

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 161011

MOP

Statistical Summary

Analytes: 24

Labs Reporting: 77

Issue Date : 11/30/2016

Analyte Code	Analyte	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
010	Total Nitrogen (%)	6	5	6.404	14.03	6.404		14.03	7.843	219.10%		0.0016	3.02%
020	Total Phosphorus as P2O5 (%)	3	3	0.0321	0.0502	0.0321		0.0502	0.0362	156.64%		0.0000	6.71%
041	Direct Available Phosphorus as P2O5 (%)	2	1	0.3120									
050	Soluble Potassium as K2O (61%)	81	77	60.65	1.885	60.62	1.7862	1.130	0.1610	1.86%	1.47%	0.4760	2.16%
060	Water (Free) (%)	5	4	0.1780	0.1847	0.1780		0.1847	0.1155	103.78%		0.0183	5.19%
101	Acid Soluble Calcium (%)	4	4	0.0617	0.0152	0.0617		0.0152	0.0095	24.56%		0.0031	6.08%
121	Acid Soluble Magnesium (%)	5	5	0.0279	0.0080	0.0279		0.0080	0.0045	28.70%		0.0024	6.85%
148	Total Sulfur (%)	4	4	0.0222	0.0068	0.0222		0.0068	0.0043	30.74%		0.0005	7.09%
149	Sulfur - HNO3 soluble (%)	2	2	0.0227	0.0005								
151	Acid Soluble Arsenic (ppm)	1		0.8250									
165	Acid Soluble Boron (%)	3	3	0.0026	0.0034	0.0026		0.0034	0.0025	129.19%		0.0017	9.78%
181	Acid Soluble Cadmium (ppm)	2	2	0.0106	0.0009								
190	Water Soluble Chlorine (47%)	22	22	47.15	0.8300	47.17	1.0000	0.7487	0.1995	1.59%	1.06%	0.4106	2.24%
191	Acid Soluble Chromium (ppm)	1		0.6300									
221	Acid Soluble Copper (%)	3	3	0.0028	0.0041	0.0028		0.0041	0.0030	148.56%		0.0003	9.71%
241	Acid Soluble Iron (%)	5	5	0.0826	0.0065	0.0826		0.0065	0.0037	7.92%		0.0003	5.82%
251	Acid Soluble Lead (ppm)	2	2	0.1327	0.1728								
261	Acid Soluble Manganese (%)	3	3	0.0011	0.0003	0.0011		0.0003	0.0002	24.05%		0.0000	11.15%
281	Acid Soluble Mercury (ppm)	2	1	0.0300									
289	Acid Soluble Molybdenum (ppm)	2	2	2.553	3.600								
291	Acid Soluble Nickel (ppm)	3	3	0.2690	0.2782	0.2690		0.2782	0.2008	103.44%		0.0001	19.49%
301.00	Acid Soluble Selenium (ppm)	1		0.3250									
311.00	Sodium (%)	4	4	1.466	0.1445	1.466		0.1445	0.0903	9.86%		0.0078	3.78%
321.00	Acid Soluble Zinc (%)	4	3	0.0021	0.0029	0.0021		0.0029	0.0021	136.85%		0.0003	10.09%

