

Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 36

Sample # 230411

Regular PT Scheme

Labs Reporting: 68

Grade 1-3-2

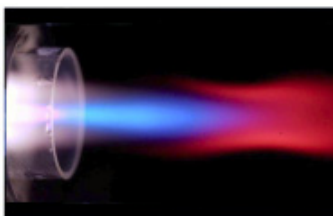
Statistical Summary

Issue Date : 05/31/2023

Analyte Code	Analyte Sample # 230411	# 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 (%)	11	10	1.382	0.2507	1.366		0.2931	0.1158	21.45%		0.0452	3.82%
002	Nitrate N (%)	2	2	0.0188	0.0088								
005	Urea N (%)	1		0.1650									
007	Urea (%)	1		0.1700									
009	Ammoniacal Plus Nitrate N (%)	1		1.990									
010	Total N (1%)	53	51	1.684	0.2848	1.644	0.4900	0.1104	0.0193	6.72%	0.53	0.0595	3.71%
020	Total P2O5 (%)	34	32	3.780	1.228	3.898		0.7332	0.1620	18.81%		0.1205	3.26%
040	Indirect Available P2O5 (3%)	1		4.217									
041	Direct Available P2O5 (3%)	36	35	3.989	0.6493	4.035	0.6700	0.4946	0.1045	12.26%	1.72	0.0911	3.24%
048	Water Soluble P2O5 (%)	2	2	3.279	1.300								
050	Soluble K2O (2%)	68	66	2.234	2.144	1.950	0.4100	0.1676	0.0258	8.59%	0.95	0.0639	3.62%
060	Water (Free) (%)	2	2	1.994	2.816								
101	Acid Soluble Ca (%)	10	9	3.092	7.945	0.5368	0.2268	0.0847	0.0353	15.79%	0.87	0.0374	4.39%
121	Acid Soluble Mg (2%)	42	40	0.7005	1.341	0.3525	0.2176	0.0347	0.0069	9.84%	0.37	0.0182	4.68%
131	Water Soluble Mg (%)	9	9	0.5466	0.5553	0.3949		0.1590	0.0662	40.26%		0.0206	4.60%
143	Elemental S (%)	4	4	3.599	3.727	3.599		3.727	2.329	103.55%		0.0178	3.30%
145	Sulfate S, HCl soluble (%)	6	6	8.163	0.5054	8.163		0.5731	0.2925	7.02%		0.1628	2.92%
148	Total S (2%)	33	32	7.307	2.513	7.652	0.5826	1.229	0.2717	16.07%	4.92	0.1933	2.94%
149	S - HNO3 soluble (%)	1		7.805									
151	Acid Soluble As (ppm)	15	15	750.7	298.8	758.9		168.6	54.43	22.22%		64.28	5.90%
165	Acid Soluble B (%)	9	6	0.1235	0.3036	0.0194	0.0059	0.0144	0.0073	74.22%	5.67	0.0155	7.24%
181	Acid Soluble Cd (ppm)	16	15	1,517	545.2	1,609		366.7	118.4	22.79%		75.08	5.27%
191	Acid Soluble Cr (ppm)	13	12	197.1	367.8	49.88		18.60	6.713	37.29%		10.18	8.88%
202	Acid Soluble Co (ppm)	15	14	74.16	17.47	74.60	23.3808	19.04	6.361	25.52%	1.90	4.624	8.36%
221	Acid Soluble Cu (4%)	50	49	3.334	0.5526	3.390	0.3440	0.2602	0.0465	7.67%	1.76	0.1102	3.33%
241	Acid Soluble Fe (35%)	43	41	22.93	8.187	22.80	1.0000	9.455	1.846	41.47%	22.03	0.5649	2.09%
251	Acid Soluble Pb (ppm)	14	14	7,626	3,390	8,141		2,622	876.0	32.21%		688.8	4.13%
261	Acid Soluble Mn (0.5%)	41	39	0.2832	0.3246	0.2084	0.0258	0.0204	0.0041	9.77%	1.84	0.0159	5.06%
271	Water Soluble Mn (%)	3	3	0.2522	0.1761	0.2522		0.1761	0.1271	69.83%		0.0177	4.92%

Analyte Code	Analyte Sample # 230411	# 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
281	Acid Soluble Hg (ppm)	6	5	1,387	1,170	1,665		1,065	595.1	63.95%		197.9	5.24%
289	Acid Soluble Mo (ppm)	13	8	4.894	6.489	3.568	2.0704	2.650	1.171	74.26%	2.98	0.6088	13.21%
291	Acid Soluble Ni (ppm)	15	13	26.58	24.94	20.73		7.278	2.523	35.11%		1.514	10.14%
301	Acid Soluble Se (ppm)	12	11	6,170	3,093	6,666		2,439	919.1	36.58%		602.1	4.25%
311	Sodium (%)	5	5	0.2610	0.0258	0.2610	0.0311	0.0258	0.0144	9.88%	1.93	0.0133	4.90%
321	Acid Soluble Zn (7%)	51	49	6.598	2.688	6.374	0.6424	0.5980	0.1068	9.38%	2.17	0.2584	3.03%
325	Water Soluble Zn (%)	5	5	6.043	0.7944	6.043		0.7944	0.4441	13.15%		0.0300	3.05%

The Analyte IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Analyte Assigned Value}$. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.



Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 36

Sample # 230411

Regular PT Scheme

Labs Reporting: 68

Grade 1-3-2

Lab Values

Issue Date : 05/31/2023

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal N (%)	0584	0.9350	0.0100	1.366	0.2931	0.0452	10	-1.37	001.99	0
001	Ammoniacal N (%)	0510	0.9596	0.0004	1.366	0.2931	0.0452	10	-1.29	001.99	0
001	Ammoniacal N (%)	0220	1.155	0.0500	1.366	0.2931	0.0452	10	-0.67	001.99	0
001	Ammoniacal N (%)	0389	1.390	0.0600	1.366	0.2931	0.0452	10	0.08	001.10	0
001	Ammoniacal N (%)	0451	1.425	0.0700	1.366	0.2931	0.0452	10	0.19	001.10	0
001	Ammoniacal N (%)	0587	1.485	0.0300	1.366	0.2931	0.0452	10	0.38	001.10	0
001	Ammoniacal N (%)	0572	1.512	0.0320	1.366	0.2931	0.0452	10	0.46	001.99	0
001	Ammoniacal N (%)	0419	1.580	0.0600	1.366	0.2931	0.0452	10	0.68	001.99	0
001	Ammoniacal N (%)	0605	1.585	0.0700	1.366	0.2931	0.0452	10	0.69	001.99	0
001	Ammoniacal N (%)	0255	1.635	0.0700	1.366	0.2931	0.0452	10	0.85	001.99	0
001	Ammoniacal N (%)	0027	1.540	0.2800	1.366	0.2931	0.0452	10	0.55	001.99	1
002	Nitrate N (%)	0220	0.0125	0.0010				2		002.99	0
002	Nitrate N (%)	0605	0.0250	0.0100				2		002.99	0
005	Urea N (%)	0027	0.1650	0.0500				1		005.99	0
007	Urea (%)	0220	0.1700	0.0000				1		007.99	0
009	Ammoniacal Plus Nitrate N (%)	0587	1.990	0.0400				1		009.10	0
010	Total N (1%)	0510	1.130†	0.0002	1.644	0.1104	0.0595	51	-4.65	010.11	0
010	Total N (1%)	0588	1.340	0.1000	1.644	0.1104	0.0595	51	-2.75	010.60	0
010	Total N (1%)	0452	1.445	0.0300	1.644	0.1104	0.0595	51	-1.80	010.60	0
010	Total N (1%)	0527	1.456	0.0600	1.644	0.1104	0.0595	51	-1.70	010.60	0
010	Total N (1%)	0234	1.530	0.0200	1.644	0.1104	0.0595	51	-1.03	010.60	0
010	Total N (1%)	0043	1.535	0.0300	1.644	0.1104	0.0595	51	-0.98	010.60	0
010	Total N (1%)	0324	1.540	0.0000	1.644	0.1104	0.0595	51	-0.94	010.60	0
010	Total N (1%)	0609	1.540	0.0400	1.644	0.1104	0.0595	51	-0.94	010.60	0
010	Total N (1%)	0049	1.545	0.0300	1.644	0.1104	0.0595	51	-0.89	010.60	0
010	Total N (1%)	0136	1.555	0.0100	1.644	0.1104	0.0595	51	-0.80	010.60	0
010	Total N (1%)	0260	1.555	0.0500	1.644	0.1104	0.0595	51	-0.80	010.60	0
010	Total N (1%)	0624	1.575	0.0100	1.644	0.1104	0.0595	51	-0.62	010.60	0
010	Total N (1%)	0572	1.594	0.1210	1.644	0.1104	0.0595	51	-0.45	010.12	0
010	Total N (1%)	0508	1.595	0.0900	1.644	0.1104	0.0595	51	-0.44	010.99	0
010	Total N (1%)	0419	1.595	0.0500	1.644	0.1104	0.0595	51	-0.44	010.11	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total N (1%)	0035	1.600	0.0000	1.644	0.1104	0.0595	51	-0.40	010.60	0
010	Total N (1%)	0231	1.600	0.0400	1.644	0.1104	0.0595	51	-0.40	010.60	0
010	Total N (1%)	0354	1.600	0.0400	1.644	0.1104	0.0595	51	-0.40	010.60	0
010	Total N (1%)	0086	1.601	0.0355	1.644	0.1104	0.0595	51	-0.38	010.60	0
010	Total N (1%)	0472	1.605	0.0100	1.644	0.1104	0.0595	51	-0.35	010.60	0
010	Total N (1%)	0360	1.610	0.0800	1.644	0.1104	0.0595	51	-0.31	010.60	0
010	Total N (1%)	0389	1.610	0.0200	1.644	0.1104	0.0595	51	-0.31	010.60	0
010	Total N (1%)	0055	1.615	0.1500	1.644	0.1104	0.0595	51	-0.26	010.60	0
010	Total N (1%)	0605	1.615	0.0900	1.644	0.1104	0.0595	51	-0.26	010.99	0
010	Total N (1%)	0095	1.620	0.0000	1.644	0.1104	0.0595	51	-0.22	010.60	0
010	Total N (1%)	0619	1.620	0.0400	1.644	0.1104	0.0595	51	-0.22	010.60	0
010	Total N (1%)	0619	1.620	0.0400	1.644	0.1104	0.0595	51	-0.22	010.99	0
010	Total N (1%)	0422	1.635	0.0300	1.644	0.1104	0.0595	51	-0.08	010.60	0
010	Total N (1%)	0485	1.640	0.0200	1.644	0.1104	0.0595	51	-0.03	010.60	0
010	Total N (1%)	0612	1.640	0.0200	1.644	0.1104	0.0595	51	-0.03	010.60	0
010	Total N (1%)	0177	1.644	0.0450	1.644	0.1104	0.0595	51	0.00	010.60	0
010	Total N (1%)	0451	1.647	0.0790	1.644	0.1104	0.0595	51	0.02	010.60	0
010	Total N (1%)	0534	1.665	0.0500	1.644	0.1104	0.0595	51	0.19	010.60	0
010	Total N (1%)	0106	1.675	0.0500	1.644	0.1104	0.0595	51	0.28	010.60	0
010	Total N (1%)	0233	1.676	0.0290	1.644	0.1104	0.0595	51	0.29	010.60	0
010	Total N (1%)	0494	1.690	0.0000	1.644	0.1104	0.0595	51	0.42	010.60	0
010	Total N (1%)	0029	1.692	0.0290	1.644	0.1104	0.0595	51	0.43	010.60	0
010	Total N (1%)	0042	1.700	0.0000	1.644	0.1104	0.0595	51	0.51	010.60	0
010	Total N (1%)	0543	1.706	0.1430	1.644	0.1104	0.0595	51	0.56	010.60	0
010	Total N (1%)	0023	1.737	0.0800	1.644	0.1104	0.0595	51	0.84	010.60	0
010	Total N (1%)	0521	1.750	0.0400	1.644	0.1104	0.0595	51	0.96	010.60	0
010	Total N (1%)	0558	1.758	0.0122	1.644	0.1104	0.0595	51	1.03	010.99	0
010	Total N (1%)	0291	1.775	0.0100	1.644	0.1104	0.0595	51	1.19	010.60	0
010	Total N (1%)	0073	1.780	0.0000	1.644	0.1104	0.0595	51	1.23	010.60	0
010	Total N (1%)	0587	1.780	0.0800	1.644	0.1104	0.0595	51	1.23	010.99	0
010	Total N (1%)	0255	1.813	0.1900	1.644	0.1104	0.0595	51	1.53	010.60	0
010	Total N (1%)	0027	1.850	0.2000	1.644	0.1104	0.0595	51	1.87	010.60	0
010	Total N (1%)	0559	1.950	0.0200	1.644	0.1104	0.0595	51	2.77	010.99	0
010	Total N (1%)	0600	1.960	0.0800	1.644	0.1104	0.0595	51	2.86	010.99	0
010	Total N (1%)	0562	1.965	0.0500	1.644	0.1104	0.0595	51	2.91	010.99	0
010	Total N (1%)	0034	2.095	0.2320	1.644	0.1104	0.0595	51	4.09	010.60	0
010	Total N (1%)	0220	1.770	0.3400	1.644	0.1104	0.0595	51	1.14	010.60	1
010	Total N (1%)	0102	3.400±	0.0800	1.644	0.1104	0.0595	51	15.90	010.60	2
020	Total P2O5 (%)	0255	0.8035	0.0370	3.898	0.7332	0.1205	32	-4.22	020.50	0
020	Total P2O5 (%)	0605	1.905	0.0100	3.898	0.7332	0.1205	32	-2.72	020.50	0
020	Total P2O5 (%)	0559	2.935	0.0100	3.898	0.7332	0.1205	32	-1.31	020.99	0
020	Total P2O5 (%)	0562	2.940	0.0200	3.898	0.7332	0.1205	32	-1.31	020.99	0
020	Total P2O5 (%)	0534	3.025	0.0100	3.898	0.7332	0.1205	32	-1.19	020.20	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020	Total P2O5 (%)	0521	3.052	0.0040	3.898	0.7332	0.1205	32	-1.15	020.50	0
020	Total P2O5 (%)	0600	3.150	0.1000	3.898	0.7332	0.1205	32	-1.02	020.99	0
020	Total P2O5 (%)	0433	3.325	0.2300	3.898	0.7332	0.1205	32	-0.78	020.50	0
020	Total P2O5 (%)	0472	3.415	0.1300	3.898	0.7332	0.1205	32	-0.66	020.50	0
020	Total P2O5 (%)	0260	3.643	0.5310	3.898	0.7332	0.1205	32	-0.35	020.50	0
020	Total P2O5 (%)	0543	3.654	0.0930	3.898	0.7332	0.1205	32	-0.33	020.50	0
020	Total P2O5 (%)	0510	3.766	0.0019	3.898	0.7332	0.1205	32	-0.18	020.20	0
020	Total P2O5 (%)	0588	3.772	0.3730	3.898	0.7332	0.1205	32	-0.17	020.50	0
020	Total P2O5 (%)	0035	3.800	0.2000	3.898	0.7332	0.1205	32	-0.13	020.40	0
020	Total P2O5 (%)	0389	3.890	0.0400	3.898	0.7332	0.1205	32	-0.01	020.50	0
020	Total P2O5 (%)	0527	4.016	0.0156	3.898	0.7332	0.1205	32	0.16	020.50	0
020	Total P2O5 (%)	0619	4.020	0.0800	3.898	0.7332	0.1205	32	0.17	020.50	0
020	Total P2O5 (%)	0619	4.020	0.0800	3.898	0.7332	0.1205	32	0.17	020.99	0
020	Total P2O5 (%)	0231	4.055	0.0900	3.898	0.7332	0.1205	32	0.21	020.50	0
020	Total P2O5 (%)	0587	4.135	0.0100	3.898	0.7332	0.1205	32	0.32	020.99	0
020	Total P2O5 (%)	0291	4.240	0.0200	3.898	0.7332	0.1205	32	0.47	020.50	0
020	Total P2O5 (%)	0515	4.271	0.1620	3.898	0.7332	0.1205	32	0.51	020.99	0
020	Total P2O5 (%)	0234	4.295	0.0300	3.898	0.7332	0.1205	32	0.54	020.50	0
020	Total P2O5 (%)	0307	4.320	0.0400	3.898	0.7332	0.1205	32	0.58	020.50	0
020	Total P2O5 (%)	0157	4.375	0.1500	3.898	0.7332	0.1205	32	0.65	020.10	0
020	Total P2O5 (%)	0619	4.445	0.2700	3.898	0.7332	0.1205	32	0.75	020.10	0
020	Total P2O5 (%)	0572	4.514	0.3000	3.898	0.7332	0.1205	32	0.84	020.99	0
020	Total P2O5 (%)	0552	4.620	0.4000	3.898	0.7332	0.1205	32	0.99	020.50	0
020	Total P2O5 (%)	0405	4.655	0.0300	3.898	0.7332	0.1205	32	1.03	020.20	0
020	Total P2O5 (%)	0451	4.789	0.0150	3.898	0.7332	0.1205	32	1.21	020.50	0
020	Total P2O5 (%)	0542	5.743	0.2730	3.898	0.7332	0.1205	32	2.52	020.50	0
020	Total P2O5 (%)	0042	7.050	0.1000	3.898	0.7332	0.1205	32	4.30	020.40	0
020	Total P2O5 (%)	0324	3.885	1.210	3.898	0.7332	0.1205	32	-0.02	020.20	1
020	Total P2O5 (%)	0422	0.0000	0.0000	3.898	0.7332	0.1205	32		020.50	4
040	Indirect Available P2O5 (3%)	0558	4.217±	0.0118				1		040.20	0
041	Direct Available P2O5 (3%)	0354	2.030†	0.0000	4.035	0.4946	0.0911	35	-4.05	041.21	0
041	Direct Available P2O5 (3%)	0559	2.875†	0.0100	4.035	0.4946	0.0911	35	-2.35	041.99	0
041	Direct Available P2O5 (3%)	0600	2.875†	0.0500	4.035	0.4946	0.0911	35	-2.35	041.99	0
041	Direct Available P2O5 (3%)	0562	2.885†	0.0500	4.035	0.4946	0.0911	35	-2.33	041.99	0
041	Direct Available P2O5 (3%)	0536	3.035†	0.0500	4.035	0.4946	0.0911	35	-2.02	041.99	0
041	Direct Available P2O5 (3%)	0518	3.150†	0.1000	4.035	0.4946	0.0911	35	-1.79	041.99	0
041	Direct Available P2O5 (3%)	0553	3.542	0.0300	4.035	0.4946	0.0911	35	-1.00	041.20	0
041	Direct Available P2O5 (3%)	0472	3.625	0.1100	4.035	0.4946	0.0911	35	-0.83	041.21	0
041	Direct Available P2O5 (3%)	0494	3.770	0.3200	4.035	0.4946	0.0911	35	-0.54	041.51	0
041	Direct Available P2O5 (3%)	0027	3.845	0.1900	4.035	0.4946	0.0911	35	-0.39	041.20	0
041	Direct Available P2O5 (3%)	0231	3.870	0.1200	4.035	0.4946	0.0911	35	-0.33	041.51	0
041	Direct Available P2O5 (3%)	0136	3.905	0.0300	4.035	0.4946	0.0911	35	-0.26	041.51	0
041	Direct Available P2O5 (3%)	0049	3.975	0.1100	4.035	0.4946	0.0911	35	-0.12	041.11	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041	Direct Available P2O5 (3%)	0452	4.010	0.0200	4.035	0.4946	0.0911	35	-0.05	041.20	0
041	Direct Available P2O5 (3%)	0419	4.025	0.1500	4.035	0.4946	0.0911	35	-0.02	041.21	0
041	Direct Available P2O5 (3%)	0106	4.040	0.0600	4.035	0.4946	0.0911	35	0.01	041.21	0
041	Direct Available P2O5 (3%)	0023	4.069	0.1520	4.035	0.4946	0.0911	35	0.07	041.51	0
041	Direct Available P2O5 (3%)	0025	4.175	0.0500	4.035	0.4946	0.0911	35	0.28	041.51	0
041	Direct Available P2O5 (3%)	0055	4.195	0.0100	4.035	0.4946	0.0911	35	0.32	041.11	0
041	Direct Available P2O5 (3%)	0605	4.205	0.1500	4.035	0.4946	0.0911	35	0.34	041.50	0
