

Analyte Proficiency From All Labs

Magruder Fertilizer PT Program

Analytes: 40

Sample # 220411

Regular PT Scheme

Labs Reporting: 93

Grade 24-25-4

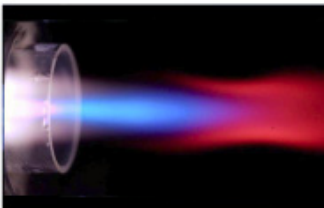
Statistical Summary

Issue Date : 05/31/2022

Analyte Code	Analyte Sample # 220411	# 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)	Hornitz %RSD
001	Ammoniacal N (%)	28	27	5.547	0.8294	5.582		0.5638	0.1356	10.10%		0.0708	3.09%
002	Nitrate N (%)	1		0.2800									
003	Water Insoluble N (%)	9	9	0.5285	0.2757	0.4870		0.2032	0.0847	41.73%		0.0701	4.46%
005	Urea N (%)	12	12	11.65	4.362	12.18		3.504	1.264	28.76%		0.0675	2.75%
007	Urea (%)	4	4	12.01	5.590	12.01		5.590	3.494	46.56%		0.1475	2.75%
008	Biuret (%)	1		0.5150									
010	Total N (24%)	83	81	24.58	0.6183	24.63	0.7894	0.4168	0.0579	1.69%	1.23	0.1448	2.02%
020	Total P2O5 (%)	47	46	25.24	1.261	25.22		0.8016	0.1477	3.18%		0.2963	1.99%
030	Citrate Insoluble P2O5 (%)	2	2	12.47	17.52								
040	Indirect Available P2O5 (25%)	2	2	25.95	0.8379								
041	Direct Available P2O5 (25%)	52	51	25.02	0.5713	25.06	0.7300	0.4472	0.0783	1.78%	1.43	0.2412	2.00%
048	Water Soluble P2O5 (%)	6	6	23.12	1.617	23.12		1.834	0.9357	7.93%		0.4333	2.08%
050	Soluble K2O (4%)	86	82	4.167	0.2811	4.139	0.4128	0.2132	0.0294	5.15%	1.20	0.0841	3.23%
060	Water (Free) (%)	3	3	1.533	0.7429	1.533		0.7429	0.5361	48.47%		0.0682	3.75%
101	Acid Soluble Ca (%)	13	12	0.3462	0.4872	0.2208	0.2110	0.0479	0.0173	21.67%	0.53	0.0065	5.02%
121	Acid Soluble Mg (%)	16	15	0.4650	0.0994	0.4427	0.2221	0.0428	0.0138	9.67%	0.45	0.0156	4.52%
131	Water Soluble Mg (%)	1		0.0893									
143	Elemental S (%)	1		0.6920									
145	Sulfate S, HCl soluble (%)	2	2	0.6049	0.0621								
148	Total S (%)	8	7	0.5397	0.2584	0.6154	0.2308	0.1772	0.0837	28.80%	1.79	0.0217	4.30%
149	S - HNO3 soluble (%)	2	2	0.6107	0.0221								
151	Acid Soluble As (ppm)	17	16	7.490	3.254	7.725		1.638	0.5120	21.21%		0.4561	11.76%
165	Acid Soluble B (%)	12	9	0.0130	0.0150	0.0151	0.0053	0.0191	0.0080	127.00%	8.48	0.0126	7.52%
171	Water Soluble B (%)	1		0.0100									
181	Acid Soluble Cd (ppm)	22	22	1.736	0.2297	1.730		0.2318	0.0618	13.39%		0.0963	14.73%
190	Water Soluble Cl (%)	2	2	3.285	0.3253								
191	Acid Soluble Cr (ppm)	20	19	46.88	5.491	46.23		5.075	1.455	10.98%		1.823	8.98%
202	Acid Soluble Co (ppm)	19	16	4.454	8.389	1.670	1.5010	0.3474	0.1086	20.80%	0.54	0.0601	14.81%
221	Acid Soluble Cu (%)	22	8	0.0415	0.1818	0.0021	0.0052	0.0033	0.0015	159.65%	1.49	0.0052	10.13%

Analyte Code	Analyte Sample # 220411	# 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
241	Acid Soluble Fe (%)	16	16	0.5896	0.0581	0.5789	0.0629	0.0227	0.0071	3.92%	0.84	0.0194	4.34%
251	Acid Soluble Pb (ppm)	19	11	1.549	1.603	0.8748		0.2652	0.1000	30.32%		0.0513	16.32%
261	Acid Soluble Mn (%)	15	13	0.0293	0.0308	0.0186	0.0069	0.0018	0.0006	9.60%	0.61	0.0053	7.29%
281	Acid Soluble Hg (ppm)	10	2	0.3805	0.6964	0.0136		0.0079	0.0070	58.23%		0.0151	22.00%
289	Acid Soluble Mo (ppm)	19	16	10.96	21.68	6.389	2.9166	0.8974	0.2804	14.05%	0.72	0.2054	12.10%
291	Acid Soluble Ni (ppm)	22	20	9.708	12.25	6.820		1.209	0.3379	17.73%		0.5901	11.98%
301	Acid Soluble Se (ppm)	15	7	1.850	2.462	1.305		0.5260	0.2485	40.30%		0.1557	15.37%
311	Sodium (%)	7	6	0.3727	0.5877	0.1507	0.0201	0.0270	0.0138	17.95%	3.14	0.0070	5.32%
321	Acid Soluble Zn (%)	32	30	1.339	7.501	0.0051	0.0055	0.0011	0.0002	20.65%	0.45	0.0130	8.85%
325	Water Soluble Zn (%)	2	1	0.0002	0.0001								
431	Soluble Si in nonliquids (%)	1		0.0060									

