

Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 40

Sample # 230811

Regular PT Scheme

Labs Reporting: 73

Grade 4-3-4

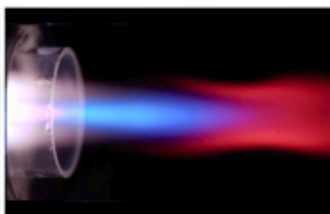
Statistical Summary

Issue Date : 09/30/2023

Analyte Code	Analyte Sample # 230811	# 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 (%)	19	17	0.4412	0.2488	0.3807		0.1502	0.0455	39.45%		0.0229	4.63%
002	Nitrate N (%)	1		2.549									
003	Water Insoluble N (%)	5	5	2.042	0.3481	2.042		0.3481	0.1946	17.05%		0.0855	3.59%
005	Urea N (%)	1		0.0850									
010	Total N (4%)	64	63	4.031	0.3052	4.048	0.4910	0.1292	0.0203	3.19%	0.61	0.0701	3.24%
020	Total P2O5 (%)	39	38	4.523	0.5400	4.551		0.5236	0.1062	11.50%		0.0885	3.18%
030	Citrate Insoluble P2O5 (%)	1		0.1950									
040	Indirect Available P2O5 (3%)	1		4.129									
041	Direct Available P2O5 (3%)	43	42	4.037	0.6049	4.066	0.6700	0.5415	0.1044	13.32%	1.88	0.0900	3.24%
048	Water Soluble P2O5 (%)	6	5	1.049	1.105	1.020		1.233	0.6893	120.89%		0.0200	3.99%
050	Soluble K2O (4%)	74	72	4.347	0.4133	4.326	0.4165	0.2882	0.0425	6.66%	1.61	0.0842	3.21%
060	Water (Free) (%)	1		5.063									
101	Acid Soluble Ca (%)	47	46	7.530	0.6348	7.559	0.5779	0.4102	0.0756	5.43%	1.65	0.1172	2.95%
121	Acid Soluble Mg (1%)	55	54	1.958	0.3143	1.956	0.2978	0.1659	0.0282	8.48%	1.30	0.0477	3.62%
131	Water Soluble Mg (%)	11	10	1.351	0.3693	1.266		0.2281	0.0901	18.01%		0.0404	3.86%
143	Elemental S (%)	5	5	5.800	1.529	5.800		1.529	0.8549	26.37%		0.2018	3.07%
145	Sulfate S, HCl soluble (%)	3	3	2.965	0.1767	2.965		0.1767	0.1275	5.96%		0.1700	3.40%
148	Total S (5%)	40	39	6.081	1.076	6.222	0.5111	0.8855	0.1772	14.23%	4.04	0.1326	3.04%
149	S - HNO3 soluble (%)	4	4	5.863	1.300	5.863		1.300	0.8123	22.17%		0.1969	3.06%
151	Acid Soluble As (ppm)	15	5	3.932	10.07	8.319		17.51	9.789	210.49%		14.91	11.63%
165	Acid Soluble B (%)	8	4	0.1392	0.3386	0.2707	0.0436	0.4705	0.2940	173.82%	25.14	0.0230	4.87%
171	Water Soluble B (%)	1		0.0116									
181	Acid Soluble Cd (ppm)	16	6	0.5931	0.8498	0.1161		0.0572	0.0292	49.27%		0.0267	22.00%
190	Water Soluble Cl (%)	1		0.5050									
191	Acid Soluble Cr (ppm)	17	16	46.19	19.40	43.26		15.72	4.912	36.34%		4.455	9.07%
202	Acid Soluble Co (ppm)	18	13	6.620	6.172	6.168	2.8503	2.838	0.9838	46.01%	2.32	0.5626	12.17%
221	Acid Soluble Cu (%)	25	24	7.383	36.82	0.0184	0.0068	0.0018	0.0004	9.56%	0.60	0.0012	7.30%
241	Acid Soluble Fe (%)	15	14	42.29	163.4	0.0858	0.0136	0.0265	0.0089	30.93%	4.55	0.0180	5.79%
251	Acid Soluble Pb (ppm)	18	9	4.498	7.565	1.739		0.6859	0.2858	39.44%		0.4603	14.72%

Analyte Code	Analyte Sample # 230811	# 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
261	Acid Soluble Mn (%)	15	14	18.46	71.40	0.0241	0.0074	0.0031	0.0010	12.99%	0.98	0.0017	7.01%
281	Acid Soluble Hg (ppm)	10	4	0.3413	0.6999	0.0108		0.0098	0.0061	91.00%		0.0023	22.00%
289	Acid Soluble Mo (ppm)	18	14	4.930	2.422	5.216	2.5649	1.620	0.5411	31.05%	1.47	0.4702	12.48%
291	Acid Soluble Ni (ppm)	16	15	25.11	13.75	21.45		5.650	1.823	26.34%		3.442	10.08%
301	Acid Soluble Se (ppm)	14	5	2.319	3.812	0.8038		0.4014	0.2244	49.94%		0.0079	16.53%
311	Sodium (%)	6	6	0.3393	0.0332	0.3393	0.0389	0.0377	0.0192	11.11%	2.26	0.0061	4.71%
321	Acid Soluble Zn (%)	26	25	11.94	60.73	0.0323	0.0082	0.0034	0.0009	10.63%	0.97	0.0014	6.70%
325	Water Soluble Zn (%)	1		0.0100									
431	Soluble Si in nonliquids (%)	1		0.0070									
441	Humic Acids (%)	12	12	2.268	1.022	2.087		0.4709	0.1699	22.57%		0.2080	3.58%
451	Hydrophobic Fulvic Acids (%)	1		1.730									

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 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. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.



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Magruder Fertilizer Proficiency Testing Program

