

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 200311

Grade 18-24-6 Starter

### Statistical Summary

# Analytes: 32

# Labs Reporting: 84

Revised : 05/15/2020

Analyte Code	Analyte Sample # 200311	# 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 N (%)	34	33	9.195	0.7777	9.136		0.5312	0.1156	5.81%		0.1122	2.87%
005	Urea N (%)	20	20	8.400	0.8164	8.479		0.2833	0.0792	3.34%		0.1585	2.90%
007	Urea (%)	5	5	10.62	4.714	10.62		4.714	2.635	44.39%		0.1900	2.80%
010	Total N (18%)	78	77	17.54	0.3331	17.53	0.6929	0.3157	0.0450	1.80%	1.06	0.1797	2.60%
020	Total P2O5 (%)	43	42	23.43	0.8297	23.48		0.6213	0.1198	2.65%		0.3814	2.49%
030	Citrate Insoluble P2O5 (%)	2	2	0.0400	0.0141								
040	Indirect Available P2O5 (6%)	3	3	24.17	0.8618	24.17	0.7300	0.8618	0.6219	3.56%	2.75	0.1600	2.48%
041	Direct Available P2O5 (24%)	46	44	23.53	0.6646	23.60	0.7280	0.5258	0.0991	2.23%	1.68	0.1716	2.49%
048	Water Soluble P2O5 (%)	5	5	21.67	1.351	21.67		1.351	0.7551	6.23%		0.0860	2.52%
050	Soluble K2O (6%)	79	78	6.173	0.3468	6.199	0.4819	0.3060	0.0433	4.94%	1.48	0.1381	3.04%
060	Water (Free) (%)	3	3	1.155	0.3329	1.155		0.3329	0.2402	28.82%		0.0633	3.91%
101	Acid Soluble Ca (%)	14	14	4.723	0.4736	4.666	0.4333	0.2736	0.0914	5.86%	1.47	0.2651	3.17%
121	Acid Soluble Mg (%)	19	18	3.161	0.5349	3.088	0.3544	0.3487	0.1027	11.29%	2.29	0.1799	3.38%
143	Elemental S (%)	1		0.6900									
145	Sulfate S, HCl soluble (%)	1		0.7021									
148	Total S (%)	9	8	0.7550	0.1390	0.7204	0.2360	0.0593	0.0262	8.23%	0.59	0.0300	4.20%
149	S - HNO3 soluble (%)	3	3	0.6860	0.0271	0.6860		0.0271	0.0195	3.95%		0.0054	4.23%
151	Acid Soluble As (ppm)	16	15	5.135	1.753	5.135		1.988	0.6416	38.71%		0.4384	12.51%
165	Acid Soluble B (%)	12	9	0.0179	0.0440	0.0040	0.0036	0.0039	0.0016	97.51%	2.52	0.0057	9.19%
181	Acid Soluble Cd (ppm)	18	16	1.734	0.8729	1.528		0.2507	0.0783	16.41%		0.5303	15.01%
191	Acid Soluble Cr (ppm)	17	17	72.54	12.85	72.25		13.74	4.165	19.01%		3.435	8.40%
202	Acid Soluble Co (ppm)	15	12	4.394	0.8987	4.469	2.3408	0.8306	0.2997	18.59%	0.83	0.2850	12.77%
221	Acid Soluble Cu (%)	19	10	0.0019	0.0046	0.0005	0.0051	0.0004	0.0002	86.91%	0.20	0.0011	12.55%
241	Acid Soluble Fe (%)	20	19	0.5297	0.0567	0.5325	0.0582	0.0560	0.0161	10.53%	2.24	0.0410	4.40%
251	Acid Soluble Pb (ppm)	16	13	2.002	1.022	1.834		0.6729	0.2333	36.68%		0.2647	14.60%
261	Acid Soluble Mn (%)	19	16	0.0170	0.0034	0.0169	0.0067	0.0026	0.0008	15.47%	0.91	0.0030	7.39%
281	Acid Soluble Hg (ppm)	9	3	0.0059	0.0049	0.0059		0.0049	0.0035	83.05%		0.0011	34.64%
289	Acid Soluble Mo (ppm)	19	16	7.549	1.868	7.572	3.2715	2.068	0.6464	27.32%	1.47	0.5545	11.80%
291	Acid Soluble Ni (ppm)	20	18	24.51	4.948	24.79		4.992	1.471	20.13%		1.077	9.87%
301	Acid Soluble Se (ppm)	11	6	8.442	16.13	3.051		3.835	1.957	125.69%		0.9466	13.52%
311	Sodium (%)	8	8	0.2199	0.0176	0.2206	0.0271	0.0183	0.0081	8.28%	1.57	0.0100	5.02%
321	Acid Soluble Zn (%)	29	24	0.0069	0.0025	0.0070	0.0057	0.0025	0.0006	35.28%	1.01	0.0005	8.44%

The Analyte IA Ratio = 2.33 \* Robust SD / 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

Analyte Code	Analyte Sample # 200311	# 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
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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.

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Analyte Proficiency From All Labs