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 PT Program

Analytes: 40

Sample # 220411

Regular PT Scheme

Labs Reporting: 93

Grade 24-25-4

Lab Values

Issue Date : 05/31/2022

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001	Ammoniacal N (%)	0220	2.375	0.1700	5.582	0.5638	0.0708	27	-5.69	001.99	0
001	Ammoniacal N (%)	0605	4.870	0.0400	5.582	0.5638	0.0708	27	-1.26	001.99	0
001	Ammoniacal N (%)	0423	4.900	0.1200	5.582	0.5638	0.0708	27	-1.21	001.99	0
001	Ammoniacal N (%)	0394	5.023	0.1310	5.582	0.5638	0.0708	27	-0.99	001.99	0
001	Ammoniacal N (%)	0230	5.180	0.0400	5.582	0.5638	0.0708	27	-0.71	001.10	0
001	Ammoniacal N (%)	0547	5.250	0.0400	5.582	0.5638	0.0708	27	-0.59	001.10	0
001	Ammoniacal N (%)	0580	5.250	0.0000	5.582	0.5638	0.0708	27	-0.59	001.10	0
001	Ammoniacal N (%)	0538	5.250	0.1000	5.582	0.5638	0.0708	27	-0.59	001.99	0
001	Ammoniacal N (%)	0368	5.253	0.0600	5.582	0.5638	0.0708	27	-0.58	001.99	0
001	Ammoniacal N (%)	0452	5.320	0.0000	5.582	0.5638	0.0708	27	-0.46	001.10	0
001	Ammoniacal N (%)	0027	5.345	0.1300	5.582	0.5638	0.0708	27	-0.42	001.99	0
001	Ammoniacal N (%)	0524	5.365	0.2900	5.582	0.5638	0.0708	27	-0.38	001.99	0
001	Ammoniacal N (%)	0389	5.450	0.0200	5.582	0.5638	0.0708	27	-0.23	001.10	0
001	Ammoniacal N (%)	0563	5.500	0.0000	5.582	0.5638	0.0708	27	-0.15	001.99	0
001	Ammoniacal N (%)	0451	5.605	0.0500	5.582	0.5638	0.0708	27	0.04	001.10	0
001	Ammoniacal N (%)	0419	5.605	0.1300	5.582	0.5638	0.0708	27	0.04	001.99	0
001	Ammoniacal N (%)	0300	5.635	0.0500	5.582	0.5638	0.0708	27	0.09	001.99	0
001	Ammoniacal N (%)	0444	5.715	0.1900	5.582	0.5638	0.0708	27	0.24	001.10	0
001	Ammoniacal N (%)	0562	5.850	0.1000	5.582	0.5638	0.0708	27	0.48	001.99	0
001	Ammoniacal N (%)	0564	5.875	0.0500	5.582	0.5638	0.0708	27	0.52	001.99	0
001	Ammoniacal N (%)	0572	5.890	0.0273	5.582	0.5638	0.0708	27	0.55	001.99	0
001	Ammoniacal N (%)	0567	5.950	0.0000	5.582	0.5638	0.0708	27	0.65	001.99	0
001	Ammoniacal N (%)	0510	6.201	0.0372	5.582	0.5638	0.0708	27	1.10	001.99	0
001	Ammoniacal N (%)	0558	6.414	0.0567	5.582	0.5638	0.0708	27	1.48	001.99	0
001	Ammoniacal N (%)	0255	6.765	0.0100	5.582	0.5638	0.0708	27	2.10	001.99	0
001	Ammoniacal N (%)	0559	6.810	0.0200	5.582	0.5638	0.0708	27	2.18	001.99	0
001	Ammoniacal N (%)	0533	6.935	0.0500	5.582	0.5638	0.0708	27	2.40	001.99	0
001	Ammoniacal N (%)	0553	5.725	0.5100	5.582	0.5638	0.0708	27	0.25	001.99	1
002	Nitrate N (%)	0452	0.2800	0.0000				1		002.99	0
003	Water Insoluble N (%)	0559	0.3050	0.0100	0.4870	0.2032	0.0701	9	-0.83	003.99	0
003	Water Insoluble N (%)	0564	0.3200	0.0400	0.4870	0.2032	0.0701	9	-0.76	003.99	0
003	Water Insoluble N (%)	0220	0.3350	0.0500	0.4870	0.2032	0.0701	9	-0.69	003.10	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
003	Water Insoluble N (%)	0567	0.3450	0.0100	0.4870	0.2032	0.0701	9	-0.65	003.99	0
003	Water Insoluble N (%)	0494	0.4364	0.0290	0.4870	0.2032	0.0701	9	-0.23	003.10	0
003	Water Insoluble N (%)	0027	0.5550	0.1500	0.4870	0.2032	0.0701	9	0.31	003.10	0
003	Water Insoluble N (%)	0029	0.6250	0.2520	0.4870	0.2032	0.0701	9	0.63	003.10	0
003	Water Insoluble N (%)	0451	0.6700	0.0800	0.4870	0.2032	0.0701	9	0.83	003.10	0
003	Water Insoluble N (%)	0547	1.165	0.0100	0.4870	0.2032	0.0701	9	3.08	003.10	0
005	Urea N (%)	0368	0.5530	0.1005	12.18	3.504	0.0675	12	-3.32	005.00	0
005	Urea N (%)	0389	10.11	0.1000	12.18	3.504	0.0675	12	-0.59	005.00	0
005	Urea N (%)	0027	10.30	0.1200	12.18	3.504	0.0675	12	-0.54	005.99	0
005	Urea N (%)	0547	10.55	0.1000	12.18	3.504	0.0675	12	-0.47	005.99	0
005	Urea N (%)	0029	10.59	0.0300	12.18	3.504	0.0675	12	-0.46	005.99	0
005	Urea N (%)	0451	10.70	0.1000	12.18	3.504	0.0675	12	-0.42	005.20	0
005	Urea N (%)	0394	11.00	0.0400	12.18	3.504	0.0675	12	-0.34	005.10	0
005	Urea N (%)	0524	11.78	0.0200	12.18	3.504	0.0675	12	-0.12	005.99	0
005	Urea N (%)	0605	15.66	0.1400	12.18	3.504	0.0675	12	0.99	005.99	0
005	Urea N (%)	0567	15.89	0.0200	12.18	3.504	0.0675	12	1.06	005.99	0
005	Urea N (%)	0559	16.29	0.0200	12.18	3.504	0.0675	12	1.17	005.99	0
005	Urea N (%)	0564	16.41	0.0200	12.18	3.504	0.0675	12	1.21	005.99	0
007	Urea (%)	0230	7.420	0.2000	12.01	5.590	0.1475	4	-0.82	007.00	0
007	Urea (%)	0538	10.06	0.2800	12.01	5.590	0.1475	4	-0.35	007.99	0
007	Urea (%)	0220	10.40	0.0100	12.01	5.590	0.1475	4	-0.29	007.99	0
007	Urea (%)	0444	20.15	0.1000	12.01	5.590	0.1475	4	1.46	007.00	0
008	Biuret (%)	0444	0.5150	0.0100				1		008.10	0
010	Total N (24%)	0553	22.25†	0.3000	24.63	0.4168	0.1448	81	-5.70	010.99	0
010	Total N (24%)	0564	22.54†	0.0300	24.63	0.4168	0.1448	81	-5.02	010.99	0
010	Total N (24%)	0567	23.05†	0.1000	24.63	0.4168	0.1448	81	-3.78	010.99	0
010	Total N (24%)	0559	23.38†	0.0100	24.63	0.4168	0.1448	81	-3.00	010.99	0
010	Total N (24%)	0569	23.38†	0.1700	24.63	0.4168	0.1448	81	-3.00	010.99	0
010	Total N (24%)	0549	23.69†	0.1800	24.63	0.4168	0.1448	81	-2.25	010.99	0
010	Total N (24%)	0600	23.88	0.1100	24.63	0.4168	0.1448	81	-1.80	010.99	0
010	Total N (24%)	0538	23.90	0.0300	24.63	0.4168	0.1448	81	-1.75	010.99	0
010	Total N (24%)	0600	23.90	0.1000	24.63	0.4168	0.1448	81	-1.74	010.11	0
010	Total N (24%)	0034	24.00	0.0200	24.63	0.4168	0.1448	81	-1.50	010.60	0
010	Total N (24%)	0558	24.00	0.2081	24.63	0.4168	0.1448	81	-1.50	010.99	0
010	Total N (24%)	0518	24.05	0.2600	24.63	0.4168	0.1448	81	-1.38	010.99	0
010	Total N (24%)	0533	24.10	0.1900	24.63	0.4168	0.1448	81	-1.27	010.11	0
010	Total N (24%)	0023	24.21	0.0200	24.63	0.4168	0.1448	81	-0.99	010.60	0
010	Total N (24%)	0521	24.25	0.0000	24.63	0.4168	0.1448	81	-0.90	010.60	0
010	Total N (24%)	0423	24.26	0.0600	24.63	0.4168	0.1448	81	-0.88	010.60	0
010	Total N (24%)	0527	24.27	0.0540	24.63	0.4168	0.1448	81	-0.85	010.60	0
010	Total N (24%)	0117	24.33	0.0459	24.63	0.4168	0.1448	81	-0.71	010.12	0
010	Total N (24%)	0524	24.37	0.0376	24.63	0.4168	0.1448	81	-0.63	010.99	0
010	Total N (24%)	0185	24.38	0.0800	24.63	0.4168	0.1448	81	-0.59	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total N (24%)	0568	24.40	0.0000	24.63	0.4168	0.1448	81	-0.54	010.12	0
010	Total N (24%)	0443	24.42	0.0300	24.63	0.4168	0.1448	81	-0.51	010.60	0
010	Total N (24%)	0042	24.45	0.3000	24.63	0.4168	0.1448	81	-0.42	010.60	0
010	Total N (24%)	0292	24.46	0.0100	24.63	0.4168	0.1448	81	-0.41	010.60	0
010	Total N (24%)	0481	24.46	0.3300	24.63	0.4168	0.1448	81	-0.41	010.60	0
010	Total N (24%)	0169	24.46	0.0040	24.63	0.4168	0.1448	81	-0.41	010.60	0
010	Total N (24%)	0377	24.48	0.1900	24.63	0.4168	0.1448	81	-0.36	010.60	0
010	Total N (24%)	0234	24.52	0.1700	24.63	0.4168	0.1448	81	-0.27	010.60	0
010	Total N (24%)	0481	24.54	0.6300	24.63	0.4168	0.1448	81	-0.22	010.12	0
010	Total N (24%)	0028	24.54	0.6600	24.63	0.4168	0.1448	81	-0.21	010.60	0
010	Total N (24%)	0356	24.55	0.0620	24.63	0.4168	0.1448	81	-0.18	010.60	0
010	Total N (24%)	0510	24.56	0.0646	24.63	0.4168	0.1448	81	-0.15	010.11	0
010	Total N (24%)	0055	24.60	0.0500	24.63	0.4168	0.1448	81	-0.08	010.60	0
010	Total N (24%)	0580	24.63	0.0000	24.63	0.4168	0.1448	81	0.01	010.12	0
010	Total N (24%)	0563	24.63	0.3400	24.63	0.4168	0.1448	81	0.01	010.99	0
010	Total N (24%)	0452	24.64	0.0500	24.63	0.4168	0.1448	81	0.02	010.60	0
010	Total N (24%)	0472	24.65	0.0300	24.63	0.4168	0.1448	81	0.04	010.60	0
010	Total N (24%)	0307	24.65	0.5000	24.63	0.4168	0.1448	81	0.06	010.60	0
010	Total N (24%)	0421	24.65	0.3800	24.63	0.4168	0.1448	81	0.06	010.60	0
010	Total N (24%)	0451	24.68	0.0100	24.63	0.4168	0.1448	81	0.12	010.60	0
010	Total N (24%)	0422	24.68	0.2400	24.63	0.4168	0.1448	81	0.13	010.60	0
010	Total N (24%)	0131	24.69	0.1150	24.63	0.4168	0.1448	81	0.15	010.60	0
010	Total N (24%)	0523	24.69	0.0200	24.63	0.4168	0.1448	81	0.15	010.60	0
010	Total N (24%)	0231	24.70	0.0500	24.63	0.4168	0.1448	81	0.16	010.60	0
010	Total N (24%)	0291	24.71	0.0100	24.63	0.4168	0.1448	81	0.19	010.60	0
010	Total N (24%)	0501	24.71	0.5300	24.63	0.4168	0.1448	81	0.19	010.60	0
010	Total N (24%)	0389	24.71	0.0400	24.63	0.4168	0.1448	81	0.20	010.60	0
010	Total N (24%)	0095	24.72	0.0500	24.63	0.4168	0.1448	81	0.21	010.60	0
010	Total N (24%)	0513	24.74	0.0200	24.63	0.4168	0.1448	81	0.27	010.99	0
010	Total N (24%)	0402	24.76	0.0690	24.63	0.4168	0.1448	81	0.33	010.60	0
010	Total N (24%)	0043	24.78	0.1700	24.63	0.4168	0.1448	81	0.36	010.60	0
010	Total N (24%)	0534	24.78	0.1500	24.63	0.4168	0.1448	81	0.36	010.60	0
010	Total N (24%)	0027	24.80	0.4000	24.63	0.4168	0.1448	81	0.42	010.60	0
010	Total N (24%)	0040	24.80	0.0000	24.63	0.4168	0.1448	81	0.42	010.60	0
010	Total N (24%)	0561	24.81	0.1000	24.63	0.4168	0.1448	81	0.44	010.60	0
010	Total N (24%)	0368	24.81	0.2300	24.63	0.4168	0.1448	81	0.44	010.60	0
010	Total N (24%)	0360	24.83	0.1000	24.63	0.4168	0.1448	81	0.49	010.60	0
010	Total N (24%)	0300	24.84	0.2100	24.63	0.4168	0.1448	81	0.50	010.16	0