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Analytes: 24

Sample # 161011

Lab Values

Labs Reporting: 77

MOP

Issue Date : 11/30/2016

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 (%)	0354	0.0280	0.0020	6.404	14.03	0.0016	5	-0.40	010.60	0
010	Total Nitrogen (%)	0292	0.0400	0.0000	6.404	14.03	0.0016	5	-0.40	010.60	0
010	Total Nitrogen (%)	0524	0.0878	0.0062	6.404	14.03	0.0016	5	-0.39	010.99	0
010	Total Nitrogen (%)	0521	0.3622	0.0000	6.404	14.03	0.0016	5	-0.38	010.60	0
010	Total Nitrogen (%)	0455	31.50	0.0000	6.404	14.03	0.0016	5	1.56	010.12	0
010	Total Nitrogen (%)	0325	0.0000	0.0000	6.404	14.03	0.0016	5		010.60	4
020	Total Phosphorus as P2O5 (%)	0524	0.0007	0.0000	0.0321	0.0502	0.0000	3	-0.62	020.50	0
020	Total Phosphorus as P2O5 (%)	0521	0.0055	0.0000	0.0321	0.0502	0.0000	3	-0.53	020.50	0
020	Total Phosphorus as P2O5 (%)	0292	0.0900	0.0000	0.0321	0.0502	0.0000	3	1.15	020.20	0
041	Direct Available Phosphorus as P2O5 (%)	0354	0.3120	0.0120				1		041.60	0
041	Direct Available Phosphorus as P2O5 (%)	0325	0.0000	0.0000				1		041.50	4
050	Soluble Potassium as K2O (61%)	0501	54.45*	0.9540	60.62	1.130	0.4760	77	-5.46	050.99	0
050	Soluble Potassium as K2O (61%)	0422	55.69*	0.4400	60.62	1.130	0.4760	77	-4.36	050.50	0
050	Soluble Potassium as K2O (61%)	0523	55.77*	0.6600	60.62	1.130	0.4760	77	-4.29	050.99	0
050	Soluble Potassium as K2O (61%)	0042	57.85*	0.3000	60.62	1.130	0.4760	77	-2.45	050.99	0
050	Soluble Potassium as K2O (61%)	0117	58.23*	1.650	60.62	1.130	0.4760	77	-2.12	050.52	0
050	Soluble Potassium as K2O (61%)	0072	59.14	0.2000	60.62	1.130	0.4760	77	-1.31	050.51	0
050	Soluble Potassium as K2O (61%)	0292	59.15	0.4400	60.62	1.130	0.4760	77	-1.30	050.50	0
050	Soluble Potassium as K2O (61%)	0390	59.25	0.5000	60.62	1.130	0.4760	77	-1.21	050.50	0
050	Soluble Potassium as K2O (61%)	0025	59.31	1.510	60.62	1.130	0.4760	77	-1.16	050.52	0
050	Soluble Potassium as K2O (61%)	0522	59.32	1.120	60.62	1.130	0.4760	77	-1.15	050.00	0
050	Soluble Potassium as K2O (61%)	0521	59.44	0.0000	60.62	1.130	0.4760	77	-1.04	050.99	0
050	Soluble Potassium as K2O (61%)	0481	59.48	1.440	60.62	1.130	0.4760	77	-1.01	050.99	0
050	Soluble Potassium as K2O (61%)	0406	59.53	1.090	60.62	1.130	0.4760	77	-0.97	050.50	0
050	Soluble Potassium as K2O (61%)	0433	59.59	0.0600	60.62	1.130	0.4760	77	-0.91	050.99	0
050	Soluble Potassium as K2O (61%)	0136	59.60	0.2000	60.62	1.130	0.4760	77	-0.90	050.30	0
050	Soluble Potassium as K2O (61%)	0157	59.60	1.200	60.62	1.130	0.4760	77	-0.90	050.50	0
050	Soluble Potassium as K2O (61%)	0177	59.73	0.0412	60.62	1.130	0.4760	77	-0.79	050.99	0
050	Soluble Potassium as K2O (61%)	0200	59.75	0.1900	60.62	1.130	0.4760	77	-0.77	050.60	0
050	Soluble Potassium as K2O (61%)	0516	59.75	0.7272	60.62	1.130	0.4760	77	-0.77	050.30	0
050	Soluble Potassium as K2O (61%)	0185	59.81	0.2700	60.62	1.130	0.4760	77	-0.72	050.32	0
050	Soluble Potassium as K2O (61%)	0072	59.83	0.6810	60.62	1.130	0.4760	77	-0.70	050.00	0