Sample # 200311

Grade 18-24-6 Starter

### Lab Values

# Analytes: 32

# Labs Reporting: 84

Revised : 05/15/2020

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 N (%)	0136	7.400	0.2000	9.136	0.5312	0.1122	33	-3.27	001.10	0
001	Ammoniacal N (%)	0027	8.276	0.3240	9.136	0.5312	0.1122	33	-1.62	001.99	0
001	Ammoniacal N (%)	0513	8.360	0.0200	9.136	0.5312	0.1122	33	-1.46	001.99	0
001	Ammoniacal N (%)	0423	8.555	0.4100	9.136	0.5312	0.1122	33	-1.09	001.99	0
001	Ammoniacal N (%)	0230	8.560	0.1000	9.136	0.5312	0.1122	33	-1.09	001.10	0
001	Ammoniacal N (%)	0444	8.600	0.5400	9.136	0.5312	0.1122	33	-1.01	001.10	0
001	Ammoniacal N (%)	0546	8.650	0.0400	9.136	0.5312	0.1122	33	-0.92	001.99	0
001	Ammoniacal N (%)	0456	8.685	0.0500	9.136	0.5312	0.1122	33	-0.85	001.10	0
001	Ammoniacal N (%)	0524	8.760	0.0270	9.136	0.5312	0.1122	33	-0.71	001.99	0
001	Ammoniacal N (%)	0096	8.800	0.0400	9.136	0.5312	0.1122	33	-0.63	001.99	0
001	Ammoniacal N (%)	0231	8.810	0.0200	9.136	0.5312	0.1122	33	-0.61	001.10	0
001	Ammoniacal N (%)	0550	8.860	0.0600	9.136	0.5312	0.1122	33	-0.52	001.99	0
001	Ammoniacal N (%)	0527	9.000	0.0800	9.136	0.5312	0.1122	33	-0.26	001.99	0
001	Ammoniacal N (%)	0394	9.031	0.0140	9.136	0.5312	0.1122	33	-0.20	001.99	0
001	Ammoniacal N (%)	0481	9.155	0.0900	9.136	0.5312	0.1122	33	0.04	001.10	0
001	Ammoniacal N (%)	0559	9.165	0.0100	9.136	0.5312	0.1122	33	0.05	001.99	0
001	Ammoniacal N (%)	0255	9.197	0.1860	9.136	0.5312	0.1122	33	0.11	001.99	0
001	Ammoniacal N (%)	0549	9.250	0.1000	9.136	0.5312	0.1122	33	0.21	001.99	0
001	Ammoniacal N (%)	0532	9.315	0.0700	9.136	0.5312	0.1122	33	0.34	001.99	0
001	Ammoniacal N (%)	0405	9.335	0.1700	9.136	0.5312	0.1122	33	0.37	001.99	0
001	Ammoniacal N (%)	0560	9.350	0.1000	9.136	0.5312	0.1122	33	0.40	001.99	0
001	Ammoniacal N (%)	0220	9.385	0.0500	9.136	0.5312	0.1122	33	0.47	001.99	0
001	Ammoniacal N (%)	0506	9.405	0.0100	9.136	0.5312	0.1122	33	0.51	001.99	0
001	Ammoniacal N (%)	0486	9.455	0.1700	9.136	0.5312	0.1122	33	0.60	001.10	0
001	Ammoniacal N (%)	0533	9.470	0.0400	9.136	0.5312	0.1122	33	0.63	001.99	0
001	Ammoniacal N (%)	0536	9.475	0.0900	9.136	0.5312	0.1122	33	0.64	001.99	0
001	Ammoniacal N (%)	0522	9.575	0.0900	9.136	0.5312	0.1122	33	0.83	001.99	0
001	Ammoniacal N (%)	0567	9.650	0.1000	9.136	0.5312	0.1122	33	0.97	001.99	0
001	Ammoniacal N (%)	0562	9.665	0.0900	9.136	0.5312	0.1122	33	1.00	001.99	0
001	Ammoniacal N (%)	0565	9.665	0.1100	9.136	0.5312	0.1122	33	1.00	001.99	0
001	Ammoniacal N (%)	0544	9.770	0.0000	9.136	0.5312	0.1122	33	1.19	001.99	0
001	Ammoniacal N (%)	0564	10.70	0.1000	9.136	0.5312	0.1122	33	2.94	001.99	0
001	Ammoniacal N (%)	0498	12.10	0.2000	9.136	0.5312	0.1122	33	5.58	001.10	0
001	Ammoniacal N (%)	0117	12.50	1.000	9.136	0.5312	0.1122	33	6.33	001.10	1
005	Urea N (%)	0498	6.200	0.4000	8.479	0.2833	0.1585	20	-8.05	005.00	0
005	Urea N (%)	0564	7.225	0.0500	8.479	0.2833	0.1585	20	-4.43	005.99	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				
005	Urea N (%)	0559	7.450	0.0200	8.479	0.2833	0.1585	20	-3.63	005.99	0
005	Urea N (%)	0029	8.265	0.0700	8.479	0.2833	0.1585	20	-0.76	005.99	0
005	Urea N (%)	0567	8.350	0.1000	8.479	0.2833	0.1585	20	-0.46	005.99	0
005	Urea N (%)	0565	8.400	0.1000	8.479	0.2833	0.1585	20	-0.28	005.99	0
005	Urea N (%)	0546	8.400	0.1600	8.479	0.2833	0.1585	20	-0.28	005.99	0
005	Urea N (%)	0562	8.410	0.1200	8.479	0.2833	0.1585	20	-0.24	005.99	0
005	Urea N (%)	0506	8.415	0.1700	8.479	0.2833	0.1585	20	-0.23	005.99	0
005	Urea N (%)	0533	8.490	0.1000	8.479	0.2833	0.1585	20	0.04	005.99	0
005	Urea N (%)	0136	8.500	0.4000	8.479	0.2833	0.1585	20	0.07	005.00	0
005	Urea N (%)	0394	8.500	0.2000	8.479	0.2833	0.1585	20	0.07	005.10	0
005	Urea N (%)	0532	8.515	0.2100	8.479	0.2833	0.1585	20	0.13	005.99	0
005	Urea N (%)	0536	8.575	0.0500	8.479	0.2833	0.1585	20	0.34	005.99	0
005	Urea N (%)	0550	8.670	0.0000	8.479	0.2833	0.1585	20	0.67	005.00	0
005	Urea N (%)	0027	8.675	0.0700	8.479	0.2833	0.1585	20	0.69	005.99	0
005	Urea N (%)	0560	8.700	0.2000	8.479	0.2833	0.1585	20	0.78	005.99	0
005	Urea N (%)	0405	8.795	0.0900	8.479	0.2833	0.1585	20	1.11	005.99	0
005	Urea N (%)	0513	8.860	0.0600	8.479	0.2833	0.1585	20	1.34	005.99	0
005	Urea N (%)	0230	10.60	0.6000	8.479	0.2833	0.1585	20	7.49	005.00	0
007	Urea (%)	0549	7.670	0.1000	10.62	4.714	0.1900	5	-0.63	007.99	0
007	Urea (%)	0220	8.310	0.1200	10.62	4.714	0.1900	5	-0.49	007.99	0
007	Urea (%)	0444	8.775	0.2300	10.62	4.714	0.1900	5	-0.39	007.00	0
007	Urea (%)	0231	9.370	0.3800	10.62	4.714	0.1900	5	-0.27	007.00	0
007	Urea (%)	0513	18.98	0.1200	10.62	4.714	0.1900	5	1.77	007.99	0
010	Total N (18%)	0524	16.85	0.0840	17.53	0.3157	0.1797	77	-2.16	010.99	0
010	Total N (18%)	0421	17.02	0.0400	17.53	0.3157	0.1797	77	-1.61	010.60	0
010	Total N (18%)	0521	17.04	0.0000	17.53	0.3157	0.1797	77	-1.54	010.60	0
010	Total N (18%)	0402	17.09	0.0300	17.53	0.3157	0.1797	77	-1.40	010.60	0
010	Total N (18%)	0516	17.10	0.2700	17.53	0.3157	0.1797	77	-1.37	010.60	0
010	Total N (18%)	0451	17.10	0.4800	17.53	0.3157	0.1797	77	-1.35	010.60	0
010	Total N (18%)	0525	17.10	0.2800	17.53	0.3157	0.1797	77	-1.35	010.60	0
010	Total N (18%)	0486	17.12	0.0900	17.53	0.3157	0.1797	77	-1.31	010.60	0
010	Total N (18%)	0513	17.13	0.0300	17.53	0.3157	0.1797	77	-1.27	010.99	0
010	Total N (18%)	0485	17.16	0.4650	17.53	0.3157	0.1797	77	-1.17	010.60	0
010	Total N (18%)	0231	17.21	0.1500	17.53	0.3157	0.1797	77	-1.02	010.60	0
010	Total N (18%)	0307	17.22	0.3600	17.53	0.3157	0.1797	77	-0.97	010.60	0
010	Total N (18%)	0043	17.24	0.4900	17.53	0.3157	0.1797	77	-0.93	010.60	0
010	Total N (18%)	0040	17.25	0.5000	17.53	0.3157	0.1797	77	-0.88	010.60	0
010	Total N (18%)	0157	17.25	0.1000	17.53	0.3157	0.1797	77	-0.88	010.60	0
010	Total N (18%)	0443	17.28	0.0700	17.53	0.3157	0.1797	77	-0.80	010.60	0
010	Total N (18%)	0325	17.32	0.4800	17.53	0.3157	0.1797	77	-0.66	010.60	0
010	Total N (18%)	0292	17.33	0.0600	17.53	0.3157	0.1797	77	-0.63	010.60	0
010	Total N (18%)	0018	17.35	0.1000	17.53	0.3157	0.1797	77	-0.56	010.60	0
010	Total N (18%)	0055	17.35	0.0600	17.53	0.3157	0.1797	77	-0.56	010.60	0
010	Total N (18%)	0027	17.36	0.2890	17.53	0.3157	0.1797	77	-0.54	010.60	0
010	Total N (18%)	0481	17.38	0.1500	17.53	0.3157	0.1797	77	-0.48	010.12	0
010	Total N (18%)	0220	17.39	0.0300	17.53	0.3157	0.1797	77	-0.45	010.60	0
010	Total N (18%)	0086	17.40	0.1020	17.53	0.3157	0.1797	77	-0.41	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 N (18%)	0049	17.41	0.1500	17.53	0.3157	0.1797	77	-0.39	010.60	0
010	Total N (18%)	0177	17.44	0.0000	17.53	0.3157	0.1797	77	-0.28	010.60	0
010	Total N (18%)	0230	17.45	0.1000	17.53	0.3157	0.1797	77	-0.25	010.60	0
010	Total N (18%)	0136	17.45	0.3000	17.53	0.3157	0.1797	77	-0.25	010.60	0
010	Total N (18%)	0354	17.45	0.3000	17.53	0.3157	0.1797	77	-0.25	010.60	0
010	Total N (18%)	0522	17.46	0.0750	17.53	0.3157	0.1797	77	-0.21	010.99	0
010	Total N (18%)	0025	17.47	0.2000	17.53	0.3157	0.1797	77	-0.18	010.60	0
010	Total N (18%)	0423	17.47	0.0800	17.53	0.3157	0.1797	77	-0.18	010.60	0