010	Total N (24%)	0102	24.84	0.1500	24.63	0.4168	0.1448	81	0.50	010.60	0
010	Total N (24%)	0086	24.85	0.1630	24.63	0.4168	0.1448	81	0.53	010.60	0
010	Total N (24%)	0324	24.85	0.1000	24.63	0.4168	0.1448	81	0.54	010.60	0
010	Total N (24%)	0136	24.89	0.1400	24.63	0.4168	0.1448	81	0.63	010.60	0
010	Total N (24%)	0260	24.90	0.0000	24.63	0.4168	0.1448	81	0.66	010.60	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010	Total N (24%)	0405	24.94	0.0200	24.63	0.4168	0.1448	81	0.75	010.60	0
010	Total N (24%)	0494	24.94	0.2000	24.63	0.4168	0.1448	81	0.75	010.60	0
010	Total N (24%)	0035	24.95	0.3000	24.63	0.4168	0.1448	81	0.78	010.60	0
010	Total N (24%)	0106	24.96	0.1100	24.63	0.4168	0.1448	81	0.79	010.60	0
010	Total N (24%)	0041	24.99	0.0300	24.63	0.4168	0.1448	81	0.86	010.60	0
010	Total N (24%)	0220	25.03	0.2500	24.63	0.4168	0.1448	81	0.96	010.60	0
010	Total N (24%)	0037	25.07	0.1390	24.63	0.4168	0.1448	81	1.06	010.60	0
010	Total N (24%)	0547	25.07	0.3000	24.63	0.4168	0.1448	81	1.06	010.60	0
010	Total N (24%)	0394	25.08	0.6090	24.63	0.4168	0.1448	81	1.09	010.99	0
010	Total N (24%)	0230	25.10	0.0000	24.63	0.4168	0.1448	81	1.14	010.60	0
010	Total N (24%)	0233	25.10	0.0200	24.63	0.4168	0.1448	81	1.14	010.60	0
010	Total N (24%)	0588	25.10	0.2000	24.63	0.4168	0.1448	81	1.14	010.60	0
010	Total N (24%)	0073	25.16	0.0400	24.63	0.4168	0.1448	81	1.28	010.60	0
010	Total N (24%)	0354	25.25	0.1000	24.63	0.4168	0.1448	81	1.50	010.60	0
010	Total N (24%)	0029	25.47‡	0.0600	24.63	0.4168	0.1448	81	2.02	010.60	0
010	Total N (24%)	0007	25.50‡	0.2000	24.63	0.4168	0.1448	81	2.10	010.60	0
010	Total N (24%)	0177	25.58‡	0.1900	24.63	0.4168	0.1448	81	2.28	010.60	0
010	Total N (24%)	0444	25.87‡	0.0900	24.63	0.4168	0.1448	81	2.97	010.99	0
010	Total N (24%)	0325	23.82‡	0.9300	24.63	0.4168	0.1448	81	-1.95	010.60	1
010	Total N (24%)	0255	26.38‡	0.8540	24.63	0.4168	0.1448	81	4.21	010.60	1
020	Total P2O5 (%)	0255	22.27	0.1470	25.22	0.8016	0.2963	46	-3.68	020.50	0
020	Total P2O5 (%)	0389	22.41	0.1300	25.22	0.8016	0.2963	46	-3.51	020.50	0
020	Total P2O5 (%)	0588	23.25	0.1700	25.22	0.8016	0.2963	46	-2.46	020.50	0
020	Total P2O5 (%)	0472	23.50	0.0100	25.22	0.8016	0.2963	46	-2.15	020.50	0
020	Total P2O5 (%)	0307	23.83	0.5400	25.22	0.8016	0.2963	46	-1.73	020.50	0
020	Total P2O5 (%)	0552	23.95	1.580	25.22	0.8016	0.2963	46	-1.58	020.50	0
020	Total P2O5 (%)	0300	24.15	0.1833	25.22	0.8016	0.2963	46	-1.33	020.50	0
020	Total P2O5 (%)	0524	24.61	0.4910	25.22	0.8016	0.2963	46	-0.76	020.50	0
020	Total P2O5 (%)	0605	24.68	0.6000	25.22	0.8016	0.2963	46	-0.67	020.50	0
020	Total P2O5 (%)	0481	24.76	0.1400	25.22	0.8016	0.2963	46	-0.57	020.20	0
020	Total P2O5 (%)	0510	24.77	0.6858	25.22	0.8016	0.2963	46	-0.56	020.20	0
020	Total P2O5 (%)	0423	24.83	0.9900	25.22	0.8016	0.2963	46	-0.49	020.50	0
020	Total P2O5 (%)	0451	24.86	0.0200	25.22	0.8016	0.2963	46	-0.45	020.50	0
020	Total P2O5 (%)	0534	24.88	0.0200	25.22	0.8016	0.2963	46	-0.42	020.20	0
020	Total P2O5 (%)	0563	24.90	0.1600	25.22	0.8016	0.2963	46	-0.40	020.20	0
020	Total P2O5 (%)	0027	24.99	0.3400	25.22	0.8016	0.2963	46	-0.29	020.20	0
020	Total P2O5 (%)	0260	25.00	0.2000	25.22	0.8016	0.2963	46	-0.27	020.50	0
020	Total P2O5 (%)	0324	25.01	0.4900	25.22	0.8016	0.2963	46	-0.27	020.20	0
020	Total P2O5 (%)	0419	25.08	0.0900	25.22	0.8016	0.2963	46	-0.18	020.20	0
020	Total P2O5 (%)	0513	25.08	0.0400	25.22	0.8016	0.2963	46	-0.18	020.99	0
020	Total P2O5 (%)	0521	25.09	0.0000	25.22	0.8016	0.2963	46	-0.16	020.50	0
020	Total P2O5 (%)	0292	25.14	0.1100	25.22	0.8016	0.2963	46	-0.11	020.20	0
020	Total P2O5 (%)	0169	25.15	0.0100	25.22	0.8016	0.2963	46	-0.09	020.20	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020	Total P2O5 (%)	0527	25.25	0.1963	25.22	0.8016	0.2963	46	0.04	020.50	0
020	Total P2O5 (%)	0561	25.36	0.1100	25.22	0.8016	0.2963	46	0.17	020.20	0
020	Total P2O5 (%)	0231	25.42	0.0000	25.22	0.8016	0.2963	46	0.25	020.20	0
020	Total P2O5 (%)	0564	25.43	0.0500	25.22	0.8016	0.2963	46	0.26	020.99	0
020	Total P2O5 (%)	0405	25.44	0.0700	25.22	0.8016	0.2963	46	0.27	020.20	0
020	Total P2O5 (%)	0157	25.45	0.1000	25.22	0.8016	0.2963	46	0.29	020.10	0
020	Total P2O5 (%)	0291	25.46	0.0800	25.22	0.8016	0.2963	46	0.30	020.50	0
020	Total P2O5 (%)	0368	25.50	0.3340	25.22	0.8016	0.2963	46	0.35	020.50	0
020	Total P2O5 (%)	0572	25.52	0.4931	25.22	0.8016	0.2963	46	0.37	020.99	0
020	Total P2O5 (%)	0035	25.55	0.1000	25.22	0.8016	0.2963	46	0.41	020.40	0
020	Total P2O5 (%)	0567	25.55	0.1000	25.22	0.8016	0.2963	46	0.41	020.99	0
020	Total P2O5 (%)	0547	25.60	0.6000	25.22	0.8016	0.2963	46	0.47	020.20	0
020	Total P2O5 (%)	0234	25.70	0.2000	25.22	0.8016	0.2963	46	0.60	020.50	0
020	Total P2O5 (%)	0402	25.81	0.0760	25.22	0.8016	0.2963	46	0.73	020.50	0
020	Total P2O5 (%)	0394	25.82	0.0150	25.22	0.8016	0.2963	46	0.74	020.20	0
020	Total P2O5 (%)	0356	26.05	0.2000	25.22	0.8016	0.2963	46	1.03	020.20	0
020	Total P2O5 (%)	0433	26.11	0.0900	25.22	0.8016	0.2963	46	1.10	020.50	0
020	Total P2O5 (%)	0422	26.18	1.160	25.22	0.8016	0.2963	46	1.20	020.50	0
020	Total P2O5 (%)	0559	26.21	0.0200	25.22	0.8016	0.2963	46	1.23	020.99	0
020	Total P2O5 (%)	0580	26.46	0.0000	25.22	0.8016	0.2963	46	1.55	020.20	0
020	Total P2O5 (%)	0300	26.84	0.0500	25.22	0.8016	0.2963	46	2.01	020.20	0
020	Total P2O5 (%)	0523	29.00	1.400	25.22	0.8016	0.2963	46	4.71	020.50	0
020	Total P2O5 (%)	0443	29.62	1.040	25.22	0.8016	0.2963	46	5.49	020.99	0
020	Total P2O5 (%)	0515	24.69	3.750	25.22	0.8016	0.2963	46	-0.67	020.99	1
030	Citrate Insoluble P2O5 (%)	0405	0.0800	0.0000				2		030.20	0
030	Citrate Insoluble P2O5 (%)	0444	24.86	0.1000				2		030.99	0
040	Indirect Available P2O5 (25%)	0405	25.36±	0.0700				2		040.99	0
040	Indirect Available P2O5 (25%)	0300	26.54±	0.0000				2		040.20	0
041	Direct Available P2O5 (25%)	0423	22.87±	0.2600	25.06	0.4472	0.2412	51	-4.90	041.51	0
041	Direct Available P2O5 (25%)	0230	23.95±	0.1000	25.06	0.4472	0.2412	51	-2.48	041.51	0
041	Direct Available P2O5 (25%)	0325	24.00±	0.6000	25.06	0.4472	0.2412	51	-2.37	041.50	0
041	Direct Available P2O5 (25%)	0025	24.20±	0.4000	25.06	0.4472	0.2412	51	-1.92	041.51	0
041	Direct Available P2O5 (25%)	0558	24.21±	0.2156	25.06	0.4472	0.2412	51	-1.89	041.99	0
041	Direct Available P2O5 (25%)	0106	24.31±	0.2200	25.06	0.4472	0.2412	51	-1.68	041.21	0
041	Direct Available P2O5 (25%)	0055	24.35	0.4100	25.06	0.4472	0.2412	51	-1.60	041.21	0
041	Direct Available P2O5 (25%)	0472	24.58	0.1700	25.06	0.4472	0.2412	51	-1.08	041.21	0
041	Direct Available P2O5 (25%)	0360	24.59	0.1900	25.06	0.4472	0.2412	51	-1.06	041.51	0
041	Direct Available P2O5 (25%)	0452	24.60	0.0400	25.06	0.4472	0.2412	51	-1.03	041.20	0
041	Direct Available P2O5 (25%)	0377	24.61	0.2500	25.06	0.4472	0.2412	51	-1.02	041.51	0
041	Direct Available P2O5 (25%)	0421	24.76	0.3800	25.06	0.4472	0.2412	51	-0.67	041.50	0
041	Direct Available P2O5 (25%)	0549	24.80	0.4700	25.06	0.4472	0.2412	51	-0.59	041.99	0
041	Direct Available P2O5 (25%)	0569	24.89	0.0400	25.06	0.4472	0.2412	51	-0.38	041.99	0
041	Direct Available P2O5 (25%)	0405	24.95	0.0100	25.06	0.4472	0.2412	51	-0.26	041.21	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041	Direct Available P2O5 (25%)	0040	24.95	0.5000	25.06	0.4472	0.2412	51	-0.25	041.51	0
041	Direct Available P2O5 (25%)	0177	24.95	0.1155	25.06	0.4472	0.2412	51	-0.24	041.21	0
041	Direct Available P2O5 (25%)	0513	24.98	0.0600	25.06	0.4472	0.2412	51	-0.18	041.11	0
041	Direct Available P2O5 (25%)	0095	24.99	0.1200	25.06	0.4472	0.2412	51	-0.16	041.11	0
041	Direct Available P2O5 (25%)	0538	25.00	0.2300	25.06	0.4472	0.2412	51	-0.14	041.99	0
041	Direct Available P2O5 (25%)	0518	25.00	0.6400	25.06	0.4472	0.2412	51	-0.13	041.99	0
041	Direct Available P2O5 (25%)	0394	25.01	0.2790	25.06	0.4472	0.2412	51	-0.11	041.21	0
041	Direct Available P2O5 (25%)	0600	25.03	0.0400	25.06	0.4472	0.2412	51	-0.07	041.99	0
041	Direct Available P2O5 (25%)	0231	25.05	0.1100	25.06	0.4472	0.2412	51	-0.03	041.21	0
041	Direct Available P2O5 (25%)	0055	25.05	0.1400	25.06	0.4472	0.2412	51	-0.02	041.11	0
041	Direct Available P2O5 (25%)	0533	25.06	0.1900	25.06	0.4472	0.2412	51	-0.01	041.99	0
041	Direct Available P2O5 (25%)	0354	25.10	0.2000	25.06	0.4472	0.2412	51	0.09	041.21	0
041	Direct Available P2O5 (25%)	0494	25.12	0.0900	25.06	0.4472	0.2412	51	0.12	041.10	0
041	Direct Available P2O5 (25%)	0027	25.17	0.4100	25.06	0.4472	0.2412	51	0.24	041.20	0
041	Direct Available P2O5 (25%)	0405	25.18	0.0400	25.06	0.4472	0.2412	51	0.27	041.11	0
041	Direct Available P2O5 (25%)	0007	25.20	1.000	25.06	0.4472	0.2412	51	0.31	041.50	0
041	Direct Available P2O5 (25%)	0177	25.20	0.1373	25.06	0.4472	0.2412	51	0.32	041.10	0
041	Direct Available P2O5 (25%)	0562	25.23	0.1500	25.06	0.4472	0.2412	51	0.37	041.99	0
041	Direct Available P2O5 (25%)	0023	25.25	0.1000	25.06	0.4472	0.2412	51	0.43	041.51	0