Analytes: 40

Sample # 230811

Regular PT Scheme

Labs Reporting: 73

Grade 4-3-4

Lab Values

Issue Date : 09/30/2023

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
001	Ammoniacal N (%)	0605	0.2100	0.0000	0.3807	0.1502	0.0229	17	-1.14	001.99	0
001	Ammoniacal N (%)	0423	0.2245	0.0010	0.3807	0.1502	0.0229	17	-1.04	001.99	0
001	Ammoniacal N (%)	0389	0.2350	0.0100	0.3807	0.1502	0.0229	17	-0.97	001.10	0
001	Ammoniacal N (%)	0451	0.2450	0.0300	0.3807	0.1502	0.0229	17	-0.90	001.10	0
001	Ammoniacal N (%)	0524	0.2900	0.0200	0.3807	0.1502	0.0229	17	-0.60	001.99	0
001	Ammoniacal N (%)	0220	0.3000	0.0400	0.3807	0.1502	0.0229	17	-0.54	001.99	0
001	Ammoniacal N (%)	0553	0.3030	0.0160	0.3807	0.1502	0.0229	17	-0.52	001.99	0
001	Ammoniacal N (%)	0587	0.3300	0.0800	0.3807	0.1502	0.0229	17	-0.34	001.99	0
001	Ammoniacal N (%)	0619	0.3500	0.0000	0.3807	0.1502	0.0229	17	-0.20	001.99	0
001	Ammoniacal N (%)	0619	0.3700	0.0400	0.3807	0.1502	0.0229	17	-0.07	001.10	0
001	Ammoniacal N (%)	0255	0.4340	0.0000	0.3807	0.1502	0.0229	17	0.35	001.99	0
001	Ammoniacal N (%)	0559	0.4450	0.0100	0.3807	0.1502	0.0229	17	0.43	001.99	0
001	Ammoniacal N (%)	0626	0.4450	0.0300	0.3807	0.1502	0.0229	17	0.43	001.99	0
001	Ammoniacal N (%)	0117	0.5389	0.0250	0.3807	0.1502	0.0229	17	1.05	001.10	0
001	Ammoniacal N (%)	0368	0.5400	0.0300	0.3807	0.1502	0.0229	17	1.06	001.99	0
001	Ammoniacal N (%)	0558	1.054	0.0102	0.3807	0.1502	0.0229	17	4.48	001.99	0
001	Ammoniacal N (%)	0415	1.110	0.0125	0.3807	0.1502	0.0229	17	4.85	001.99	0
001	Ammoniacal N (%)	0572	0.4587	0.1206	0.3807	0.1502	0.0229	17	0.52	001.99	1
001	Ammoniacal N (%)	0405	< 0.5		0.3807	0.1502	0.0229	17		001.99	5
002	Nitrate N (%)	0368	2.549	0.0095				1		002.99	0
003	Water Insoluble N (%)	0220	1.735	0.0500	2.042	0.3481	0.0855	5	-0.88	003.10	0
003	Water Insoluble N (%)	0494	1.739	0.0854	2.042	0.3481	0.0855	5	-0.87	003.10	0
003	Water Insoluble N (%)	0451	1.915	0.1700	2.042	0.3481	0.0855	5	-0.37	003.10	0
003	Water Insoluble N (%)	0626	2.343	0.0220	2.042	0.3481	0.0855	5	0.86	003.99	0
003	Water Insoluble N (%)	0547	2.480	0.1000	2.042	0.3481	0.0855	5	1.26	003.10	0
005	Urea N (%)	0524	0.0850	0.0100				1		005.99	0
010	Total N (4%)	0580	3.430†	0.0000	4.048	0.1292	0.0701	63	-4.78	010.12	0
010	Total N (4%)	0518	3.700	0.2000	4.048	0.1292	0.0701	63	-2.69	010.99	0
010	Total N (4%)	0095	3.775	0.0100	4.048	0.1292	0.0701	63	-2.11	010.60	0
010	Total N (4%)	0485	3.870	0.0400	4.048	0.1292	0.0701	63	-1.38	010.60	0
010	Total N (4%)	0572	3.880	0.0400	4.048	0.1292	0.0701	63	-1.30	010.12	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
010	Total N (4%)	0260	3.885	0.2700	4.048	0.1292	0.0701	63	-1.26	010.60	0
010	Total N (4%)	0377	3.885	0.1100	4.048	0.1292	0.0701	63	-1.26	010.60	0
010	Total N (4%)	0117	3.925	0.0278	4.048	0.1292	0.0701	63	-0.95	010.12	0
010	Total N (4%)	0049	3.930	0.0400	4.048	0.1292	0.0701	63	-0.91	010.60	0
010	Total N (4%)	0102	3.930	0.0800	4.048	0.1292	0.0701	63	-0.91	010.60	0
010	Total N (4%)	0231	3.935	0.0100	4.048	0.1292	0.0701	63	-0.87	010.60	0
010	Total N (4%)	0543	3.940	0.0800	4.048	0.1292	0.0701	63	-0.84	010.60	0
010	Total N (4%)	0035	3.950	0.1000	4.048	0.1292	0.0701	63	-0.76	010.60	0
010	Total N (4%)	0043	3.950	0.0400	4.048	0.1292	0.0701	63	-0.76	010.60	0
010	Total N (4%)	0510	3.964	0.0390	4.048	0.1292	0.0701	63	-0.65	010.11	0
010	Total N (4%)	0230	3.965	0.0100	4.048	0.1292	0.0701	63	-0.64	010.60	0
010	Total N (4%)	0415	3.965	0.0527	4.048	0.1292	0.0701	63	-0.64	010.12	0
010	Total N (4%)	0055	3.985	0.0900	4.048	0.1292	0.0701	63	-0.49	010.60	0
010	Total N (4%)	0324	3.985	0.1100	4.048	0.1292	0.0701	63	-0.49	010.60	0
010	Total N (4%)	0422	3.990	0.0000	4.048	0.1292	0.0701	63	-0.45	010.60	0
010	Total N (4%)	0255	3.991	0.0440	4.048	0.1292	0.0701	63	-0.44	010.60	0
010	Total N (4%)	0534	3.995	0.0100	4.048	0.1292	0.0701	63	-0.41	010.60	0
010	Total N (4%)	0423	4.000	0.0200	4.048	0.1292	0.0701	63	-0.37	010.60	0
010	Total N (4%)	0626	4.002	0.0410	4.048	0.1292	0.0701	63	-0.36	010.60	0
010	Total N (4%)	0136	4.005	0.1100	4.048	0.1292	0.0701	63	-0.33	010.60	0
010	Total N (4%)	0588	4.012	0.1150	4.048	0.1292	0.0701	63	-0.28	010.60	0
010	Total N (4%)	0220	4.015	0.0300	4.048	0.1292	0.0701	63	-0.25	010.60	0
010	Total N (4%)	0568	4.020	0.0000	4.048	0.1292	0.0701	63	-0.22	010.12	0
010	Total N (4%)	0360	4.025	0.0900	4.048	0.1292	0.0701	63	-0.18	010.60	0
010	Total N (4%)	0131	4.031	0.0727	4.048	0.1292	0.0701	63	-0.13	010.60	0
010	Total N (4%)	0405	4.040	0.0600	4.048	0.1292	0.0701	63	-0.06	010.60	0
010	Total N (4%)	0587	4.040	0.1400	4.048	0.1292	0.0701	63	-0.06	010.60	0
010	Total N (4%)	0619	4.040	0.0200	4.048	0.1292	0.0701	63	-0.06	010.60	0
010	Total N (4%)	0389	4.045	0.0100	4.048	0.1292	0.0701	63	-0.02	010.60	0
010	Total N (4%)	0040	4.050	0.1000	4.048	0.1292	0.0701	63	0.02	010.60	0
010	Total N (4%)	0521	4.050	0.0000	4.048	0.1292	0.0701	63	0.02	010.60	0
010	Total N (4%)	0444	4.050	0.1000	4.048	0.1292	0.0701	63	0.02	010.99	0
010	Total N (4%)	0524	4.052	0.0125	4.048	0.1292	0.0701	63	0.03	010.99	0
010	Total N (4%)	0472	4.060	0.0000	4.048	0.1292	0.0701	63	0.09	010.60	0
010	Total N (4%)	0547	4.060	0.0800	4.048	0.1292	0.0701	63	0.09	010.60	0
010	Total N (4%)	0354	4.065	0.0500	4.048	0.1292	0.0701	63	0.13	010.60	0
010	Total N (4%)	0584	4.070	0.0800	4.048	0.1292	0.0701	63	0.17	010.99	0
010	Total N (4%)	0291	4.085	0.0100	4.048	0.1292	0.0701	63	0.29	010.60	0
010	Total N (4%)	0073	4.090	0.1000	4.048	0.1292	0.0701	63	0.33	010.60	0
010	Total N (4%)	0451	4.091	0.2540	4.048	0.1292	0.0701	63	0.33	010.60	0
010	Total N (4%)	0513	4.115	0.0700	4.048	0.1292	0.0701	63	0.52	010.99	0
010	Total N (4%)	0234	4.125	0.1500	4.048	0.1292	0.0701	63	0.60	010.60	0
010	Total N (4%)	0023	4.126	0.0150	4.048	0.1292	0.0701	63	0.60	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
010	Total N (4%)	0042	4.150	0.1000	4.048	0.1292	0.0701	63	0.79	010.60	0
010	Total N (4%)	0612	4.150	0.1000	4.048	0.1292	0.0701	63	0.79	010.60	0
010	Total N (4%)	0025	4.165	0.0700	4.048	0.1292	0.0701	63	0.91	010.60	0
010	Total N (4%)	0619	4.175	0.0100	4.048	0.1292	0.0701	63	0.98	010.99	0
010	Total N (4%)	0565	4.190	0.0200	4.048	0.1292	0.0701	63	1.10	010.99	0
010	Total N (4%)	0029	4.193	0.0910	4.048	0.1292	0.0701	63	1.12	010.60	0
010	Total N (4%)	0527	4.219	0.2370	4.048	0.1292	0.0701	63	1.32	010.60	0
010	Total N (4%)	0501	4.250	0.0200	4.048	0.1292	0.0701	63	1.56	010.60	0
010	Total N (4%)	0562	4.250	0.1000	4.048	0.1292	0.0701	63	1.56	010.99	0
010	Total N (4%)	0600	4.250	0.1000	4.048	0.1292	0.0701	63	1.56	010.99	0
010	Total N (4%)	0559	4.295	0.0100	4.048	0.1292	0.0701	63	1.91	010.99	0
010	Total N (4%)	0452	4.335	0.1100	4.048	0.1292	0.0701	63	2.22	010.60	0
010	Total N (4%)	0605	4.345	0.0300	4.048	0.1292	0.0701	63	2.30	010.99	0
010	Total N (4%)	0368	4.760±	0.2280	4.048	0.1292	0.0701	63	5.51	010.60	0
010	Total N (4%)	0421	4.855±	0.2300	4.048	0.1292	0.0701	63	6.25	010.60	0
010	Total N (4%)	0558	2.202±	0.0276	4.048	0.1292	0.0701	63	-14.29	010.99	2
020	Total P2O5 (%)	0444	3.050	0.1000	4.551	0.5236	0.0885	38	-2.87	020.10	0
020	Total P2O5 (%)	0559	3.235	0.0100	4.551	0.5236	0.0885	38	-2.51	020.99	0
020	Total P2O5 (%)	0552	3.670	0.0000	4.551	0.5236	0.0885	38	-1.68	020.50	0
020	Total P2O5 (%)	0619	3.670	0.0000	4.551	0.5236	0.0885	38	-1.68	020.99	0
020	Total P2O5 (%)	0042	3.750	0.1000	4.551	0.5236	0.0885	38	-1.53	020.40	0
020	Total P2O5 (%)	0513	3.850	0.0200	4.551	0.5236	0.0885	38	-1.34	020.99	0
020	Total P2O5 (%)	0405	4.080	0.0800	4.551	0.5236	0.0885	38	-0.90	020.20	0