010	Total N (18%)	0544	17.47	0.0600	17.53	0.3157	0.1797	77	-0.18	010.99	0
010	Total N (18%)	0035	17.50	0.0000	17.53	0.3157	0.1797	77	-0.09	010.60	0
010	Total N (18%)	0324	17.50	0.6000	17.53	0.3157	0.1797	77	-0.09	010.60	0
010	Total N (18%)	0556	17.50	0.2000	17.53	0.3157	0.1797	77	-0.09	010.99	0
010	Total N (18%)	0405	17.51	0.0700	17.53	0.3157	0.1797	77	-0.07	010.60	0
010	Total N (18%)	0444	17.51	0.0400	17.53	0.3157	0.1797	77	-0.06	010.60	0
010	Total N (18%)	0029	17.51	0.3200	17.53	0.3157	0.1797	77	-0.06	010.60	0
010	Total N (18%)	0291	17.52	0.0100	17.53	0.3157	0.1797	77	-0.04	010.60	0
010	Total N (18%)	0073	17.52	0.0600	17.53	0.3157	0.1797	77	-0.02	010.60	0
010	Total N (18%)	0550	17.53	0.0000	17.53	0.3157	0.1797	77	0.01	010.60	0
010	Total N (18%)	0394	17.53	0.2140	17.53	0.3157	0.1797	77	0.01	010.99	0
010	Total N (18%)	0456	17.54	0.0900	17.53	0.3157	0.1797	77	0.02	010.11	0
010	Total N (18%)	0561	17.54	0.0100	17.53	0.3157	0.1797	77	0.02	010.60	0
010	Total N (18%)	0542	17.54	0.1400	17.53	0.3157	0.1797	77	0.03	010.60	0
010	Total N (18%)	0102	17.55	0.5000	17.53	0.3157	0.1797	77	0.07	010.60	0
010	Total N (18%)	0494	17.56	0.3200	17.53	0.3157	0.1797	77	0.10	010.60	0
010	Total N (18%)	0527	17.56	0.3850	17.53	0.3157	0.1797	77	0.12	010.60	0
010	Total N (18%)	0234	17.57	0.5400	17.53	0.3157	0.1797	77	0.13	010.60	0
010	Total N (18%)	0452	17.59	0.0100	17.53	0.3157	0.1797	77	0.18	010.60	0
010	Total N (18%)	0501	17.59	0.0550	17.53	0.3157	0.1797	77	0.21	010.60	0
010	Total N (18%)	0117	17.60	0.0000	17.53	0.3157	0.1797	77	0.23	010.60	0
010	Total N (18%)	0422	17.60	0.2000	17.53	0.3157	0.1797	77	0.23	010.60	0
010	Total N (18%)	0481	17.60	0.4000	17.53	0.3157	0.1797	77	0.23	010.60	0
010	Total N (18%)	0169	17.61	0.0400	17.53	0.3157	0.1797	77	0.26	010.60	0
010	Total N (18%)	0356	17.62	0.0650	17.53	0.3157	0.1797	77	0.28	010.60	0
010	Total N (18%)	0096	17.62	0.0200	17.53	0.3157	0.1797	77	0.29	010.60	0
010	Total N (18%)	0472	17.71	0.0100	17.53	0.3157	0.1797	77	0.56	010.60	0
010	Total N (18%)	0547	17.72	0.2000	17.53	0.3157	0.1797	77	0.61	010.60	0
010	Total N (18%)	0095	17.77	0.8100	17.53	0.3157	0.1797	77	0.75	010.60	0
010	Total N (18%)	0041	17.80	0.5300	17.53	0.3157	0.1797	77	0.85	010.60	0
010	Total N (18%)	0506	17.80	0.2000	17.53	0.3157	0.1797	77	0.86	010.99	0
010	Total N (18%)	0534	17.92	0.0300	17.53	0.3157	0.1797	77	1.23	010.60	0
010	Total N (18%)	0532	17.93	0.0600	17.53	0.3157	0.1797	77	1.28	010.99	0
010	Total N (18%)	0559	17.94	0.0300	17.53	0.3157	0.1797	77	1.29	010.99	0
010	Total N (18%)	0533	17.96	0.0600	17.53	0.3157	0.1797	77	1.37	010.11	0
010	Total N (18%)	0518	17.98	0.1500	17.53	0.3157	0.1797	77	1.42	010.99	0
010	Total N (18%)	0567	18.03	0.1500	17.53	0.3157	0.1797	77	1.58	010.99	0
010	Total N (18%)	0560	18.05	0.3000	17.53	0.3157	0.1797	77	1.66	010.99	0
010	Total N (18%)	0562	18.05	0.2000	17.53	0.3157	0.1797	77	1.66	010.99	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				
010	Total N (18%)	0536	18.05	0.1400	17.53	0.3157	0.1797	77	1.66	010.11	0
010	Total N (18%)	0564	18.13	0.0500	17.53	0.3157	0.1797	77	1.89	010.99	0
010	Total N (18%)	0565	18.14	0.1200	17.53	0.3157	0.1797	77	1.94	010.99	0
010	Total N (18%)	0028	18.17	0.1900	17.53	0.3157	0.1797	77	2.02	010.60	0
010	Total N (18%)	0498	18.20	0.2000	17.53	0.3157	0.1797	77	2.13	010.12	0
010	Total N (18%)	0255	18.81±	0.1440	17.53	0.3157	0.1797	77	4.05	010.60	0
010	Total N (18%)	0546	17.59	0.9200	17.53	0.3157	0.1797	77	0.20	010.11	1
020	Total P2O5 (%)	0515	21.02	1.661	23.48	0.6213	0.3814	42	-3.96	020.99	0
020	Total P2O5 (%)	0524	21.16	2.163	23.48	0.6213	0.3814	42	-3.74	020.50	0
020	Total P2O5 (%)	0550	22.18	3.020	23.48	0.6213	0.3814	42	-2.10	020.20	0
020	Total P2O5 (%)	0472	22.30	0.0400	23.48	0.6213	0.3814	42	-1.90	020.50	0
020	Total P2O5 (%)	0552	22.41	0.1900	23.48	0.6213	0.3814	42	-1.73	020.50	0
020	Total P2O5 (%)	0157	22.55	1.300	23.48	0.6213	0.3814	42	-1.50	020.50	0
020	Total P2O5 (%)	0255	22.82	0.9780	23.48	0.6213	0.3814	42	-1.06	020.50	0
020	Total P2O5 (%)	0324	22.85	0.3000	23.48	0.6213	0.3814	42	-1.02	020.20	0
020	Total P2O5 (%)	0444	22.95	0.6300	23.48	0.6213	0.3814	42	-0.86	020.50	0
020	Total P2O5 (%)	0423	23.07	0.1500	23.48	0.6213	0.3814	42	-0.67	020.50	0
020	Total P2O5 (%)	0402	23.14	0.3400	23.48	0.6213	0.3814	42	-0.55	020.50	0
020	Total P2O5 (%)	0501	23.14	0.1400	23.48	0.6213	0.3814	42	-0.55	020.50	0
020	Total P2O5 (%)	0546	23.15	0.2700	23.48	0.6213	0.3814	42	-0.54	020.50	0
020	Total P2O5 (%)	0521	23.39	0.0000	23.48	0.6213	0.3814	42	-0.14	020.50	0
020	Total P2O5 (%)	0157	23.40	0.2000	23.48	0.6213	0.3814	42	-0.13	020.10	0
020	Total P2O5 (%)	0405	23.41	0.1800	23.48	0.6213	0.3814	42	-0.12	020.20	0
020	Total P2O5 (%)	0444	23.44	0.6600	23.48	0.6213	0.3814	42	-0.07	020.10	0
020	Total P2O5 (%)	0096	23.46	0.0800	23.48	0.6213	0.3814	42	-0.04	020.40	0
020	Total P2O5 (%)	0231	23.48	0.0100	23.48	0.6213	0.3814	42	-0.01	020.20	0
020	Total P2O5 (%)	0561	23.51	0.0900	23.48	0.6213	0.3814	42	0.04	020.20	0
020	Total P2O5 (%)	0525	23.51	0.0200	23.48	0.6213	0.3814	42	0.05	020.50	0
020	Total P2O5 (%)	0513	23.52	0.0400	23.48	0.6213	0.3814	42	0.06	020.99	0
020	Total P2O5 (%)	0035	23.55	0.7000	23.48	0.6213	0.3814	42	0.11	020.40	0
020	Total P2O5 (%)	0456	23.66	0.0800	23.48	0.6213	0.3814	42	0.29	020.40	0
020	Total P2O5 (%)	0292	23.67	0.2100	23.48	0.6213	0.3814	42	0.29	020.20	0
020	Total P2O5 (%)	0422	23.68	0.4400	23.48	0.6213	0.3814	42	0.32	020.50	0
020	Total P2O5 (%)	0481	23.70	0.5600	23.48	0.6213	0.3814	42	0.35	020.20	0
020	Total P2O5 (%)	0522	23.79	0.1450	23.48	0.6213	0.3814	42	0.50	020.20	0
020	Total P2O5 (%)	0559	23.80	0.0100	23.48	0.6213	0.3814	42	0.50	020.99	0
020	Total P2O5 (%)	0234	23.83	0.0500	23.48	0.6213	0.3814	42	0.55	020.50	0
020	Total P2O5 (%)	0506	23.85	0.1000	23.48	0.6213	0.3814	42	0.59	020.20	0
020	Total P2O5 (%)	0443	23.88	0.1200	23.48	0.6213	0.3814	42	0.64	020.99	0
020	Total P2O5 (%)	0291	23.90	0.0100	23.48	0.6213	0.3814	42	0.66	020.50	0
020	Total P2O5 (%)	0169	23.90	0.0400	23.48	0.6213	0.3814	42	0.67	020.50	0
020	Total P2O5 (%)	0564	23.90	0.1000	23.48	0.6213	0.3814	42	0.67	020.99	0
020	Total P2O5 (%)	0433	23.97	0.0300	23.48	0.6213	0.3814	42	0.78	020.50	0
020	Total P2O5 (%)	0565	24.03	0.2500	23.48	0.6213	0.3814	42	0.87	020.99	0
020	Total P2O5 (%)	0356	24.20	0.2080	23.48	0.6213	0.3814	42	1.15	020.20	0
020	Total P2O5 (%)	0567	24.25	0.1000	23.48	0.6213	0.3814	42	1.24	020.99	0
020	Total P2O5 (%)	0562	24.37	0.1100	23.48	0.6213	0.3814	42	1.42	020.99	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				
020	Total P2O5 (%)	0534	24.67	0.0800	23.48	0.6213	0.3814	42	1.91	020.20	0
020	Total P2O5 (%)	0527	25.72	0.2132	23.48	0.6213	0.3814	42	3.59	020.50	0
020	Total P2O5 (%)	0516	19.72	7.145	23.48	0.6213	0.3814	42	-6.06	020.50	1
030	Citrate Insoluble P2O5 (%)	0096	0.0300	0.0200				2		030.40	0
030	Citrate Insoluble P2O5 (%)	0405	0.0500	0.0200				2		030.20	0
040	Indirect Available P2O5 (6%)	0096	23.52	0.2800	24.17	0.8618	0.1600	3	-0.76	040.40	0