050	Soluble Potassium as K2O (61%)	0485	60.00	0.2700	60.62	1.130	0.4760	77	-0.55	050.52	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 (61%)	0420	60.20	0.1200	60.62	1.130	0.4760	77	-0.37	050.50	0
050	Soluble Potassium as K2O (61%)	0090	60.23	0.3000	60.62	1.130	0.4760	77	-0.34	050.00	0
050	Soluble Potassium as K2O (61%)	0231	60.25	0.1000	60.62	1.130	0.4760	77	-0.33	050.00	0
050	Soluble Potassium as K2O (61%)	0506	60.25	0.1000	60.62	1.130	0.4760	77	-0.33	050.99	0
050	Soluble Potassium as K2O (61%)	0482	60.30	0.2000	60.62	1.130	0.4760	77	-0.28	050.99	0
050	Soluble Potassium as K2O (61%)	0485	60.31	0.1100	60.62	1.130	0.4760	77	-0.28	050.00	0
050	Soluble Potassium as K2O (61%)	0489	60.31	0.0200	60.62	1.130	0.4760	77	-0.27	050.00	0
050	Soluble Potassium as K2O (61%)	0524	60.33	0.1100	60.62	1.130	0.4760	77	-0.26	050.99	0
050	Soluble Potassium as K2O (61%)	0309	60.34	0.1700	60.62	1.130	0.4760	77	-0.25	050.30	0
050	Soluble Potassium as K2O (61%)	0371	60.35	0.9000	60.62	1.130	0.4760	77	-0.24	050.99	0
050	Soluble Potassium as K2O (61%)	0520	60.35	0.1000	60.62	1.130	0.4760	77	-0.24	050.99	0
050	Soluble Potassium as K2O (61%)	0073	60.38	0.0800	60.62	1.130	0.4760	77	-0.21	050.30	0
050	Soluble Potassium as K2O (61%)	0105	60.39	0.1700	60.62	1.130	0.4760	77	-0.21	050.60	0
050	Soluble Potassium as K2O (61%)	0055	60.49	0.1000	60.62	1.130	0.4760	77	-0.11	050.00	0
050	Soluble Potassium as K2O (61%)	0007	60.55	0.1000	60.62	1.130	0.4760	77	-0.06	050.51	0
050	Soluble Potassium as K2O (61%)	0360	60.59	0.6800	60.62	1.130	0.4760	77	-0.03	050.52	0
050	Soluble Potassium as K2O (61%)	0526	60.65	0.1000	60.62	1.130	0.4760	77	0.03	050.60	0
050	Soluble Potassium as K2O (61%)	0049	60.70	0.1900	60.62	1.130	0.4760	77	0.07	050.00	0
050	Soluble Potassium as K2O (61%)	0354	60.72	0.1990	60.62	1.130	0.4760	77	0.09	050.52	0
050	Soluble Potassium as K2O (61%)	0494	60.74	0.8500	60.62	1.130	0.4760	77	0.10	050.00	0
050	Soluble Potassium as K2O (61%)	0055	60.74	0.2500	60.62	1.130	0.4760	77	0.10	050.50	0
050	Soluble Potassium as K2O (61%)	0508	60.74	0.0300	60.62	1.130	0.4760	77	0.10	050.99	0
050	Soluble Potassium as K2O (61%)	0405	60.74	0.0400	60.62	1.130	0.4760	77	0.11	050.00	0
050	Soluble Potassium as K2O (61%)	0324	60.80	0.4000	60.62	1.130	0.4760	77	0.16	050.50	0
050	Soluble Potassium as K2O (61%)	0029	60.90	1.090	60.62	1.130	0.4760	77	0.24	050.62	0
050	Soluble Potassium as K2O (61%)	0368	60.92	0.1011	60.62	1.130	0.4760	77	0.27	050.99	0
050	Soluble Potassium as K2O (61%)	0494	60.97	0.1100	60.62	1.130	0.4760	77	0.31	050.52	0
050	Soluble Potassium as K2O (61%)	0486	60.97	0.1400	60.62	1.130	0.4760	77	0.31	050.51	0
050	Soluble Potassium as K2O (61%)	0444	60.98	0.2500	60.62	1.130	0.4760	77	0.31	050.99	0
050	Soluble Potassium as K2O (61%)	0493	61.00	0.1000	60.62	1.130	0.4760	77	0.34	050.99	0
050	Soluble Potassium as K2O (61%)	0500	61.01	0.0200	60.62	1.130	0.4760	77	0.35	050.99	0
050	Soluble Potassium as K2O (61%)	0389	61.05	0.3000	60.62	1.130	0.4760	77	0.38	050.99	0