041	Direct Available P2O5 (3%)	0485	4.220	0.0000	4.035	0.4946	0.0911	35	0.37	041.11	0
041	Direct Available P2O5 (3%)	0043	4.260	0.0200	4.035	0.4946	0.0911	35	0.45	041.51	0
041	Direct Available P2O5 (3%)	0494	4.265	0.0900	4.035	0.4946	0.0911	35	0.46	041.10	0
041	Direct Available P2O5 (3%)	0360	4.265	0.0300	4.035	0.4946	0.0911	35	0.46	041.51	0
041	Direct Available P2O5 (3%)	0220	4.335	0.0700	4.035	0.4946	0.0911	35	0.61	041.11	0
041	Direct Available P2O5 (3%)	0018	4.335	0.1300	4.035	0.4946	0.0911	35	0.61	041.40	0
041	Direct Available P2O5 (3%)	0073	4.385	0.1700	4.035	0.4946	0.0911	35	0.71	041.11	0
041	Direct Available P2O5 (3%)	0405	4.390	0.0000	4.035	0.4946	0.0911	35	0.72	041.11	0
041	Direct Available P2O5 (3%)	0102	4.405	0.1900	4.035	0.4946	0.0911	35	0.75	041.10	0
041	Direct Available P2O5 (3%)	0029	4.413	0.0030	4.035	0.4946	0.0911	35	0.76	041.40	0
041	Direct Available P2O5 (3%)	0095	4.430	0.1800	4.035	0.4946	0.0911	35	0.80	041.21	0
041	Direct Available P2O5 (3%)	0034	4.478	0.0130	4.035	0.4946	0.0911	35	0.89	041.40	0
041	Direct Available P2O5 (3%)	0584	4.587	0.0270	4.035	0.4946	0.0911	35	1.11	041.99	0
041	Direct Available P2O5 (3%)	0055	4.685	0.0300	4.035	0.4946	0.0911	35	1.31	041.21	0
041	Direct Available P2O5 (3%)	0609	5.500±	0.2000	4.035	0.4946	0.0911	35	2.96	041.21	0
041	Direct Available P2O5 (3%)	0233	4.536	0.5840	4.035	0.4946	0.0911	35	1.01	041.51	1
048	Water Soluble P2O5 (%)	0472	2.360	0.0600				2		048.20	0
048	Water Soluble P2O5 (%)	0086	4.199	0.1286				2		048.10	0
050	Soluble K2O (2%)	0494	1.180†	0.1000	1.950	0.1676	0.0639	66	-4.59	050.00	0
050	Soluble K2O (2%)	0609	1.375†	0.0100	1.950	0.1676	0.0639	66	-3.43	050.60	0
050	Soluble K2O (2%)	0558	1.717	0.0084	1.950	0.1676	0.0639	66	-1.39	050.30	0
050	Soluble K2O (2%)	0485	1.740	0.1400	1.950	0.1676	0.0639	66	-1.25	050.00	0
050	Soluble K2O (2%)	0452	1.745	0.0500	1.950	0.1676	0.0639	66	-1.22	050.51	0
050	Soluble K2O (2%)	0422	1.750	0.0181	1.950	0.1676	0.0639	66	-1.19	050.50	0
050	Soluble K2O (2%)	0055	1.755	0.0700	1.950	0.1676	0.0639	66	-1.16	050.50	0
050	Soluble K2O (2%)	0543	1.755	0.0940	1.950	0.1676	0.0639	66	-1.16	050.52	0
050	Soluble K2O (2%)	0324	1.770	0.1200	1.950	0.1676	0.0639	66	-1.07	050.50	0
050	Soluble K2O (2%)	0027	1.775	0.0700	1.950	0.1676	0.0639	66	-1.04	050.99	0
050	Soluble K2O (2%)	0521	1.785	0.0300	1.950	0.1676	0.0639	66	-0.99	050.99	0
050	Soluble K2O (2%)	0106	1.795	0.0700	1.950	0.1676	0.0639	66	-0.93	050.50	0
050	Soluble K2O (2%)	0025	1.800	0.1400	1.950	0.1676	0.0639	66	-0.90	050.52	0
050	Soluble K2O (2%)	0102	1.810	0.0000	1.950	0.1676	0.0639	66	-0.84	050.00	0
050	Soluble K2O (2%)	0619	1.825	0.0100	1.950	0.1676	0.0639	66	-0.75	050.50	0
050	Soluble K2O (2%)	0619	1.825	0.0100	1.950	0.1676	0.0639	66	-0.75	050.99	0
050	Soluble K2O (2%)	0494	1.845	0.1500	1.950	0.1676	0.0639	66	-0.63	050.52	0
050	Soluble K2O (2%)	0018	1.845	0.0700	1.950	0.1676	0.0639	66	-0.63	050.62	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble K2O (2%)	0389	1.850	0.0200	1.950	0.1676	0.0639	66	-0.60	050.99	0
050	Soluble K2O (2%)	0117	1.854	0.0447	1.950	0.1676	0.0639	66	-0.57	050.50	0
050	Soluble K2O (2%)	0605	1.860	0.0400	1.950	0.1676	0.0639	66	-0.54	050.99	0
050	Soluble K2O (2%)	0023	1.871	0.0260	1.950	0.1676	0.0639	66	-0.47	050.52	0
050	Soluble K2O (2%)	0419	1.880	0.0400	1.950	0.1676	0.0639	66	-0.42	050.50	0
050	Soluble K2O (2%)	0233	1.888	0.0330	1.950	0.1676	0.0639	66	-0.37	050.52	0
050	Soluble K2O (2%)	0588	1.889	0.2110	1.950	0.1676	0.0639	66	-0.37	050.99	0
050	Soluble K2O (2%)	0055	1.890	0.0200	1.950	0.1676	0.0639	66	-0.36	050.00	0
050	Soluble K2O (2%)	0043	1.890	0.0400	1.950	0.1676	0.0639	66	-0.36	050.52	0
050	Soluble K2O (2%)	0307	1.890	0.2200	1.950	0.1676	0.0639	66	-0.36	050.99	0
050	Soluble K2O (2%)	0029	1.902	0.0980	1.950	0.1676	0.0639	66	-0.29	050.62	0
050	Soluble K2O (2%)	0472	1.915	0.0700	1.950	0.1676	0.0639	66	-0.21	050.32	0
050	Soluble K2O (2%)	0536	1.915	0.0300	1.950	0.1676	0.0639	66	-0.21	050.99	0
050	Soluble K2O (2%)	0255	1.918	0.0730	1.950	0.1676	0.0639	66	-0.19	050.99	0
050	Soluble K2O (2%)	0559	1.925	0.0100	1.950	0.1676	0.0639	66	-0.15	050.99	0
050	Soluble K2O (2%)	0177	1.927	0.0307	1.950	0.1676	0.0639	66	-0.14	050.99	0
050	Soluble K2O (2%)	0562	1.930	0.0600	1.950	0.1676	0.0639	66	-0.12	050.99	0
050	Soluble K2O (2%)	0600	1.930	0.0600	1.950	0.1676	0.0639	66	-0.12	050.99	0
050	Soluble K2O (2%)	0220	1.955	0.0100	1.950	0.1676	0.0639	66	0.03	050.00	0
050	Soluble K2O (2%)	0619	1.980	0.0000	1.950	0.1676	0.0639	66	0.18	050.00	0
050	Soluble K2O (2%)	0073	2.000	0.0000	1.950	0.1676	0.0639	66	0.30	050.30	0
050	Soluble K2O (2%)	0291	2.000	0.0200	1.950	0.1676	0.0639	66	0.30	050.51	0
050	Soluble K2O (2%)	0136	2.000	0.0400	1.950	0.1676	0.0639	66	0.30	050.52	0
050	Soluble K2O (2%)	0234	2.015	0.1300	1.950	0.1676	0.0639	66	0.39	050.99	0
050	Soluble K2O (2%)	0360	2.020	0.0200	1.950	0.1676	0.0639	66	0.42	050.52	0
050	Soluble K2O (2%)	0485	2.020	0.2800	1.950	0.1676	0.0639	66	0.42	050.52	0
050	Soluble K2O (2%)	0231	2.025	0.0100	1.950	0.1676	0.0639	66	0.45	050.99	0
050	Soluble K2O (2%)	0587	2.035	0.0500	1.950	0.1676	0.0639	66	0.51	050.99	0
050	Soluble K2O (2%)	0231	2.045	0.1100	1.950	0.1676	0.0639	66	0.57	050.50	0
050	Soluble K2O (2%)	0624	2.045	0.1100	1.950	0.1676	0.0639	66	0.57	050.99	0
050	Soluble K2O (2%)	0035	2.050	0.1000	1.950	0.1676	0.0639	66	0.60	050.61	0
050	Soluble K2O (2%)	0584	2.055	0.0100	1.950	0.1676	0.0639	66	0.63	050.61	0
050	Soluble K2O (2%)	0510	2.061	0.0051	1.950	0.1676	0.0639	66	0.66	050.60	0
050	Soluble K2O (2%)	0542	2.072	0.0672	1.950	0.1676	0.0639	66	0.73	050.99	0
050	Soluble K2O (2%)	0451	2.082	0.0360	1.950	0.1676	0.0639	66	0.79	050.99	0
050	Soluble K2O (2%)	0527	2.095	0.1704	1.950	0.1676	0.0639	66	0.87	050.99	0
050	Soluble K2O (2%)	0086	2.107	0.0630	1.950	0.1676	0.0639	66	0.94	050.50	0
050	Soluble K2O (2%)	0518	2.110	0.0000	1.950	0.1676	0.0639	66	0.95	050.99	0
050	Soluble K2O (2%)	0508	2.125	0.0300	1.950	0.1676	0.0639	66	1.04	050.99	0
050	Soluble K2O (2%)	0553	2.139	0.0240	1.950	0.1676	0.0639	66	1.13	050.99	0
050	Soluble K2O (2%)	0095	2.230	0.0200	1.950	0.1676	0.0639	66	1.67	050.62	0
050	Soluble K2O (2%)	0034	2.252	0.0406	1.950	0.1676	0.0639	66	1.80	050.62	0
050	Soluble K2O (2%)	0042	2.305	0.0900	1.950	0.1676	0.0639	66	2.12	050.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble K2O (2%)	0552	2.320	0.0200	1.950	0.1676	0.0639	66	2.21	050.99	0
050	Soluble K2O (2%)	0405	2.325	0.0100	1.950	0.1676	0.0639	66	2.24	050.00	0
050	Soluble K2O (2%)	0515	2.456±	0.0600	1.950	0.1676	0.0639	66	3.02	050.99	0
050	Soluble K2O (2%)	0609	2.650±	0.1000	1.950	0.1676	0.0639	66	4.18	050.62	0
050	Soluble K2O (2%)	0354	3.495±	0.0500	1.950	0.1676	0.0639	66	9.22	050.52	0
050	Soluble K2O (2%)	0260	2.104	0.3610	1.950	0.1676	0.0639	66	0.92	050.99	1
050	Soluble K2O (2%)	0433	19.50±	0.1200	1.950	0.1676	0.0639	66	104.71	050.99	2
060	Water (Free) (%)	0518	2.830	0.1000				2		060.30	0
060	Water (Free) (%)	0510	3,986	7,970				2		060.99	0
101	Acid Soluble Ca (%)	0527	0.4606	0.0315	0.5368	0.0847	0.0374	9	-0.83	101.33	0
101	Acid Soluble Ca (%)	0307	0.4950	0.0100	0.5368	0.0847	0.0374	9	-0.46	101.99	0
101	Acid Soluble Ca (%)	0572	0.4955	0.0110	0.5368	0.0847	0.0374	9	-0.45	101.99	0
101	Acid Soluble Ca (%)	0035	0.4995	0.0590	0.5368	0.0847	0.0374	9	-0.41	101.30	0
101	Acid Soluble Ca (%)	0472	0.5000	0.0200	0.5368	0.0847	0.0374	9	-0.40	101.33	0
101	Acid Soluble Ca (%)	0624	0.5190	0.0000	0.5368	0.0847	0.0374	9	-0.19	101.33	0
101	Acid Soluble Ca (%)	0494	0.5342	0.0603	0.5368	0.0847	0.0374	9	-0.03	101.33	0
101	Acid Soluble Ca (%)	0354	0.7100	0.0000	0.5368	0.0847	0.0374	9	1.89	101.30	0
101	Acid Soluble Ca (%)	0552	1.005	0.0700	0.5368	0.0847	0.0374	9	5.10	101.99	0
101	Acid Soluble Ca (%)	0630	25.70	1.200	0.5368	0.0847	0.0374	9	274.07	101.33	1
121	Acid Soluble Mg (2%)	0405	0.2845	0.0030	0.3525	0.0347	0.0182	40	-1.96	121.32	0
121	Acid Soluble Mg (2%)	0023	0.3000	0.0120	0.3525	0.0347	0.0182	40	-1.52	121.30	0
121	Acid Soluble Mg (2%)	0255	0.3055	0.0130	0.3525	0.0347	0.0182	40	-1.36	121.30	0
121	Acid Soluble Mg (2%)	0543	0.3110	0.0040	0.3525	0.0347	0.0182	40	-1.20	121.33	0
121	Acid Soluble Mg (2%)	0095	0.3150	0.0100	0.3525	0.0347	0.0182	40	-1.08	121.32	0
121	Acid Soluble Mg (2%)	0177	0.3196	0.0003	0.3525	0.0347	0.0182	40	-0.95	121.33	0
121	Acid Soluble Mg (2%)	0572	0.3220	0.0100	0.3525	0.0347	0.0182	40	-0.88	121.99	0
121	Acid Soluble Mg (2%)	0049	0.3250	0.0300	0.3525	0.0347	0.0182	40	-0.79	121.30	0
121	Acid Soluble Mg (2%)	0472	0.3300	0.0400	0.3525	0.0347	0.0182	40	-0.65	121.33	0
121	Acid Soluble Mg (2%)	0354	0.3300	0.0200	0.3525	0.0347	0.0182	40	-0.65	121.30	0
121	Acid Soluble Mg (2%)	0619	0.3310	0.0100	0.3525	0.0347	0.0182	40	-0.62	121.30	0
121	Acid Soluble Mg (2%)	0619	0.3310	0.0100	0.3525	0.0347	0.0182	40	-0.62	121.99	0
121	Acid Soluble Mg (2%)	0419	0.3350	0.0100	0.3525	0.0347	0.0182	40	-0.51	121.33	0
121	Acid Soluble Mg (2%)	0307	0.3350	0.0100	0.3525	0.0347	0.0182	40	-0.51	121.99	0
121	Acid Soluble Mg (2%)	0035	0.3395	0.0690	0.3525	0.0347	0.0182	40	-0.38	121.30	0
121	Acid Soluble Mg (2%)	0029	0.3449	0.0335	0.3525	0.0347	0.0182	40	-0.22	121.00	0
121	Acid Soluble Mg (2%)	0389	0.3450	0.0100	0.3525	0.0347	0.0182	40	-0.22	121.99	0
121	Acid Soluble Mg (2%)	0521	0.3460	0.0080	0.3525	0.0347	0.0182	40	-0.19	121.99	0
121	Acid Soluble Mg (2%)	0042	0.3500	0.0200	0.3525	0.0347	0.0182	40	-0.07	121.99	0
121	Acid Soluble Mg (2%)	0360	0.3510	0.0015	0.3525	0.0347	0.0182	40	-0.05	121.30	0
121	Acid Soluble Mg (2%)	0106	0.3515	0.0056	0.3525	0.0347	0.0182	40	-0.03	121.33	0
121	Acid Soluble Mg (2%)	0451	0.3519	0.0164	0.3525	0.0347	0.0182	40	-0.02	121.30	0
121	Acid Soluble Mg (2%)	0136	0.3550	0.0300	0.3525	0.0347	0.0182	40	0.07	121.33	0
121	Acid Soluble Mg (2%)	0485	0.3595	0.0090	0.3525	0.0347	0.0182	40	0.20	121.00	0

