000	22.52	4.101	1.828	21	0.56	291.33	0
291	Acid Soluble Nickel (ppm)	0515	25.44	6.490	22.52	4.101	1.828	21	0.71	291.33	0
291	Acid Soluble Nickel (ppm)	0527	25.45	0.2281	22.52	4.101	1.828	21	0.72	291.33	0
291	Acid Soluble Nickel (ppm)	0037	25.81	0.1520	22.52	4.101	1.828	21	0.80	291.33	0
291	Acid Soluble Nickel (ppm)	0450	26.00	4.000	22.52	4.101	1.828	21	0.85	291.30	0
291	Acid Soluble Nickel (ppm)	0233	27.16	2.980	22.52	4.101	1.828	21	1.13	291.33	0
291	Acid Soluble Nickel (ppm)	0255	83.50	7.519	22.52	4.101	1.828	21	14.87	291.99	0
291	Acid Soluble Nickel (ppm)	0555	0.0000	0.0000	22.52	4.101	1.828	21		291.30	4
301	Acid Soluble Selenium (ppm)	0519	1.705	0.0100	5.287	3.656	0.3837	9	-0.98	301.99	0
301	Acid Soluble Selenium (ppm)	0527	2.120	0.9473	5.287	3.656	0.3837	9	-0.87	301.33	0
301	Acid Soluble Selenium (ppm)	0405	3.000	0.0000	5.287	3.656	0.3837	9	-0.63	301.99	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				
301	Acid Soluble Selenium (ppm)	0300	3.627	0.0880	5.287	3.656	0.3837	9	-0.45	301.32	0
301	Acid Soluble Selenium (ppm)	0523	4.645	0.0100	5.287	3.656	0.3837	9	-0.18	301.30	0
301	Acid Soluble Selenium (ppm)	0255	5.117	0.4860	5.287	3.656	0.3837	9	-0.05	301.99	0
301	Acid Soluble Selenium (ppm)	0524	6.863	0.2450	5.287	3.656	0.3837	9	0.43	301.30	0
301	Acid Soluble Selenium (ppm)	0037	10.11	1.267	5.287	3.656	0.3837	9	1.32	301.33	0
301	Acid Soluble Selenium (ppm)	0220	10.40	0.4000	5.287	3.656	0.3837	9	1.40	301.33	0
301	Acid Soluble Selenium (ppm)	0555	0.0000	0.0000	5.287	3.656	0.3837	9		301.30	4
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	5.287	3.656	0.3837	9		301.33	4
301	Acid Soluble Selenium (ppm)	0515	0.0000	0.0000	5.287	3.656	0.3837	9		301.34	4
301	Acid Soluble Selenium (ppm)	0481	< 0.15		5.287	3.656	0.3837	9		301.99	5
301	Acid Soluble Selenium (ppm)	0368	< 1.4		5.287	3.656	0.3837	9		301.34	5
311	Sodium (%)	0136	1.345	0.0500	1.475	0.1000	0.0281	8	-1.19	311.33	0
311	Sodium (%)	0035	1.350	0.0200	1.475	0.1000	0.0281	8	-1.14	311.33	0
311	Sodium (%)	0354	1.485	0.0300	1.475	0.1000	0.0281	8	0.10	311.99	0
311	Sodium (%)	0117	1.494	0.0181	1.475	0.1000	0.0281	8	0.18	311.33	0
311	Sodium (%)	0482	1.495	0.0300	1.475	0.1000	0.0281	8	0.19	311.99	0
311	Sodium (%)	0527	1.503	0.0608	1.475	0.1000	0.0281	8	0.26	311.33	0
311	Sodium (%)	0546	1.512	0.0162	1.475	0.1000	0.0281	8	0.34	311.33	0
311	Sodium (%)	0521	1.612	0.0000	1.475	0.1000	0.0281	8	1.26	311.32	0
321	Acid Soluble Zinc (2%)	0486	1.000†	0.0000	1.438	0.0960	0.0362	61	-4.56	321.33	0
321	Acid Soluble Zinc (2%)	0481	1.215†	0.0100	1.438	0.0960	0.0362	61	-2.32	321.99	0
321	Acid Soluble Zinc (2%)	0561	1.230†	0.1000	1.438	0.0960	0.0362	61	-2.17	321.33	0
321	Acid Soluble Zinc (2%)	0526	1.256†	0.0188	1.438	0.0960	0.0362	61	-1.90	321.03	0
321	Acid Soluble Zinc (2%)	0106	1.306	0.0220	1.438	0.0960	0.0362	61	-1.37	321.33	0