020	Total P2O5 (%)	0619	4.080	0.0000	4.551	0.5236	0.0885	38	-0.90	020.50	0
020	Total P2O5 (%)	0501	4.140	0.2200	4.551	0.5236	0.0885	38	-0.79	020.50	0
020	Total P2O5 (%)	0588	4.287	0.0450	4.551	0.5236	0.0885	38	-0.51	020.50	0
020	Total P2O5 (%)	0324	4.290	0.2000	4.551	0.5236	0.0885	38	-0.50	020.20	0
020	Total P2O5 (%)	0368	4.316	0.1521	4.551	0.5236	0.0885	38	-0.45	020.50	0
020	Total P2O5 (%)	0307	4.355	0.1700	4.551	0.5236	0.0885	38	-0.38	020.50	0
020	Total P2O5 (%)	0255	4.373	0.0620	4.551	0.5236	0.0885	38	-0.34	020.50	0
020	Total P2O5 (%)	0580	4.390	0.0000	4.551	0.5236	0.0885	38	-0.31	020.20	0
020	Total P2O5 (%)	0619	4.425	0.2900	4.551	0.5236	0.0885	38	-0.24	020.10	0
020	Total P2O5 (%)	0472	4.445	0.0300	4.551	0.5236	0.0885	38	-0.20	020.50	0
020	Total P2O5 (%)	0587	4.515	0.0100	4.551	0.5236	0.0885	38	-0.07	020.99	0
020	Total P2O5 (%)	0423	4.645	0.0900	4.551	0.5236	0.0885	38	0.18	020.50	0
020	Total P2O5 (%)	0422	4.683	0.0344	4.551	0.5236	0.0885	38	0.25	020.50	0
020	Total P2O5 (%)	0524	4.746	0.1376	4.551	0.5236	0.0885	38	0.37	020.50	0
020	Total P2O5 (%)	0234	4.765	0.0700	4.551	0.5236	0.0885	38	0.41	020.50	0
020	Total P2O5 (%)	0605	4.790	0.1000	4.551	0.5236	0.0885	38	0.46	020.50	0
020	Total P2O5 (%)	0389	4.810	0.0000	4.551	0.5236	0.0885	38	0.49	020.50	0
020	Total P2O5 (%)	0572	4.870	0.1200	4.551	0.5236	0.0885	38	0.61	020.99	0
020	Total P2O5 (%)	0433	4.890	0.0200	4.551	0.5236	0.0885	38	0.65	020.50	0
020	Total P2O5 (%)	0587	4.890	0.0600	4.551	0.5236	0.0885	38	0.65	020.50	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
020	Total P2O5 (%)	0510	4.901	0.0356	4.551	0.5236	0.0885	38	0.67	020.20	0
020	Total P2O5 (%)	0626	4.920	0.0200	4.551	0.5236	0.0885	38	0.70	020.10	0
020	Total P2O5 (%)	0626	4.930	0.0200	4.551	0.5236	0.0885	38	0.72	020.40	0
020	Total P2O5 (%)	0626	4.970	0.0000	4.551	0.5236	0.0885	38	0.80	020.20	0
020	Total P2O5 (%)	0451	4.979	0.5020	4.551	0.5236	0.0885	38	0.82	020.50	0
020	Total P2O5 (%)	0626	5.030	0.0400	4.551	0.5236	0.0885	38	0.91	020.50	0
020	Total P2O5 (%)	0231	5.060	0.1200	4.551	0.5236	0.0885	38	0.97	020.50	0
020	Total P2O5 (%)	0035	5.100	0.0000	4.551	0.5236	0.0885	38	1.05	020.40	0
020	Total P2O5 (%)	0527	5.153	0.0455	4.551	0.5236	0.0885	38	1.15	020.50	0
020	Total P2O5 (%)	0612	5.175	0.6900	4.551	0.5236	0.0885	38	1.19	020.50	0
020	Total P2O5 (%)	0260	5.270	0.0600	4.551	0.5236	0.0885	38	1.37	020.50	0
020	Total P2O5 (%)	0515	4.907	1.096	4.551	0.5236	0.0885	38	0.68	020.99	1
030	Citrate Insoluble P2O5 (%)	0405	0.1950	0.0300				1		030.20	0
040	Indirect Available P2O5 (3%)	0572	4.129±	0.8540				1		040.99	0
041	Direct Available P2O5 (3%)	0230	2.440†	0.1200	4.066	0.5415	0.0900	42	-3.00	041.21	0
041	Direct Available P2O5 (3%)	0095	2.630†	0.3400	4.066	0.5415	0.0900	42	-2.65	041.21	0
041	Direct Available P2O5 (3%)	0562	3.205†	0.1100	4.066	0.5415	0.0900	42	-1.59	041.99	0
041	Direct Available P2O5 (3%)	0600	3.205†	0.1100	4.066	0.5415	0.0900	42	-1.59	041.99	0
041	Direct Available P2O5 (3%)	0518	3.350†	0.3000	4.066	0.5415	0.0900	42	-1.32	041.99	0
041	Direct Available P2O5 (3%)	0405	3.430	0.0000	4.066	0.5415	0.0900	42	-1.18	041.11	0
041	Direct Available P2O5 (3%)	0558	3.471	0.0280	4.066	0.5415	0.0900	42	-1.10	041.21	0
041	Direct Available P2O5 (3%)	0055	3.540	0.0800	4.066	0.5415	0.0900	42	-0.97	041.11	0
041	Direct Available P2O5 (3%)	0472	3.565	0.0100	4.066	0.5415	0.0900	42	-0.93	041.21	0
041	Direct Available P2O5 (3%)	0513	3.715	0.0700	4.066	0.5415	0.0900	42	-0.65	041.11	0
041	Direct Available P2O5 (3%)	0494	3.730	0.0800	4.066	0.5415	0.0900	42	-0.62	041.10	0
041	Direct Available P2O5 (3%)	0220	3.730	0.0600	4.066	0.5415	0.0900	42	-0.62	041.11	0
041	Direct Available P2O5 (3%)	0055	3.795	0.2100	4.066	0.5415	0.0900	42	-0.50	041.21	0
041	Direct Available P2O5 (3%)	0485	3.820	0.1000	4.066	0.5415	0.0900	42	-0.45	041.11	0
041	Direct Available P2O5 (3%)	0405	3.890	0.0400	4.066	0.5415	0.0900	42	-0.33	041.99	0
041	Direct Available P2O5 (3%)	0073	3.975	0.3100	4.066	0.5415	0.0900	42	-0.17	041.11	0
041	Direct Available P2O5 (3%)	0117	4.000	0.0618	4.066	0.5415	0.0900	42	-0.12	041.11	0
041	Direct Available P2O5 (3%)	0072	4.014	0.1170	4.066	0.5415	0.0900	42	-0.10	041.11	0
041	Direct Available P2O5 (3%)	0626	4.025	0.0700	4.066	0.5415	0.0900	42	-0.08	041.50	0
041	Direct Available P2O5 (3%)	0626	4.030	0.0400	4.066	0.5415	0.0900	42	-0.07	041.20	0
041	Direct Available P2O5 (3%)	0626	4.075	0.1100	4.066	0.5415	0.0900	42	0.02	041.40	0
041	Direct Available P2O5 (3%)	0025	4.075	0.1900	4.066	0.5415	0.0900	42	0.02	041.51	0
041	Direct Available P2O5 (3%)	0102	4.140	0.1800	4.066	0.5415	0.0900	42	0.14	041.10	0
041	Direct Available P2O5 (3%)	0452	4.160	0.0000	4.066	0.5415	0.0900	42	0.17	041.20	0
041	Direct Available P2O5 (3%)	0360	4.205	0.0300	4.066	0.5415	0.0900	42	0.26	041.51	0
041	Direct Available P2O5 (3%)	0029	4.220	0.1000	4.066	0.5415	0.0900	42	0.28	041.40	0
041	Direct Available P2O5 (3%)	0605	4.305	0.1300	4.066	0.5415	0.0900	42	0.44	041.50	0
041	Direct Available P2O5 (3%)	0136	4.320	0.0200	4.066	0.5415	0.0900	42	0.47	041.51	0
041	Direct Available P2O5 (3%)	0049	4.385	0.0900	4.066	0.5415	0.0900	42	0.59	041.11	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
041	Direct Available P2O5 (3%)	0131	4.385	0.0700	4.066	0.5415	0.0900	42	0.59	041.50	0
041	Direct Available P2O5 (3%)	0423	4.400	0.0400	4.066	0.5415	0.0900	42	0.62	041.51	0
041	Direct Available P2O5 (3%)	0553	4.425	0.0300	4.066	0.5415	0.0900	42	0.66	041.20	0
041	Direct Available P2O5 (3%)	0043	4.430	0.0600	4.066	0.5415	0.0900	42	0.67	041.51	0
041	Direct Available P2O5 (3%)	0040	4.450	0.1000	4.066	0.5415	0.0900	42	0.71	041.51	0
041	Direct Available P2O5 (3%)	0117	4.535	0.0324	4.066	0.5415	0.0900	42	0.87	041.51	0
041	Direct Available P2O5 (3%)	0494	4.595	0.0900	4.066	0.5415	0.0900	42	0.98	041.51	0
041	Direct Available P2O5 (3%)	0291	4.635	0.0100	4.066	0.5415	0.0900	42	1.05	041.50	0
041	Direct Available P2O5 (3%)	0023	4.668	0.0090	4.066	0.5415	0.0900	42	1.11	041.51	0
041	Direct Available P2O5 (3%)	0377	4.740±	0.3200	4.066	0.5415	0.0900	42	1.24	041.51	0
041	Direct Available P2O5 (3%)	0354	4.785±	0.0700	4.066	0.5415	0.0900	42	1.33	041.21	0
041	Direct Available P2O5 (3%)	0421	4.955±	0.1300	4.066	0.5415	0.0900	42	1.64	041.50	0
041	Direct Available P2O5 (3%)	0568	5.690±	0.0000	4.066	0.5415	0.0900	42	3.00	041.21	0
041	Direct Available P2O5 (3%)	0584	3.435	0.5700	4.066	0.5415	0.0900	42	-1.17	041.99	1
048	Water Soluble P2O5 (%)	0472	0.0700	0.0000	1.020	1.233	0.0200	5	-0.67	048.20	0
048	Water Soluble P2O5 (%)	0626	0.6000	0.0000	1.020	1.233	0.0200	5	-0.30	048.50	0
048	Water Soluble P2O5 (%)	0626	0.6200	0.0200	1.020	1.233	0.0200	5	-0.28	048.20	0
048	Water Soluble P2O5 (%)	0626	0.6250	0.0100	1.020	1.233	0.0200	5	-0.28	048.40	0
048	Water Soluble P2O5 (%)	0565	3.185	0.0300	1.020	1.233	0.0200	5	1.53	048.99	0
048	Water Soluble P2O5 (%)	0572	1.195	1.110	1.020	1.233	0.0200	5	0.12	048.99	1
050	Soluble K2O (4%)	0049	3.320±	0.4400	4.326	0.2882	0.0842	72	-3.49	050.00	0
050	Soluble K2O (4%)	0131	3.550±	0.1000	4.326	0.2882	0.0842	72	-2.69	050.51	0
050	Soluble K2O (4%)	0042	3.550±	0.1000	4.326	0.2882	0.0842	72	-2.69	050.99	0
050	Soluble K2O (4%)	0220	3.630±	0.0200	4.326	0.2882	0.0842	72	-2.41	050.00	0
050	Soluble K2O (4%)	0501	3.725±	0.3500	4.326	0.2882	0.0842	72	-2.08	050.99	0
050	Soluble K2O (4%)	0072	3.830±	0.1000	4.326	0.2882	0.0842	72	-1.72	050.00	0
050	Soluble K2O (4%)	0494	3.935	0.1300	4.326	0.2882	0.0842	72	-1.36	050.00	0
050	Soluble K2O (4%)	0562	3.940	0.0800	4.326	0.2882	0.0842	72	-1.34	050.99	0