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121	Acid Soluble Mg (2%)	0234	0.3600	0.0200	0.3525	0.0347	0.0182	40	0.22	121.30	0
121	Acid Soluble Mg (2%)	0220	0.3600	0.0000	0.3525	0.0347	0.0182	40	0.22	121.32	0
121	Acid Soluble Mg (2%)	0027	0.3600	0.0000	0.3525	0.0347	0.0182	40	0.22	121.99	0
121	Acid Soluble Mg (2%)	0587	0.3600	0.0000	0.3525	0.0347	0.0182	40	0.22	121.99	0
121	Acid Soluble Mg (2%)	0324	0.3630	0.0080	0.3525	0.0347	0.0182	40	0.30	121.30	0
121	Acid Soluble Mg (2%)	0605	0.3700	0.0400	0.3525	0.0347	0.0182	40	0.50	121.99	0
121	Acid Soluble Mg (2%)	0260	0.3720	0.0140	0.3525	0.0347	0.0182	40	0.56	121.33	0
121	Acid Soluble Mg (2%)	0231	0.3750	0.0100	0.3525	0.0347	0.0182	40	0.65	121.30	0
121	Acid Soluble Mg (2%)	0612	0.3750	0.0100	0.3525	0.0347	0.0182	40	0.65	121.33	0
121	Acid Soluble Mg (2%)	0291	0.3940	0.0020	0.3525	0.0347	0.0182	40	1.20	121.30	0
121	Acid Soluble Mg (2%)	0494	0.4080	0.0094	0.3525	0.0347	0.0182	40	1.60	121.33	0
121	Acid Soluble Mg (2%)	0527	0.4141	0.0100	0.3525	0.0347	0.0182	40	1.78	121.33	0
121	Acid Soluble Mg (2%)	0055	0.4350	0.0900	0.3525	0.0347	0.0182	40	2.38	121.33	0
121	Acid Soluble Mg (2%)	0552	0.4950	0.0100	0.3525	0.0347	0.0182	40	4.11	121.99	0
121	Acid Soluble Mg (2%)	0558	1.034‡	0.0410	0.3525	0.0347	0.0182	40	19.64	121.99	0
121	Acid Soluble Mg (2%)	0515	6.993‡	0.0240	0.3525	0.0347	0.0182	40	191.50	121.33	0
121	Acid Soluble Mg (2%)	0600	2.025‡	0.1500	0.3525	0.0347	0.0182	40	48.23	121.99	1
121	Acid Soluble Mg (2%)	0630	5.958‡	0.1580	0.3525	0.0347	0.0182	40	161.65	121.33	1
131	Water Soluble Mg (%)	0029	0.2756	0.0249	0.3949	0.1590	0.0206	9	-0.69	131.00	0
131	Water Soluble Mg (%)	0619	0.2775	0.0090	0.3949	0.1590	0.0206	9	-0.68	131.30	0
131	Water Soluble Mg (%)	0619	0.2775	0.0090	0.3949	0.1590	0.0206	9	-0.68	131.99	0
131	Water Soluble Mg (%)	0220	0.2900	0.0000	0.3949	0.1590	0.0206	9	-0.61	131.30	0
131	Water Soluble Mg (%)	0027	0.2900	0.0200	0.3949	0.1590	0.0206	9	-0.61	131.30	0
131	Water Soluble Mg (%)	0558	0.4749	0.0018	0.3949	0.1590	0.0206	9	0.46	131.99	0
131	Water Soluble Mg (%)	0536	0.5100	0.0200	0.3949	0.1590	0.0206	9	0.67	131.99	0
131	Water Soluble Mg (%)	0536	0.5250	0.0300	0.3949	0.1590	0.0206	9	0.76	131.00	0
131	Water Soluble Mg (%)	0510	1.999	0.0498	0.3949	0.1590	0.0206	9	9.31	131.70	0
143	Elemental S (%)	0405	0.0625	0.0050	3.599	3.727	0.0178	4	-0.95	143.99	0
143	Elemental S (%)	0584	2.120	0.0400	3.599	3.727	0.0178	4	-0.40	143.00	0
143	Elemental S (%)	0255	3.424	0.0060	3.599	3.727	0.0178	4	-0.05	143.99	0
143	Elemental S (%)	0291	8.790	0.0200	3.599	3.727	0.0178	4	1.39	143.99	0
145	Sulfate S, HCl soluble (%)	0619	7.405	0.0300	8.163	0.5731	0.1628	6	-1.18	145.99	0
145	Sulfate S, HCl soluble (%)	0405	7.940	0.2400	8.163	0.5731	0.1628	6	-0.35	145.00	0
145	Sulfate S, HCl soluble (%)	0106	8.070	0.2800	8.163	0.5731	0.1628	6	-0.14	145.00	0
145	Sulfate S, HCl soluble (%)	0419	8.131	0.2870	8.163	0.5731	0.1628	6	-0.05	145.99	0
145	Sulfate S, HCl soluble (%)	0220	8.585	0.0300	8.163	0.5731	0.1628	6	0.66	145.00	0
145	Sulfate S, HCl soluble (%)	0027	8.845	0.1100	8.163	0.5731	0.1628	6	1.06	145.00	0
148	Total S (2%)	0600	1.915†	0.0700	7.652	1.229	0.1933	32	-4.67	148.99	0
148	Total S (2%)	0559	1.930†	0.0200	7.652	1.229	0.1933	32	-4.65	148.99	0
148	Total S (2%)	0562	1.930†	0.0600	7.652	1.229	0.1933	32	-4.65	148.99	0
148	Total S (2%)	0624	2.224†	0.3560	7.652	1.229	0.1933	32	-4.41	148.07	0
148	Total S (2%)	0521	4.878†	0.0450	7.652	1.229	0.1933	32	-2.26	148.99	0
148	Total S (2%)	0354	5.190†	0.0600	7.652	1.229	0.1933	32	-2.00	148.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
148	Total S (2%)	0260	6.738†	0.8835	7.652	1.229	0.1933	32	-0.74	148.07	0
148	Total S (2%)	0572	6.989†	0.7600	7.652	1.229	0.1933	32	-0.54	148.99	0
148	Total S (2%)	0177	7.127	0.1271	7.652	1.229	0.1933	32	-0.43	148.07	0
148	Total S (2%)	0543	7.311	0.4270	7.652	1.229	0.1933	32	-0.28	148.07	0
148	Total S (2%)	0558	7.394	0.0160	7.652	1.229	0.1933	32	-0.21	148.99	0
148	Total S (2%)	0029	7.567	0.1680	7.652	1.229	0.1933	32	-0.07	148.00	0
148	Total S (2%)	0049	7.585	0.1300	7.652	1.229	0.1933	32	-0.05	148.00	0
148	Total S (2%)	0307	7.590	0.1000	7.652	1.229	0.1933	32	-0.05	148.99	0
148	Total S (2%)	0472	7.615	0.1500	7.652	1.229	0.1933	32	-0.03	148.07	0
148	Total S (2%)	0117	7.824	0.2259	7.652	1.229	0.1933	32	0.14	148.07	0
148	Total S (2%)	0055	7.970	0.0400	7.652	1.229	0.1933	32	0.26	148.01	0
148	Total S (2%)	0405	8.000	0.2400	7.652	1.229	0.1933	32	0.28	148.01	0
148	Total S (2%)	0609	8.035	0.4300	7.652	1.229	0.1933	32	0.31	148.00	0
148	Total S (2%)	0451	8.246‡	0.0520	7.652	1.229	0.1933	32	0.48	148.00	0
148	Total S (2%)	0494	8.342‡	0.0952	7.652	1.229	0.1933	32	0.56	148.07	0
148	Total S (2%)	0605	8.345‡	0.3300	7.652	1.229	0.1933	32	0.56	148.99	0
148	Total S (2%)	0220	8.425‡	0.1100	7.652	1.229	0.1933	32	0.63	148.99	0
148	Total S (2%)	0433	8.437‡	0.1000	7.652	1.229	0.1933	32	0.64	148.99	0
148	Total S (2%)	0023	8.553‡	0.0580	7.652	1.229	0.1933	32	0.73	148.99	0
148	Total S (2%)	0324	8.615‡	0.0300	7.652	1.229	0.1933	32	0.78	148.01	0
148	Total S (2%)	0485	8.655‡	0.2300	7.652	1.229	0.1933	32	0.82	148.01	0
148	Total S (2%)	0619	8.695‡	0.0100	7.652	1.229	0.1933	32	0.85	148.07	0
148	Total S (2%)	0619	8.695‡	0.0100	7.652	1.229	0.1933	32	0.85	148.99	0
148	Total S (2%)	0612	8.795‡	0.1300	7.652	1.229	0.1933	32	0.93	148.07	0
148	Total S (2%)	0136	8.965‡	0.6700	7.652	1.229	0.1933	32	1.07	148.07	0
148	Total S (2%)	0422	14.85‡	0.0510	7.652	1.229	0.1933	32	5.85	148.99	0
148	Total S (2%)	0515	7.696	4.333	7.652	1.229	0.1933	32	0.04	148.07	1
149	S - HNO3 soluble (%)	0231	7.805	0.0900				1		149.04	0
151	Acid Soluble As (ppm)	0630	1.619	0.0040	758.9	168.6	64.28	15	-4.49	151.30	0
151	Acid Soluble As (ppm)	0255	455.6	204.4	758.9	168.6	64.28	15	-1.80	151.30	0
151	Acid Soluble As (ppm)	0515	646.5	50.40	758.9	168.6	64.28	15	-0.67	151.34	0
151	Acid Soluble As (ppm)	0419	687.7	27.10	758.9	168.6	64.28	15	-0.42	151.30	0
151	Acid Soluble As (ppm)	0527	698.6	8.209	758.9	168.6	64.28	15	-0.36	151.33	0
151	Acid Soluble As (ppm)	0035	706.0	148.0	758.9	168.6	64.28	15	-0.31	151.30	0
151	Acid Soluble As (ppm)	0136	728.8	33.50	758.9	168.6	64.28	15	-0.18	151.33	0
151	Acid Soluble As (ppm)	0117	758.0	2.780	758.9	168.6	64.28	15	-0.01	151.33	0
151	Acid Soluble As (ppm)	0572	762.1	185.6	758.9	168.6	64.28	15	0.02	151.99	0
151	Acid Soluble As (ppm)	0515	793.7	25.20	758.9	168.6	64.28	15	0.21	151.33	0
151	Acid Soluble As (ppm)	0405	799.5	111.0	758.9	168.6	64.28	15	0.24	151.32	0
151	Acid Soluble As (ppm)	0220	871.5	7.000	758.9	168.6	64.28	15	0.67	151.99	0
151	Acid Soluble As (ppm)	0605	931.2	0.0000	758.9	168.6	64.28	15	1.02	151.30	0
151	Acid Soluble As (ppm)	0220	976.5	15.00	758.9	168.6	64.28	15	1.29	151.32	0
151	Acid Soluble As (ppm)	0624	1,443	81.67	758.9	168.6	64.28	15	4.06	151.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
165	Acid Soluble B (%)	0260	0.0088	0.0000	0.0194	0.0144	0.0155	6	-0.66	165.30	0
165	Acid Soluble B (%)	0354	0.0100	0.0000	0.0194	0.0144	0.0155	6	-0.58	165.30	0
165	Acid Soluble B (%)	0605	0.0100	0.0000	0.0194	0.0144	0.0155	6	-0.58	165.99	0
165	Acid Soluble B (%)	0472	0.0200	0.0000	0.0194	0.0144	0.0155	6	0.04	165.99	0
165	Acid Soluble B (%)	0624	0.0265	0.0010	0.0194	0.0144	0.0155	6	0.44	165.99	0
165	Acid Soluble B (%)	0552	0.0850	0.0300	0.0194	0.0144	0.0155	6	4.07	165.99	0
165	Acid Soluble B (%)	0515	0.9306	0.2308	0.0194	0.0144	0.0155	6	56.45	165.99	1
165	Acid Soluble B (%)	0527	< 0.01		0.0194	0.0144	0.0155	6		165.99	5
165	Acid Soluble B (%)	0572	< 0.0107		0.0194	0.0144	0.0155	6		165.99	5
181	Acid Soluble Cd (ppm)	0630	0.0485	0.0030	1,609	366.7	75.08	15	-4.39	181.30	0
181	Acid Soluble Cd (ppm)	0494	595.5	1.000	1,609	366.7	75.08	15	-2.76	181.33	0
181	Acid Soluble Cd (ppm)	0515	1,318	203.0	1,609	366.7	75.08	15	-0.79	181.33	0
181	Acid Soluble Cd (ppm)	0624	1,410	18.79	1,609	366.7	75.08	15	-0.54	181.33	0
181	Acid Soluble Cd (ppm)	0405	1,499	126.0	1,609	366.7	75.08	15	-0.30	181.32	0
181	Acid Soluble Cd (ppm)	0605	1,521	0.0000	1,609	366.7	75.08	15	-0.24	181.30	0
181	Acid Soluble Cd (ppm)	0527	1,594	3.346	1,609	366.7	75.08	15	-0.04	181.33	0
181	Acid Soluble Cd (ppm)	0136	1,613	59.00	1,609	366.7	75.08	15	0.01	181.33	0