321	Acid Soluble Zinc (2%)	0558	1.310	0.0600	1.438	0.0960	0.0362	61	-1.33	321.99	0
321	Acid Soluble Zinc (2%)	0055	1.330	0.0200	1.438	0.0960	0.0362	61	-1.12	321.33	0
321	Acid Soluble Zinc (2%)	0472	1.335	0.0100	1.438	0.0960	0.0362	61	-1.07	321.30	0
321	Acid Soluble Zinc (2%)	0102	1.348	0.1773	1.438	0.0960	0.0362	61	-0.93	321.30	0
321	Acid Soluble Zinc (2%)	0513	1.350	0.0200	1.438	0.0960	0.0362	61	-0.92	321.00	0
321	Acid Soluble Zinc (2%)	0523	1.352	0.0720	1.438	0.0960	0.0362	61	-0.90	321.99	0
321	Acid Soluble Zinc (2%)	0444	1.355	0.0500	1.438	0.0960	0.0362	61	-0.86	321.30	0
321	Acid Soluble Zinc (2%)	0552	1.365	0.0500	1.438	0.0960	0.0362	61	-0.76	321.30	0
321	Acid Soluble Zinc (2%)	0027	1.368	0.0880	1.438	0.0960	0.0362	61	-0.73	321.99	0
321	Acid Soluble Zinc (2%)	0535	1.370	0.0400	1.438	0.0960	0.0362	61	-0.71	321.00	0
321	Acid Soluble Zinc (2%)	0531	1.380	0.0200	1.438	0.0960	0.0362	61	-0.60	321.00	0
321	Acid Soluble Zinc (2%)	0536	1.380	0.0400	1.438	0.0960	0.0362	61	-0.60	321.00	0
321	Acid Soluble Zinc (2%)	0485	1.383	0.0890	1.438	0.0960	0.0362	61	-0.58	321.00	0
321	Acid Soluble Zinc (2%)	0324	1.385	0.0300	1.438	0.0960	0.0362	61	-0.55	321.30	0
321	Acid Soluble Zinc (2%)	0300	1.387	0.0040	1.438	0.0960	0.0362	61	-0.53	321.32	0
321	Acid Soluble Zinc (2%)	0389	1.395	0.0300	1.438	0.0960	0.0362	61	-0.45	321.99	0
321	Acid Soluble Zinc (2%)	0040	1.398	0.0160	1.438	0.0960	0.0362	61	-0.42	321.00	0
321	Acid Soluble Zinc (2%)	0551	1.400	0.0600	1.438	0.0960	0.0362	61	-0.40	321.00	0
321	Acid Soluble Zinc (2%)	0433	1.402	0.0010	1.438	0.0960	0.0362	61	-0.38	321.30	0
321	Acid Soluble Zinc (2%)	0037	1.415	0.0340	1.438	0.0960	0.0362	61	-0.24	321.33	0
321	Acid Soluble Zinc (2%)	0029	1.418	0.0880	1.438	0.0960	0.0362	61	-0.21	321.00	0
321	Acid Soluble Zinc (2%)	0177	1.419	0.0508	1.438	0.0960	0.0362	61	-0.20	321.33	0
321	Acid Soluble Zinc (2%)	0105	1.420	0.0010	1.438	0.0960	0.0362	61	-0.19	321.03	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 (2%)	0034	1.421	0.0850	1.438	0.0960	0.0362	61	-0.18	321.33	0
321	Acid Soluble Zinc (2%)	0233	1.431	0.0520	1.438	0.0960	0.0362	61	-0.07	321.33	0
321	Acid Soluble Zinc (2%)	0390	1.435	0.0300	1.438	0.0960	0.0362	61	-0.03	321.30	0
321	Acid Soluble Zinc (2%)	0049	1.438	0.0480	1.438	0.0960	0.0362	61	0.00	321.30	0
321	Acid Soluble Zinc (2%)	0220	1.440	0.0200	1.438	0.0960	0.0362	61	0.02	321.32	0
321	Acid Soluble Zinc (2%)	0105	1.443	0.0450	1.438	0.0960	0.0362	61	0.05	321.00	0
321	Acid Soluble Zinc (2%)	0117	1.445	0.0142	1.438	0.0960	0.0362	61	0.07	321.33	0
321	Acid Soluble Zinc (2%)	0042	1.450	0.0200	1.438	0.0960	0.0362	61	0.13	321.99	0
321	Acid Soluble Zinc (2%)	0527	1.450	0.0502	1.438	0.0960	0.0362	61	0.13	321.33	0
321	Acid Soluble Zinc (2%)	0482	1.465	0.0300	1.438	0.0960	0.0362	61	0.28	321.30	0