050	Soluble Potassium as K2O (61%)	0034	61.06	0.5228	60.62	1.130	0.4760	77	0.39	050.62	0
050	Soluble Potassium as K2O (61%)	0040	61.10	1.000	60.62	1.130	0.4760	77	0.42	050.30	0
050	Soluble Potassium as K2O (61%)	0043	61.14	0.2400	60.62	1.130	0.4760	77	0.46	050.99	0
050	Soluble Potassium as K2O (61%)	0519	61.22	0.0300	60.62	1.130	0.4760	77	0.53	050.99	0
050	Soluble Potassium as K2O (61%)	0102	61.25	0.5000	60.62	1.130	0.4760	77	0.56	050.00	0
050	Soluble Potassium as K2O (61%)	0131	61.26	0.1800	60.62	1.130	0.4760	77	0.57	050.61	0
050	Soluble Potassium as K2O (61%)	0510	61.27	0.1003	60.62	1.130	0.4760	77	0.57	050.60	0
050	Soluble Potassium as K2O (61%)	0157	61.55	0.1000	60.62	1.130	0.4760	77	0.82	050.30	0
050	Soluble Potassium as K2O (61%)	0041	61.59	2.000	60.62	1.130	0.4760	77	0.86	050.60	0
050	Soluble Potassium as K2O (61%)	0457	61.71	0.0800	60.62	1.130	0.4760	77	0.96	050.99	0
050	Soluble Potassium as K2O (61%)	0456	61.75	0.1000	60.62	1.130	0.4760	77	1.00	050.61	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 (61%)	0483	61.80	0.9700	60.62	1.130	0.4760	77	1.04	050.51	0
050	Soluble Potassium as K2O (61%)	0472	62.03	0.1500	60.62	1.130	0.4760	77	1.24	050.31	0
050	Soluble Potassium as K2O (61%)	0451	62.11	1.380	60.62	1.130	0.4760	77	1.32	050.99	0
050	Soluble Potassium as K2O (61%)	0513	62.43	0.0900	60.62	1.130	0.4760	77	1.60	050.62	0
050	Soluble Potassium as K2O (61%)	0027	62.51	0.4980	60.62	1.130	0.4760	77	1.67	050.99	0
050	Soluble Potassium as K2O (61%)	0234	62.88	0.1100	60.62	1.130	0.4760	77	2.00	050.99	0
050	Soluble Potassium as K2O (61%)	0035	63.07	3.360	60.62	1.130	0.4760	77	2.17	050.61	0
050	Soluble Potassium as K2O (61%)	0230	63.10	0.0000	60.62	1.130	0.4760	77	2.19	050.00	0
050	Soluble Potassium as K2O (61%)	0377	63.31	0.7000	60.62	1.130	0.4760	77	2.38	050.52	0
050	Soluble Potassium as K2O (61%)	0307	63.72	2.116	60.62	1.130	0.4760	77	2.75	050.99	0
050	Soluble Potassium as K2O (61%)	0487	65.45	0.9000	60.62	1.130	0.4760	77	4.27	050.99	0
050	Soluble Potassium as K2O (61%)	0096	69.06	0.0500	60.62	1.130	0.4760	77	7.46	050.99	0
050	Soluble Potassium as K2O (61%)	0443	24.26*	4.180	60.62	1.130	0.4760	77	-32.17	050.60	1
050	Soluble Potassium as K2O (61%)	0515	58.21*	6.050	60.62	1.130	0.4760	77	-2.13	050.99	1
050	Soluble Potassium as K2O (61%)	0325	59.75	3.500	60.62	1.130	0.4760	77	-0.77	050.99	1
050	Soluble Potassium as K2O (61%)	0455	9.585*	0.0300	60.62	1.130	0.4760	77	-45.16	050.99	2
060	Water (Free) (%)	0510	0.0056	0.0001	0.1780	0.1847	0.0183	4	-0.93	060.99	0
060	Water (Free) (%)	0105	0.0315	0.0030	0.1780	0.1847	0.0183	4	-0.79	060.00	0
060	Water (Free) (%)	0456	0.3250	0.0500	0.1780	0.1847	0.0183	4	0.80	060.00	0
060	Water (Free) (%)	0513	0.3500	0.0200	0.1780	0.1847	0.0183	4	0.93	060.30	0
060	Water (Free) (%)	0007	0.0100	0.0200	0.1780	0.1847	0.0183	4		060.00	4
101	Acid Soluble Calcium (%)	0482	0.0500	0.0000	0.0617	0.0152	0.0031	4	-0.77	101.30	0
101	Acid Soluble Calcium (%)	0117	0.0518	0.0002	0.0617	0.0152	0.0031	4	-0.65	101.33	0