181	Acid Soluble Cd (ppm)	0035	1,662	158.0	1,609	366.7	75.08	15	0.15	181.30	0
181	Acid Soluble Cd (ppm)	0419	1,710	23.00	1,609	366.7	75.08	15	0.27	181.30	0
181	Acid Soluble Cd (ppm)	0220	1,732	21.00	1,609	366.7	75.08	15	0.33	181.99	0
181	Acid Soluble Cd (ppm)	0117	1,781	181.0	1,609	366.7	75.08	15	0.47	181.33	0
181	Acid Soluble Cd (ppm)	0220	1,858	29.00	1,609	366.7	75.08	15	0.68	181.32	0
181	Acid Soluble Cd (ppm)	0572	2,180	168.0	1,609	366.7	75.08	15	1.56	181.99	0
181	Acid Soluble Cd (ppm)	0515	2,231	60.00	1,609	366.7	75.08	15	1.70	181.34	0
181	Acid Soluble Cd (ppm)	0255	1,565	556.0	1,609	366.7	75.08	15	-0.12	181.30	1
191	Acid Soluble Cr (ppm)	0515	34.53	2.170	49.88	18.60	10.18	12	-0.83	191.34	0
191	Acid Soluble Cr (ppm)	0515	35.12	41.11	49.88	18.60	10.18	12	-0.79	191.33	0
191	Acid Soluble Cr (ppm)	0035	36.70	0.2000	49.88	18.60	10.18	12	-0.71	191.30	0
191	Acid Soluble Cr (ppm)	0572	38.47	2.769	49.88	18.60	10.18	12	-0.61	191.99	0
191	Acid Soluble Cr (ppm)	0136	38.57	0.2200	49.88	18.60	10.18	12	-0.61	191.33	0
191	Acid Soluble Cr (ppm)	0220	43.15	0.7000	49.88	18.60	10.18	12	-0.36	191.32	0
191	Acid Soluble Cr (ppm)	0605	44.98	0.0000	49.88	18.60	10.18	12	-0.26	191.30	0
191	Acid Soluble Cr (ppm)	0220	45.15	0.1000	49.88	18.60	10.18	12	-0.25	191.99	0
191	Acid Soluble Cr (ppm)	0419	57.23	9.130	49.88	18.60	10.18	12	0.39	191.30	0
191	Acid Soluble Cr (ppm)	0527	69.15	0.9611	49.88	18.60	10.18	12	1.04	191.33	0
191	Acid Soluble Cr (ppm)	0624	418.1	33.67	49.88	18.60	10.18	12	19.79	191.33	0
191	Acid Soluble Cr (ppm)	0630	1,344	21.00	49.88	18.60	10.18	12	69.53	191.30	0
191	Acid Soluble Cr (ppm)	0405	357.5	329.0	49.88	18.60	10.18	12	16.53	191.32	1
202	Acid Soluble Co (ppm)	0255	38.77	21.90	74.60	19.04	4.624	14	-1.88	202.99	0
202	Acid Soluble Co (ppm)	0630	43.80	2.070	74.60	19.04	4.624	14	-1.62	202.30	0
202	Acid Soluble Co (ppm)	0605	60.74	0.0000	74.60	19.04	4.624	14	-0.73	202.30	0
202	Acid Soluble Co (ppm)	0515	64.10	12.58	74.60	19.04	4.624	14	-0.55	202.34	0
202	Acid Soluble Co (ppm)	0035	64.80	3.800	74.60	19.04	4.624	14	-0.51	202.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
202	Acid Soluble Co (ppm)	0136	73.89	1.380	74.60	19.04	4.624	14	-0.04	202.33	0
202	Acid Soluble Co (ppm)	0405	76.00	2.000	74.60	19.04	4.624	14	0.07	202.32	0
202	Acid Soluble Co (ppm)	0494	77.40	1.600	74.60	19.04	4.624	14	0.15	202.33	0
202	Acid Soluble Co (ppm)	0572	80.20	7.538	74.60	19.04	4.624	14	0.29	202.99	0
202	Acid Soluble Co (ppm)	0220	82.40	3.400	74.60	19.04	4.624	14	0.41	202.32	0
202	Acid Soluble Co (ppm)	0220	83.05	1.500	74.60	19.04	4.624	14	0.44	202.99	0
202	Acid Soluble Co (ppm)	0117	93.95	0.2120	74.60	19.04	4.624	14	1.02	202.33	0
202	Acid Soluble Co (ppm)	0527	97.46	0.2950	74.60	19.04	4.624	14	1.20	202.33	0
202	Acid Soluble Co (ppm)	0419	98.37	1.840	74.60	19.04	4.624	14	1.25	202.30	0
202	Acid Soluble Co (ppm)	0515	77.55	50.90	74.60	19.04	4.624	14	0.15	202.33	1
221	Acid Soluble Cu (4%)	0558	2.837†	0.0079	3.390	0.2602	0.1102	49	-2.13	221.99	0
221	Acid Soluble Cu (4%)	0543	2.905†	0.0830	3.390	0.2602	0.1102	49	-1.87	221.33	0
221	Acid Soluble Cu (4%)	0324	3.005†	0.2500	3.390	0.2602	0.1102	49	-1.48	221.30	0
221	Acid Soluble Cu (4%)	0624	3.098	0.0540	3.390	0.2602	0.1102	49	-1.12	221.33	0
221	Acid Soluble Cu (4%)	0055	3.105	0.1500	3.390	0.2602	0.1102	49	-1.10	221.33	0
221	Acid Soluble Cu (4%)	0255	3.111	0.1340	3.390	0.2602	0.1102	49	-1.07	221.30	0
221	Acid Soluble Cu (4%)	0106	3.129	0.0105	3.390	0.2602	0.1102	49	-1.00	221.33	0
221	Acid Soluble Cu (4%)	0472	3.135	0.0500	3.390	0.2602	0.1102	49	-0.98	221.33	0
221	Acid Soluble Cu (4%)	0177	3.156	0.1671	3.390	0.2602	0.1102	49	-0.90	221.33	0
221	Acid Soluble Cu (4%)	0029	3.164	0.2950	3.390	0.2602	0.1102	49	-0.87	221.00	0
221	Acid Soluble Cu (4%)	0405	3.165	0.1500	3.390	0.2602	0.1102	49	-0.87	221.32	0
221	Acid Soluble Cu (4%)	0419	3.200	0.1200	3.390	0.2602	0.1102	49	-0.73	221.33	0
221	Acid Soluble Cu (4%)	0553	3.205	0.0100	3.390	0.2602	0.1102	49	-0.71	221.00	0
221	Acid Soluble Cu (4%)	0527	3.243	0.0401	3.390	0.2602	0.1102	49	-0.56	221.33	0
221	Acid Soluble Cu (4%)	0291	3.250	0.0200	3.390	0.2602	0.1102	49	-0.54	221.30	0
221	Acid Soluble Cu (4%)	0515	3.255	0.0800	3.390	0.2602	0.1102	49	-0.52	221.99	0
221	Acid Soluble Cu (4%)	0095	3.275	0.0300	3.390	0.2602	0.1102	49	-0.44	221.32	0
221	Acid Soluble Cu (4%)	0220	3.275	0.1100	3.390	0.2602	0.1102	49	-0.44	221.32	0
221	Acid Soluble Cu (4%)	0354	3.310	0.0200	3.390	0.2602	0.1102	49	-0.31	221.30	0
221	Acid Soluble Cu (4%)	0494	3.318	0.1568	3.390	0.2602	0.1102	49	-0.28	221.33	0
221	Acid Soluble Cu (4%)	0587	3.325	0.0100	3.390	0.2602	0.1102	49	-0.25	221.99	0
221	Acid Soluble Cu (4%)	0619	3.345	0.0900	3.390	0.2602	0.1102	49	-0.17	221.30	0
221	Acid Soluble Cu (4%)	0619	3.345	0.0900	3.390	0.2602	0.1102	49	-0.17	221.99	0
221	Acid Soluble Cu (4%)	0136	3.350	0.1000	3.390	0.2602	0.1102	49	-0.15	221.33	0
221	Acid Soluble Cu (4%)	0485	3.385	0.2100	3.390	0.2602	0.1102	49	-0.02	221.00	0
221	Acid Soluble Cu (4%)	0035	3.390	0.0400	3.390	0.2602	0.1102	49	0.00	221.30	0
221	Acid Soluble Cu (4%)	0157	3.405	0.2100	3.390	0.2602	0.1102	49	0.06	221.30	0
221	Acid Soluble Cu (4%)	0260	3.405	0.0900	3.390	0.2602	0.1102	49	0.06	221.33	0
221	Acid Soluble Cu (4%)	0389	3.435	0.0100	3.390	0.2602	0.1102	49	0.17	221.99	0
221	Acid Soluble Cu (4%)	0451	3.440	0.0660	3.390	0.2602	0.1102	49	0.19	221.30	0
221	Acid Soluble Cu (4%)	0234	3.465	0.1700	3.390	0.2602	0.1102	49	0.29	221.30	0
221	Acid Soluble Cu (4%)	0049	3.472	0.3430	3.390	0.2602	0.1102	49	0.31	221.30	0
221	Acid Soluble Cu (4%)	0360	3.485	0.1100	3.390	0.2602	0.1102	49	0.36	221.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
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221	Acid Soluble Cu (4%)	0605	3.490	0.1400	3.390	0.2602	0.1102	49	0.38	221.99	0
221	Acid Soluble Cu (4%)	0552	3.495	0.0500	3.390	0.2602	0.1102	49	0.40	221.30	0
221	Acid Soluble Cu (4%)	0572	3.524	0.1080	3.390	0.2602	0.1102	49	0.51	221.99	0
221	Acid Soluble Cu (4%)	0023	3.530	0.0170	3.390	0.2602	0.1102	49	0.54	221.30	0
221	Acid Soluble Cu (4%)	0231	3.545	0.0700	3.390	0.2602	0.1102	49	0.60	221.30	0
221	Acid Soluble Cu (4%)	0027	3.585	0.1700	3.390	0.2602	0.1102	49	0.75	221.99	0
221	Acid Soluble Cu (4%)	0433	3.588	0.0400	3.390	0.2602	0.1102	49	0.76	221.30	0
221	Acid Soluble Cu (4%)	0609	3.605	0.1100	3.390	0.2602	0.1102	49	0.83	221.33	0
221	Acid Soluble Cu (4%)	0042	3.650	0.1600	3.390	0.2602	0.1102	49	1.00	221.99	0
221	Acid Soluble Cu (4%)	0559	3.775‡	0.0100	3.390	0.2602	0.1102	49	1.48	221.99	0
221	Acid Soluble Cu (4%)	0600	3.785‡	0.1300	3.390	0.2602	0.1102	49	1.52	221.99	0
221	Acid Soluble Cu (4%)	0612	3.795‡	0.1900	3.390	0.2602	0.1102	49	1.56	221.33	0
221	Acid Soluble Cu (4%)	0562	3.800‡	0.1000	3.390	0.2602	0.1102	49	1.58	221.99	0
221	Acid Soluble Cu (4%)	0580	3.905‡	0.1500	3.390	0.2602	0.1102	49	1.98	221.00	0
221	Acid Soluble Cu (4%)	0584	4.100‡	0.2000	3.390	0.2602	0.1102	49	2.73	221.99	0
221	Acid Soluble Cu (4%)	0515	4.121‡	0.2790	3.390	0.2602	0.1102	49	2.81	221.33	0
221	Acid Soluble Cu (4%)	0630	0.00145†	0.0001	3.390	0.2602	0.1102	49	-13.02	221.33	2
241	Acid Soluble Fe (35%)	0255	8.824†	0.6640	22.80	9.455	0.5649	41	-1.48	241.30	0
241	Acid Soluble Fe (35%)	0619	9.655†	0.0100	22.80	9.455	0.5649	41	-1.39	241.30	0
241	Acid Soluble Fe (35%)	0619	9.655†	0.0100	22.80	9.455	0.5649	41	-1.39	241.99	0
241	Acid Soluble Fe (35%)	0042	10.25†	1.450	22.80	9.455	0.5649	41	-1.33	241.99	0
241	Acid Soluble Fe (35%)	0472	11.14†	0.0800	22.80	9.455	0.5649	41	-1.23	241.33	0
241	Acid Soluble Fe (35%)	0035	11.50†	1.200	22.80	9.455	0.5649	41	-1.20	241.30	0
241	Acid Soluble Fe (35%)	0515	11.57†	0.0500	22.80	9.455	0.5649	41	-1.19	241.99	0
241	Acid Soluble Fe (35%)	0572	12.47†	1.078	22.80	9.455	0.5649	41	-1.09	241.99	0
241	Acid Soluble Fe (35%)	0558	12.64†	0.0313	22.80	9.455	0.5649	41	-1.07	241.99	0
241	Acid Soluble Fe (35%)	0605	13.33†	0.0500	22.80	9.455	0.5649	41	-1.00	241.99	0
241	Acid Soluble Fe (35%)	0136	14.90†	0.2000	22.80	9.455	0.5649	41	-0.84	241.33	0
241	Acid Soluble Fe (35%)	0419	15.13†	1.040	22.80	9.455	0.5649	41	-0.81	241.33	0
241	Acid Soluble Fe (35%)	0630	15.67†	2.020	22.80	9.455	0.5649	41	-0.75	241.33	0
241	Acid Soluble Fe (35%)	0543	16.51†	0.0300	22.80	9.455	0.5649	41	-0.67	241.33	0