041	Direct Available P2O5 (25%)	0220	25.27	0.1200	25.06	0.4472	0.2412	51	0.47	041.11	0
041	Direct Available P2O5 (25%)	0037	25.28	0.5240	25.06	0.4472	0.2412	51	0.49	041.51	0
041	Direct Available P2O5 (25%)	0072	25.29	0.0580	25.06	0.4472	0.2412	51	0.52	041.11	0
041	Direct Available P2O5 (25%)	0029	25.33	0.2100	25.06	0.4472	0.2412	51	0.59	041.40	0
041	Direct Available P2O5 (25%)	0073	25.34	0.3400	25.06	0.4472	0.2412	51	0.63	041.11	0
041	Direct Available P2O5 (25%)	0185	25.35	0.0800	25.06	0.4472	0.2412	51	0.65	041.11	0
041	Direct Available P2O5 (25%)	0049	25.39	0.0700	25.06	0.4472	0.2412	51	0.73	041.11	0
041	Direct Available P2O5 (25%)	0028	25.42	0.0600	25.06	0.4472	0.2412	51	0.81	041.40	0
041	Direct Available P2O5 (25%)	0086	25.47	0.0730	25.06	0.4472	0.2412	51	0.91	041.10	0
041	Direct Available P2O5 (25%)	0553	25.50	0.2000	25.06	0.4472	0.2412	51	0.99	041.20	0
041	Direct Available P2O5 (25%)	0494	25.50	0.5400	25.06	0.4472	0.2412	51	0.99	041.51	0
041	Direct Available P2O5 (25%)	0117	25.51	0.6456	25.06	0.4472	0.2412	51	1.00	041.51	0
041	Direct Available P2O5 (25%)	0131	25.54	0.3100	25.06	0.4472	0.2412	51	1.06	041.50	0
041	Direct Available P2O5 (25%)	0136	25.71	0.2600	25.06	0.4472	0.2412	51	1.45	041.51	0
041	Direct Available P2O5 (25%)	0072	25.89‡	0.0431	25.06	0.4472	0.2412	51	1.86	041.51	0
041	Direct Available P2O5 (25%)	0043	26.01‡	0.0600	25.06	0.4472	0.2412	51	2.13	041.51	0
041	Direct Available P2O5 (25%)	0102	26.50‡	0.4000	25.06	0.4472	0.2412	51	3.22	041.10	0
041	Direct Available P2O5 (25%)	0568	24.75	1.100	25.06	0.4472	0.2412	51	-0.69	041.21	1
048	Water Soluble P2O5 (%)	0572	21.20	0.9695	23.12	1.834	0.4333	6	-0.93	048.99	0
048	Water Soluble P2O5 (%)	0513	22.24	0.0500	23.12	1.834	0.4333	6	-0.43	048.99	0
048	Water Soluble P2O5 (%)	0472	22.24	0.0200	23.12	1.834	0.4333	6	-0.43	048.20	0
048	Water Soluble P2O5 (%)	0605	22.89	0.2400	23.12	1.834	0.4333	6	-0.11	048.50	0
048	Water Soluble P2O5 (%)	0444	24.78	0.2600	23.12	1.834	0.4333	6	0.81	048.50	0
048	Water Soluble P2O5 (%)	0501	25.36	1.060	23.12	1.834	0.4333	6	1.09	048.50	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble K2O (4%)	0055	3.621†	0.0040	4.139	0.2132	0.0841	82	-2.43	050.50	0
050	Soluble K2O (4%)	0547	3.630†	0.0600	4.139	0.2132	0.0841	82	-2.39	050.52	0
050	Soluble K2O (4%)	0564	3.690†	0.0200	4.139	0.2132	0.0841	82	-2.11	050.99	0
050	Soluble K2O (4%)	0040	3.750	0.1000	4.139	0.2132	0.0841	82	-1.83	050.30	0
050	Soluble K2O (4%)	0559	3.760	0.0200	4.139	0.2132	0.0841	82	-1.78	050.99	0
050	Soluble K2O (4%)	0481	3.765	0.0900	4.139	0.2132	0.0841	82	-1.76	050.99	0
050	Soluble K2O (4%)	0451	3.768	0.2280	4.139	0.2132	0.0841	82	-1.74	050.99	0
050	Soluble K2O (4%)	0515	3.842	0.0730	4.139	0.2132	0.0841	82	-1.40	050.99	0
050	Soluble K2O (4%)	0567	3.865	0.0300	4.139	0.2132	0.0841	82	-1.29	050.99	0
050	Soluble K2O (4%)	0563	3.893	0.0479	4.139	0.2132	0.0841	82	-1.16	050.99	0
050	Soluble K2O (4%)	0422	3.895	0.0700	4.139	0.2132	0.0841	82	-1.15	050.50	0
050	Soluble K2O (4%)	0562	3.900	0.1000	4.139	0.2132	0.0841	82	-1.12	050.99	0
050	Soluble K2O (4%)	0549	3.915	0.2700	4.139	0.2132	0.0841	82	-1.05	050.99	0
050	Soluble K2O (4%)	0443	3.930	0.0400	4.139	0.2132	0.0841	82	-0.98	050.60	0
050	Soluble K2O (4%)	0533	3.935	0.0700	4.139	0.2132	0.0841	82	-0.96	050.99	0
050	Soluble K2O (4%)	0600	3.935	0.0700	4.139	0.2132	0.0841	82	-0.96	050.99	0
050	Soluble K2O (4%)	0472	3.940	0.0200	4.139	0.2132	0.0841	82	-0.93	050.32	0
050	Soluble K2O (4%)	0553	3.970	0.1200	4.139	0.2132	0.0841	82	-0.79	050.99	0
050	Soluble K2O (4%)	0260	3.975	0.0700	4.139	0.2132	0.0841	82	-0.77	050.99	0
050	Soluble K2O (4%)	0538	4.030	0.1000	4.139	0.2132	0.0841	82	-0.51	050.99	0
050	Soluble K2O (4%)	0255	4.031	0.2250	4.139	0.2132	0.0841	82	-0.51	050.99	0
050	Soluble K2O (4%)	0230	4.040	0.0800	4.139	0.2132	0.0841	82	-0.47	050.50	0
050	Soluble K2O (4%)	0518	4.045	0.1100	4.139	0.2132	0.0841	82	-0.44	050.99	0
050	Soluble K2O (4%)	0423	4.050	0.0200	4.139	0.2132	0.0841	82	-0.42	050.52	0
050	Soluble K2O (4%)	0569	4.050	0.1400	4.139	0.2132	0.0841	82	-0.42	050.99	0
050	Soluble K2O (4%)	0029	4.055	0.1100	4.139	0.2132	0.0841	82	-0.40	050.62	0
050	Soluble K2O (4%)	0027	4.060	0.0000	4.139	0.2132	0.0841	82	-0.37	050.99	0
050	Soluble K2O (4%)	0524	4.063	0.0289	4.139	0.2132	0.0841	82	-0.36	050.99	0
050	Soluble K2O (4%)	0356	4.073	0.1580	4.139	0.2132	0.0841	82	-0.31	050.30	0
050	Soluble K2O (4%)	0377	4.080	0.1000	4.139	0.2132	0.0841	82	-0.28	050.52	0
050	Soluble K2O (4%)	0421	4.080	0.1200	4.139	0.2132	0.0841	82	-0.28	050.99	0
050	Soluble K2O (4%)	0485	4.089	0.0450	4.139	0.2132	0.0841	82	-0.24	050.52	0
050	Soluble K2O (4%)	0419	4.093	0.0679	4.139	0.2132	0.0841	82	-0.22	050.50	0
050	Soluble K2O (4%)	0136	4.095	0.0300	4.139	0.2132	0.0841	82	-0.21	050.52	0
050	Soluble K2O (4%)	0023	4.100	0.0800	4.139	0.2132	0.0841	82	-0.18	050.52	0
050	Soluble K2O (4%)	0605	4.110	0.0400	4.139	0.2132	0.0841	82	-0.14	050.99	0
050	Soluble K2O (4%)	0055	4.115	0.0700	4.139	0.2132	0.0841	82	-0.11	050.00	0
050	Soluble K2O (4%)	0389	4.125	0.0060	4.139	0.2132	0.0841	82	-0.07	050.99	0
050	Soluble K2O (4%)	0231	4.135	0.0100	4.139	0.2132	0.0841	82	-0.02	050.50	0
050	Soluble K2O (4%)	0307	4.140	0.4000	4.139	0.2132	0.0841	82	0.00	050.50	0
050	Soluble K2O (4%)	0025	4.145	0.2100	4.139	0.2132	0.0841	82	0.03	050.52	0
050	Soluble K2O (4%)	0007	4.150	0.1000	4.139	0.2132	0.0841	82	0.05	050.51	0
050	Soluble K2O (4%)	0106	4.155	0.2700	4.139	0.2132	0.0841	82	0.07	050.50	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050	Soluble K2O (4%)	0169	4.155	0.1100	4.139	0.2132	0.0841	82	0.07	050.60	0
050	Soluble K2O (4%)	0220	4.160	0.0200	4.139	0.2132	0.0841	82	0.10	050.00	0
050	Soluble K2O (4%)	0368	4.162	0.0292	4.139	0.2132	0.0841	82	0.11	050.51	0
050	Soluble K2O (4%)	0234	4.165	0.0500	4.139	0.2132	0.0841	82	0.12	050.99	0
050	Soluble K2O (4%)	0157	4.170	0.1000	4.139	0.2132	0.0841	82	0.14	050.30	0
050	Soluble K2O (4%)	0394	4.170	0.1460	4.139	0.2132	0.0841	82	0.14	050.62	0
050	Soluble K2O (4%)	0521	4.174	0.0000	4.139	0.2132	0.0841	82	0.16	050.99	0
050	Soluble K2O (4%)	0452	4.175	0.0100	4.139	0.2132	0.0841	82	0.17	050.51	0
050	Soluble K2O (4%)	0444	4.200	0.0400	4.139	0.2132	0.0841	82	0.28	050.50	0
050	Soluble K2O (4%)	0292	4.200	0.0000	4.139	0.2132	0.0841	82	0.28	050.50	0
050	Soluble K2O (4%)	0568	4.200	0.0600	4.139	0.2132	0.0841	82	0.28	050.51	0
050	Soluble K2O (4%)	0527	4.210	0.0722	4.139	0.2132	0.0841	82	0.33	050.99	0
050	Soluble K2O (4%)	0580	4.210	0.0000	4.139	0.2132	0.0841	82	0.33	050.60	0
050	Soluble K2O (4%)	0028	4.220	0.1600	4.139	0.2132	0.0841	82	0.38	050.62	0
050	Soluble K2O (4%)	0291	4.225	0.0300	4.139	0.2132	0.0841	82	0.40	050.51	0
050	Soluble K2O (4%)	0177	4.228	0.0063	4.139	0.2132	0.0841	82	0.42	050.99	0
050	Soluble K2O (4%)	0037	4.235	0.0540	4.139	0.2132	0.0841	82	0.45	050.52	0
050	Soluble K2O (4%)	0049	4.255	0.1900	4.139	0.2132	0.0841	82	0.54	050.00	0
050	Soluble K2O (4%)	0360	4.255	0.0100	4.139	0.2132	0.0841	82	0.54	050.52	0
050	Soluble K2O (4%)	0043	4.295	0.0100	4.139	0.2132	0.0841	82	0.73	050.52	0
050	Soluble K2O (4%)	0501	4.295	0.1500	4.139	0.2132	0.0841	82	0.73	050.99	0
050	Soluble K2O (4%)	0117	4.303	0.0704	4.139	0.2132	0.0841	82	0.77	050.52	0
050	Soluble K2O (4%)	0494	4.305	0.0100	4.139	0.2132	0.0841	82	0.78	050.00	0
050	Soluble K2O (4%)	0433	4.305	0.1100	4.139	0.2132	0.0841	82	0.78	050.99	0
050	Soluble K2O (4%)	0035	4.350	0.1000	4.139	0.2132	0.0841	82	0.99	050.61	0
050	Soluble K2O (4%)	0561	4.355	0.0300	4.139	0.2132	0.0841	82	1.01	050.00	0
050	Soluble K2O (4%)	0072	4.363	0.0009	4.139	0.2132	0.0841	82	1.05	050.52	0
050	Soluble K2O (4%)	0513	4.370	0.0800	4.139	0.2132	0.0841	82	1.08	050.62	0
050	Soluble K2O (4%)	0072	4.372	0.0300	4.139	0.2132	0.0841	82	1.09	050.00	0
050	Soluble K2O (4%)	0405	4.410	0.0000	4.139	0.2132	0.0841	82	1.27	050.00	0
050	Soluble K2O (4%)	0354	4.420	0.1800	4.139	0.2132	0.0841	82	1.32	050.52	0
050	Soluble K2O (4%)	0102	4.490	0.0200	4.139	0.2132	0.0841	82	1.64	050.00	0
050	Soluble K2O (4%)	0523	4.550	0.3000	4.139	0.2132	0.0841	82	1.93	050.99	0
050	Soluble K2O (4%)	0073	4.630‡	0.1600	4.139	0.2132	0.0841	82	2.30	050.30	0
050	Soluble K2O (4%)	0300	4.695‡	0.0700	4.139	0.2132	0.0841	82	2.61	050.99	0
050	Soluble K2O (4%)	0095	4.895‡	0.0100	4.139	0.2132	0.0841	82	3.54	050.62	0
050	Soluble K2O (4%)	0402	4.935‡	0.0170	4.139	0.2132	0.0841	82	3.73	050.99	0
050	Soluble K2O (4%)	0552	5.050‡	0.3200	4.139	0.2132	0.0841	82	4.27	050.99	0
050	Soluble K2O (4%)	0558	5.181‡	0.1124	4.139	0.2132	0.0841	82	4.88	050.99	0
050	Soluble K2O (4%)	0510	4.013	0.6154	4.139	0.2132	0.0841	82	-0.59	050.60	1
050	Soluble K2O (4%)	0324	4.060	0.7600	4.139	0.2132	0.0841	82	-0.37	050.50	1
050	Soluble K2O (4%)	0494	4.335	0.7300	4.139	0.2132	0.0841	82	0.92	050.52	1
050	Soluble K2O (4%)	0325	4.500	0.6000	4.139	0.2132	0.0841	82	1.69	050.99	1