050	Soluble K2O (4%)	0600	3.940	0.0800	4.326	0.2882	0.0842	72	-1.34	050.99	0
050	Soluble K2O (4%)	0405	3.955	0.0100	4.326	0.2882	0.0842	72	-1.29	050.00	0
050	Soluble K2O (4%)	0534	3.980	0.1200	4.326	0.2882	0.0842	72	-1.20	050.99	0
050	Soluble K2O (4%)	0444	4.000	0.0000	4.326	0.2882	0.0842	72	-1.13	050.00	0
050	Soluble K2O (4%)	0485	4.040	0.2000	4.326	0.2882	0.0842	72	-0.99	050.52	0
050	Soluble K2O (4%)	0518	4.050	0.3000	4.326	0.2882	0.0842	72	-0.96	050.99	0
050	Soluble K2O (4%)	0588	4.068	0.0530	4.326	0.2882	0.0842	72	-0.90	050.99	0
050	Soluble K2O (4%)	0389	4.075	0.1100	4.326	0.2882	0.0842	72	-0.87	050.99	0
050	Soluble K2O (4%)	0605	4.075	0.1100	4.326	0.2882	0.0842	72	-0.87	050.99	0
050	Soluble K2O (4%)	0626	4.095	0.0100	4.326	0.2882	0.0842	72	-0.80	050.99	0
050	Soluble K2O (4%)	0451	4.099	0.2060	4.326	0.2882	0.0842	72	-0.79	050.99	0
050	Soluble K2O (4%)	0584	4.135	0.0700	4.326	0.2882	0.0842	72	-0.66	050.99	0
050	Soluble K2O (4%)	0354	4.145	0.0500	4.326	0.2882	0.0842	72	-0.63	050.52	0
050	Soluble K2O (4%)	0102	4.165	0.1900	4.326	0.2882	0.0842	72	-0.56	050.00	0
050	Soluble K2O (4%)	0521	4.180	0.0000	4.326	0.2882	0.0842	72	-0.51	050.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
050	Soluble K2O (4%)	0559	4.195	0.0100	4.326	0.2882	0.0842	72	-0.45	050.99	0
050	Soluble K2O (4%)	0558	4.234	0.0160	4.326	0.2882	0.0842	72	-0.32	050.99	0
050	Soluble K2O (4%)	0023	4.243	0.0590	4.326	0.2882	0.0842	72	-0.29	050.52	0
050	Soluble K2O (4%)	0255	4.254	0.1450	4.326	0.2882	0.0842	72	-0.25	050.99	0
050	Soluble K2O (4%)	0552	4.270	0.0400	4.326	0.2882	0.0842	72	-0.19	050.99	0
050	Soluble K2O (4%)	0565	4.285	0.0300	4.326	0.2882	0.0842	72	-0.14	050.99	0
050	Soluble K2O (4%)	0368	4.287	0.0022	4.326	0.2882	0.0842	72	-0.13	050.51	0
050	Soluble K2O (4%)	0619	4.315	0.0300	4.326	0.2882	0.0842	72	-0.04	050.00	0
050	Soluble K2O (4%)	0619	4.315	0.0300	4.326	0.2882	0.0842	72	-0.04	050.99	0
050	Soluble K2O (4%)	0472	4.360	0.0400	4.326	0.2882	0.0842	72	0.12	050.32	0
050	Soluble K2O (4%)	0055	4.375	0.0300	4.326	0.2882	0.0842	72	0.17	050.00	0
050	Soluble K2O (4%)	0619	4.375	0.0100	4.326	0.2882	0.0842	72	0.17	050.50	0
050	Soluble K2O (4%)	0422	4.376	0.0012	4.326	0.2882	0.0842	72	0.17	050.50	0
050	Soluble K2O (4%)	0572	4.385	0.1700	4.326	0.2882	0.0842	72	0.21	050.99	0
050	Soluble K2O (4%)	0040	4.400	0.0000	4.326	0.2882	0.0842	72	0.26	050.30	0
050	Soluble K2O (4%)	0452	4.405	0.0300	4.326	0.2882	0.0842	72	0.28	050.51	0
050	Soluble K2O (4%)	0025	4.415	0.0300	4.326	0.2882	0.0842	72	0.31	050.52	0
050	Soluble K2O (4%)	0513	4.430	0.0800	4.326	0.2882	0.0842	72	0.36	050.99	0
050	Soluble K2O (4%)	0510	4.435	0.2220	4.326	0.2882	0.0842	72	0.38	050.60	0
050	Soluble K2O (4%)	0234	4.435	0.2300	4.326	0.2882	0.0842	72	0.38	050.99	0
050	Soluble K2O (4%)	0035	4.450	0.1000	4.326	0.2882	0.0842	72	0.43	050.10	0
050	Soluble K2O (4%)	0231	4.450	0.0200	4.326	0.2882	0.0842	72	0.43	050.50	0
050	Soluble K2O (4%)	0360	4.450	0.0200	4.326	0.2882	0.0842	72	0.43	050.52	0
050	Soluble K2O (4%)	0055	4.455	0.1700	4.326	0.2882	0.0842	72	0.45	050.50	0
050	Soluble K2O (4%)	0117	4.463	0.0160	4.326	0.2882	0.0842	72	0.47	050.52	0
050	Soluble K2O (4%)	0307	4.475	0.4500	4.326	0.2882	0.0842	72	0.52	050.99	0
050	Soluble K2O (4%)	0043	4.480	0.0600	4.326	0.2882	0.0842	72	0.54	050.52	0
050	Soluble K2O (4%)	0029	4.505	0.0900	4.326	0.2882	0.0842	72	0.62	050.62	0
050	Soluble K2O (4%)	0553	4.505	0.0100	4.326	0.2882	0.0842	72	0.62	050.99	0
050	Soluble K2O (4%)	0423	4.505	0.0500	4.326	0.2882	0.0842	72	0.62	050.52	0
050	Soluble K2O (4%)	0433	4.510	0.0200	4.326	0.2882	0.0842	72	0.64	050.99	0
050	Soluble K2O (4%)	0421	4.515	0.0100	4.326	0.2882	0.0842	72	0.66	050.99	0
050	Soluble K2O (4%)	0377	4.515	0.1300	4.326	0.2882	0.0842	72	0.66	050.52	0
050	Soluble K2O (4%)	0415	4.528	0.0244	4.326	0.2882	0.0842	72	0.70	050.30	0
050	Soluble K2O (4%)	0580	4.530	0.0000	4.326	0.2882	0.0842	72	0.71	050.30	0
050	Soluble K2O (4%)	0494	4.540	0.1400	4.326	0.2882	0.0842	72	0.74	050.52	0
050	Soluble K2O (4%)	0524	4.553	0.0979	4.326	0.2882	0.0842	72	0.79	050.99	0
050	Soluble K2O (4%)	0513	4.555	0.0700	4.326	0.2882	0.0842	72	0.80	050.62	0
050	Soluble K2O (4%)	0136	4.560	0.0600	4.326	0.2882	0.0842	72	0.81	050.52	0
050	Soluble K2O (4%)	0230	4.600	0.0000	4.326	0.2882	0.0842	72	0.95	050.50	0
050	Soluble K2O (4%)	0587	4.620	0.0600	4.326	0.2882	0.0842	72	1.02	050.99	0
050	Soluble K2O (4%)	0095	4.630	0.1000	4.326	0.2882	0.0842	72	1.06	050.62	0
050	Soluble K2O (4%)	0527	4.645	0.0399	4.326	0.2882	0.0842	72	1.11	050.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
050	Soluble K2O (4%)	0291	4.645	0.0100	4.326	0.2882	0.0842	72	1.11	050.51	0
050	Soluble K2O (4%)	0073	4.710	0.0000	4.326	0.2882	0.0842	72	1.33	050.30	0
050	Soluble K2O (4%)	0260	4.770‡	0.3200	4.326	0.2882	0.0842	72	1.54	050.99	0
050	Soluble K2O (4%)	0086	4.869‡	0.1198	4.326	0.2882	0.0842	72	1.88	050.50	0
050	Soluble K2O (4%)	0324	5.150‡	0.2200	4.326	0.2882	0.0842	72	2.86	050.50	0
050	Soluble K2O (4%)	0568	5.730‡	0.0000	4.326	0.2882	0.0842	72	4.87	050.51	0
050	Soluble K2O (4%)	0612	4.320	0.7200	4.326	0.2882	0.0842	72	-0.02	050.99	1
050	Soluble K2O (4%)	0515	6.153‡	1.395	4.326	0.2882	0.0842	72	6.34	050.99	1
060	Water (Free) (%)	0510	5.063	0.1897				1		060.99	0
101	Acid Soluble Ca (%)	0415	6.196	0.2732	7.559	0.4102	0.1172	46	-3.32	101.01	0
101	Acid Soluble Ca (%)	0368	6.376	0.0450	7.559	0.4102	0.1172	46	-2.88	101.99	0
101	Acid Soluble Ca (%)	0042	6.885	0.0300	7.559	0.4102	0.1172	46	-1.64	101.99	0
101	Acid Soluble Ca (%)	0626	7.025	0.0900	7.559	0.4102	0.1172	46	-1.30	101.00	0
101	Acid Soluble Ca (%)	0231	7.050	0.0200	7.559	0.4102	0.1172	46	-1.24	101.30	0
101	Acid Soluble Ca (%)	0513	7.050	0.0400	7.559	0.4102	0.1172	46	-1.24	101.99	0
101	Acid Soluble Ca (%)	0255	7.073	0.2000	7.559	0.4102	0.1172	46	-1.18	101.30	0
101	Acid Soluble Ca (%)	0055	7.200	0.0000	7.559	0.4102	0.1172	46	-0.87	101.33	0
101	Acid Soluble Ca (%)	0405	7.251	0.1300	7.559	0.4102	0.1172	46	-0.75	101.32	0
101	Acid Soluble Ca (%)	0494	7.262	0.1603	7.559	0.4102	0.1172	46	-0.72	101.33	0
101	Acid Soluble Ca (%)	0580	7.290	0.0000	7.559	0.4102	0.1172	46	-0.66	101.01	0
101	Acid Soluble Ca (%)	0177	7.302	0.0650	7.559	0.4102	0.1172	46	-0.63	101.33	0
101	Acid Soluble Ca (%)	0626	7.315	0.2100	7.559	0.4102	0.1172	46	-0.59	101.33	0
101	Acid Soluble Ca (%)	0040	7.340	0.0400	7.559	0.4102	0.1172	46	-0.53	101.33	0
101	Acid Soluble Ca (%)	0043	7.390	0.1000	7.559	0.4102	0.1172	46	-0.41	101.33	0
101	Acid Soluble Ca (%)	0086	7.396	0.4262	7.559	0.4102	0.1172	46	-0.40	101.33	0
101	Acid Soluble Ca (%)	0220	7.410	0.0400	7.559	0.4102	0.1172	46	-0.36	101.30	0
101	Acid Soluble Ca (%)	0568	7.410	0.0000	7.559	0.4102	0.1172	46	-0.36	101.30	0
101	Acid Soluble Ca (%)	0421	7.430	0.1400	7.559	0.4102	0.1172	46	-0.31	101.33	0
101	Acid Soluble Ca (%)	0324	7.440	0.4600	7.559	0.4102	0.1172	46	-0.29	101.30	0
101	Acid Soluble Ca (%)	0510	7.463	0.1486	7.559	0.4102	0.1172	46	-0.23	101.70	0
101	Acid Soluble Ca (%)	0354	7.505	0.0300	7.559	0.4102	0.1172	46	-0.13	101.30	0
101	Acid Soluble Ca (%)	0451	7.506	0.0780	7.559	0.4102	0.1172	46	-0.13	101.30	0
101	Acid Soluble Ca (%)	0485	7.545	0.0100	7.559	0.4102	0.1172	46	-0.03	101.00	0
101	Acid Soluble Ca (%)	0360	7.580	0.0400	7.559	0.4102	0.1172	46	0.05	101.30	0
101	Acid Soluble Ca (%)	0136	7.635	0.2300	7.559	0.4102	0.1172	46	0.19	101.33	0
101	Acid Soluble Ca (%)	0587	7.695	0.0100	7.559	0.4102	0.1172	46	0.33	101.99	0
101	Acid Soluble Ca (%)	0619	7.700	0.1400	7.559	0.4102	0.1172	46	0.34	101.99	0