241	Acid Soluble Fe (35%)	0095	17.82†	0.8800	22.80	9.455	0.5649	41	-0.53	241.32	0
241	Acid Soluble Fe (35%)	0106	21.10†	0.9498	22.80	9.455	0.5649	41	-0.18	241.33	0
241	Acid Soluble Fe (35%)	0055	21.24†	0.9600	22.80	9.455	0.5649	41	-0.17	241.33	0
241	Acid Soluble Fe (35%)	0405	23.62	0.6000	22.80	9.455	0.5649	41	0.09	241.32	0
241	Acid Soluble Fe (35%)	0494	24.44‡	0.2329	22.80	9.455	0.5649	41	0.17	241.33	0
241	Acid Soluble Fe (35%)	0177	26.48‡	0.1165	22.80	9.455	0.5649	41	0.39	241.33	0
241	Acid Soluble Fe (35%)	0389	27.30‡	0.6000	22.80	9.455	0.5649	41	0.48	241.99	0
241	Acid Soluble Fe (35%)	0231	27.45‡	0.1300	22.80	9.455	0.5649	41	0.49	241.30	0
241	Acid Soluble Fe (35%)	0433	27.71‡	0.5000	22.80	9.455	0.5649	41	0.52	241.30	0
241	Acid Soluble Fe (35%)	0515	27.78‡	0.5900	22.80	9.455	0.5649	41	0.53	241.33	0
241	Acid Soluble Fe (35%)	0029	27.89‡	2.100	22.80	9.455	0.5649	41	0.54	241.00	0
241	Acid Soluble Fe (35%)	0527	28.31‡	0.3030	22.80	9.455	0.5649	41	0.58	241.33	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241	Acid Soluble Fe (35%)	0354	28.50±	0.0000	22.80	9.455	0.5649	41	0.60	241.30	0
241	Acid Soluble Fe (35%)	0559	29.10±	0.2100	22.80	9.455	0.5649	41	0.67	241.99	0
241	Acid Soluble Fe (35%)	0600	29.10±	0.4000	22.80	9.455	0.5649	41	0.67	241.99	0
241	Acid Soluble Fe (35%)	0562	29.16±	0.3100	22.80	9.455	0.5649	41	0.67	241.99	0
241	Acid Soluble Fe (35%)	0324	29.55±	1.100	22.80	9.455	0.5649	41	0.71	241.30	0
241	Acid Soluble Fe (35%)	0360	29.63±	0.0800	22.80	9.455	0.5649	41	0.72	241.30	0
241	Acid Soluble Fe (35%)	0587	30.04±	0.0300	22.80	9.455	0.5649	41	0.77	241.99	0
241	Acid Soluble Fe (35%)	0485	30.20±	0.6000	22.80	9.455	0.5649	41	0.78	241.00	0
241	Acid Soluble Fe (35%)	0023	30.37±	0.8510	22.80	9.455	0.5649	41	0.80	241.30	0
241	Acid Soluble Fe (35%)	0234	30.54±	0.1700	22.80	9.455	0.5649	41	0.82	241.30	0
241	Acid Soluble Fe (35%)	0552	30.99±	0.0200	22.80	9.455	0.5649	41	0.87	241.30	0
241	Acid Soluble Fe (35%)	0451	31.76±	0.8400	22.80	9.455	0.5649	41	0.95	241.30	0
241	Acid Soluble Fe (35%)	0612	32.30±	0.6100	22.80	9.455	0.5649	41	1.00	241.33	0
241	Acid Soluble Fe (35%)	0609	34.55±	0.9000	22.80	9.455	0.5649	41	1.24	241.33	0
241	Acid Soluble Fe (35%)	0580	34.74±	0.6000	22.80	9.455	0.5649	41	1.26	241.00	0
241	Acid Soluble Fe (35%)	0049	22.33	4.653	22.80	9.455	0.5649	41	-0.05	241.30	1
241	Acid Soluble Fe (35%)	0157	28.70±	5.200	22.80	9.455	0.5649	41	0.62	241.30	1
251	Acid Soluble Pb (ppm)	0630	1,585	0.1810	8,141	2,622	688.8	14	-3.10	251.30	0
251	Acid Soluble Pb (ppm)	0494	1,192	3.000	8,141	2,622	688.8	14	-2.65	251.33	0
251	Acid Soluble Pb (ppm)	0035	6,800	2,255	8,141	2,622	688.8	14	-0.51	251.30	0
251	Acid Soluble Pb (ppm)	0624	6,952	299.8	8,141	2,622	688.8	14	-0.45	251.33	0
251	Acid Soluble Pb (ppm)	0515	7,020	289.0	8,141	2,622	688.8	14	-0.43	251.33	0
251	Acid Soluble Pb (ppm)	0405	7,178	584.0	8,141	2,622	688.8	14	-0.37	251.32	0
251	Acid Soluble Pb (ppm)	0255	7,710	2,044	8,141	2,622	688.8	14	-0.16	251.30	0
251	Acid Soluble Pb (ppm)	0605	8,131	0.0000	8,141	2,622	688.8	14	0.00	251.30	0
251	Acid Soluble Pb (ppm)	0527	8,894	6.559	8,141	2,622	688.8	14	0.29	251.33	0
251	Acid Soluble Pb (ppm)	0136	9,909	525.0	8,141	2,622	688.8	14	0.67	251.33	0
251	Acid Soluble Pb (ppm)	0419	9,988	289.0	8,141	2,622	688.8	14	0.70	251.30	0
251	Acid Soluble Pb (ppm)	0117	10,063	157.3	8,141	2,622	688.8	14	0.73	251.33	0
251	Acid Soluble Pb (ppm)	0515	11,178	175.0	8,141	2,622	688.8	14	1.16	251.34	0
251	Acid Soluble Pb (ppm)	0572	11,743	2,327	8,141	2,622	688.8	14	1.37	251.99	0
261	Acid Soluble Mn (0.5%)	0558	0.1481±	0.0014	0.2084	0.0204	0.0159	39	-2.96	261.99	0
261	Acid Soluble Mn (0.5%)	0255	0.1555±	0.0010	0.2084	0.0204	0.0159	39	-2.60	261.99	0
261	Acid Soluble Mn (0.5%)	0035	0.1590±	0.0020	0.2084	0.0204	0.0159	39	-2.43	261.30	0
261	Acid Soluble Mn (0.5%)	0049	0.1700±	0.0140	0.2084	0.0204	0.0159	39	-1.89	261.32	0
261	Acid Soluble Mn (0.5%)	0042	0.1800±	0.0200	0.2084	0.0204	0.0159	39	-1.39	261.99	0
261	Acid Soluble Mn (0.5%)	0572	0.1865	0.0110	0.2084	0.0204	0.0159	39	-1.07	261.99	0
261	Acid Soluble Mn (0.5%)	0177	0.1894	0.0241	0.2084	0.0204	0.0159	39	-0.93	261.35	0
261	Acid Soluble Mn (0.5%)	0451	0.1938	0.0019	0.2084	0.0204	0.0159	39	-0.72	261.32	0
261	Acid Soluble Mn (0.5%)	0619	0.1940	0.0000	0.2084	0.0204	0.0159	39	-0.71	261.32	0
261	Acid Soluble Mn (0.5%)	0619	0.1940	0.0000	0.2084	0.0204	0.0159	39	-0.71	261.99	0
261	Acid Soluble Mn (0.5%)	0234	0.1950	0.0100	0.2084	0.0204	0.0159	39	-0.66	261.30	0
261	Acid Soluble Mn (0.5%)	0389	0.2000	0.0000	0.2084	0.0204	0.0159	39	-0.41	261.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
261	Acid Soluble Mn (0.5%)	0095	0.2050	0.0100	0.2084	0.0204	0.0159	39	-0.17	261.34	0
261	Acid Soluble Mn (0.5%)	0055	0.2050	0.0100	0.2084	0.0204	0.0159	39	-0.17	261.35	0
261	Acid Soluble Mn (0.5%)	0260	0.2050	0.0040	0.2084	0.0204	0.0159	39	-0.17	261.35	0
261	Acid Soluble Mn (0.5%)	0472	0.2050	0.0100	0.2084	0.0204	0.0159	39	-0.17	261.35	0
261	Acid Soluble Mn (0.5%)	0494	0.2074	0.0290	0.2084	0.0204	0.0159	39	-0.05	261.35	0
261	Acid Soluble Mn (0.5%)	0543	0.2085	0.0130	0.2084	0.0204	0.0159	39	0.01	261.35	0
261	Acid Soluble Mn (0.5%)	0023	0.2100	0.0060	0.2084	0.0204	0.0159	39	0.08	261.32	0
261	Acid Soluble Mn (0.5%)	0587	0.2100	0.0000	0.2084	0.0204	0.0159	39	0.08	261.99	0
261	Acid Soluble Mn (0.5%)	0354	0.2100	0.0400	0.2084	0.0204	0.0159	39	0.08	261.30	0
261	Acid Soluble Mn (0.5%)	0136	0.2100	0.0200	0.2084	0.0204	0.0159	39	0.08	261.35	0
261	Acid Soluble Mn (0.5%)	0157	0.2130	0.0200	0.2084	0.0204	0.0159	39	0.23	261.30	0
261	Acid Soluble Mn (0.5%)	0324	0.2135	0.0150	0.2084	0.0204	0.0159	39	0.25	261.31	0
261	Acid Soluble Mn (0.5%)	0029	0.2137	0.0134	0.2084	0.0204	0.0159	39	0.26	261.12	0
261	Acid Soluble Mn (0.5%)	0360	0.2150	0.0100	0.2084	0.0204	0.0159	39	0.33	261.31	0
261	Acid Soluble Mn (0.5%)	0231	0.2150	0.0100	0.2084	0.0204	0.0159	39	0.33	261.32	0
261	Acid Soluble Mn (0.5%)	0605	0.2150	0.0100	0.2084	0.0204	0.0159	39	0.33	261.99	0
261	Acid Soluble Mn (0.5%)	0027	0.2150	0.0300	0.2084	0.0204	0.0159	39	0.33	261.99	0
261	Acid Soluble Mn (0.5%)	0106	0.2155	0.0068	0.2084	0.0204	0.0159	39	0.35	261.35	0
261	Acid Soluble Mn (0.5%)	0419	0.2200	0.0000	0.2084	0.0204	0.0159	39	0.57	261.35	0
261	Acid Soluble Mn (0.5%)	0405	0.2225	0.0130	0.2084	0.0204	0.0159	39	0.69	261.34	0
261	Acid Soluble Mn (0.5%)	0485	0.2240	0.0120	0.2084	0.0204	0.0159	39	0.77	261.12	0
261	Acid Soluble Mn (0.5%)	0527	0.2339	0.0022	0.2084	0.0204	0.0159	39	1.25	261.35	0
261	Acid Soluble Mn (0.5%)	0612	0.2350‡	0.0100	0.2084	0.0204	0.0159	39	1.31	261.35	0
261	Acid Soluble Mn (0.5%)	0552	0.2750‡	0.0100	0.2084	0.0204	0.0159	39	3.27	261.32	0
261	Acid Soluble Mn (0.5%)	0562	0.2850‡	0.1100	0.2084	0.0204	0.0159	39	3.77	261.99	0
261	Acid Soluble Mn (0.5%)	0559	0.2950‡	0.0100	0.2084	0.0204	0.0159	39	4.26	261.99	0
261	Acid Soluble Mn (0.5%)	0630	1.605‡	0.0300	0.2084	0.0204	0.0159	39	68.63	261.35	0
261	Acid Soluble Mn (0.5%)	0600	0.2850‡	0.1300	0.2084	0.0204	0.0159	39	3.77	261.99	1
261	Acid Soluble Mn (0.5%)	0515	1.776‡	0.1530	0.2084	0.0204	0.0159	39	77.00	261.35	1
271	Water Soluble Mn (%)	0619	0.1505	0.0030	0.2522	0.1761	0.0177	3	-0.58	271.30	0
271	Water Soluble Mn (%)	0619	0.1505	0.0030	0.2522	0.1761	0.0177	3	-0.58	271.99	0
271	Water Soluble Mn (%)	0536	0.4555	0.0470	0.2522	0.1761	0.0177	3	1.15	271.00	0
281	Acid Soluble Hg (ppm)	0630	0.6700	0.1400	1,665	1,065	197.9	5	-1.36	281.30	0
281	Acid Soluble Hg (ppm)	0405	1,551	254.0	1,665	1,065	197.9	5	-0.09	281.30	0
281	Acid Soluble Hg (ppm)	0605	1,707	0.0000	1,665	1,065	197.9	5	0.03	281.30	0
281	Acid Soluble Hg (ppm)	0527	2,183	12.48	1,665	1,065	197.9	5	0.42	281.30	0
281	Acid Soluble Hg (ppm)	0572	2,882	524.8	1,665	1,065	197.9	5	1.00	281.99	0
281	Acid Soluble Hg (ppm)	0515	< 0.1		1,665	1,065	197.9	5		281.30	5
289	Acid Soluble Mo (ppm)	0234	0.0006	0.0001	3.568	2.650	0.6088	8	-1.35	289.30	0
289	Acid Soluble Mo (ppm)	0255	1.166	0.3250	3.568	2.650	0.6088	8	-0.91	289.30	0
289	Acid Soluble Mo (ppm)	0106	2.500	1.000	3.568	2.650	0.6088	8	-0.40	289.33	0
289	Acid Soluble Mo (ppm)	0572	3.771	0.4840	3.568	2.650	0.6088	8	0.08	289.99	0
289	Acid Soluble Mo (ppm)	0527	4.476	0.1256	3.568	2.650	0.6088	8	0.34	289.33	0