040	Indirect Available P2O5 (6%)	0547	23.85	0.1000	24.17	0.8618	0.1600	3	-0.38	040.20	0
040	Indirect Available P2O5 (6%)	0498	25.15‡	0.1000	24.17	0.8618	0.1600	3	1.13	040.20	0
041	Direct Available P2O5 (24%)	0230	21.40†	0.4000	23.60	0.5258	0.1716	44	-4.19	041.21	0
041	Direct Available P2O5 (24%)	0095	21.94†	0.2800	23.60	0.5258	0.1716	44	-3.16	041.11	0
041	Direct Available P2O5 (24%)	0423	22.30†	0.3700	23.60	0.5258	0.1716	44	-2.49	041.51	0
041	Direct Available P2O5 (24%)	0486	22.33†	0.1800	23.60	0.5258	0.1716	44	-2.42	041.51	0
041	Direct Available P2O5 (24%)	0354	22.35†	0.1000	23.60	0.5258	0.1716	44	-2.38	041.21	0
041	Direct Available P2O5 (24%)	0472	23.04	0.1200	23.60	0.5258	0.1716	44	-1.07	041.21	0
041	Direct Available P2O5 (24%)	0027	23.06	0.0900	23.60	0.5258	0.1716	44	-1.04	041.20	0
041	Direct Available P2O5 (24%)	0185	23.07	0.3400	23.60	0.5258	0.1716	44	-1.01	041.11	0
041	Direct Available P2O5 (24%)	0049	23.18	0.2500	23.60	0.5258	0.1716	44	-0.81	041.10	0
041	Direct Available P2O5 (24%)	0117	23.27	0.3465	23.60	0.5258	0.1716	44	-0.63	041.51	0
041	Direct Available P2O5 (24%)	0040	23.30	0.4000	23.60	0.5258	0.1716	44	-0.58	041.51	0
041	Direct Available P2O5 (24%)	0544	23.32	0.0300	23.60	0.5258	0.1716	44	-0.55	041.21	0
041	Direct Available P2O5 (24%)	0177	23.34	0.3922	23.60	0.5258	0.1716	44	-0.50	041.10	0
041	Direct Available P2O5 (24%)	0177	23.38	0.1971	23.60	0.5258	0.1716	44	-0.42	041.21	0
041	Direct Available P2O5 (24%)	0494	23.39	0.0000	23.60	0.5258	0.1716	44	-0.41	041.10	0
041	Direct Available P2O5 (24%)	0405	23.42	0.0200	23.60	0.5258	0.1716	44	-0.35	041.21	0
041	Direct Available P2O5 (24%)	0513	23.43	0.0100	23.60	0.5258	0.1716	44	-0.34	041.11	0
041	Direct Available P2O5 (24%)	0452	23.45	0.0100	23.60	0.5258	0.1716	44	-0.30	041.50	0
041	Direct Available P2O5 (24%)	0086	23.48	0.1388	23.60	0.5258	0.1716	44	-0.24	041.10	0
041	Direct Available P2O5 (24%)	0029	23.50	0.3000	23.60	0.5258	0.1716	44	-0.20	041.40	0
041	Direct Available P2O5 (24%)	0136	23.55	0.1000	23.60	0.5258	0.1716	44	-0.10	041.51	0
041	Direct Available P2O5 (24%)	0102	23.60	0.0000	23.60	0.5258	0.1716	44	-0.01	041.10	0
041	Direct Available P2O5 (24%)	0506	23.60	0.4000	23.60	0.5258	0.1716	44	-0.01	041.99	0
041	Direct Available P2O5 (24%)	0231	23.61	0.1700	23.60	0.5258	0.1716	44	0.00	041.21	0
041	Direct Available P2O5 (24%)	0073	23.71	0.0400	23.60	0.5258	0.1716	44	0.20	041.11	0
041	Direct Available P2O5 (24%)	0494	23.73	0.0400	23.60	0.5258	0.1716	44	0.24	041.51	0
041	Direct Available P2O5 (24%)	0028	23.77	0.4400	23.60	0.5258	0.1716	44	0.32	041.40	0
041	Direct Available P2O5 (24%)	0485	23.79	0.3250	23.60	0.5258	0.1716	44	0.36	041.11	0
041	Direct Available P2O5 (24%)	0220	23.81	0.0600	23.60	0.5258	0.1716	44	0.39	041.11	0
041	Direct Available P2O5 (24%)	0522	23.81	0.0200	23.60	0.5258	0.1716	44	0.39	041.21	0
041	Direct Available P2O5 (24%)	0055	23.85	0.0100	23.60	0.5258	0.1716	44	0.46	041.21	0
041	Direct Available P2O5 (24%)	0549	23.99	0.2200	23.60	0.5258	0.1716	44	0.74	041.99	0
041	Direct Available P2O5 (24%)	0043	24.00	0.0400	23.60	0.5258	0.1716	44	0.76	041.51	0
041	Direct Available P2O5 (24%)	0533	24.01	0.0900	23.60	0.5258	0.1716	44	0.76	041.99	0
041	Direct Available P2O5 (24%)	0532	24.02	0.2400	23.60	0.5258	0.1716	44	0.79	041.99	0
041	Direct Available P2O5 (24%)	0560	24.05	0.3000	23.60	0.5258	0.1716	44	0.85	041.99	0
041	Direct Available P2O5 (24%)	0055	24.05	0.0000	23.60	0.5258	0.1716	44	0.85	041.11	0
041	Direct Available P2O5 (24%)	0531	24.13	0.0500	23.60	0.5258	0.1716	44	0.99	041.99	0
041	Direct Available P2O5 (24%)	0562	24.21	0.1200	23.60	0.5258	0.1716	44	1.15	041.99	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				
041	Direct Available P2O5 (24%)	0421	24.22	0.3110	23.60	0.5258	0.1716	44	1.16	041.50	0
041	Direct Available P2O5 (24%)	0536	24.28	0.1200	23.60	0.5258	0.1716	44	1.29	041.99	0
041	Direct Available P2O5 (24%)	0518	24.30	0.2000	23.60	0.5258	0.1716	44	1.33	041.99	0
041	Direct Available P2O5 (24%)	0563	24.51‡	0.1210	23.60	0.5258	0.1716	44	1.72	041.21	0
041	Direct Available P2O5 (24%)	0394	24.62‡	0.1600	23.60	0.5258	0.1716	44	1.93	041.21	0
041	Direct Available P2O5 (24%)	0325	22.80†	1.200	23.60	0.5258	0.1716	44	-1.53	041.50	1
041	Direct Available P2O5 (24%)	0025	18.15†	0.1000	23.60	0.5258	0.1716	44	-10.37	041.51	2
048	Water Soluble P2O5 (%)	0513	20.78	0.0200	21.67	1.351	0.0860	5	-0.66	048.99	0
048	Water Soluble P2O5 (%)	0444	20.94	0.1000	21.67	1.351	0.0860	5	-0.54	048.10	0
048	Water Soluble P2O5 (%)	0096	21.26	0.1100	21.67	1.351	0.0860	5	-0.30	048.40	0
048	Water Soluble P2O5 (%)	0444	21.30	0.1000	21.67	1.351	0.0860	5	-0.27	048.50	0
048	Water Soluble P2O5 (%)	0556	24.05	0.1000	21.67	1.351	0.0860	5	1.77	048.99	0
050	Soluble K2O (6%)	0515	4.854†	0.1807	6.199	0.3060	0.1381	78	-4.40	050.99	0
050	Soluble K2O (6%)	0025	4.995†	0.2700	6.199	0.3060	0.1381	78	-3.93	050.52	0
050	Soluble K2O (6%)	0324	5.520†	0.1800	6.199	0.3060	0.1381	78	-2.22	050.50	0
050	Soluble K2O (6%)	0402	5.580†	0.0200	6.199	0.3060	0.1381	78	-2.02	050.99	0
050	Soluble K2O (6%)	0485	5.615†	0.1070	6.199	0.3060	0.1381	78	-1.91	050.52	0
050	Soluble K2O (6%)	0547	5.675†	0.0100	6.199	0.3060	0.1381	78	-1.71	050.99	0
050	Soluble K2O (6%)	0394	5.710†	0.2480	6.199	0.3060	0.1381	78	-1.60	050.99	0
050	Soluble K2O (6%)	0518	5.855	0.1100	6.199	0.3060	0.1381	78	-1.12	050.99	0
050	Soluble K2O (6%)	0405	5.900	0.0800	6.199	0.3060	0.1381	78	-0.98	050.00	0
050	Soluble K2O (6%)	0506	5.905	0.0100	6.199	0.3060	0.1381	78	-0.96	050.99	0
050	Soluble K2O (6%)	0443	5.910	0.1000	6.199	0.3060	0.1381	78	-0.94	050.60	0
050	Soluble K2O (6%)	0559	5.920	0.0200	6.199	0.3060	0.1381	78	-0.91	050.99	0
050	Soluble K2O (6%)	0556	5.930	0.0200	6.199	0.3060	0.1381	78	-0.88	050.99	0
050	Soluble K2O (6%)	0564	5.930	0.0600	6.199	0.3060	0.1381	78	-0.88	050.99	0
050	Soluble K2O (6%)	0049	5.950	0.0400	6.199	0.3060	0.1381	78	-0.81	050.00	0
050	Soluble K2O (6%)	0102	5.950	0.5000	6.199	0.3060	0.1381	78	-0.81	050.00	0
050	Soluble K2O (6%)	0567	5.950	0.1000	6.199	0.3060	0.1381	78	-0.81	050.99	0
050	Soluble K2O (6%)	0292	5.960	0.0800	6.199	0.3060	0.1381	78	-0.78	050.50	0
050	Soluble K2O (6%)	0481	5.965	0.0900	6.199	0.3060	0.1381	78	-0.76	050.99	0
050	Soluble K2O (6%)	0486	5.970	0.1200	6.199	0.3060	0.1381	78	-0.75	050.52	0
050	Soluble K2O (6%)	0169	5.975	0.0300	6.199	0.3060	0.1381	78	-0.73	050.50	0
050	Soluble K2O (6%)	0169	5.975	0.0300	6.199	0.3060	0.1381	78	-0.73	050.51	0
050	Soluble K2O (6%)	0565	5.975	0.1500	6.199	0.3060	0.1381	78	-0.73	050.99	0
050	Soluble K2O (6%)	0055	5.985	0.0100	6.199	0.3060	0.1381	78	-0.70	050.50	0
050	Soluble K2O (6%)	0531	6.025	0.0500	6.199	0.3060	0.1381	78	-0.57	050.99	0
050	Soluble K2O (6%)	0040	6.050	0.1000	6.199	0.3060	0.1381	78	-0.49	050.30	0
050	Soluble K2O (6%)	0549	6.050	0.1000	6.199	0.3060	0.1381	78	-0.49	050.99	0
050	Soluble K2O (6%)	0536	6.050	0.1400	6.199	0.3060	0.1381	78	-0.49	050.99	0
050	Soluble K2O (6%)	0533	6.055	0.1700	6.199	0.3060	0.1381	78	-0.47	050.99	0
050	Soluble K2O (6%)	0525	6.070	0.1600	6.199	0.3060	0.1381	78	-0.42	050.99	0