101	Acid Soluble Ca (%)	0619	7.710	0.1600	7.559	0.4102	0.1172	46	0.37	101.31	0
101	Acid Soluble Ca (%)	0377	7.715	0.4900	7.559	0.4102	0.1172	46	0.38	101.30	0
101	Acid Soluble Ca (%)	0035	7.720	0.7200	7.559	0.4102	0.1172	46	0.39	101.30	0
101	Acid Soluble Ca (%)	0472	7.750	0.0200	7.559	0.4102	0.1172	46	0.47	101.33	0
101	Acid Soluble Ca (%)	0423	7.752	0.0310	7.559	0.4102	0.1172	46	0.47	101.32	0
101	Acid Soluble Ca (%)	0630	7.785	0.2900	7.559	0.4102	0.1172	46	0.55	101.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
101	Acid Soluble Ca (%)	0572	7.795	0.3700	7.559	0.4102	0.1172	46	0.58	101.99	0
101	Acid Soluble Ca (%)	0527	7.807	0.0016	7.559	0.4102	0.1172	46	0.60	101.33	0
101	Acid Soluble Ca (%)	0023	7.812	0.0780	7.559	0.4102	0.1172	46	0.62	101.32	0
101	Acid Soluble Ca (%)	0095	7.895	0.1100	7.559	0.4102	0.1172	46	0.82	101.32	0
101	Acid Soluble Ca (%)	0552	7.975	0.0500	7.559	0.4102	0.1172	46	1.01	101.99	0
101	Acid Soluble Ca (%)	0605	8.010	0.1400	7.559	0.4102	0.1172	46	1.10	101.99	0
101	Acid Soluble Ca (%)	0558	8.042	0.0239	7.559	0.4102	0.1172	46	1.18	101.03	0
101	Acid Soluble Ca (%)	0612	8.150	0.5000	7.559	0.4102	0.1172	46	1.44	101.33	0
101	Acid Soluble Ca (%)	0291	8.440	0.0200	7.559	0.4102	0.1172	46	2.15	101.30	0
101	Acid Soluble Ca (%)	0452	8.730	0.0600	7.559	0.4102	0.1172	46	2.85	101.30	0
101	Acid Soluble Ca (%)	0553	8.870	0.0600	7.559	0.4102	0.1172	46	3.20	101.00	0
101	Acid Soluble Ca (%)	0433	9.041	0.0210	7.559	0.4102	0.1172	46	3.61	101.30	0
101	Acid Soluble Ca (%)	0444	5.200	0.8000	7.559	0.4102	0.1172	46	-5.75	101.30	1
121	Acid Soluble Mg (1%)	0042	1.065†	0.1300	1.956	0.1659	0.0477	54	-5.37	121.99	0
121	Acid Soluble Mg (1%)	0444	1.200†	0.2000	1.956	0.1659	0.0477	54	-4.56	121.30	0
121	Acid Soluble Mg (1%)	0558	1.429†	0.0137	1.956	0.1659	0.0477	54	-3.18	121.03	0
121	Acid Soluble Mg (1%)	0515	1.507†	0.1300	1.956	0.1659	0.0477	54	-2.71	121.99	0
121	Acid Soluble Mg (1%)	0600	1.550†	0.1000	1.956	0.1659	0.0477	54	-2.45	121.99	0
121	Acid Soluble Mg (1%)	0368	1.606†	0.0413	1.956	0.1659	0.0477	54	-2.11	121.99	0
121	Acid Soluble Mg (1%)	0234	1.610†	0.0200	1.956	0.1659	0.0477	54	-2.09	121.30	0
121	Acid Soluble Mg (1%)	0501	1.645†	0.2500	1.956	0.1659	0.0477	54	-1.87	121.99	0
121	Acid Soluble Mg (1%)	0415	1.727	0.2258	1.956	0.1659	0.0477	54	-1.38	121.01	0
121	Acid Soluble Mg (1%)	0389	1.830	0.0200	1.956	0.1659	0.0477	54	-0.76	121.99	0
121	Acid Soluble Mg (1%)	0177	1.837	0.0034	1.956	0.1659	0.0477	54	-0.72	121.33	0
121	Acid Soluble Mg (1%)	0055	1.845	0.0100	1.956	0.1659	0.0477	54	-0.67	121.33	0
121	Acid Soluble Mg (1%)	0451	1.860	0.0400	1.956	0.1659	0.0477	54	-0.58	121.30	0
121	Acid Soluble Mg (1%)	0255	1.866	0.0730	1.956	0.1659	0.0477	54	-0.55	121.30	0
121	Acid Soluble Mg (1%)	0513	1.885	0.0300	1.956	0.1659	0.0477	54	-0.43	121.30	0
121	Acid Soluble Mg (1%)	0423	1.888	0.0270	1.956	0.1659	0.0477	54	-0.41	121.32	0
121	Acid Soluble Mg (1%)	0405	1.897	0.0150	1.956	0.1659	0.0477	54	-0.36	121.32	0
121	Acid Soluble Mg (1%)	0494	1.897	0.0511	1.956	0.1659	0.0477	54	-0.36	121.33	0
121	Acid Soluble Mg (1%)	0040	1.900	0.0000	1.956	0.1659	0.0477	54	-0.34	121.00	0
121	Acid Soluble Mg (1%)	0324	1.920	0.2000	1.956	0.1659	0.0477	54	-0.22	121.30	0
121	Acid Soluble Mg (1%)	0630	1.936	0.0720	1.956	0.1659	0.0477	54	-0.12	121.33	0
121	Acid Soluble Mg (1%)	0485	1.950	0.1000	1.956	0.1659	0.0477	54	-0.04	121.00	0
121	Acid Soluble Mg (1%)	0626	1.955	0.0100	1.956	0.1659	0.0477	54	-0.01	121.00	0
121	Acid Soluble Mg (1%)	0354	1.955	0.0100	1.956	0.1659	0.0477	54	-0.01	121.30	0
121	Acid Soluble Mg (1%)	0035	1.960	0.1200	1.956	0.1659	0.0477	54	0.02	121.30	0
121	Acid Soluble Mg (1%)	0421	1.965	0.0100	1.956	0.1659	0.0477	54	0.05	121.33	0
121	Acid Soluble Mg (1%)	0360	1.970	0.0400	1.956	0.1659	0.0477	54	0.08	121.30	0
121	Acid Soluble Mg (1%)	0043	1.970	0.0200	1.956	0.1659	0.0477	54	0.08	121.33	0
121	Acid Soluble Mg (1%)	0377	1.980	0.2000	1.956	0.1659	0.0477	54	0.14	121.30	0
121	Acid Soluble Mg (1%)	0524	1.992	0.0670	1.956	0.1659	0.0477	54	0.22	121.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
121	Acid Soluble Mg (1%)	0626	1.995	0.0300	1.956	0.1659	0.0477	54	0.23	121.33	0
121	Acid Soluble Mg (1%)	0605	1.995	0.0100	1.956	0.1659	0.0477	54	0.23	121.99	0
121	Acid Soluble Mg (1%)	0612	2.000	0.2000	1.956	0.1659	0.0477	54	0.26	121.33	0
121	Acid Soluble Mg (1%)	0029	2.006	0.0040	1.956	0.1659	0.0477	54	0.30	121.00	0
121	Acid Soluble Mg (1%)	0136	2.010	0.0200	1.956	0.1659	0.0477	54	0.32	121.33	0
121	Acid Soluble Mg (1%)	0552	2.020	0.0200	1.956	0.1659	0.0477	54	0.39	121.99	0
121	Acid Soluble Mg (1%)	0619	2.020	0.0600	1.956	0.1659	0.0477	54	0.39	121.99	0
121	Acid Soluble Mg (1%)	0291	2.055	0.0100	1.956	0.1659	0.0477	54	0.60	121.30	0
121	Acid Soluble Mg (1%)	0587	2.055	0.0100	1.956	0.1659	0.0477	54	0.60	121.99	0
121	Acid Soluble Mg (1%)	0023	2.056	0.0200	1.956	0.1659	0.0477	54	0.60	121.32	0
121	Acid Soluble Mg (1%)	0231	2.060	0.0800	1.956	0.1659	0.0477	54	0.63	121.30	0
121	Acid Soluble Mg (1%)	0095	2.060	0.0400	1.956	0.1659	0.0477	54	0.63	121.32	0
121	Acid Soluble Mg (1%)	0619	2.065	0.0300	1.956	0.1659	0.0477	54	0.66	121.31	0
121	Acid Soluble Mg (1%)	0260	2.065	0.0100	1.956	0.1659	0.0477	54	0.66	121.33	0
121	Acid Soluble Mg (1%)	0086	2.069	0.0031	1.956	0.1659	0.0477	54	0.68	121.33	0
121	Acid Soluble Mg (1%)	0220	2.095	0.0500	1.956	0.1659	0.0477	54	0.84	121.30	0
121	Acid Soluble Mg (1%)	0572	2.100	0.0600	1.956	0.1659	0.0477	54	0.87	121.99	0
121	Acid Soluble Mg (1%)	0433	2.142	0.0010	1.956	0.1659	0.0477	54	1.12	121.30	0
121	Acid Soluble Mg (1%)	0527	2.149	0.0144	1.956	0.1659	0.0477	54	1.16	121.33	0
121	Acid Soluble Mg (1%)	0568	2.150	0.0000	1.956	0.1659	0.0477	54	1.17	121.30	0
121	Acid Soluble Mg (1%)	0452	2.220	0.0400	1.956	0.1659	0.0477	54	1.59	121.33	0
121	Acid Soluble Mg (1%)	0472	2.320±	0.0000	1.956	0.1659	0.0477	54	2.19	121.33	0
121	Acid Soluble Mg (1%)	0580	2.410±	0.0000	1.956	0.1659	0.0477	54	2.74	121.01	0
121	Acid Soluble Mg (1%)	0553	3.125±	0.0500	1.956	0.1659	0.0477	54	7.04	121.00	0
121	Acid Soluble Mg (1%)	0515	2.862±	1.116	1.956	0.1659	0.0477	54	5.46	121.33	1
131	Water Soluble Mg (%)	0619	0.9920	0.0000	1.266	0.2281	0.0404	10	-1.12	131.99	0
131	Water Soluble Mg (%)	0619	1.011	0.0380	1.266	0.2281	0.0404	10	-1.04	131.30	0
131	Water Soluble Mg (%)	0405	1.135	0.0900	1.266	0.2281	0.0404	10	-0.54	131.30	0
131	Water Soluble Mg (%)	0600	1.140	0.0800	1.266	0.2281	0.0404	10	-0.51	131.99	0
131	Water Soluble Mg (%)	0626	1.240	0.0200	1.266	0.2281	0.0404	10	-0.11	131.00	0
131	Water Soluble Mg (%)	0626	1.280	0.0200	1.266	0.2281	0.0404	10	0.06	131.30	0
131	Water Soluble Mg (%)	0605	1.385	0.0300	1.266	0.2281	0.0404	10	0.48	131.99	0
131	Water Soluble Mg (%)	0029	1.411	0.0280	1.266	0.2281	0.0404	10	0.59	131.00	0
131	Water Soluble Mg (%)	0220	1.460	0.0000	1.266	0.2281	0.0404	10	0.79	131.30	0
131	Water Soluble Mg (%)	0510	2.342	0.0204	1.266	0.2281	0.0404	10	4.39	131.70	0
131	Water Soluble Mg (%)	0572	1.460	0.2400	1.266	0.2281	0.0404	10	0.79	131.99	1
143	Elemental S (%)	0485	3.330	0.4000	5.800	1.529	0.2018	5	-1.62	143.00	0
143	Elemental S (%)	0368	5.310	0.0548	5.800	1.529	0.2018	5	-0.32	143.99	0
143	Elemental S (%)	0255	6.565	0.3040	5.800	1.529	0.2018	5	0.50	143.99	0
143	Elemental S (%)	0389	6.800	0.2400	5.800	1.529	0.2018	5	0.65	143.99	0
143	Elemental S (%)	0291	6.995	0.0100	5.800	1.529	0.2018	5	0.78	143.99	0
145	Sulfate S, HCl soluble (%)	0553	2.765	0.0700	2.965	0.1767	0.1700	3	-1.13	145.99	0
145	Sulfate S, HCl soluble (%)	0485	3.030	0.3600	2.965	0.1767	0.1700	3	0.37	145.00	0