101	Acid Soluble Calcium (%)	0521	0.0620	0.0000	0.0617	0.0152	0.0031	4	0.02	101.32	0
101	Acid Soluble Calcium (%)	0354	0.0830	0.0120	0.0617	0.0152	0.0031	4	1.41	101.30	0
121	Acid Soluble Magnesium (%)	0524	0.0207	0.0007	0.0279	0.0080	0.0024	5	-0.91	121.99	0
121	Acid Soluble Magnesium (%)	0117	0.0247	0.0001	0.0279	0.0080	0.0024	5	-0.41	121.33	0
121	Acid Soluble Magnesium (%)	0482	0.0250	0.0100	0.0279	0.0080	0.0024	5	-0.36	121.30	0
121	Acid Soluble Magnesium (%)	0521	0.0277	0.0000	0.0279	0.0080	0.0024	5	-0.02	121.32	0
121	Acid Soluble Magnesium (%)	0354	0.0415	0.0010	0.0279	0.0080	0.0024	5	1.70	121.30	0
148	Total Sulfur (%)	0354	0.0140	0.0020	0.0222	0.0068	0.0005	4	-1.20	148.99	0
148	Total Sulfur (%)	0292	0.0200	0.0000	0.0222	0.0068	0.0005	4	-0.32	148.07	0
148	Total Sulfur (%)	0117	0.0248	0.0000	0.0222	0.0068	0.0005	4	0.38	148.07	0
148	Total Sulfur (%)	0482	0.0300	0.0000	0.0222	0.0068	0.0005	4	1.14	148.99	0
149	Sulfur - HNO3 soluble (%)	0524	0.0224	0.0023				2		149.04	0
149	Sulfur - HNO3 soluble (%)	0521	0.0230	0.0000				2		149.04	0
151	Acid Soluble Arsenic (ppm)	0519	0.8250	0.0500				1		151.30	0
165	Acid Soluble Boron (%)	0524	0.0001	0.0000	0.0026	0.0034	0.0017	3	-0.74	165.99	0
165	Acid Soluble Boron (%)	0521	0.0013	0.0000	0.0026	0.0034	0.0017	3	-0.39	165.30	0
165	Acid Soluble Boron (%)	0354	0.0065	0.0050	0.0026	0.0034	0.0017	3	1.14	165.30	0
181	Acid Soluble Cadmium (ppm)	0519	0.0100	0.0000				2		181.30	0
181	Acid Soluble Cadmium (ppm)	0524	0.0113	0.0001				2		181.30	0
190	Water Soluble Chlorine (47%)	0506	45.05*	0.1000	47.17	0.7487	0.4106	22	-2.83	190.00	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				
190	Water Soluble Chlorine (47%)	0029	46.00*	0.8500	47.17	0.7487	0.4106	22	-1.56	190.99	0
190	Water Soluble Chlorine (47%)	0389	46.05*	0.7000	47.17	0.7487	0.4106	22	-1.49	190.99	0
190	Water Soluble Chlorine (47%)	0519	46.56	0.0800	47.17	0.7487	0.4106	22	-0.81	190.99	0
190	Water Soluble Chlorine (47%)	0043	46.60	0.8000	47.17	0.7487	0.4106	22	-0.76	190.00	0
190	Water Soluble Chlorine (47%)	0520	46.65	0.0000	47.17	0.7487	0.4106	22	-0.69	190.99	0
190	Water Soluble Chlorine (47%)	0523	46.70	0.2000	47.17	0.7487	0.4106	22	-0.62	190.00	0
190	Water Soluble Chlorine (47%)	0105	46.74	0.1200	47.17	0.7487	0.4106	22	-0.57	190.00	0
190	Water Soluble Chlorine (47%)	0494	46.97	0.6940	47.17	0.7487	0.4106	22	-0.26	190.00	0
190	Water Soluble Chlorine (47%)	0029	47.22	0.1300	47.17	0.7487	0.4106	22	0.07	190.00	0
190	Water Soluble Chlorine (47%)	0368	47.29	1.040	47.17	0.7487	0.4106	22	0.17	190.99	0
190	Water Soluble Chlorine (47%)	0444	47.31	0.2700	47.17	0.7487	0.4106	22	0.19	190.00	0
190	Water Soluble Chlorine (47%)	0481	47.37	0.2500	47.17	0.7487	0.4106	22	0.27	190.00	0
190	Water Soluble Chlorine (47%)	0102	47.53	0.1100	47.17	0.7487	0.4106	22	0.48	190.00	0
190	Water Soluble Chlorine (47%)	0136	47.60	0.4000	47.17	0.7487	0.4106	22	0.58	190.00	0
190	Water Soluble Chlorine (47%)	0405	47.64	0.0800	47.17	0.7487	0.4106	22	0.63	190.00	0
190	Water Soluble Chlorine (47%)	0117	47.75	0.7000	47.17	0.7487	0.4106	22	0.78	190.00	0