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289	Acid Soluble Mo (ppm)	0405	4.500	1.000	3.568	2.650	0.6088	8	0.35	289.32	0
289	Acid Soluble Mo (ppm)	0605	4.590	0.0000	3.568	2.650	0.6088	8	0.39	289.30	0
289	Acid Soluble Mo (ppm)	0630	24.29	1.327	3.568	2.650	0.6088	8	7.82	289.30	0
289	Acid Soluble Mo (ppm)	0419	10.61	2.990	3.568	2.650	0.6088	8	2.66	289.30	1
289	Acid Soluble Mo (ppm)	0515	< 0.056		3.568	2.650	0.6088	8		289.33	5
289	Acid Soluble Mo (ppm)	0515	< 0.178		3.568	2.650	0.6088	8		289.34	5
289	Acid Soluble Mo (ppm)	0136	< 2.5		3.568	2.650	0.6088	8		289.33	5
289	Acid Soluble Mo (ppm)	0117	< 5		3.568	2.650	0.6088	8		289.33	5
291	Acid Soluble Ni (ppm)	0515	10.76	3.446	20.73	7.278	1.514	13	-1.37	291.34	0
291	Acid Soluble Ni (ppm)	0624	13.85	0.8400	20.73	7.278	1.514	13	-0.95	291.33	0
291	Acid Soluble Ni (ppm)	0035	14.80	0.4000	20.73	7.278	1.514	13	-0.81	291.30	0
291	Acid Soluble Ni (ppm)	0136	17.97	2.750	20.73	7.278	1.514	13	-0.38	291.33	0
291	Acid Soluble Ni (ppm)	0605	18.09	0.0000	20.73	7.278	1.514	13	-0.36	291.30	0
291	Acid Soluble Ni (ppm)	0027	19.26	0.4500	20.73	7.278	1.514	13	-0.20	291.30	0
291	Acid Soluble Ni (ppm)	0572	19.39	0.3610	20.73	7.278	1.514	13	-0.18	291.99	0
291	Acid Soluble Ni (ppm)	0494	19.55	1.500	20.73	7.278	1.514	13	-0.16	291.33	0
291	Acid Soluble Ni (ppm)	0405	22.00	0.0000	20.73	7.278	1.514	13	0.17	291.32	0
291	Acid Soluble Ni (ppm)	0527	22.88	0.8224	20.73	7.278	1.514	13	0.30	291.33	0
291	Acid Soluble Ni (ppm)	0419	27.65	4.630	20.73	7.278	1.514	13	0.95	291.30	0
291	Acid Soluble Ni (ppm)	0117	33.24	0.8580	20.73	7.278	1.514	13	1.72	291.33	0
291	Acid Soluble Ni (ppm)	0630	106.5	0.6000	20.73	7.278	1.514	13	11.79	291.30	0
291	Acid Soluble Ni (ppm)	0255	52.73	16.47	20.73	7.278	1.514	13	4.40	291.99	1
291	Acid Soluble Ni (ppm)	0515	< 0.049		20.73	7.278	1.514	13		291.33	5
301	Acid Soluble Se (ppm)	0630	4.779	0.0470	6,666	2,439	602.1	11	-2.73	301.30	0
301	Acid Soluble Se (ppm)	0494	6.595	0.9020	6,666	2,439	602.1	11	-2.73	301.33	0
301	Acid Soluble Se (ppm)	0255	5,451	778.0	6,666	2,439	602.1	11	-0.50	301.99	0
301	Acid Soluble Se (ppm)	0605	6,181	0.0000	6,666	2,439	602.1	11	-0.20	301.30	0
301	Acid Soluble Se (ppm)	0405	6,335	218.0	6,666	2,439	602.1	11	-0.14	301.99	0
301	Acid Soluble Se (ppm)	0527	6,826	74.62	6,666	2,439	602.1	11	0.07	301.33	0
301	Acid Soluble Se (ppm)	0419	8,025	501.0	6,666	2,439	602.1	11	0.56	301.30	0
301	Acid Soluble Se (ppm)	0117	8,247	187.2	6,666	2,439	602.1	11	0.65	301.33	0
301	Acid Soluble Se (ppm)	0515	8,338	1,834	6,666	2,439	602.1	11	0.69	301.34	0
301	Acid Soluble Se (ppm)	0572	8,828	1,410	6,666	2,439	602.1	11	0.89	301.99	0
301	Acid Soluble Se (ppm)	0035	9,080	1,017	6,666	2,439	602.1	11	0.99	301.30	0
301	Acid Soluble Se (ppm)	0515	6,712	3,568	6,666	2,439	602.1	11	0.02	301.33	1
311	Sodium (%)	0494	0.2422	0.0158	0.2610	0.0258	0.0133	5	-0.73	311.33	0
311	Sodium (%)	0035	0.2470	0.0040	0.2610	0.0258	0.0133	5	-0.54	311.33	0
311	Sodium (%)	0572	0.2480	0.0100	0.2610	0.0258	0.0133	5	-0.51	311.99	0
311	Sodium (%)	0527	0.2629	0.0068	0.2610	0.0258	0.0133	5	0.07	311.33	0
311	Sodium (%)	0354	0.3050	0.0300	0.2610	0.0258	0.0133	5	1.71	311.99	0
321	Acid Soluble Zn (7%)	0630	0.00760†	0.0004	6.374	0.5980	0.2584	49	-10.65	321.33	0
321	Acid Soluble Zn (7%)	0508	3.965†	0.0500	6.374	0.5980	0.2584	49	-4.03	321.99	0
321	Acid Soluble Zn (7%)	0231	5.365†	0.0100	6.374	0.5980	0.2584	49	-1.69	321.30	0