321	Acid Soluble Zinc (2%)	0354	1.480	0.0200	1.438	0.0960	0.0362	61	0.44	321.30	0
321	Acid Soluble Zinc (2%)	0360	1.482	0.0050	1.438	0.0960	0.0362	61	0.46	321.30	0
321	Acid Soluble Zinc (2%)	0405	1.485	0.0700	1.438	0.0960	0.0362	61	0.49	321.99	0
321	Acid Soluble Zinc (2%)	0255	1.486	0.0130	1.438	0.0960	0.0362	61	0.50	321.30	0
321	Acid Soluble Zinc (2%)	0450	1.490	0.0600	1.438	0.0960	0.0362	61	0.54	321.30	0
321	Acid Soluble Zinc (2%)	0524	1.499	0.0127	1.438	0.0960	0.0362	61	0.63	321.99	0
321	Acid Soluble Zinc (2%)	0234	1.500	0.0000	1.438	0.0960	0.0362	61	0.65	321.30	0
321	Acid Soluble Zinc (2%)	0546	1.501	0.0004	1.438	0.0960	0.0362	61	0.66	321.33	0
321	Acid Soluble Zinc (2%)	0368	1.503	0.0654	1.438	0.0960	0.0362	61	0.68	321.99	0
321	Acid Soluble Zinc (2%)	0136	1.505	0.0100	1.438	0.0960	0.0362	61	0.70	321.33	0
321	Acid Soluble Zinc (2%)	0377	1.510	0.0100	1.438	0.0960	0.0362	61	0.75	321.30	0
321	Acid Soluble Zinc (2%)	0291	1.525	0.0100	1.438	0.0960	0.0362	61	0.91	321.30	0
321	Acid Soluble Zinc (2%)	0402	1.525	0.0100	1.438	0.0960	0.0362	61	0.91	321.30	0
321	Acid Soluble Zinc (2%)	0559	1.525	0.0500	1.438	0.0960	0.0362	61	0.91	321.99	0
321	Acid Soluble Zinc (2%)	0035	1.530	0.0400	1.438	0.0960	0.0362	61	0.96	321.30	0
321	Acid Soluble Zinc (2%)	0095	1.535	0.0700	1.438	0.0960	0.0362	61	1.01	321.30	0
321	Acid Soluble Zinc (2%)	0421	1.580	0.0400	1.438	0.0960	0.0362	61	1.48	321.33	0
321	Acid Soluble Zinc (2%)	0483	1.715‡	0.0100	1.438	0.0960	0.0362	61	2.89	321.30	0
321	Acid Soluble Zinc (2%)	0534	1.785‡	0.0100	1.438	0.0960	0.0362	61	3.62	321.00	0
321	Acid Soluble Zinc (2%)	0519	1.940‡	0.0200	1.438	0.0960	0.0362	61	5.23	321.99	0
321	Acid Soluble Zinc (2%)	0556	1.960‡	0.0400	1.438	0.0960	0.0362	61	5.44	321.00	0
321	Acid Soluble Zinc (2%)	0521	1.986‡	0.0000	1.438	0.0960	0.0362	61	5.72	321.32	0
321	Acid Soluble Zinc (2%)	0553	1.993‡	0.0450	1.438	0.0960	0.0362	61	5.78	321.00	0
321	Acid Soluble Zinc (2%)	0515	2.322‡	1.124	1.438	0.0960	0.0362	61	9.21	321.33	1
321	Acid Soluble Zinc (2%)	0520	15.71‡	0.1800	1.438	0.0960	0.0362	61	148.72	321.99	2
325	Water Soluble Zinc (%)	0444	0.2050	0.0100	1.209	0.8567	0.0583	4	-1.17	325.30	0
325	Water Soluble Zinc (%)	0027	0.7955	0.1130	1.209	0.8567	0.0583	4	-0.48	325.00	0
325	Water Soluble Zinc (%)	0555	1.820	0.0200	1.209	0.8567	0.0583	4	0.71	325.30	0
325	Water Soluble Zinc (%)	0532	2.015	0.0900	1.209	0.8567	0.0583	4	0.94	325.00	0

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, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. 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 grey and included for information only. Your offset values are higher (‡) or lower (†) than the Robust Analyte value ± Investigational Allowance. 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.