190	Water Soluble Chlorine (47%)	0371	47.75	0.9000	47.17	0.7487	0.4106	22	0.78	190.99	0
190	Water Soluble Chlorine (47%)	0508	47.80	0.3400	47.17	0.7487	0.4106	22	0.85	190.99	0
190	Water Soluble Chlorine (47%)	0027	47.84	0.9000	47.17	0.7487	0.4106	22	0.90	190.99	0
190	Water Soluble Chlorine (47%)	0513	47.93	0.2300	47.17	0.7487	0.4106	22	1.01	190.00	0
190	Water Soluble Chlorine (47%)	0055	48.97	0.1400	47.17	0.7487	0.4106	22	2.41	190.00	0
191	Acid Soluble Chromium (ppm)	0519	0.6300	0.0600				1		191.30	0
221	Acid Soluble Copper (%)	0524	0.0001	0.0000	0.0028	0.0041	0.0003	3	-0.65	221.99	0
221	Acid Soluble Copper (%)	0521	0.0007	0.0000	0.0028	0.0041	0.0003	3	-0.50	221.32	0
221	Acid Soluble Copper (%)	0354	0.0075	0.0010	0.0028	0.0041	0.0003	3	1.15	221.30	0
241	Acid Soluble Iron (%)	0521	0.0756	0.0000	0.0826	0.0065	0.0003	5	-1.08	241.32	0
241	Acid Soluble Iron (%)	0524	0.0769	0.0000	0.0826	0.0065	0.0003	5	-0.88	241.99	0
241	Acid Soluble Iron (%)	0117	0.0822	0.0004	0.0826	0.0065	0.0003	5	-0.07	241.33	0
241	Acid Soluble Iron (%)	0354	0.0885	0.0010	0.0826	0.0065	0.0003	5	0.90	241.30	0
241	Acid Soluble Iron (%)	0482	0.0900	0.0000	0.0826	0.0065	0.0003	5	1.12	241.30	0
251	Acid Soluble Lead (ppm)	0519	0.0105	0.0010				2		251.30	0
251	Acid Soluble Lead (ppm)	0524	0.2549	0.0006				2		251.30	0
261	Acid Soluble Manganese (%)	0524	0.0009	0.0000	0.0011	0.0003	0.0000	3	-0.76	261.99	0
261	Acid Soluble Manganese (%)	0354	0.0010	0.0000	0.0011	0.0003	0.0000	3	-0.38	261.30	0
261	Acid Soluble Manganese (%)	0521	0.0014	0.0000	0.0011	0.0003	0.0000	3	1.13	261.34	0
281	Acid Soluble Mercury (ppm)	0519	0.0300	0.0000				1		281.30	0
281	Acid Soluble Mercury (ppm)	0009	0.0000	0.0000				1		281.99	4
289	Acid Soluble Molybdenum (ppm)	0524	0.0070	0.0000				2		289.30	0
289	Acid Soluble Molybdenum (ppm)	0521	5.099	0.0000				2		289.30	0
291	Acid Soluble Nickel (ppm)	0519	0.0200	0.0000	0.2690	0.2782	0.0001	3	-0.89	291.30	0
291	Acid Soluble Nickel (ppm)	0524	0.2176	0.0002	0.2690	0.2782	0.0001	3	-0.18	291.30	0
291	Acid Soluble Nickel (ppm)	521	0.5693	0.0000	0.2690	0.2782	0.0001	3	1.08	291.3	0
301	Acid Soluble Selenium (ppm)	519	0.3250	0.0100				1		301.3	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 (%)	482	1.345	0.0300	1.466	0.1445	0.0078	4	-0.84	311.99	0
311	Sodium (%)	510	1.410	0.0003	1.466	0.1445	0.0078	4	-0.39	311.3	0
311	Sodium (%)	521	1.435	0.0000	1.466	0.1445	0.0078	4	-0.22	311.32	0
311	Sodium (%)	354	1.676	0.0010	1.466	0.1445	0.0078	4	1.45	311.99	0
321	Acid Soluble Zinc (%)	524	0.0003	0.0000	0.0021	0.0029	0.0003	3	-0.63	321.99	0
321	Acid Soluble Zinc (%)	521	0.0006	0.0000	0.0021	0.0029	0.0003	3	-0.53	321.32	0
321	Acid Soluble Zinc (%)	354	0.0055	0.0010	0.0021	0.0029	0.0003	3	1.15	321.3	0
321	Acid Soluble Zinc (%)	292	0.0000	0.0000	0.0021	0.0029	0.0003	3		321.3	4

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. 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 asterix 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.