050	Soluble K2O (6%)	0532	6.070	0.1000	6.199	0.3060	0.1381	78	-0.42	050.99	0
050	Soluble K2O (6%)	0096	6.125	0.1700	6.199	0.3060	0.1381	78	-0.24	050.99	0
050	Soluble K2O (6%)	0456	6.135	0.0500	6.199	0.3060	0.1381	78	-0.21	050.61	0
050	Soluble K2O (6%)	0501	6.145	0.0100	6.199	0.3060	0.1381	78	-0.18	050.99	0
050	Soluble K2O (6%)	0560	6.150	0.1000	6.199	0.3060	0.1381	78	-0.16	050.99	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				
050	Soluble K2O (6%)	0234	6.155	0.1100	6.199	0.3060	0.1381	78	-0.14	050.99	0
050	Soluble K2O (6%)	0552	6.155	0.2300	6.199	0.3060	0.1381	78	-0.14	050.99	0
050	Soluble K2O (6%)	0562	6.175	0.0900	6.199	0.3060	0.1381	78	-0.08	050.99	0
050	Soluble K2O (6%)	0354	6.185	0.1900	6.199	0.3060	0.1381	78	-0.05	050.52	0
050	Soluble K2O (6%)	0561	6.195	0.0700	6.199	0.3060	0.1381	78	-0.01	050.99	0
050	Soluble K2O (6%)	0055	6.210	0.0800	6.199	0.3060	0.1381	78	0.04	050.00	0
050	Soluble K2O (6%)	0433	6.225	0.0100	6.199	0.3060	0.1381	78	0.09	050.99	0
050	Soluble K2O (6%)	0356	6.226	0.2220	6.199	0.3060	0.1381	78	0.09	050.30	0
050	Soluble K2O (6%)	0494	6.245	0.0100	6.199	0.3060	0.1381	78	0.15	050.00	0
050	Soluble K2O (6%)	0521	6.252	0.0000	6.199	0.3060	0.1381	78	0.17	050.99	0
050	Soluble K2O (6%)	0513	6.275	0.0700	6.199	0.3060	0.1381	78	0.25	050.62	0
050	Soluble K2O (6%)	0325	6.300	0.2000	6.199	0.3060	0.1381	78	0.33	050.99	0
050	Soluble K2O (6%)	0472	6.310	0.1000	6.199	0.3060	0.1381	78	0.36	050.31	0
050	Soluble K2O (6%)	0220	6.320	0.0000	6.199	0.3060	0.1381	78	0.40	050.00	0
050	Soluble K2O (6%)	0230	6.330	0.4200	6.199	0.3060	0.1381	78	0.43	050.50	0
050	Soluble K2O (6%)	0550	6.345	0.0300	6.199	0.3060	0.1381	78	0.48	050.00	0
050	Soluble K2O (6%)	0185	6.355	0.0300	6.199	0.3060	0.1381	78	0.51	050.32	0
050	Soluble K2O (6%)	0423	6.360	0.0800	6.199	0.3060	0.1381	78	0.53	050.52	0
050	Soluble K2O (6%)	0422	6.365	0.3700	6.199	0.3060	0.1381	78	0.54	050.50	0
050	Soluble K2O (6%)	0522	6.378	0.0350	6.199	0.3060	0.1381	78	0.58	050.00	0
050	Soluble K2O (6%)	0177	6.385	0.0431	6.199	0.3060	0.1381	78	0.61	050.99	0
050	Soluble K2O (6%)	0255	6.390	0.1840	6.199	0.3060	0.1381	78	0.62	050.99	0
050	Soluble K2O (6%)	0563	6.394	0.0705	6.199	0.3060	0.1381	78	0.64	050.99	0
050	Soluble K2O (6%)	0498	6.400	0.0000	6.199	0.3060	0.1381	78	0.66	050.31	0
050	Soluble K2O (6%)	0117	6.412	0.0993	6.199	0.3060	0.1381	78	0.70	050.52	0
050	Soluble K2O (6%)	0028	6.420	0.0400	6.199	0.3060	0.1381	78	0.72	050.62	0
050	Soluble K2O (6%)	0136	6.450	0.7000	6.199	0.3060	0.1381	78	0.82	050.52	0
050	Soluble K2O (6%)	0073	6.450	0.0600	6.199	0.3060	0.1381	78	0.82	050.30	0
050	Soluble K2O (6%)	0157	6.490	0.6200	6.199	0.3060	0.1381	78	0.95	050.50	0
050	Soluble K2O (6%)	0452	6.515	0.0100	6.199	0.3060	0.1381	78	1.03	050.51	0
050	Soluble K2O (6%)	0546	6.535	0.3500	6.199	0.3060	0.1381	78	1.10	050.99	0
050	Soluble K2O (6%)	0444	6.540	0.1600	6.199	0.3060	0.1381	78	1.11	050.50	0
050	Soluble K2O (6%)	0291	6.545	0.0100	6.199	0.3060	0.1381	78	1.13	050.51	0
050	Soluble K2O (6%)	0035	6.550	0.7000	6.199	0.3060	0.1381	78	1.15	050.61	0
050	Soluble K2O (6%)	0029	6.566	0.1800	6.199	0.3060	0.1381	78	1.20	050.62	0
050	Soluble K2O (6%)	0524	6.578	0.7286	6.199	0.3060	0.1381	78	1.24	050.99	0
050	Soluble K2O (6%)	0027	6.600	0.0200	6.199	0.3060	0.1381	78	1.31	050.99	0
050	Soluble K2O (6%)	0095	6.605	0.0500	6.199	0.3060	0.1381	78	1.33	050.62	0
050	Soluble K2O (6%)	0421	6.610	0.0140	6.199	0.3060	0.1381	78	1.34	050.99	0
050	Soluble K2O (6%)	0231	6.630	0.0600	6.199	0.3060	0.1381	78	1.41	050.00	0
050	Soluble K2O (6%)	0043	6.685‡	0.4700	6.199	0.3060	0.1381	78	1.59	050.52	0
050	Soluble K2O (6%)	0527	6.708‡	0.0574	6.199	0.3060	0.1381	78	1.66	050.99	0
050	Soluble K2O (6%)	0544	6.800‡	0.0800	6.199	0.3060	0.1381	78	1.96	050.00	0
050	Soluble K2O (6%)	0516	5.336†	2.208	6.199	0.3060	0.1381	78	-2.82	050.99	1
060	Water (Free) (%)	0513	0.7750	0.0100	1.155	0.3329	0.0633	3	-1.14	060.00	0
060	Water (Free) (%)	0456	1.295	0.0900	1.155	0.3329	0.0633	3	0.42	060.00	0
060	Water (Free) (%)	0096	1.395	0.0900	1.155	0.3329	0.0633	3	0.72	060.00	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				
101	Acid Soluble Ca (%)	0563	4.015	0.4102	4.666	0.2736	0.2651	14	-2.38	101.33	0
101	Acid Soluble Ca (%)	0402	4.320	0.0200	4.666	0.2736	0.2651	14	-1.26	101.30	0
101	Acid Soluble Ca (%)	0354	4.440	0.3000	4.666	0.2736	0.2651	14	-0.83	101.30	0
101	Acid Soluble Ca (%)	0136	4.515	0.5300	4.666	0.2736	0.2651	14	-0.55	101.33	0
101	Acid Soluble Ca (%)	0096	4.555	0.4300	4.666	0.2736	0.2651	14	-0.41	101.30	0
101	Acid Soluble Ca (%)	0035	4.620	0.7000	4.666	0.2736	0.2651	14	-0.17	101.30	0
101	Acid Soluble Ca (%)	0494	4.651	0.4685	4.666	0.2736	0.2651	14	-0.05	101.33	0
101	Acid Soluble Ca (%)	0472	4.710	0.0400	4.666	0.2736	0.2651	14	0.16	101.30	0
101	Acid Soluble Ca (%)	0423	4.712	0.0650	4.666	0.2736	0.2651	14	0.17	101.32	0
101	Acid Soluble Ca (%)	0041	4.795	0.3700	4.666	0.2736	0.2651	14	0.47	101.30	0
101	Acid Soluble Ca (%)	0521	4.804	0.0000	4.666	0.2736	0.2651	14	0.51	101.32	0
101	Acid Soluble Ca (%)	0552	4.815	0.1100	4.666	0.2736	0.2651	14	0.55	101.99	0
101	Acid Soluble Ca (%)	0527	5.053	0.2651	4.666	0.2736	0.2651	14	1.42	101.33	0
101	Acid Soluble Ca (%)	0421	6.121	0.0020	4.666	0.2736	0.2651	14	5.32	101.33	0
121	Acid Soluble Mg (%)	0515	2.506	0.5277	3.088	0.3487	0.1799	18	-1.67	121.99	0
121	Acid Soluble Mg (%)	0563	2.628	0.0060	3.088	0.3487	0.1799	18	-1.32	121.33	0
121	Acid Soluble Mg (%)	0524	2.687	0.1353	3.088	0.3487	0.1799	18	-1.15	121.99	0
121	Acid Soluble Mg (%)	0515	2.888	0.1759	3.088	0.3487	0.1799	18	-0.57	121.33	0
121	Acid Soluble Mg (%)	0035	2.945	0.4500	3.088	0.3487	0.1799	18	-0.41	121.30	0
121	Acid Soluble Mg (%)	0096	2.950	0.3400	3.088	0.3487	0.1799	18	-0.40	121.30	0
121	Acid Soluble Mg (%)	0494	3.007	0.2132	3.088	0.3487	0.1799	18	-0.23	121.33	0
121	Acid Soluble Mg (%)	0444	3.025	0.0500	3.088	0.3487	0.1799	18	-0.18	121.30	0
121	Acid Soluble Mg (%)	0354	3.050	0.3400	3.088	0.3487	0.1799	18	-0.11	121.30	0
121	Acid Soluble Mg (%)	0552	3.050	0.0600	3.088	0.3487	0.1799	18	-0.11	121.99	0
121	Acid Soluble Mg (%)	0546	3.090	0.1060	3.088	0.3487	0.1799	18	0.00	121.03	0
121	Acid Soluble Mg (%)	0423	3.138	0.0350	3.088	0.3487	0.1799	18	0.14	121.32	0
121	Acid Soluble Mg (%)	0041	3.175	0.1900	3.088	0.3487	0.1799	18	0.25	121.30	0
121	Acid Soluble Mg (%)	0521	3.301	0.0000	3.088	0.3487	0.1799	18	0.61	121.32	0
121	Acid Soluble Mg (%)	0136	3.315	0.5100	3.088	0.3487	0.1799	18	0.65	121.33	0
121	Acid Soluble Mg (%)	0472	3.580	0.0200	3.088	0.3487	0.1799	18	1.41	121.30	0
121	Acid Soluble Mg (%)	0527	3.584	0.0768	3.088	0.3487	0.1799	18	1.42	121.33	0
121	Acid Soluble Mg (%)	0421	4.975	0.0020	3.088	0.3487	0.1799	18	5.41	121.33	0
121	Acid Soluble Mg (%)	0516	2.570	0.9600	3.088	0.3487	0.1799	18	-1.49	121.99	1
143	Elemental S (%)	0472	0.6900	0.0000				1		143.99	0
145	Sulfate S, HCl soluble (%)	0485	0.7021	0.0398				1		145.00	0
148	Total S (%)	0421	0.6610	0.0100	0.7204	0.0593	0.0300	8	-0.92	148.07	0
148	Total S (%)	0515	0.6700	0.0197	0.7204	0.0593	0.0300	8	-0.78	148.07	0