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
060	Water (Free) (%)	0513	0.9850	0.0300	1.533	0.7429	0.0682	3	-0.74	060.00	0
060	Water (Free) (%)	0419	1.235	0.0500	1.533	0.7429	0.0682	3	-0.40	060.10	0
060	Water (Free) (%)	0510	2.378	0.1246	1.533	0.7429	0.0682	3	1.14	060.99	0
101	Acid Soluble Ca (%)	0553	0.0450	0.0100	0.2208	0.0479	0.0065	12	-3.67	101.00	0
101	Acid Soluble Ca (%)	0472	0.1650	0.0100	0.2208	0.0479	0.0065	12	-1.17	101.33	0
101	Acid Soluble Ca (%)	0527	0.1655	0.0024	0.2208	0.0479	0.0065	12	-1.16	101.33	0
101	Acid Soluble Ca (%)	0572	0.2042	0.0121	0.2208	0.0479	0.0065	12	-0.35	101.99	0
101	Acid Soluble Ca (%)	0568	0.2190	0.0020	0.2208	0.0479	0.0065	12	-0.04	101.30	0
101	Acid Soluble Ca (%)	0389	0.2300	0.0000	0.2208	0.0479	0.0065	12	0.19	101.99	0
101	Acid Soluble Ca (%)	0300	0.2323	0.0032	0.2208	0.0479	0.0065	12	0.24	101.32	0
101	Acid Soluble Ca (%)	0423	0.2425	0.0010	0.2208	0.0479	0.0065	12	0.45	101.32	0
101	Acid Soluble Ca (%)	0494	0.2483	0.0087	0.2208	0.0479	0.0065	12	0.57	101.33	0
101	Acid Soluble Ca (%)	0354	0.2500	0.0000	0.2208	0.0479	0.0065	12	0.61	101.30	0
101	Acid Soluble Ca (%)	0419	0.2571	0.0091	0.2208	0.0479	0.0065	12	0.76	101.33	0
101	Acid Soluble Ca (%)	0035	0.2870	0.0200	0.2208	0.0479	0.0065	12	1.38	101.30	0
101	Acid Soluble Ca (%)	0552	1.955	2.090	0.2208	0.0479	0.0065	12	36.23	101.99	2
121	Acid Soluble Mg (%)	0572	0.3683	0.0043	0.4427	0.0428	0.0156	15	-1.74	121.99	0
121	Acid Soluble Mg (%)	0524	0.3840	0.0238	0.4427	0.0428	0.0156	15	-1.37	121.99	0
121	Acid Soluble Mg (%)	0494	0.4044	0.0357	0.4427	0.0428	0.0156	15	-0.90	121.33	0
121	Acid Soluble Mg (%)	0515	0.4108	0.0567	0.4427	0.0428	0.0156	15	-0.75	121.99	0
121	Acid Soluble Mg (%)	0515	0.4112	0.0008	0.4427	0.0428	0.0156	15	-0.74	121.33	0
121	Acid Soluble Mg (%)	0568	0.4370	0.0040	0.4427	0.0428	0.0156	15	-0.13	121.30	0
121	Acid Soluble Mg (%)	0300	0.4435	0.0036	0.4427	0.0428	0.0156	15	0.02	121.32	0
121	Acid Soluble Mg (%)	0423	0.4465	0.0030	0.4427	0.0428	0.0156	15	0.09	121.32	0
121	Acid Soluble Mg (%)	0389	0.4545	0.0030	0.4427	0.0428	0.0156	15	0.28	121.99	0
121	Acid Soluble Mg (%)	0354	0.4600	0.0000	0.4427	0.0428	0.0156	15	0.40	121.30	0
121	Acid Soluble Mg (%)	0472	0.4650	0.0100	0.4427	0.0428	0.0156	15	0.52	121.33	0
121	Acid Soluble Mg (%)	0419	0.4770	0.0020	0.4427	0.0428	0.0156	15	0.80	121.33	0
121	Acid Soluble Mg (%)	0035	0.4790	0.0080	0.4427	0.0428	0.0156	15	0.85	121.30	0
121	Acid Soluble Mg (%)	0527	0.4903	0.0065	0.4427	0.0428	0.0156	15	1.11	121.33	0
121	Acid Soluble Mg (%)	0553	0.4990	0.0720	0.4427	0.0428	0.0156	15	1.31	121.00	0
121	Acid Soluble Mg (%)	0552	0.8100	0.4000	0.4427	0.0428	0.0156	15	8.58	121.99	1
131	Water Soluble Mg (%)	0572	0.0893	0.0035				1		131.99	0
143	Elemental S (%)	0389	0.6920	0.0080				1		143.99	0
145	Sulfate S, HCl soluble (%)	0553	0.5610	0.0060				2		145.99	0
145	Sulfate S, HCl soluble (%)	0419	0.6488	0.0110				2		145.99	0
148	Total S (%)	0515	0.4144	0.0144	0.6154	0.1772	0.0217	7	-1.03	148.07	0
148	Total S (%)	0572	0.4346	0.0229	0.6154	0.1772	0.0217	7	-0.92	148.99	0
148	Total S (%)	0300	0.6237	0.0016	0.6154	0.1772	0.0217	7	0.04	148.99	0
148	Total S (%)	0472	0.6400	0.0000	0.6154	0.1772	0.0217	7	0.13	148.07	0
148	Total S (%)	0494	0.6474	0.0567	0.6154	0.1772	0.0217	7	0.16	148.07	0
148	Total S (%)	0354	0.6700	0.0200	0.6154	0.1772	0.0217	7	0.28	148.99	0
148	Total S (%)	0402	0.8777	0.0365	0.6154	0.1772	0.0217	7	1.34	148.07	0