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145	Sulfate S, HCl soluble (%)	0405	3.100	0.0800	2.965	0.1767	0.1700	3	0.76	145.00	0
148	Total S (5%)	0354	3.290†	0.1400	6.222	0.8855	0.1326	39	-3.31	148.99	0
148	Total S (5%)	0587	3.315†	0.0300	6.222	0.8855	0.1326	39	-3.28	148.99	0
148	Total S (5%)	0324	3.335†	0.2700	6.222	0.8855	0.1326	39	-3.26	148.01	0
148	Total S (5%)	0580	4.230†	0.0000	6.222	0.8855	0.1326	39	-2.25	148.01	0
148	Total S (5%)	0230	4.725†	0.1500	6.222	0.8855	0.1326	39	-1.69	148.01	0
148	Total S (5%)	0559	4.895†	0.0100	6.222	0.8855	0.1326	39	-1.50	148.99	0
148	Total S (5%)	0584	5.070†	0.0800	6.222	0.8855	0.1326	39	-1.30	148.01	0
148	Total S (5%)	0562	5.265†	0.1300	6.222	0.8855	0.1326	39	-1.08	148.99	0
148	Total S (5%)	0600	5.265†	0.1300	6.222	0.8855	0.1326	39	-1.08	148.99	0
148	Total S (5%)	0534	5.475†	0.0500	6.222	0.8855	0.1326	39	-0.84	148.01	0
148	Total S (5%)	0605	6.030	0.2800	6.222	0.8855	0.1326	39	-0.22	148.99	0
148	Total S (5%)	0626	6.045	0.0300	6.222	0.8855	0.1326	39	-0.20	148.00	0
148	Total S (5%)	0433	6.059	0.0660	6.222	0.8855	0.1326	39	-0.18	148.99	0
148	Total S (5%)	0513	6.210	0.0400	6.222	0.8855	0.1326	39	-0.01	148.07	0
148	Total S (5%)	0049	6.335	0.0700	6.222	0.8855	0.1326	39	0.13	148.00	0
148	Total S (5%)	0029	6.340	0.1750	6.222	0.8855	0.1326	39	0.13	148.00	0
148	Total S (5%)	0035	6.350	0.0600	6.222	0.8855	0.1326	39	0.14	148.99	0
148	Total S (5%)	0485	6.360	0.0200	6.222	0.8855	0.1326	39	0.16	148.01	0
148	Total S (5%)	0377	6.370	0.6600	6.222	0.8855	0.1326	39	0.17	148.99	0
148	Total S (5%)	0472	6.390	0.0200	6.222	0.8855	0.1326	39	0.19	148.07	0
148	Total S (5%)	0521	6.440	0.0000	6.222	0.8855	0.1326	39	0.25	148.07	0
148	Total S (5%)	0572	6.450	0.2600	6.222	0.8855	0.1326	39	0.26	148.99	0
148	Total S (5%)	0136	6.455	0.1300	6.222	0.8855	0.1326	39	0.26	148.07	0
148	Total S (5%)	0405	6.470	0.0400	6.222	0.8855	0.1326	39	0.28	148.00	0
148	Total S (5%)	0095	6.480	0.3200	6.222	0.8855	0.1326	39	0.29	148.01	0
148	Total S (5%)	0073	6.550	0.1800	6.222	0.8855	0.1326	39	0.37	148.00	0
148	Total S (5%)	0421	6.735‡	0.0100	6.222	0.8855	0.1326	39	0.58	148.07	0
148	Total S (5%)	0260	6.755‡	0.3300	6.222	0.8855	0.1326	39	0.60	148.07	0
148	Total S (5%)	0040	6.800‡	0.0000	6.222	0.8855	0.1326	39	0.65	148.07	0
148	Total S (5%)	0023	6.806‡	0.1140	6.222	0.8855	0.1326	39	0.66	148.07	0
148	Total S (5%)	0494	6.823‡	0.2125	6.222	0.8855	0.1326	39	0.68	148.07	0
148	Total S (5%)	0451	6.825‡	0.1300	6.222	0.8855	0.1326	39	0.68	148.00	0
148	Total S (5%)	0025	6.937‡	0.3820	6.222	0.8855	0.1326	39	0.81	148.00	0
148	Total S (5%)	0220	7.030‡	0.0400	6.222	0.8855	0.1326	39	0.91	148.99	0
148	Total S (5%)	0043	7.150‡	0.2000	6.222	0.8855	0.1326	39	1.05	148.07	0
148	Total S (5%)	0612	7.150‡	0.7000	6.222	0.8855	0.1326	39	1.05	148.07	0
148	Total S (5%)	0558	7.160‡	0.0235	6.222	0.8855	0.1326	39	1.06	148.99	0
148	Total S (5%)	0452	7.340‡	0.1000	6.222	0.8855	0.1326	39	1.26	148.99	0
148	Total S (5%)	0527	7.366‡	0.0414	6.222	0.8855	0.1326	39	1.29	148.07	0
148	Total S (5%)	0515	6.150	1.751	6.222	0.8855	0.1326	39	-0.08	148.07	1
149	S - HNO3 soluble (%)	0524	3.939	0.3423	5.863	1.300	0.1969	4	-1.48	149.04	0
149	S - HNO3 soluble (%)	0231	6.230	0.0200	5.863	1.300	0.1969	4	0.28	149.04	0