148	Total S (%)	0563	0.6839	0.0767	0.7204	0.0593	0.0300	8	-0.56	148.07	0
148	Total S (%)	0096	0.7050	0.0100	0.7204	0.0593	0.0300	8	-0.24	148.99	0
148	Total S (%)	0354	0.7150	0.0300	0.7204	0.0593	0.0300	8	-0.08	148.99	0
148	Total S (%)	0494	0.7441	0.0545	0.7204	0.0593	0.0300	8	0.37	148.07	0
148	Total S (%)	0402	0.7750	0.0300	0.7204	0.0593	0.0300	8	0.84	148.07	0
148	Total S (%)	0527	1.086	0.0092	0.7204	0.0593	0.0300	8	5.64	148.07	0
148	Total S (%)	0516	0.6650	0.2840	0.7204	0.0593	0.0300	8	-0.85	148.99	1
149	S - HNO3 soluble (%)	0524	0.6548	0.0071	0.6860	0.0271	0.0054	3	-1.15	149.04	0
149	S - HNO3 soluble (%)	0423	0.7005	0.0090	0.6860	0.0271	0.0054	3	0.54	149.04	0
149	S - HNO3 soluble (%)	0521	0.7027	0.0000	0.6860	0.0271	0.0054	3	0.62	149.04	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				
151	Acid Soluble As (ppm)	0515	2.536	1.044	5.135	1.988	0.4384	15	-1.31	151.34	0
151	Acid Soluble As (ppm)	0550	2.605	0.1500	5.135	1.988	0.4384	15	-1.27	151.00	0
151	Acid Soluble As (ppm)	0515	2.899	0.0990	5.135	1.988	0.4384	15	-1.13	151.33	0
151	Acid Soluble As (ppm)	0220	3.600	0.4000	5.135	1.988	0.4384	15	-0.77	151.99	0
151	Acid Soluble As (ppm)	0444	3.690	0.1800	5.135	1.988	0.4384	15	-0.73	151.30	0
151	Acid Soluble As (ppm)	0498	4.450	0.1000	5.135	1.988	0.4384	15	-0.34	151.00	0
151	Acid Soluble As (ppm)	0096	5.300	0.2000	5.135	1.988	0.4384	15	0.08	151.30	0
151	Acid Soluble As (ppm)	0524	5.469	0.3520	5.135	1.988	0.4384	15	0.17	151.30	0
151	Acid Soluble As (ppm)	0481	5.805	0.0500	5.135	1.988	0.4384	15	0.34	151.99	0
151	Acid Soluble As (ppm)	0405	6.000	2.000	5.135	1.988	0.4384	15	0.43	151.99	0
151	Acid Soluble As (ppm)	0136	6.050	0.2600	5.135	1.988	0.4384	15	0.46	151.33	0
151	Acid Soluble As (ppm)	0501	6.539	1.153	5.135	1.988	0.4384	15	0.71	151.30	0
151	Acid Soluble As (ppm)	0527	6.582	0.0481	5.135	1.988	0.4384	15	0.73	151.33	0
151	Acid Soluble As (ppm)	0563	7.697	0.4905	5.135	1.988	0.4384	15	1.29	151.33	0
151	Acid Soluble As (ppm)	0494	7.810	0.0494	5.135	1.988	0.4384	15	1.35	151.33	0
151	Acid Soluble As (ppm)	0255	9.227	8.419	5.135	1.988	0.4384	15	2.06	151.30	1
165	Acid Soluble B (%)	0546	0.0012	0.0000	0.0040	0.0039	0.0057	9	-0.72	165.30	0
165	Acid Soluble B (%)	0524	0.0019	0.0002	0.0040	0.0039	0.0057	9	-0.54	165.99	0
165	Acid Soluble B (%)	0516	0.0020	0.0000	0.0040	0.0039	0.0057	9	-0.51	165.99	0
165	Acid Soluble B (%)	0136	0.0021	0.0001	0.0040	0.0039	0.0057	9	-0.50	165.99	0
165	Acid Soluble B (%)	0563	0.0022	0.0002	0.0040	0.0039	0.0057	9	-0.46	165.99	0
165	Acid Soluble B (%)	0515	0.0024	0.0011	0.0040	0.0039	0.0057	9	-0.42	165.99	0
165	Acid Soluble B (%)	0527	0.0046	0.0001	0.0040	0.0039	0.0057	9	0.14	165.99	0
165	Acid Soluble B (%)	0472	0.0100	0.0000	0.0040	0.0039	0.0057	9	1.55	165.99	0
165	Acid Soluble B (%)	0552	0.1350	0.0500	0.0040	0.0039	0.0057	9	33.69	165.99	0
165	Acid Soluble B (%)	0423	35.38	2.230	0.0040	0.0039	0.0057	9	9096.83	165.99	2
165	Acid Soluble B (%)	0421	< 0.0018		0.0040	0.0039	0.0057	9		165.30	5
165	Acid Soluble B (%)	0354	< 0.01		0.0040	0.0039	0.0057	9		165.30	5
181	Acid Soluble Cd (ppm)	0444	0.9800	0.0200	1.528	0.2507	0.5303	16	-2.18	181.30	0
181	Acid Soluble Cd (ppm)	0524	1.213	0.1220	1.528	0.2507	0.5303	16	-1.26	181.30	0
181	Acid Soluble Cd (ppm)	0481	1.280	0.0000	1.528	0.2507	0.5303	16	-0.99	181.99	0
181	Acid Soluble Cd (ppm)	0506	1.310	0.0200	1.528	0.2507	0.5303	16	-0.87	181.99	0
181	Acid Soluble Cd (ppm)	0494	1.423	0.0694	1.528	0.2507	0.5303	16	-0.42	181.33	0
181	Acid Soluble Cd (ppm)	0501	1.447	0.3060	1.528	0.2507	0.5303	16	-0.32	181.30	0
181	Acid Soluble Cd (ppm)	0394	1.460	0.0400	1.528	0.2507	0.5303	16	-0.27	181.30	0
181	Acid Soluble Cd (ppm)	0563	1.561	0.1415	1.528	0.2507	0.5303	16	0.13	181.33	0
181	Acid Soluble Cd (ppm)	0136	1.565	0.0300	1.528	0.2507	0.5303	16	0.15	181.33	0
181	Acid Soluble Cd (ppm)	0405	1.580	0.0200	1.528	0.2507	0.5303	16	0.21	181.99	0
181	Acid Soluble Cd (ppm)	0220	1.625	0.2500	1.528	0.2507	0.5303	16	0.39	181.99	0
181	Acid Soluble Cd (ppm)	0498	1.650	0.1000	1.528	0.2507	0.5303	16	0.49	181.00	0
181	Acid Soluble Cd (ppm)	0035	1.675	0.1900	1.528	0.2507	0.5303	16	0.59	181.30	0
181	Acid Soluble Cd (ppm)	0515	1.694	1.108	1.528	0.2507	0.5303	16	0.66	181.33	0
181	Acid Soluble Cd (ppm)	0550	2.515	0.0500	1.528	0.2507	0.5303	16	3.94	181.00	0
181	Acid Soluble Cd (ppm)	0527	4.773	6.019	1.528	0.2507	0.5303	16	12.94	181.33	0
181	Acid Soluble Cd (ppm)	0255	5.756	8.934	1.528	0.2507	0.5303	16	16.87	181.30	1
181	Acid Soluble Cd (ppm)	0515	0.7700	1.540	1.528	0.2507	0.5303	16		181.34	4
191	Acid Soluble Cr (ppm)	0444	50.98	0.5200	72.25	13.74	3.435	17	-1.55	191.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
191	Acid Soluble Cr (ppm)	0550	52.59	1.400	72.25	13.74	3.435	17	-1.43	191.00	0
191	Acid Soluble Cr (ppm)	0498	58.05	2.500	72.25	13.74	3.435	17	-1.03	191.00	0
191	Acid Soluble Cr (ppm)	0506	58.65	0.3000	72.25	13.74	3.435	17	-0.99	191.99	0
191	Acid Soluble Cr (ppm)	0394	61.70	1.000	72.25	13.74	3.435	17	-0.77	191.30	0
191	Acid Soluble Cr (ppm)	0136	64.78	1.040	72.25	13.74	3.435	17	-0.54	191.33	0
191	Acid Soluble Cr (ppm)	0563	73.22	4.334	72.25	13.74	3.435	17	0.07	191.33	0
191	Acid Soluble Cr (ppm)	0035	74.00	9.600	72.25	13.74	3.435	17	0.13	191.30	0
191	Acid Soluble Cr (ppm)	0494	75.53	2.823	72.25	13.74	3.435	17	0.24	191.33	0
191	Acid Soluble Cr (ppm)	0096	77.30	1.600	72.25	13.74	3.435	17	0.37	191.30	0
191	Acid Soluble Cr (ppm)	0405	78.00	0.0000	72.25	13.74	3.435	17	0.42	191.99	0
191	Acid Soluble Cr (ppm)	0527	79.47	0.7347	72.25	13.74	3.435	17	0.53	191.33	0
191	Acid Soluble Cr (ppm)	0220	81.50	1.000	72.25	13.74	3.435	17	0.67	191.99	0
191	Acid Soluble Cr (ppm)	0481	82.10	1.600	72.25	13.74	3.435	17	0.72	191.99	0
191	Acid Soluble Cr (ppm)	0515	82.93	12.51	72.25	13.74	3.435	17	0.78	191.34	0
191	Acid Soluble Cr (ppm)	0515	83.93	5.883	72.25	13.74	3.435	17	0.85	191.33	0
191	Acid Soluble Cr (ppm)	0501	98.52	11.54	72.25	13.74	3.435	17	1.91	191.30	0
202	Acid Soluble Co (ppm)	0515	2.324	0.0280	4.469	0.8306	0.2850	12	-2.58	202.34	0
202	Acid Soluble Co (ppm)	0220	3.450	0.1000	4.469	0.8306	0.2850	12	-1.23	202.99	0
202	Acid Soluble Co (ppm)	0524	3.702	0.5782	4.469	0.8306	0.2850	12	-0.92	202.30	0
202	Acid Soluble Co (ppm)	0035	4.060	0.6200	4.469	0.8306	0.2850	12	-0.49	202.30	0
202	Acid Soluble Co (ppm)	0527	4.449	0.1173	4.469	0.8306	0.2850	12	-0.02	202.33	0
202	Acid Soluble Co (ppm)	0563	4.503	0.4052	4.469	0.8306	0.2850	12	0.04	202.33	0
202	Acid Soluble Co (ppm)	0494	4.592	0.1782	4.469	0.8306	0.2850	12	0.15	202.33	0
202	Acid Soluble Co (ppm)	0501	4.834	0.2590	4.469	0.8306	0.2850	12	0.44	202.34	0
202	Acid Soluble Co (ppm)	0423	4.850	0.1000	4.469	0.8306	0.2850	12	0.46	202.32	0
202	Acid Soluble Co (ppm)	0405	5.150	0.3000	4.469	0.8306	0.2850	12	0.82	202.99	0
202	Acid Soluble Co (ppm)	0515	5.288	0.2726	4.469	0.8306	0.2850	12	0.99	202.33	0
202	Acid Soluble Co (ppm)	0546	5.531	0.4620	4.469	0.8306	0.2850	12	1.28	202.33	0
202	Acid Soluble Co (ppm)	0255	6.938	8.568	4.469	0.8306	0.2850	12	2.97	202.99	1