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148	Total S (%)	0527	< 0.01		0.6154	0.1772	0.0217	7		148.07	5
149	S - HNO3 soluble (%)	0423	0.5950	0.0020				2		149.04	0
149	S - HNO3 soluble (%)	0524	0.6263	0.0262				2		149.04	0
151	Acid Soluble As (ppm)	0220	3.150	0.7000	7.725	1.638	0.4561	16	-2.79	151.99	0
151	Acid Soluble As (ppm)	0368	5.200	1.200	7.725	1.638	0.4561	16	-1.54	151.34	0
151	Acid Soluble As (ppm)	0405	6.000	0.0000	7.725	1.638	0.4561	16	-1.05	151.32	0
151	Acid Soluble As (ppm)	0515	6.428	0.0510	7.725	1.638	0.4561	16	-0.79	151.33	0
151	Acid Soluble As (ppm)	0534	7.214	0.1330	7.725	1.638	0.4561	16	-0.31	151.00	0
151	Acid Soluble As (ppm)	0037	7.374	0.0650	7.725	1.638	0.4561	16	-0.21	151.33	0
151	Acid Soluble As (ppm)	0136	7.745	0.0300	7.725	1.638	0.4561	16	0.01	151.33	0
151	Acid Soluble As (ppm)	0605	7.790	0.3600	7.725	1.638	0.4561	16	0.04	151.30	0
151	Acid Soluble As (ppm)	0501	7.840	0.2800	7.725	1.638	0.4561	16	0.07	151.30	0
151	Acid Soluble As (ppm)	0300	8.029	0.0420	7.725	1.638	0.4561	16	0.19	151.32	0
151	Acid Soluble As (ppm)	0481	8.035	0.2900	7.725	1.638	0.4561	16	0.19	151.99	0
151	Acid Soluble As (ppm)	0523	8.710	0.0200	7.725	1.638	0.4561	16	0.60	151.30	0
151	Acid Soluble As (ppm)	0527	9.118	0.6708	7.725	1.638	0.4561	16	0.85	151.33	0
151	Acid Soluble As (ppm)	0563	9.138	0.6559	7.725	1.638	0.4561	16	0.86	151.33	0
151	Acid Soluble As (ppm)	0524	9.467	0.9996	7.725	1.638	0.4561	16	1.06	151.30	0
151	Acid Soluble As (ppm)	0494	16.10	1.800	7.725	1.638	0.4561	16	5.11	151.33	0
151	Acid Soluble As (ppm)	0255	0.0000	0.0000	7.725	1.638	0.4561	16		151.30	4
165	Acid Soluble B (%)	0515	0.0020	0.0009	0.0151	0.0191	0.0126	9	-0.69	165.99	0
165	Acid Soluble B (%)	0553	0.0020	0.0000	0.0151	0.0191	0.0126	9	-0.68	165.00	0
165	Acid Soluble B (%)	0423	0.0020	0.0000	0.0151	0.0191	0.0126	9	-0.68	165.99	0
165	Acid Soluble B (%)	0524	0.0026	0.0001	0.0151	0.0191	0.0126	9	-0.65	165.99	0
165	Acid Soluble B (%)	0389	0.0071	0.0000	0.0151	0.0191	0.0126	9	-0.42	165.30	0
165	Acid Soluble B (%)	0472	0.0100	0.0000	0.0151	0.0191	0.0126	9	-0.26	165.99	0
165	Acid Soluble B (%)	0300	0.0279	0.0013	0.0151	0.0191	0.0126	9	0.67	165.99	0
165	Acid Soluble B (%)	0552	0.0400	0.0600	0.0151	0.0191	0.0126	9	1.30	165.99	0
165	Acid Soluble B (%)	0494	0.0422	0.0507	0.0151	0.0191	0.0126	9	1.42	165.30	0
165	Acid Soluble B (%)	0527	< 0.001		0.0151	0.0191	0.0126	9		165.99	5
165	Acid Soluble B (%)	0572	< 0.009		0.0151	0.0191	0.0126	9		165.99	5
165	Acid Soluble B (%)	0354	< 0.01		0.0151	0.0191	0.0126	9		165.30	5
171	Water Soluble B (%)	0572	< 0.01					0		171.99	5
181	Acid Soluble Cd (ppm)	0534	1.310	0.0400	1.730	0.2318	0.0963	22	-1.81	181.00	0
181	Acid Soluble Cd (ppm)	0485	1.385	0.0140	1.730	0.2318	0.0963	22	-1.49	181.30	0
181	Acid Soluble Cd (ppm)	0524	1.464	0.0125	1.730	0.2318	0.0963	22	-1.15	181.30	0
181	Acid Soluble Cd (ppm)	0501	1.505	0.1100	1.730	0.2318	0.0963	22	-0.97	181.30	0
181	Acid Soluble Cd (ppm)	0444	1.595	0.0500	1.730	0.2318	0.0963	22	-0.58	181.30	0
181	Acid Soluble Cd (ppm)	0255	1.601	0.2310	1.730	0.2318	0.0963	22	-0.56	181.30	0
181	Acid Soluble Cd (ppm)	0136	1.640	0.0000	1.730	0.2318	0.0963	22	-0.39	181.33	0
181	Acid Soluble Cd (ppm)	0389	1.650	0.0200	1.730	0.2318	0.0963	22	-0.35	181.30	0
181	Acid Soluble Cd (ppm)	0368	1.650	0.1000	1.730	0.2318	0.0963	22	-0.35	181.34	0
181	Acid Soluble Cd (ppm)	0481	1.655	0.2700	1.730	0.2318	0.0963	22	-0.33	181.99	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
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181	Acid Soluble Cd (ppm)	0394	1.707	0.0130	1.730	0.2318	0.0963	22	-0.10	181.30	0
181	Acid Soluble Cd (ppm)	0419	1.718	0.2550	1.730	0.2318	0.0963	22	-0.06	181.30	0
181	Acid Soluble Cd (ppm)	0572	1.751	0.0750	1.730	0.2318	0.0963	22	0.09	181.99	0
181	Acid Soluble Cd (ppm)	0300	1.776	0.0480	1.730	0.2318	0.0963	22	0.20	181.32	0
181	Acid Soluble Cd (ppm)	0523	1.795	0.0100	1.730	0.2318	0.0963	22	0.28	181.30	0
181	Acid Soluble Cd (ppm)	0563	1.849	0.0298	1.730	0.2318	0.0963	22	0.51	181.33	0
181	Acid Soluble Cd (ppm)	0527	1.900	0.0097	1.730	0.2318	0.0963	22	0.73	181.33	0
181	Acid Soluble Cd (ppm)	0220	1.950	0.1000	1.730	0.2318	0.0963	22	0.95	181.99	0
181	Acid Soluble Cd (ppm)	0494	1.960	0.2200	1.730	0.2318	0.0963	22	0.99	181.33	0
181	Acid Soluble Cd (ppm)	0405	2.000	0.0000	1.730	0.2318	0.0963	22	1.16	181.32	0
181	Acid Soluble Cd (ppm)	0605	2.060	0.3400	1.730	0.2318	0.0963	22	1.42	181.30	0
181	Acid Soluble Cd (ppm)	0035	2.275	0.1700	1.730	0.2318	0.0963	22	2.35	181.30	0
190	Water Soluble Cl (%)	0494	3.055	0.0500				2		190.00	0
190	Water Soluble Cl (%)	0553	3.515	0.7500				2		190.00	0
191	Acid Soluble Cr (ppm)	0524	36.86	2.011	46.23	5.075	1.823	19	-1.85	191.30	0
191	Acid Soluble Cr (ppm)	0572	39.06	2.001	46.23	5.075	1.823	19	-1.41	191.99	0
191	Acid Soluble Cr (ppm)	0419	40.61	7.926	46.23	5.075	1.823	19	-1.11	191.30	0
191	Acid Soluble Cr (ppm)	0563	41.24	0.8824	46.23	5.075	1.823	19	-0.98	191.33	0
191	Acid Soluble Cr (ppm)	0394	43.28	0.1150	46.23	5.075	1.823	19	-0.58	191.30	0
191	Acid Soluble Cr (ppm)	0136	44.26	0.8700	46.23	5.075	1.823	19	-0.39	191.33	0
191	Acid Soluble Cr (ppm)	0300	44.32	0.1600	46.23	5.075	1.823	19	-0.38	191.32	0
191	Acid Soluble Cr (ppm)	0481	45.46	2.500	46.23	5.075	1.823	19	-0.15	191.99	0
191	Acid Soluble Cr (ppm)	0389	45.99	0.0700	46.23	5.075	1.823	19	-0.05	191.30	0
191	Acid Soluble Cr (ppm)	0494	46.35	3.100	46.23	5.075	1.823	19	0.02	191.33	0
191	Acid Soluble Cr (ppm)	0037	46.61	1.600	46.23	5.075	1.823	19	0.07	191.33	0
191	Acid Soluble Cr (ppm)	0368	46.95	0.5000	46.23	5.075	1.823	19	0.14	191.34	0
191	Acid Soluble Cr (ppm)	0035	47.60	0.4000	46.23	5.075	1.823	19	0.27	191.30	0
191	Acid Soluble Cr (ppm)	0405	48.50	1.000	46.23	5.075	1.823	19	0.45	191.32	0
191	Acid Soluble Cr (ppm)	0220	50.50	3.000	46.23	5.075	1.823	19	0.84	191.99	0
191	Acid Soluble Cr (ppm)	0527	50.54	0.2020	46.23	5.075	1.823	19	0.85	191.33	0
191	Acid Soluble Cr (ppm)	0515	52.28	7.867	46.23	5.075	1.823	19	1.19	191.34	0
191	Acid Soluble Cr (ppm)	0523	52.45	0.3000	46.23	5.075	1.823	19	1.22	191.30	0
191	Acid Soluble Cr (ppm)	0605	57.24	0.1400	46.23	5.075	1.823	19	2.17	191.30	0
191	Acid Soluble Cr (ppm)	0515	57.53	16.06	46.23	5.075	1.823	19	2.23	191.33	1
202	Acid Soluble Co (ppm)	0389	1.023	0.0020	1.670	0.3474	0.0601	16	-1.86	202.30	0
202	Acid Soluble Co (ppm)	0572	1.220	0.0550	1.670	0.3474	0.0601	16	-1.30	202.99	0
202	Acid Soluble Co (ppm)	0563	1.402	0.0100	1.670	0.3474	0.0601	16	-0.77	202.33	0
202	Acid Soluble Co (ppm)	0419	1.447	0.2150	1.670	0.3474	0.0601	16	-0.64	202.30	0
202	Acid Soluble Co (ppm)	0527	1.486	0.0261	1.670	0.3474	0.0601	16	-0.53	202.33	0
202	Acid Soluble Co (ppm)	0220	1.550	0.1000	1.670	0.3474	0.0601	16	-0.35	202.99	0
202	Acid Soluble Co (ppm)	0423	1.595	0.0100	1.670	0.3474	0.0601	16	-0.22	202.33	0
202	Acid Soluble Co (ppm)	0523	1.605	0.0100	1.670	0.3474	0.0601	16	-0.19	202.30	0