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321	Acid Soluble Zn (7%)	0307	5.510†	0.6200	6.374	0.5980	0.2584	49	-1.45	321.99	0
321	Acid Soluble Zn (7%)	0558	5.671†	0.0055	6.374	0.5980	0.2584	49	-1.18	321.99	0
321	Acid Soluble Zn (7%)	0324	5.710†	1.280	6.374	0.5980	0.2584	49	-1.11	321.30	0
321	Acid Soluble Zn (7%)	0055	5.790	0.1200	6.374	0.5980	0.2584	49	-0.98	321.33	0
321	Acid Soluble Zn (7%)	0260	5.810	1.380	6.374	0.5980	0.2584	49	-0.94	321.33	0
321	Acid Soluble Zn (7%)	0177	5.853	0.0102	6.374	0.5980	0.2584	49	-0.87	321.33	0
321	Acid Soluble Zn (7%)	0255	5.902	0.3750	6.374	0.5980	0.2584	49	-0.79	321.30	0
321	Acid Soluble Zn (7%)	0360	5.935	0.1100	6.374	0.5980	0.2584	49	-0.73	321.30	0
321	Acid Soluble Zn (7%)	0157	5.965	0.8700	6.374	0.5980	0.2584	49	-0.68	321.30	0
321	Acid Soluble Zn (7%)	0136	5.965	0.0700	6.374	0.5980	0.2584	49	-0.68	321.33	0
321	Acid Soluble Zn (7%)	0405	5.980	0.7200	6.374	0.5980	0.2584	49	-0.66	321.99	0
321	Acid Soluble Zn (7%)	0485	5.990	0.5600	6.374	0.5980	0.2584	49	-0.64	321.00	0
321	Acid Soluble Zn (7%)	0023	6.016	0.1110	6.374	0.5980	0.2584	49	-0.60	321.30	0
321	Acid Soluble Zn (7%)	0095	6.040	0.3600	6.374	0.5980	0.2584	49	-0.56	321.32	0
321	Acid Soluble Zn (7%)	0419	6.045	0.2500	6.374	0.5980	0.2584	49	-0.55	321.33	0
321	Acid Soluble Zn (7%)	0605	6.095	0.0100	6.374	0.5980	0.2584	49	-0.47	321.99	0
321	Acid Soluble Zn (7%)	0543	6.103	0.0320	6.374	0.5980	0.2584	49	-0.45	321.33	0
321	Acid Soluble Zn (7%)	0472	6.155	0.0700	6.374	0.5980	0.2584	49	-0.37	321.33	0
321	Acid Soluble Zn (7%)	0291	6.240	0.0200	6.374	0.5980	0.2584	49	-0.22	321.30	0
321	Acid Soluble Zn (7%)	0117	6.255	0.1364	6.374	0.5980	0.2584	49	-0.20	321.33	0
321	Acid Soluble Zn (7%)	0433	6.289	0.0320	6.374	0.5980	0.2584	49	-0.14	321.30	0
321	Acid Soluble Zn (7%)	0552	6.410	0.4600	6.374	0.5980	0.2584	49	0.06	321.30	0
321	Acid Soluble Zn (7%)	0587	6.435	0.0700	6.374	0.5980	0.2584	49	0.10	321.99	0
321	Acid Soluble Zn (7%)	0042	6.480	0.2400	6.374	0.5980	0.2584	49	0.18	321.99	0
321	Acid Soluble Zn (7%)	0389	6.490	0.1000	6.374	0.5980	0.2584	49	0.19	321.99	0
321	Acid Soluble Zn (7%)	0029	6.494	0.4430	6.374	0.5980	0.2584	49	0.20	321.00	0
321	Acid Soluble Zn (7%)	0106	6.521	0.2178	6.374	0.5980	0.2584	49	0.24	321.33	0
321	Acid Soluble Zn (7%)	0027	6.555	0.1500	6.374	0.5980	0.2584	49	0.30	321.99	0
321	Acid Soluble Zn (7%)	0612	6.725	0.2700	6.374	0.5980	0.2584	49	0.59	321.33	0
321	Acid Soluble Zn (7%)	0580	6.750	0.1200	6.374	0.5980	0.2584	49	0.63	321.00	0
321	Acid Soluble Zn (7%)	0527	6.751	0.0221	6.374	0.5980	0.2584	49	0.63	321.33	0
321	Acid Soluble Zn (7%)	0234	6.775	0.0900	6.374	0.5980	0.2584	49	0.67	321.30	0
321	Acid Soluble Zn (7%)	0049	6.785	0.3300	6.374	0.5980	0.2584	49	0.69	321.30	0
321	Acid Soluble Zn (7%)	0619	6.800	0.0000	6.374	0.5980	0.2584	49	0.71	321.30	0
321	Acid Soluble Zn (7%)	0619	6.800	0.0000	6.374	0.5980	0.2584	49	0.71	321.99	0
321	Acid Soluble Zn (7%)	0572	6.874	0.4400	6.374	0.5980	0.2584	49	0.84	321.99	0
321	Acid Soluble Zn (7%)	0035	6.945	0.4300	6.374	0.5980	0.2584	49	0.95	321.30	0
321	Acid Soluble Zn (7%)	0559	7.070‡	0.0200	6.374	0.5980	0.2584	49	1.16	321.99	0
321	Acid Soluble Zn (7%)	0553	7.075‡	0.1500	6.374	0.5980	0.2584	49	1.17	321.00	0
321	Acid Soluble Zn (7%)	0600	7.085‡	0.0700	6.374	0.5980	0.2584	49	1.19	321.99	0
321	Acid Soluble Zn (7%)	0220	7.095‡	0.1100	6.374	0.5980	0.2584	49	1.20	321.32	0
321	Acid Soluble Zn (7%)	0562	7.100‡	0.0400	6.374	0.5980	0.2584	49	1.21	321.99	0
321	Acid Soluble Zn (7%)	0515	7.114‡	0.1200	6.374	0.5980	0.2584	49	1.24	321.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321	Acid Soluble Zn (7%)	0354	7.125‡	0.0900	6.374	0.5980	0.2584	49	1.26	321.30	0
321	Acid Soluble Zn (7%)	0451	7.164‡	0.2610	6.374	0.5980	0.2584	49	1.32	321.30	0
321	Acid Soluble Zn (7%)	0609	7.180‡	0.7000	6.374	0.5980	0.2584	49	1.35	321.33	0
321	Acid Soluble Zn (7%)	0515	7.415‡	2.100	6.374	0.5980	0.2584	49	1.74	321.33	1
321	Acid Soluble Zn (7%)	0494	23.82‡	0.0660	6.374	0.5980	0.2584	49	29.18	321.33	2
325	Water Soluble Zn (%)	0536	4.945	0.0100	6.043	0.7944	0.0300	5	-1.38	325.00	0
325	Water Soluble Zn (%)	0619	5.815	0.0100	6.043	0.7944	0.0300	5	-0.29	325.30	0
325	Water Soluble Zn (%)	0619	5.815	0.0100	6.043	0.7944	0.0300	5	-0.29	325.99	0
325	Water Soluble Zn (%)	0518	6.760	0.0800	6.043	0.7944	0.0300	5	0.90	325.00	0
325	Water Soluble Zn (%)	0584	6.880	0.0400	6.043	0.7944	0.0300	5	1.05	325.99	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 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. 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.