202	Acid Soluble Co (ppm)	0498	< 0.002		4.469	0.8306	0.2850	12		202.00	5
202	Acid Soluble Co (ppm)	0481	< 20		4.469	0.8306	0.2850	12		202.99	5
221	Acid Soluble Cu (%)	0394	0.0002	0.0000	0.0005	0.0004	0.0011	10	-0.69	221.32	0
221	Acid Soluble Cu (%)	0494	0.0002	0.0000	0.0005	0.0004	0.0011	10	-0.69	221.33	0
221	Acid Soluble Cu (%)	0527	0.0002	0.0000	0.0005	0.0004	0.0011	10	-0.69	221.33	0
221	Acid Soluble Cu (%)	0563	0.0002	0.0000	0.0005	0.0004	0.0011	10	-0.69	221.33	0
221	Acid Soluble Cu (%)	0095	0.0003	0.0001	0.0005	0.0004	0.0011	10	-0.58	221.32	0
221	Acid Soluble Cu (%)	0546	0.0003	0.0001	0.0005	0.0004	0.0011	10	-0.58	221.33	0
221	Acid Soluble Cu (%)	0515	0.0007	0.0002	0.0005	0.0004	0.0011	10	0.46	221.33	0
221	Acid Soluble Cu (%)	0515	0.0009	0.0003	0.0005	0.0004	0.0011	10	0.80	221.99	0
221	Acid Soluble Cu (%)	0516	0.0010	0.0000	0.0005	0.0004	0.0011	10	1.15	221.99	0
221	Acid Soluble Cu (%)	0552	0.0150	0.0100	0.0005	0.0004	0.0011	10	33.35	221.30	0
221	Acid Soluble Cu (%)	0423	6.415	0.0900	0.0005	0.0004	0.0011	10	14754.54	221.32	2
221	Acid Soluble Cu (%)	0255	0.0000	0.0000	0.0005	0.0004	0.0011	10		221.30	4
221	Acid Soluble Cu (%)	0550	< 0.0001		0.0005	0.0004	0.0011	10		221.00	5
221	Acid Soluble Cu (%)	0041	< 0.001		0.0005	0.0004	0.0011	10		221.30	5
221	Acid Soluble Cu (%)	0481	< 0.001		0.0005	0.0004	0.0011	10		221.99	5
221	Acid Soluble Cu (%)	0421	< 0.0015		0.0005	0.0004	0.0011	10		221.33	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				
221	Acid Soluble Cu (%)	0498	< 0.002		0.0005	0.0004	0.0011	10		221.03	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0005	0.0004	0.0011	10		221.30	5
221	Acid Soluble Cu (%)	0405	< 0.5		0.0005	0.0004	0.0011	10		221.99	5
241	Acid Soluble Fe (%)	0563	0.3910	0.0155	0.5325	0.0560	0.0410	19	-2.52	241.33	0
241	Acid Soluble Fe (%)	0524	0.4577	0.0450	0.5325	0.0560	0.0410	19	-1.33	241.99	0
241	Acid Soluble Fe (%)	0516	0.4690	0.1840	0.5325	0.0560	0.0410	19	-1.13	241.99	0
241	Acid Soluble Fe (%)	0035	0.4920	0.0400	0.5325	0.0560	0.0410	19	-0.72	241.30	0
241	Acid Soluble Fe (%)	0546	0.4972	0.0030	0.5325	0.0560	0.0410	19	-0.63	241.03	0
241	Acid Soluble Fe (%)	0515	0.5009	0.1608	0.5325	0.0560	0.0410	19	-0.56	241.99	0
241	Acid Soluble Fe (%)	0041	0.5150	0.0500	0.5325	0.0560	0.0410	19	-0.31	241.30	0
241	Acid Soluble Fe (%)	0552	0.5200	0.0800	0.5325	0.0560	0.0410	19	-0.22	241.30	0
241	Acid Soluble Fe (%)	0402	0.5300	0.0000	0.5325	0.0560	0.0410	19	-0.04	241.30	0
241	Acid Soluble Fe (%)	0096	0.5350	0.0100	0.5325	0.0560	0.0410	19	0.05	241.30	0
241	Acid Soluble Fe (%)	0354	0.5350	0.0100	0.5325	0.0560	0.0410	19	0.05	241.30	0
241	Acid Soluble Fe (%)	0472	0.5400	0.0000	0.5325	0.0560	0.0410	19	0.13	241.30	0
241	Acid Soluble Fe (%)	0494	0.5409	0.0233	0.5325	0.0560	0.0410	19	0.15	241.33	0
241	Acid Soluble Fe (%)	0421	0.5462	0.0010	0.5325	0.0560	0.0410	19	0.25	241.33	0
241	Acid Soluble Fe (%)	0515	0.5778	0.0610	0.5325	0.0560	0.0410	19	0.81	241.33	0
241	Acid Soluble Fe (%)	0521	0.5850	0.0000	0.5325	0.0560	0.0410	19	0.94	241.32	0
241	Acid Soluble Fe (%)	0444	0.5950	0.0100	0.5325	0.0560	0.0410	19	1.12	241.30	0
241	Acid Soluble Fe (%)	0136	0.6150	0.0700	0.5325	0.0560	0.0410	19	1.47	241.33	0
241	Acid Soluble Fe (%)	0527	0.6225	0.0145	0.5325	0.0560	0.0410	19	1.61	241.33	0
241	Acid Soluble Fe (%)	0423	5.265	30.00	0.5325	0.0560	0.0410	19	93938.67	241.32	2
251	Acid Soluble Pb (ppm)	0524	1.120	0.0316	1.834	0.6729	0.2647	13	-1.06	251.30	0
251	Acid Soluble Pb (ppm)	0494	1.214	0.1101	1.834	0.6729	0.2647	13	-0.92	251.33	0
251	Acid Soluble Pb (ppm)	0096	1.350	0.5000	1.834	0.6729	0.2647	13	-0.72	251.30	0
251	Acid Soluble Pb (ppm)	0136	1.460	0.2000	1.834	0.6729	0.2647	13	-0.56	251.33	0
251	Acid Soluble Pb (ppm)	0481	1.460	0.0200	1.834	0.6729	0.2647	13	-0.56	251.99	0
251	Acid Soluble Pb (ppm)	0563	1.491	0.1140	1.834	0.6729	0.2647	13	-0.51	251.33	0
251	Acid Soluble Pb (ppm)	0405	1.650	0.3000	1.834	0.6729	0.2647	13	-0.27	251.99	0
251	Acid Soluble Pb (ppm)	0527	1.707	0.0151	1.834	0.6729	0.2647	13	-0.19	251.33	0
251	Acid Soluble Pb (ppm)	0501	1.953	0.2200	1.834	0.6729	0.2647	13	0.18	251.30	0
251	Acid Soluble Pb (ppm)	0394	2.325	0.0100	1.834	0.6729	0.2647	13	0.73	251.30	0
251	Acid Soluble Pb (ppm)	0035	2.430	0.3800	1.834	0.6729	0.2647	13	0.89	251.30	0
251	Acid Soluble Pb (ppm)	0220	2.950	0.7000	1.834	0.6729	0.2647	13	1.66	251.99	0
251	Acid Soluble Pb (ppm)	0550	4.910	0.8400	1.834	0.6729	0.2647	13	4.57	251.00	0
251	Acid Soluble Pb (ppm)	0255	5.581	8.929	1.834	0.6729	0.2647	13	5.57	251.30	1
251	Acid Soluble Pb (ppm)	0515	0.0000	0.0000	1.834	0.6729	0.2647	13		251.33	4
251	Acid Soluble Pb (ppm)	0515	0.0000	0.0000	1.834	0.6729	0.2647	13		251.34	4
261	Acid Soluble Mn (%)	0472	0.0100	0.0000	0.0169	0.0026	0.0030	16	-2.65	261.30	0
261	Acid Soluble Mn (%)	0402	0.0120	0.0000	0.0169	0.0026	0.0030	16	-1.89	261.32	0
261	Acid Soluble Mn (%)	0524	0.0140	0.0007	0.0169	0.0026	0.0030	16	-1.14	261.99	0
261	Acid Soluble Mn (%)	0515	0.0162	0.0011	0.0169	0.0026	0.0030	16	-0.30	261.99	0
261	Acid Soluble Mn (%)	0546	0.0162	0.0000	0.0169	0.0026	0.0030	16	-0.29	261.35	0
261	Acid Soluble Mn (%)	0494	0.0163	0.0011	0.0169	0.0026	0.0030	16	-0.27	261.32	0
261	Acid Soluble Mn (%)	0494	0.0163	0.0011	0.0169	0.0026	0.0030	16	-0.27	261.35	0
261	Acid Soluble Mn (%)	0096	0.0171	0.0004	0.0169	0.0026	0.0030	16	0.06	261.30	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				
261	Acid Soluble Mn (%)	0563	0.0172	0.0002	0.0169	0.0026	0.0030	16	0.10	261.35	0
261	Acid Soluble Mn (%)	0035	0.0175	0.0009	0.0169	0.0026	0.0030	16	0.19	261.30	0
261	Acid Soluble Mn (%)	0444	0.0175	0.0010	0.0169	0.0026	0.0030	16	0.21	261.30	0
261	Acid Soluble Mn (%)	0516	0.0175	0.0110	0.0169	0.0026	0.0030	16	0.21	261.99	0
261	Acid Soluble Mn (%)	0521	0.0187	0.0000	0.0169	0.0026	0.0030	16	0.67	261.34	0
261	Acid Soluble Mn (%)	0041	0.0200	0.0000	0.0169	0.0026	0.0030	16	1.16	261.30	0
261	Acid Soluble Mn (%)	0527	0.0200	0.0002	0.0169	0.0026	0.0030	16	1.16	261.35	0
261	Acid Soluble Mn (%)	0552	0.0250	0.0300	0.0169	0.0026	0.0030	16	3.07	261.32	0
261	Acid Soluble Mn (%)	0423	181.8	1.500	0.0169	0.0026	0.0030	16	69300.01	261.34	2
261	Acid Soluble Mn (%)	0515	0.0000	0.0000	0.0169	0.0026	0.0030	16		261.35	4
261	Acid Soluble Mn (%)	0354	< 0.01		0.0169	0.0026	0.0030	16		261.30	5
281	Acid Soluble Hg (ppm)	0035	0.0020	0.0000	0.0059	0.0049	0.0011	3	-0.65	281.99	0
281	Acid Soluble Hg (ppm)	0563	0.0043	0.0008	0.0059	0.0049	0.0011	3	-0.26	281.30	0
281	Acid Soluble Hg (ppm)	0501	0.0114	0.0024	0.0059	0.0049	0.0011	3	0.91	281.30	0
281	Acid Soluble Hg (ppm)	0515	0.0000	0.0000	0.0059	0.0049	0.0011	3		281.30	4
281	Acid Soluble Hg (ppm)	0550	< 0.001		0.0059	0.0049	0.0011	3		281.00	5
281	Acid Soluble Hg (ppm)	0527	< 0.001		0.0059	0.0049	0.0011	3		281.30	5
281	Acid Soluble Hg (ppm)	0220	< 0.01		0.0059	0.0049	0.0011	3		281.99	5
281	Acid Soluble Hg (ppm)	0405	< 0.01		0.0059	0.0049	0.0011	3		281.99	5
281	Acid Soluble Hg (ppm)	0481	< 0.5		0.0059	0.0049	0.0011	3		281.99	5
289	Acid Soluble Mo (ppm)	0394	4.100	0.0000	7.572	2.068	0.5545	16	-1.68	289.32	0