202	Acid Soluble Co (ppm)	0300	1.639	0.0270	1.670	0.3474	0.0601	16	-0.09	202.32	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
202	Acid Soluble Co (ppm)	0501	1.710	0.0800	1.670	0.3474	0.0601	16	0.11	202.34	0
202	Acid Soluble Co (ppm)	0035	1.725	0.0900	1.670	0.3474	0.0601	16	0.16	202.30	0
202	Acid Soluble Co (ppm)	0368	1.850	0.1000	1.670	0.3474	0.0601	16	0.52	202.34	0
202	Acid Soluble Co (ppm)	0405	2.000	0.0000	1.670	0.3474	0.0601	16	0.95	202.32	0
202	Acid Soluble Co (ppm)	0524	2.034	0.0161	1.670	0.3474	0.0601	16	1.05	202.30	0
202	Acid Soluble Co (ppm)	0605	2.120	0.1800	1.670	0.3474	0.0601	16	1.30	202.30	0
202	Acid Soluble Co (ppm)	0494	2.780	0.0400	1.670	0.3474	0.0601	16	3.20	202.33	0
202	Acid Soluble Co (ppm)	0255	34.44	10.66	1.670	0.3474	0.0601	16	94.34	202.99	1
202	Acid Soluble Co (ppm)	0136	< 3		1.670	0.3474	0.0601	16		202.33	5
202	Acid Soluble Co (ppm)	0481	< 20		1.670	0.3474	0.0601	16		202.99	5
221	Acid Soluble Cu (%)	0394	0.0002	0.0001	0.0021	0.0033	0.0052	8	-0.58	221.32	0
221	Acid Soluble Cu (%)	0368	0.0002	0.0001	0.0021	0.0033	0.0052	8	-0.58	221.99	0
221	Acid Soluble Cu (%)	0485	0.0003	0.0000	0.0021	0.0033	0.0052	8	-0.54	221.00	0
221	Acid Soluble Cu (%)	0402	0.0003	0.0000	0.0021	0.0033	0.0052	8	-0.54	221.30	0
221	Acid Soluble Cu (%)	0515	0.0009	0.0008	0.0021	0.0033	0.0052	8	-0.36	221.99	0
221	Acid Soluble Cu (%)	0515	0.0013	0.0000	0.0021	0.0033	0.0052	8	-0.24	221.33	0
221	Acid Soluble Cu (%)	0605	0.0065	0.0006	0.0021	0.0033	0.0052	8	1.33	221.99	0
221	Acid Soluble Cu (%)	0552	0.0300	0.0400	0.0021	0.0033	0.0052	8	8.39	221.30	0
221	Acid Soluble Cu (%)	0501	0.8550	0.2100	0.0021	0.0033	0.0052	8	256.30	221.99	2
221	Acid Soluble Cu (%)	0255	0.0000	0.0000	0.0021	0.0033	0.0052	8		221.30	4
221	Acid Soluble Cu (%)	0095	0.0000	0.0000	0.0021	0.0033	0.0052	8		221.32	4
221	Acid Soluble Cu (%)	0106	0.0000	0.0000	0.0021	0.0033	0.0052	8		221.33	4
221	Acid Soluble Cu (%)	0419	0.0000	0.0000	0.0021	0.0033	0.0052	8		221.33	4
221	Acid Soluble Cu (%)	0527	< 0.0001		0.0021	0.0033	0.0052	8		221.33	5
221	Acid Soluble Cu (%)	0572	< 0.0001		0.0021	0.0033	0.0052	8		221.99	5
221	Acid Soluble Cu (%)	0405	< 0.0002		0.0021	0.0033	0.0052	8		221.32	5
221	Acid Soluble Cu (%)	0136	< 0.0002		0.0021	0.0033	0.0052	8		221.33	5
221	Acid Soluble Cu (%)	0494	< 0.0002		0.0021	0.0033	0.0052	8		221.33	5
221	Acid Soluble Cu (%)	0300	< 0.001		0.0021	0.0033	0.0052	8		221.32	5
221	Acid Soluble Cu (%)	0481	< 0.001		0.0021	0.0033	0.0052	8		221.99	5
221	Acid Soluble Cu (%)	0553	< 0.005		0.0021	0.0033	0.0052	8		221.00	5
221	Acid Soluble Cu (%)	0354	< 0.01		0.0021	0.0033	0.0052	8		221.30	5
241	Acid Soluble Fe (%)	0515	0.5342	0.0600	0.5789	0.0227	0.0194	16	-1.97	241.33	0
241	Acid Soluble Fe (%)	0494	0.5496	0.0621	0.5789	0.0227	0.0194	16	-1.29	241.33	0
241	Acid Soluble Fe (%)	0300	0.5562	0.0008	0.5789	0.0227	0.0194	16	-1.00	241.32	0
241	Acid Soluble Fe (%)	0524	0.5598	0.0255	0.5789	0.0227	0.0194	16	-0.84	241.99	0
241	Acid Soluble Fe (%)	0423	0.5615	0.0090	0.5789	0.0227	0.0194	16	-0.76	241.32	0
241	Acid Soluble Fe (%)	0419	0.5725	0.0050	0.5789	0.0227	0.0194	16	-0.28	241.33	0
241	Acid Soluble Fe (%)	0572	0.5768	0.0120	0.5789	0.0227	0.0194	16	-0.09	241.99	0
241	Acid Soluble Fe (%)	0472	0.5800	0.0000	0.5789	0.0227	0.0194	16	0.05	241.33	0
241	Acid Soluble Fe (%)	0389	0.5815	0.0130	0.5789	0.0227	0.0194	16	0.12	241.99	0
241	Acid Soluble Fe (%)	0402	0.5854	0.0015	0.5789	0.0227	0.0194	16	0.29	241.30	0
241	Acid Soluble Fe (%)	0354	0.5900	0.0000	0.5789	0.0227	0.0194	16	0.49	241.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241	Acid Soluble Fe (%)	0515	0.5952	0.0700	0.5789	0.0227	0.0194	16	0.72	241.99	0
241	Acid Soluble Fe (%)	0553	0.5975	0.0050	0.5789	0.0227	0.0194	16	0.82	241.00	0
241	Acid Soluble Fe (%)	0035	0.5975	0.0130	0.5789	0.0227	0.0194	16	0.82	241.30	0
241	Acid Soluble Fe (%)	0527	0.6006	0.0036	0.5789	0.0227	0.0194	16	0.96	241.33	0
241	Acid Soluble Fe (%)	0552	0.7950	0.0300	0.5789	0.0227	0.0194	16	9.52	241.30	0
251	Acid Soluble Pb (ppm)	0389	0.3410	0.1540	0.8748	0.2652	0.0513	11	-2.01	251.30	0
251	Acid Soluble Pb (ppm)	0524	0.6989	0.0156	0.8748	0.2652	0.0513	11	-0.66	251.30	0
251	Acid Soluble Pb (ppm)	0481	0.7000	0.0600	0.8748	0.2652	0.0513	11	-0.66	251.99	0
251	Acid Soluble Pb (ppm)	0394	0.7475	0.0050	0.8748	0.2652	0.0513	11	-0.48	251.30	0
251	Acid Soluble Pb (ppm)	0563	0.8215	0.0585	0.8748	0.2652	0.0513	11	-0.20	251.33	0
251	Acid Soluble Pb (ppm)	0572	0.8670	0.0320	0.8748	0.2652	0.0513	11	-0.03	251.99	0
251	Acid Soluble Pb (ppm)	0501	0.9200	0.0200	0.8748	0.2652	0.0513	11	0.17	251.30	0
251	Acid Soluble Pb (ppm)	0523	0.9200	0.0000	0.8748	0.2652	0.0513	11	0.17	251.30	0
251	Acid Soluble Pb (ppm)	0527	0.9488	0.0191	0.8748	0.2652	0.0513	11	0.28	251.33	0
251	Acid Soluble Pb (ppm)	0220	1.250	0.1000	0.8748	0.2652	0.0513	11	1.41	251.99	0
251	Acid Soluble Pb (ppm)	0534	1.840	0.1000	0.8748	0.2652	0.0513	11	3.64	251.00	0
251	Acid Soluble Pb (ppm)	0405	4.500	1.000	0.8748	0.2652	0.0513	11	13.67	251.32	1
251	Acid Soluble Pb (ppm)	0255	0.0000	0.0000	0.8748	0.2652	0.0513	11		251.30	4
251	Acid Soluble Pb (ppm)	0419	0.0000	0.0000	0.8748	0.2652	0.0513	11		251.30	4
251	Acid Soluble Pb (ppm)	0368	< 0.6		0.8748	0.2652	0.0513	11		251.34	5
251	Acid Soluble Pb (ppm)	0494	< 1.27		0.8748	0.2652	0.0513	11		251.33	5
251	Acid Soluble Pb (ppm)	0136	< 3		0.8748	0.2652	0.0513	11		251.33	5
251	Acid Soluble Pb (ppm)	0605	< 5		0.8748	0.2652	0.0513	11		251.30	5
251	Acid Soluble Pb (ppm)	0300	< 5		0.8748	0.2652	0.0513	11		251.32	5
261	Acid Soluble Mn (%)	0572	0.0150	0.0005	0.0186	0.0018	0.0053	13	-2.03	261.99	0
261	Acid Soluble Mn (%)	0524	0.0172	0.0014	0.0186	0.0018	0.0053	13	-0.77	261.99	0
261	Acid Soluble Mn (%)	0494	0.0175	0.0013	0.0186	0.0018	0.0053	13	-0.63	261.35	0
261	Acid Soluble Mn (%)	0553	0.0175	0.0010	0.0186	0.0018	0.0053	13	-0.60	261.00	0
261	Acid Soluble Mn (%)	0419	0.0175	0.0030	0.0186	0.0018	0.0053	13	-0.60	261.35	0
261	Acid Soluble Mn (%)	0515	0.0179	0.0007	0.0186	0.0018	0.0053	13	-0.40	261.99	0
261	Acid Soluble Mn (%)	0300	0.0179	0.0000	0.0186	0.0018	0.0053	13	-0.37	261.34	0
261	Acid Soluble Mn (%)	0527	0.0190	0.0004	0.0186	0.0018	0.0053	13	0.24	261.35	0
261	Acid Soluble Mn (%)	0389	0.0192	0.0001	0.0186	0.0018	0.0053	13	0.33	261.99	0
261	Acid Soluble Mn (%)	0472	0.0200	0.0000	0.0186	0.0018	0.0053	13	0.80	261.35	0
261	Acid Soluble Mn (%)	0402	0.0202	0.0001	0.0186	0.0018	0.0053	13	0.89	261.32	0
261	Acid Soluble Mn (%)	0035	0.0206	0.0005	0.0186	0.0018	0.0053	13	1.11	261.30	0
261	Acid Soluble Mn (%)	0552	0.1000	0.0600	0.0186	0.0018	0.0053	13	45.70	261.32	0
261	Acid Soluble Mn (%)	0423	0.1095	0.1790	0.0186	0.0018	0.0053	13	51.03	261.34	1
261	Acid Soluble Mn (%)	0354	< 0.01		0.0186	0.0018	0.0053	13		261.30	5
281	Acid Soluble Hg (ppm)	0035	0.0080	0.0000				2		281.99	0
281	Acid Soluble Hg (ppm)	0368	0.0192	0.0302				2		281.99	0
281	Acid Soluble Hg (ppm)	0515	0.0000	0.0000				2		281.30	4
281	Acid Soluble Hg (ppm)	0527	< 0.001					2		281.30	5