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149	S - HNO3 soluble (%)	0423	6.557	0.0780	5.863	1.300	0.1969	4	0.53	149.04	0
149	S - HNO3 soluble (%)	0086	6.728	0.3472	5.863	1.300	0.1969	4	0.67	149.04	0
151	Acid Soluble As (ppm)	0630	0.3415	0.2490	8.319	17.51	14.91	5	-0.46	151.30	0
151	Acid Soluble As (ppm)	0524	0.4271	0.0144	8.319	17.51	14.91	5	-0.45	151.30	0
151	Acid Soluble As (ppm)	0572	0.4350	0.0500	8.319	17.51	14.91	5	-0.45	151.99	0
151	Acid Soluble As (ppm)	0220	0.7500	0.3000	8.319	17.51	14.91	5	-0.43	151.32	0
151	Acid Soluble As (ppm)	0515	39.64	73.94	8.319	17.51	14.91	5	1.79	151.33	0
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	8.319	17.51	14.91	5		151.30	4
151	Acid Soluble As (ppm)	0527	< 0.0001		8.319	17.51	14.91	5		151.33	5
151	Acid Soluble As (ppm)	0515	< 0.186		8.319	17.51	14.91	5		151.34	5
151	Acid Soluble As (ppm)	0368	< 0.4		8.319	17.51	14.91	5		151.34	5
151	Acid Soluble As (ppm)	0220	< 0.5		8.319	17.51	14.91	5		151.99	5
151	Acid Soluble As (ppm)	0626	< 0.5		8.319	17.51	14.91	5		151.99	5
151	Acid Soluble As (ppm)	0136	< 1		8.319	17.51	14.91	5		151.33	5
151	Acid Soluble As (ppm)	0405	< 3		8.319	17.51	14.91	5		151.32	5
151	Acid Soluble As (ppm)	0035	< 5.6		8.319	17.51	14.91	5		151.30	5
151	Acid Soluble As (ppm)	0605	< 6.2		8.319	17.51	14.91	5		151.30	5
165	Acid Soluble B (%)	0524	0.0026	0.0001	0.2707	0.4705	0.0230	4	-0.48	165.99	0
165	Acid Soluble B (%)	0553	0.0115	0.0010	0.2707	0.4705	0.0230	4	-0.47	165.00	0
165	Acid Soluble B (%)	0552	0.0950	0.0300	0.2707	0.4705	0.0230	4	-0.32	165.99	0
165	Acid Soluble B (%)	0515	0.9736	0.0608	0.2707	0.4705	0.0230	4	1.27	165.99	0
165	Acid Soluble B (%)	0421	0.0000	0.0000	0.2707	0.4705	0.0230	4		165.99	4
165	Acid Soluble B (%)	0354	< 0.01		0.2707	0.4705	0.0230	4		165.30	5
165	Acid Soluble B (%)	0527	< 0.01		0.2707	0.4705	0.0230	4		165.99	5
165	Acid Soluble B (%)	0572	< 0.011		0.2707	0.4705	0.0230	4		165.99	5
171	Water Soluble B (%)	0572	< 0.0116					0		171.99	5
181	Acid Soluble Cd (ppm)	0572	0.0700	0.0200	0.1161	0.0572	0.0267	6	-0.81	181.99	0
181	Acid Soluble Cd (ppm)	0524	0.0781	0.0020	0.1161	0.0572	0.0267	6	-0.66	181.30	0
181	Acid Soluble Cd (ppm)	0630	0.0965	0.0010	0.1161	0.0572	0.0267	6	-0.34	181.30	0
181	Acid Soluble Cd (ppm)	0220	0.1000	0.0000	0.1161	0.0572	0.0267	6	-0.28	181.32	0
181	Acid Soluble Cd (ppm)	0220	0.1500	0.1000	0.1161	0.0572	0.0267	6	0.59	181.99	0
181	Acid Soluble Cd (ppm)	0086	0.2034	0.0103	0.1161	0.0572	0.0267	6	1.53	181.33	0
181	Acid Soluble Cd (ppm)	0255	3.118	5.083	0.1161	0.0572	0.0267	6	52.48	181.30	1
181	Acid Soluble Cd (ppm)	0527	< 0.0001		0.1161	0.0572	0.0267	6		181.33	5
181	Acid Soluble Cd (ppm)	0368	< 0.1		0.1161	0.0572	0.0267	6		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.133		0.1161	0.0572	0.0267	6		181.34	5
181	Acid Soluble Cd (ppm)	0515	< 0.19		0.1161	0.0572	0.0267	6		181.33	5
181	Acid Soluble Cd (ppm)	0035	< 0.401		0.1161	0.0572	0.0267	6		181.30	5
181	Acid Soluble Cd (ppm)	0626	< 1		0.1161	0.0572	0.0267	6		181.30	5
181	Acid Soluble Cd (ppm)	0405	< 1		0.1161	0.0572	0.0267	6		181.32	5
181	Acid Soluble Cd (ppm)	0136	< 1		0.1161	0.0572	0.0267	6		181.33	5
181	Acid Soluble Cd (ppm)	0605	< 1.85		0.1161	0.0572	0.0267	6		181.30	5
190	Water Soluble Cl (%)	0553	0.5050	0.0100				1		190.00	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
191	Acid Soluble Cr (ppm)	0626	16.41	0.9500	43.26	15.72	4.455	16	-1.71	191.30	0
191	Acid Soluble Cr (ppm)	0626	17.74	1.180	43.26	15.72	4.455	16	-1.62	191.99	0
191	Acid Soluble Cr (ppm)	0572	21.37	0.4300	43.26	15.72	4.455	16	-1.39	191.99	0
191	Acid Soluble Cr (ppm)	0035	36.20	11.20	43.26	15.72	4.455	16	-0.45	191.30	0
191	Acid Soluble Cr (ppm)	0136	37.05	7.730	43.26	15.72	4.455	16	-0.40	191.33	0
191	Acid Soluble Cr (ppm)	0524	38.15	2.216	43.26	15.72	4.455	16	-0.33	191.30	0
191	Acid Soluble Cr (ppm)	0368	39.65	1.300	43.26	15.72	4.455	16	-0.23	191.34	0
191	Acid Soluble Cr (ppm)	0527	45.03	0.7263	43.26	15.72	4.455	16	0.11	191.33	0
191	Acid Soluble Cr (ppm)	0515	48.35	9.630	43.26	15.72	4.455	16	0.32	191.34	0
191	Acid Soluble Cr (ppm)	0220	49.05	4.900	43.26	15.72	4.455	16	0.37	191.32	0
191	Acid Soluble Cr (ppm)	0630	51.62	26.11	43.26	15.72	4.455	16	0.53	191.30	0
191	Acid Soluble Cr (ppm)	0605	52.16	6.130	43.26	15.72	4.455	16	0.57	191.30	0
191	Acid Soluble Cr (ppm)	0494	57.12	3.240	43.26	15.72	4.455	16	0.88	191.33	0
191	Acid Soluble Cr (ppm)	0086	57.52	4.235	43.26	15.72	4.455	16	0.91	191.33	0
191	Acid Soluble Cr (ppm)	0220	57.60	2.600	43.26	15.72	4.455	16	0.91	191.99	0
191	Acid Soluble Cr (ppm)	0405	62.00	0.0000	43.26	15.72	4.455	16	1.19	191.32	0
191	Acid Soluble Cr (ppm)	0515	98.28	96.44	43.26	15.72	4.455	16	3.50	191.33	1
202	Acid Soluble Co (ppm)	0368	2.800	0.0000	6.168	2.838	0.5626	13	-1.19	202.34	0
202	Acid Soluble Co (ppm)	0572	2.820	0.0000	6.168	2.838	0.5626	13	-1.18	202.99	0
202	Acid Soluble Co (ppm)	0136	3.280	1.020	6.168	2.838	0.5626	13	-1.02	202.33	0
202	Acid Soluble Co (ppm)	0035	4.490	0.8200	6.168	2.838	0.5626	13	-0.59	202.30	0
202	Acid Soluble Co (ppm)	0220	4.700	0.8000	6.168	2.838	0.5626	13	-0.52	202.32	0
202	Acid Soluble Co (ppm)	0524	4.912	0.1980	6.168	2.838	0.5626	13	-0.44	202.30	0
202	Acid Soluble Co (ppm)	0527	6.124	0.6204	6.168	2.838	0.5626	13	-0.02	202.33	0
202	Acid Soluble Co (ppm)	0220	6.550	0.3000	6.168	2.838	0.5626	13	0.13	202.99	0
202	Acid Soluble Co (ppm)	0605	8.685	0.5100	6.168	2.838	0.5626	13	0.89	202.30	0
202	Acid Soluble Co (ppm)	0494	8.740	0.8000	6.168	2.838	0.5626	13	0.91	202.33	0
202	Acid Soluble Co (ppm)	0086	8.838	0.1732	6.168	2.838	0.5626	13	0.94	202.33	0
202	Acid Soluble Co (ppm)	0405	9.000	0.0000	6.168	2.838	0.5626	13	1.00	202.32	0
202	Acid Soluble Co (ppm)	0630	9.242	0.3840	6.168	2.838	0.5626	13	1.08	202.30	0
202	Acid Soluble Co (ppm)	0255	28.58	10.55	6.168	2.838	0.5626	13	7.90	202.99	1
202	Acid Soluble Co (ppm)	0515	< 0.139		6.168	2.838	0.5626	13		202.34	5
202	Acid Soluble Co (ppm)	0515	< 0.26		6.168	2.838	0.5626	13		202.33	5
202	Acid Soluble Co (ppm)	0626	< 5		6.168	2.838	0.5626	13		202.30	5
202	Acid Soluble Co (ppm)	0626	< 5		6.168	2.838	0.5626	13		202.99	5
221	Acid Soluble Cu (%)	0515	0.0148	0.0012	0.0184	0.0018	0.0012	24	-2.05	221.99	0
221	Acid Soluble Cu (%)	0354	0.0150	0.0100	0.0184	0.0018	0.0012	24	-1.94	221.30	0
221	Acid Soluble Cu (%)	0630	0.0151	0.0001	0.0184	0.0018	0.0012	24	-1.91	221.33	0
221	Acid Soluble Cu (%)	0136	0.0170	0.0001	0.0184	0.0018	0.0012	24	-0.83	221.33	0
221	Acid Soluble Cu (%)	0553	0.0170	0.0000	0.0184	0.0018	0.0012	24	-0.80	221.00	0
221	Acid Soluble Cu (%)	0626	0.0171	0.0008	0.0184	0.0018	0.0012	24	-0.74	221.00	0
221	Acid Soluble Cu (%)	0524	0.0172	0.0001	0.0184	0.0018	0.0012	24	-0.71	221.99	0
221	Acid Soluble Cu (%)	0626	0.0178	0.0008	0.0184	0.0018	0.0012	24	-0.34	221.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
221	Acid Soluble Cu (%)	0368	0.0180	0.0019	0.0184	0.0018	0.0012	24	-0.26	221.99	0
221	Acid Soluble Cu (%)	0035	0.0180	0.0000	0.0184	0.0018	0.0012	24	-0.23	221.30	0
221	Acid Soluble Cu (%)	0234	0.0183	0.0005	0.0184	0.0018	0.0012	24	-0.09	221.30	0
221	Acid Soluble Cu (%)	0255	0.0185	0.0010	0.0184	0.0018	0.0012	24	0.05	221.30	0
221	Acid Soluble Cu (%)	0043	0.0185	0.0000	0.0184	0.0018	0.0012	24	0.05	221.33	0
221	Acid Soluble Cu (%)	0405	0.0187	0.0005	0.0184	0.0018	0.0012	24	0.14	221.32	0
221	Acid Soluble Cu (%)	0527	0.0188	0.0001	0.0184	0.0018	0.0012	24	0.20	221.33	0
221	Acid Soluble Cu (%)	0220	0.0191	0.0004	0.0184	0.0018	0.0012	24	0.39	221.32	0
221	Acid Soluble Cu (%)	0494	0.0193	0.0016	0.0184	0.0018	0.0012	24	0.51	221.33	0
221	Acid Soluble Cu (%)	0433	0.0195	0.0010	0.0184	0.0018	0.0012	24	0.62	221.30	0
221	Acid Soluble Cu (%)	0260	0.0199	0.0023	0.0184	0.0018	0.0012	24	0.82	221.33	0
221	Acid Soluble Cu (%)	0095	0.0200	0.0000	0.0184	0.0018	0.0012	24	0.91	221.32	0
221	Acid Soluble Cu (%)	0472	0.0200	0.0000	0.0184	0.0018	0.0012	24	0.91	221.33	0
221	Acid Soluble Cu (%)	0572	0.0200	0.0000	0.0184	0.0018	0.0012	24	0.91	221.99	0
221	Acid Soluble Cu (%)	0515	0.0212	0.0333	0.0184	0.0018	0.0012	24	1.56	221.33	0
221	Acid Soluble Cu (%)	0552	0.0500	0.0200	0.0184	0.0018	0.0012	24	17.95	221.30	0
221	Acid Soluble Cu (%)	0086	184.1	3.324	0.0184	0.0018	0.0012	24	104617.80	221.33	1
241	Acid Soluble Fe (%)	0472	0.0300	0.0000	0.0858	0.0265	0.0180	14	-2.10	241.33	0
241	Acid Soluble Fe (%)	0515	0.0314	0.0484	0.0858	0.0265	0.0180	14	-2.05	241.99	0
241	Acid Soluble Fe (%)	0524	0.0704	0.0084	0.0858	0.0265	0.0180	14	-0.58	241.99	0
241	Acid Soluble Fe (%)	0553	0.0720	0.0020	0.0858	0.0265	0.0180	14	-0.52	241.00	0
241	Acid Soluble Fe (%)	0095	0.0750	0.0100	0.0858	0.0265	0.0180	14	-0.41	241.32	0
241	Acid Soluble Fe (%)	0354	0.0800	0.0200	0.0858	0.0265	0.0180	14	-0.22	241.30	0
241	Acid Soluble Fe (%)	0572	0.0800	0.0000	0.0858	0.0265	0.0180	14	-0.22	241.99	0
241	Acid Soluble Fe (%)	0626	0.0912	0.0021	0.0858	0.0265	0.0180	14	0.20	241.00	0
241	Acid Soluble Fe (%)	0626	0.0930	0.0009	0.0858	0.0265	0.0180	14	0.27	241.33	0
241	Acid Soluble Fe (%)	0515	0.0959	0.1652	0.0858	0.0265	0.0180	14	0.38	241.33	0
241	Acid Soluble Fe (%)	0494	0.1083	0.0105	0.0858	0.0265	0.0180	14	0.85	241.33	0
241	Acid Soluble Fe (%)	0630	0.1087	0.0025	0.0858	0.0265	0.0180	14	0.86	241.33	0
241	Acid Soluble Fe (%)	0527	0.1092	0.0011	0.0858	0.0265	0.0180	14	0.88	241.33	0
241	Acid Soluble Fe (%)	0552	0.2200	0.0800	0.0858	0.0265	0.0180	14	5.06	241.30	0
241	Acid Soluble Fe (%)	0423	633.1	5.700	0.0858	0.0265	0.0180	14	23852.11	241.32	1
251	Acid Soluble Pb (ppm)	0524	1.052	0.0111	1.739	0.6859	0.4603	9	-1.00	251.30	0
251	Acid Soluble Pb (ppm)	0630	1.160	1.329	1.739	0.6859	0.4603	9	-0.85	251.30	0
251	Acid Soluble Pb (ppm)	0494	1.180	0.0200	1.739	0.6859	0.4603	9	-0.82	251.33	0
251	Acid Soluble Pb (ppm)	0527	1.574	0.0684	1.739	0.6859	0.4603	9	-0.24	251.33	0
251	Acid Soluble Pb (ppm)	0572	1.620	0.0000	1.739	0.6859	0.4603	9	-0.17	251.99	0
251	Acid Soluble Pb (ppm)	0220	1.800	0.0000	1.739	0.6859	0.4603	9	0.09	251.32	0
251	Acid Soluble Pb (ppm)	0220	1.950	0.1000	1.739	0.6859	0.4603	9	0.31	251.99	0
251	Acid Soluble Pb (ppm)	0368	2.550	0.7000	1.739	0.6859	0.4603	9	1.18	251.34	0
251	Acid Soluble Pb (ppm)	0086	4.748	0.9934	1.739	0.6859	0.4603	9	4.39	251.33	0
251	Acid Soluble Pb (ppm)	0515	33.31	15.03	1.739	0.6859	0.4603	9	46.02	251.33	1
251	Acid Soluble Pb (ppm)	0255	0.0000	0.0000	1.739	0.6859	0.4603	9		251.30	4