289	Acid Soluble Mo (ppm)	0515	4.847	1.138	7.572	2.068	0.5545	16	-1.32	289.34	0
289	Acid Soluble Mo (ppm)	0255	4.918	0.4200	7.572	2.068	0.5545	16	-1.28	289.30	0
289	Acid Soluble Mo (ppm)	0524	6.374	1.950	7.572	2.068	0.5545	16	-0.58	289.30	0
289	Acid Soluble Mo (ppm)	0096	6.700	0.0000	7.572	2.068	0.5545	16	-0.42	289.30	0
289	Acid Soluble Mo (ppm)	0035	7.160	0.2000	7.572	2.068	0.5545	16	-0.20	289.30	0
289	Acid Soluble Mo (ppm)	0494	7.479	0.7506	7.572	2.068	0.5545	16	-0.04	289.33	0
289	Acid Soluble Mo (ppm)	0136	7.505	0.2100	7.572	2.068	0.5545	16	-0.03	289.33	0
289	Acid Soluble Mo (ppm)	0546	7.525	1.830	7.572	2.068	0.5545	16	-0.02	289.33	0
289	Acid Soluble Mo (ppm)	0563	7.893	0.5395	7.572	2.068	0.5545	16	0.16	289.33	0
289	Acid Soluble Mo (ppm)	0423	8.325	0.2100	7.572	2.068	0.5545	16	0.36	289.33	0
289	Acid Soluble Mo (ppm)	0234	8.500	1.000	7.572	2.068	0.5545	16	0.45	289.30	0
289	Acid Soluble Mo (ppm)	0220	9.100	0.2000	7.572	2.068	0.5545	16	0.74	289.99	0
289	Acid Soluble Mo (ppm)	0405	9.835	0.0700	7.572	2.068	0.5545	16	1.09	289.99	0
289	Acid Soluble Mo (ppm)	0527	10.22	0.1016	7.572	2.068	0.5545	16	1.28	289.33	0
289	Acid Soluble Mo (ppm)	0501	10.29	0.2530	7.572	2.068	0.5545	16	1.32	289.34	0
289	Acid Soluble Mo (ppm)	0516	20.00	20.00	7.572	2.068	0.5545	16	6.01	289.30	1
289	Acid Soluble Mo (ppm)	0515	3.684	7.369	7.572	2.068	0.5545	16		289.33	4
289	Acid Soluble Mo (ppm)	0481	< 100		7.572	2.068	0.5545	16		289.99	5
291	Acid Soluble Ni (ppm)	0550	14.54	0.6500	24.79	4.992	1.077	18	-2.06	291.00	0
291	Acid Soluble Ni (ppm)	0524	16.03	2.089	24.79	4.992	1.077	18	-1.76	291.30	0
291	Acid Soluble Ni (ppm)	0444	16.17	0.9700	24.79	4.992	1.077	18	-1.73	291.30	0
291	Acid Soluble Ni (ppm)	0498	21.65	0.3000	24.79	4.992	1.077	18	-0.63	291.00	0
291	Acid Soluble Ni (ppm)	0136	22.28	0.9500	24.79	4.992	1.077	18	-0.50	291.33	0
291	Acid Soluble Ni (ppm)	0394	22.50	0.0000	24.79	4.992	1.077	18	-0.46	291.30	0
291	Acid Soluble Ni (ppm)	0035	24.15	4.100	24.79	4.992	1.077	18	-0.13	291.30	0
291	Acid Soluble Ni (ppm)	0506	24.30	0.0000	24.79	4.992	1.077	18	-0.10	291.99	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				
291	Acid Soluble Ni (ppm)	0563	24.43	2.190	24.79	4.992	1.077	18	-0.07	291.33	0
291	Acid Soluble Ni (ppm)	0405	25.55	0.7000	24.79	4.992	1.077	18	0.15	291.99	0
291	Acid Soluble Ni (ppm)	0494	26.95	0.7246	24.79	4.992	1.077	18	0.43	291.33	0
291	Acid Soluble Ni (ppm)	0521	27.57	0.0000	24.79	4.992	1.077	18	0.56	291.30	0
291	Acid Soluble Ni (ppm)	0096	27.75	1.100	24.79	4.992	1.077	18	0.59	291.30	0
291	Acid Soluble Ni (ppm)	0481	27.90	0.2000	24.79	4.992	1.077	18	0.62	291.99	0
291	Acid Soluble Ni (ppm)	0220	28.10	0.4000	24.79	4.992	1.077	18	0.66	291.99	0
291	Acid Soluble Ni (ppm)	0515	29.64	2.606	24.79	4.992	1.077	18	0.97	291.33	0
291	Acid Soluble Ni (ppm)	0501	30.05	2.237	24.79	4.992	1.077	18	1.05	291.34	0
291	Acid Soluble Ni (ppm)	0527	31.54	0.1624	24.79	4.992	1.077	18	1.35	291.33	0
291	Acid Soluble Ni (ppm)	0515	22.15	13.14	24.79	4.992	1.077	18	-0.53	291.34	1
291	Acid Soluble Ni (ppm)	0255	0.0000	0.0000	24.79	4.992	1.077	18		291.99	4
301	Acid Soluble Se (ppm)	0220	0.6000	0.0000	3.051	3.835	0.9466	6	-0.57	301.99	0
301	Acid Soluble Se (ppm)	0524	0.6150	0.7100	3.051	3.835	0.9466	6	-0.57	301.30	0
301	Acid Soluble Se (ppm)	0563	0.7552	0.0443	3.051	3.835	0.9466	6	-0.53	301.33	0
301	Acid Soluble Se (ppm)	0515	2.056	2.678	3.051	3.835	0.9466	6	-0.23	301.34	0
301	Acid Soluble Se (ppm)	0515	5.478	1.347	3.051	3.835	0.9466	6	0.56	301.33	0
301	Acid Soluble Se (ppm)	0506	41.15	0.9000	3.051	3.835	0.9466	6	8.85	301.99	0
301	Acid Soluble Se (ppm)	0255	7.374	10.53	3.051	3.835	0.9466	6	1.00	301.99	1
301	Acid Soluble Se (ppm)	0527	< 0.001		3.051	3.835	0.9466	6		301.33	5
301	Acid Soluble Se (ppm)	0550	< 0.008		3.051	3.835	0.9466	6		301.00	5
301	Acid Soluble Se (ppm)	0481	< 0.5		3.051	3.835	0.9466	6		301.99	5
301	Acid Soluble Se (ppm)	0405	< 1		3.051	3.835	0.9466	6		301.99	5
311	Sodium (%)	0563	0.1880	0.0280	0.2206	0.0183	0.0100	8	-1.63	311.33	0
311	Sodium (%)	0136	0.2100	0.0200	0.2206	0.0183	0.0100	8	-0.53	311.33	0
311	Sodium (%)	0423	0.2140	0.0060	0.2206	0.0183	0.0100	8	-0.33	311.33	0
311	Sodium (%)	0521	0.2174	0.0000	0.2206	0.0183	0.0100	8	-0.16	311.32	0
311	Sodium (%)	0035	0.2220	0.0220	0.2206	0.0183	0.0100	8	0.07	311.33	0
311	Sodium (%)	0096	0.2300	0.0000	0.2206	0.0183	0.0100	8	0.47	311.99	0
311	Sodium (%)	0354	0.2300	0.0000	0.2206	0.0183	0.0100	8	0.47	311.99	0
311	Sodium (%)	0527	0.2481	0.0042	0.2206	0.0183	0.0100	8	1.38	311.33	0
321	Acid Soluble Zn (%)	0550	0.0005	0.0000	0.0070	0.0025	0.0005	24	-2.63	321.00	0
321	Acid Soluble Zn (%)	0402	0.0030	0.0000	0.0070	0.0025	0.0005	24	-1.62	321.30	0
321	Acid Soluble Zn (%)	0255	0.0035	0.0010	0.0070	0.0025	0.0005	24	-1.42	321.30	0
321	Acid Soluble Zn (%)	0421	0.0041	0.0000	0.0070	0.0025	0.0005	24	-1.17	321.33	0
321	Acid Soluble Zn (%)	0136	0.0053	0.0003	0.0070	0.0025	0.0005	24	-0.71	321.33	0
321	Acid Soluble Zn (%)	0563	0.0057	0.0009	0.0070	0.0025	0.0005	24	-0.55	321.33	0
321	Acid Soluble Zn (%)	0546	0.0059	0.0008	0.0070	0.0025	0.0005	24	-0.45	321.33	0
321	Acid Soluble Zn (%)	0394	0.0061	0.0000	0.0070	0.0025	0.0005	24	-0.36	321.32	0
321	Acid Soluble Zn (%)	0405	0.0064	0.0009	0.0070	0.0025	0.0005	24	-0.26	321.99	0
321	Acid Soluble Zn (%)	0515	0.0068	0.0002	0.0070	0.0025	0.0005	24	-0.08	321.33	0
321	Acid Soluble Zn (%)	0527	0.0068	0.0002	0.0070	0.0025	0.0005	24	-0.08	321.33	0
321	Acid Soluble Zn (%)	0494	0.0070	0.0005	0.0070	0.0025	0.0005	24	-0.02	321.33	0
321	Acid Soluble Zn (%)	0041	0.0070	0.0000	0.0070	0.0025	0.0005	24	0.00	321.30	0
321	Acid Soluble Zn (%)	0506	0.0070	0.0000	0.0070	0.0025	0.0005	24	0.00	321.99	0
321	Acid Soluble Zn (%)	0524	0.0073	0.0010	0.0070	0.0025	0.0005	24	0.12	321.99	0
321	Acid Soluble Zn (%)	0095	0.0075	0.0000	0.0070	0.0025	0.0005	24	0.20	321.32	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 Zn (%)	0035	0.0078	0.0026	0.0070	0.0025	0.0005	24	0.32	321.30	0
321	Acid Soluble Zn (%)	0444	0.0080	0.0020	0.0070	0.0025	0.0005	24	0.41	321.30	0
321	Acid Soluble Zn (%)	0096	0.0090	0.0004	0.0070	0.0025	0.0005	24	0.81	321.30	0
321	Acid Soluble Zn (%)	0234	0.0100	0.0000	0.0070	0.0025	0.0005	24	1.22	321.30	0
321	Acid Soluble Zn (%)	0354	0.0100	0.0000	0.0070	0.0025	0.0005	24	1.22	321.30	0
321	Acid Soluble Zn (%)	0472	0.0100	0.0000	0.0070	0.0025	0.0005	24	1.22	321.30	0
321	Acid Soluble Zn (%)	0481	0.0100	0.0000	0.0070	0.0025	0.0005	24	1.22	321.99	0
321	Acid Soluble Zn (%)	0521	0.0104	0.0000	0.0070	0.0025	0.0005	24	1.38	321.32	0
321	Acid Soluble Zn (%)	0515	66.27	3.030	0.0070	0.0025	0.0005	24	26835.09	321.99	1
321	Acid Soluble Zn (%)	0423	76.78	3.950	0.0070	0.0025	0.0005	24	31090.33	321.32	1
321	Acid Soluble Zn (%)	0552	0.0000	0.0000	0.0070	0.0025	0.0005	24		321.30	4
321	Acid Soluble Zn (%)	0516	0.0000	0.0000	0.0070	0.0025	0.0005	24		321.99	4
321	Acid Soluble Zn (%)	0498	< 0.01		0.0070	0.0025	0.0005	24		321.03	5

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.