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
251	Acid Soluble Pb (ppm)	0515	< 0.216		1.739	0.6859	0.4603	9		251.34	5
251	Acid Soluble Pb (ppm)	0035	< 2.81		1.739	0.6859	0.4603	9		251.30	5
251	Acid Soluble Pb (ppm)	0136	< 3		1.739	0.6859	0.4603	9		251.33	5
251	Acid Soluble Pb (ppm)	0405	< 4		1.739	0.6859	0.4603	9		251.32	5
251	Acid Soluble Pb (ppm)	0605	< 5		1.739	0.6859	0.4603	9		251.30	5
251	Acid Soluble Pb (ppm)	0626	< 5		1.739	0.6859	0.4603	9		251.30	5
251	Acid Soluble Pb (ppm)	0626	< 10		1.739	0.6859	0.4603	9		251.99	5
261	Acid Soluble Mn (%)	0515	0.0164	0.0025	0.0241	0.0031	0.0017	14	-2.47	261.99	0
261	Acid Soluble Mn (%)	0354	0.0200	0.0000	0.0241	0.0031	0.0017	14	-1.30	261.30	0
261	Acid Soluble Mn (%)	0472	0.0200	0.0000	0.0241	0.0031	0.0017	14	-1.30	261.35	0
261	Acid Soluble Mn (%)	0524	0.0225	0.0008	0.0241	0.0031	0.0017	14	-0.50	261.99	0
261	Acid Soluble Mn (%)	0494	0.0235	0.0017	0.0241	0.0031	0.0017	14	-0.20	261.35	0
261	Acid Soluble Mn (%)	0553	0.0240	0.0000	0.0241	0.0031	0.0017	14	-0.02	261.00	0
261	Acid Soluble Mn (%)	0527	0.0246	0.0003	0.0241	0.0031	0.0017	14	0.15	261.35	0
261	Acid Soluble Mn (%)	0095	0.0250	0.0100	0.0241	0.0031	0.0017	14	0.30	261.34	0
261	Acid Soluble Mn (%)	0572	0.0250	0.0100	0.0241	0.0031	0.0017	14	0.30	261.99	0
261	Acid Soluble Mn (%)	0324	0.0255	0.0010	0.0241	0.0031	0.0017	14	0.46	261.31	0
261	Acid Soluble Mn (%)	0626	0.0258	0.0008	0.0241	0.0031	0.0017	14	0.55	261.35	0
261	Acid Soluble Mn (%)	0260	0.0265	0.0010	0.0241	0.0031	0.0017	14	0.78	261.35	0
261	Acid Soluble Mn (%)	0626	0.0266	0.0011	0.0241	0.0031	0.0017	14	0.79	261.12	0
261	Acid Soluble Mn (%)	0552	0.0900	0.0000	0.0241	0.0031	0.0017	14	21.08	261.32	0
261	Acid Soluble Mn (%)	0423	276.6	7.900	0.0241	0.0031	0.0017	14	88412.15	261.34	1
281	Acid Soluble Hg (ppm)	0415	0.0030	0.0000	0.0108	0.0098	0.0023	4	-0.67	281.99	0
281	Acid Soluble Hg (ppm)	0626	0.0060	0.0004	0.0108	0.0098	0.0023	4	-0.41	281.99	0
281	Acid Soluble Hg (ppm)	0524	0.0091	0.0026	0.0108	0.0098	0.0023	4	-0.14	281.99	0
281	Acid Soluble Hg (ppm)	0630	0.0250	0.0040	0.0108	0.0098	0.0023	4	1.23	281.30	0
281	Acid Soluble Hg (ppm)	0527	< 0.001		0.0108	0.0098	0.0023	4		281.30	5
281	Acid Soluble Hg (ppm)	0572	< 0.009		0.0108	0.0098	0.0023	4		281.99	5
281	Acid Soluble Hg (ppm)	0220	< 0.01		0.0108	0.0098	0.0023	4		281.99	5
281	Acid Soluble Hg (ppm)	0515	< 0.1		0.0108	0.0098	0.0023	4		281.30	5
281	Acid Soluble Hg (ppm)	0605	< 1.25		0.0108	0.0098	0.0023	4		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2		0.0108	0.0098	0.0023	4		281.30	5
289	Acid Soluble Mo (ppm)	0524	2.512	0.0423	5.216	1.620	0.4702	14	-1.67	289.30	0
289	Acid Soluble Mo (ppm)	0234	3.000	0.0000	5.216	1.620	0.4702	14	-1.37	289.30	0
289	Acid Soluble Mo (ppm)	0572	3.225	0.0100	5.216	1.620	0.4702	14	-1.23	289.99	0
289	Acid Soluble Mo (ppm)	0136	4.725	0.5900	5.216	1.620	0.4702	14	-0.30	289.33	0
289	Acid Soluble Mo (ppm)	0527	4.899	0.3532	5.216	1.620	0.4702	14	-0.20	289.33	0
289	Acid Soluble Mo (ppm)	0255	5.047	1.226	5.216	1.620	0.4702	14	-0.10	289.30	0
289	Acid Soluble Mo (ppm)	0220	5.100	0.6000	5.216	1.620	0.4702	14	-0.07	289.32	0
289	Acid Soluble Mo (ppm)	0433	5.500	1.000	5.216	1.620	0.4702	14	0.18	289.30	0
289	Acid Soluble Mo (ppm)	0035	5.540	0.1200	5.216	1.620	0.4702	14	0.20	289.30	0
289	Acid Soluble Mo (ppm)	0086	5.980	0.1670	5.216	1.620	0.4702	14	0.47	289.33	0
289	Acid Soluble Mo (ppm)	0368	6.450	0.5000	5.216	1.620	0.4702	14	0.76	289.34	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
289	Acid Soluble Mo (ppm)	0220	6.500	0.2000	5.216	1.620	0.4702	14	0.79	289.99	0
289	Acid Soluble Mo (ppm)	0405	7.000	0.0000	5.216	1.620	0.4702	14	1.10	289.32	0
289	Acid Soluble Mo (ppm)	0494	7.275	0.9300	5.216	1.620	0.4702	14	1.27	289.33	0
289	Acid Soluble Mo (ppm)	0630	5.575	2.530	5.216	1.620	0.4702	14	0.22	289.30	1
289	Acid Soluble Mo (ppm)	0515	< 0.178		5.216	1.620	0.4702	14		289.34	5
289	Acid Soluble Mo (ppm)	0515	< 0.23		5.216	1.620	0.4702	14		289.33	5
289	Acid Soluble Mo (ppm)	0626	< 10		5.216	1.620	0.4702	14		289.33	5
291	Acid Soluble Ni (ppm)	0572	7.360	0.5400	21.45	5.650	3.442	15	-2.49	291.99	0
291	Acid Soluble Ni (ppm)	0035	14.20	4.400	21.45	5.650	3.442	15	-1.28	291.30	0
291	Acid Soluble Ni (ppm)	0136	15.85	3.880	21.45	5.650	3.442	15	-0.99	291.33	0
291	Acid Soluble Ni (ppm)	0368	17.25	0.5000	21.45	5.650	3.442	15	-0.74	291.34	0
291	Acid Soluble Ni (ppm)	0527	18.65	0.8825	21.45	5.650	3.442	15	-0.50	291.33	0
291	Acid Soluble Ni (ppm)	0630	20.09	16.19	21.45	5.650	3.442	15	-0.24	291.30	0
291	Acid Soluble Ni (ppm)	0515	21.54	8.940	21.45	5.650	3.442	15	0.02	291.34	0
291	Acid Soluble Ni (ppm)	0605	22.36	2.800	21.45	5.650	3.442	15	0.16	291.30	0
291	Acid Soluble Ni (ppm)	0524	22.44	0.1509	21.45	5.650	3.442	15	0.18	291.30	0
291	Acid Soluble Ni (ppm)	0220	22.55	3.300	21.45	5.650	3.442	15	0.19	291.32	0
291	Acid Soluble Ni (ppm)	0494	24.36	2.920	21.45	5.650	3.442	15	0.52	291.33	0
291	Acid Soluble Ni (ppm)	0086	25.15	0.6328	21.45	5.650	3.442	15	0.65	291.33	0
291	Acid Soluble Ni (ppm)	0220	26.40	1.000	21.45	5.650	3.442	15	0.88	291.99	0
291	Acid Soluble Ni (ppm)	0405	28.00	0.0000	21.45	5.650	3.442	15	1.16	291.32	0
291	Acid Soluble Ni (ppm)	0255	60.15	13.78	21.45	5.650	3.442	15	6.85	291.99	0
291	Acid Soluble Ni (ppm)	0515	55.34	77.36	21.45	5.650	3.442	15	6.00	291.33	1
301	Acid Soluble Se (ppm)	0626	0.3137	0.0168	0.8038	0.4014	0.0079	5	-1.22	301.34	0
301	Acid Soluble Se (ppm)	0630	0.5415	0.0050	0.8038	0.4014	0.0079	5	-0.65	301.30	0
301	Acid Soluble Se (ppm)	0524	0.7636	0.0019	0.8038	0.4014	0.0079	5	-0.10	301.30	0
301	Acid Soluble Se (ppm)	0220	1.100	0.0000	0.8038	0.4014	0.0079	5	0.74	301.32	0
301	Acid Soluble Se (ppm)	0220	1.300	0.0000	0.8038	0.4014	0.0079	5	1.24	301.99	0
301	Acid Soluble Se (ppm)	0368	3.600	1.000	0.8038	0.4014	0.0079	5	6.97	301.34	1
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	0.8038	0.4014	0.0079	5		301.99	4
301	Acid Soluble Se (ppm)	0527	< 0.01		0.8038	0.4014	0.0079	5		301.33	5
301	Acid Soluble Se (ppm)	0515	< 0.226		0.8038	0.4014	0.0079	5		301.34	5
301	Acid Soluble Se (ppm)	0515	< 0.27		0.8038	0.4014	0.0079	5		301.33	5
301	Acid Soluble Se (ppm)	0572	< 0.69		0.8038	0.4014	0.0079	5		301.99	5
301	Acid Soluble Se (ppm)	0605	< 1.65		0.8038	0.4014	0.0079	5		301.30	5
301	Acid Soluble Se (ppm)	0405	< 10		0.8038	0.4014	0.0079	5		301.32	5
301	Acid Soluble Se (ppm)	0035	< 12		0.8038	0.4014	0.0079	5		301.30	5
311	Sodium (%)	0423	0.2895	0.0030	0.3393	0.0377	0.0061	6	-1.18	311.33	0
311	Sodium (%)	0494	0.3256	0.0058	0.3393	0.0377	0.0061	6	-0.32	311.33	0
311	Sodium (%)	0572	0.3350	0.0100	0.3393	0.0377	0.0061	6	-0.10	311.99	0
311	Sodium (%)	0553	0.3400	0.0080	0.3393	0.0377	0.0061	6	0.02	311.00	0
311	Sodium (%)	0527	0.3557	0.0039	0.3393	0.0377	0.0061	6	0.39	311.33	0
311	Sodium (%)	0354	0.3900	0.0000	0.3393	0.0377	0.0061	6	1.20	311.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
321	Acid Soluble Zn (%)	0234	0.0259	0.0004	0.0323	0.0034	0.0014	25	-1.87	321.30	0
321	Acid Soluble Zn (%)	0494	0.0280	0.0003	0.0323	0.0034	0.0014	25	-1.27	321.33	0
321	Acid Soluble Zn (%)	0527	0.0290	0.0004	0.0323	0.0034	0.0014	25	-0.96	321.33	0
321	Acid Soluble Zn (%)	0136	0.0290	0.0000	0.0323	0.0034	0.0014	25	-0.96	321.33	0
321	Acid Soluble Zn (%)	0354	0.0300	0.0000	0.0323	0.0034	0.0014	25	-0.67	321.30	0
321	Acid Soluble Zn (%)	0421	0.0300	0.0000	0.0323	0.0034	0.0014	25	-0.67	321.33	0
321	Acid Soluble Zn (%)	0472	0.0300	0.0000	0.0323	0.0034	0.0014	25	-0.67	321.33	0
321	Acid Soluble Zn (%)	0572	0.0300	0.0000	0.0323	0.0034	0.0014	25	-0.67	321.99	0
321	Acid Soluble Zn (%)	0515	0.0305	0.0115	0.0323	0.0034	0.0014	25	-0.54	321.99	0
321	Acid Soluble Zn (%)	0035	0.0310	0.0020	0.0323	0.0034	0.0014	25	-0.38	321.30	0
321	Acid Soluble Zn (%)	0626	0.0314	0.0011	0.0323	0.0034	0.0014	25	-0.28	321.33	0
321	Acid Soluble Zn (%)	0626	0.0315	0.0006	0.0323	0.0034	0.0014	25	-0.24	321.00	0
321	Acid Soluble Zn (%)	0043	0.0315	0.0010	0.0323	0.0034	0.0014	25	-0.24	321.33	0
321	Acid Soluble Zn (%)	0220	0.0316	0.0015	0.0323	0.0034	0.0014	25	-0.22	321.32	0
321	Acid Soluble Zn (%)	0405	0.0323	0.0005	0.0323	0.0034	0.0014	25	-0.02	321.32	0
321	Acid Soluble Zn (%)	0553	0.0335	0.0010	0.0323	0.0034	0.0014	25	0.35	321.00	0
321	Acid Soluble Zn (%)	0524	0.0339	0.0000	0.0323	0.0034	0.0014	25	0.46	321.99	0
321	Acid Soluble Zn (%)	0260	0.0340	0.0000	0.0323	0.0034	0.0014	25	0.49	321.33	0
321	Acid Soluble Zn (%)	0630	0.0346	0.0018	0.0323	0.0034	0.0014	25	0.67	321.33	0
321	Acid Soluble Zn (%)	0095	0.0350	0.0100	0.0323	0.0034	0.0014	25	0.78	321.32	0
321	Acid Soluble Zn (%)	0255	0.0355	0.0010	0.0323	0.0034	0.0014	25	0.93	321.30	0
321	Acid Soluble Zn (%)	0368	0.0361	0.0000	0.0323	0.0034	0.0014	25	1.10	321.99	0
321	Acid Soluble Zn (%)	0515	0.0471	0.0356	0.0323	0.0034	0.0014	25	4.31	321.33	0
321	Acid Soluble Zn (%)	0433	0.0520	0.0020	0.0323	0.0034	0.0014	25	5.73	321.30	0
321	Acid Soluble Zn (%)	0552	0.0800	0.0000	0.0323	0.0034	0.0014	25	13.89	321.30	0
321	Acid Soluble Zn (%)	0086	309.7	4.711	0.0323	0.0034	0.0014	25	90149.56	321.33	1
325	Water Soluble Zn (%)	0572	0.0100	0.0200				0		325.99	4
431	Soluble Si in nonliquids (%)	0572	< 0.007					0		431.99	5
441	Humic Acids (%)	0136	1.100	0.2400	2.087	0.4709	0.2080	12	-2.10	441.00	0
441	Humic Acids (%)	0562	1.750	0.1000	2.087	0.4709	0.2080	12	-0.72	441.10	0
441	Humic Acids (%)	0600	1.750	0.1000	2.087	0.4709	0.2080	12	-0.72	441.10	0
441	Humic Acids (%)	0619	1.800	0.0000	2.087	0.4709	0.2080	12	-0.61	441.10	0
441	Humic Acids (%)	0572	1.800	0.4400	2.087	0.4709	0.2080	12	-0.61	441.99	0
441	Humic Acids (%)	0501	2.060	0.3600	2.087	0.4709	0.2080	12	-0.06	441.00	0
441	Humic Acids (%)	0565	2.150	0.1000	2.087	0.4709	0.2080	12	0.13	441.10	0
441	Humic Acids (%)	0559	2.155	0.0100	2.087	0.4709	0.2080	12	0.14	441.99	0
441	Humic Acids (%)	0626	2.315	0.1900	2.087	0.4709	0.2080	12	0.48	441.00	0
441	Humic Acids (%)	0220	2.430	0.3800	2.087	0.4709	0.2080	12	0.73	441.00	0
441	Humic Acids (%)	0626	2.660	0.1600	2.087	0.4709	0.2080	12	1.22	441.99	0
441	Humic Acids (%)	0619	5.250	0.0000	2.087	0.4709	0.2080	12	6.72	441.99	0
451	Hydrophobic Fulvic Acids (%)	0626	1.730	0.1600				1		451.00	0

Interpreting Z Scores and Flags:

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)

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				

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.

Notes:

*Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. Identical duplicates not included in calculation of Rob R-bar. Your offset values are higher (‡) or lower (†) than the Robust Analyte value ± Investigational Allowance. Analyte codes in light greer indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.