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
281	Acid Soluble Hg (ppm)	0572	< 0.007					2		281.99	5
281	Acid Soluble Hg (ppm)	0501	< 0.01					2		281.30	5
281	Acid Soluble Hg (ppm)	0220	< 0.01					2		281.99	5
281	Acid Soluble Hg (ppm)	0481	< 0.5					2		281.99	5
281	Acid Soluble Hg (ppm)	0605	< 1.25					2		281.30	5
281	Acid Soluble Hg (ppm)	0405	< 2					2		281.30	5
289	Acid Soluble Mo (ppm)	0485	1.577	0.0890	6.389	0.8974	0.2054	16	-5.36	289.30	0
289	Acid Soluble Mo (ppm)	0220	5.250	0.7000	6.389	0.8974	0.2054	16	-1.27	289.99	0
289	Acid Soluble Mo (ppm)	0563	5.466	0.0199	6.389	0.8974	0.2054	16	-1.03	289.33	0
289	Acid Soluble Mo (ppm)	0524	5.712	0.2392	6.389	0.8974	0.2054	16	-0.75	289.30	0
289	Acid Soluble Mo (ppm)	0423	6.000	0.0400	6.389	0.8974	0.2054	16	-0.43	289.33	0
289	Acid Soluble Mo (ppm)	0300	6.028	0.1440	6.389	0.8974	0.2054	16	-0.40	289.32	0
289	Acid Soluble Mo (ppm)	0136	6.050	0.0180	6.389	0.8974	0.2054	16	-0.38	289.33	0
289	Acid Soluble Mo (ppm)	0037	6.287	0.0610	6.389	0.8974	0.2054	16	-0.11	289.33	0
289	Acid Soluble Mo (ppm)	0402	6.600	0.2000	6.389	0.8974	0.2054	16	0.24	289.30	0
289	Acid Soluble Mo (ppm)	0368	6.600	0.6000	6.389	0.8974	0.2054	16	0.24	289.34	0
289	Acid Soluble Mo (ppm)	0527	6.823	0.1348	6.389	0.8974	0.2054	16	0.48	289.33	0
289	Acid Soluble Mo (ppm)	0405	7.000	0.0000	6.389	0.8974	0.2054	16	0.68	289.32	0
289	Acid Soluble Mo (ppm)	0106	7.000	0.0000	6.389	0.8974	0.2054	16	0.68	289.33	0
289	Acid Soluble Mo (ppm)	0494	7.200	0.5200	6.389	0.8974	0.2054	16	0.90	289.33	0
289	Acid Soluble Mo (ppm)	0501	7.425	0.4100	6.389	0.8974	0.2054	16	1.15	289.34	0
289	Acid Soluble Mo (ppm)	0255	11.43	0.1100	6.389	0.8974	0.2054	16	5.61	289.30	0
289	Acid Soluble Mo (ppm)	0572	5.708	1.455	6.389	0.8974	0.2054	16	-0.76	289.99	1
289	Acid Soluble Mo (ppm)	0419	0.0000	0.0000	6.389	0.8974	0.2054	16		289.30	4
289	Acid Soluble Mo (ppm)	0481	< 100		6.389	0.8974	0.2054	16		289.99	5
291	Acid Soluble Ni (ppm)	0485	4.003	0.1270	6.820	1.209	0.5901	20	-2.33	291.30	0
291	Acid Soluble Ni (ppm)	0563	5.200	0.0602	6.820	1.209	0.5901	20	-1.34	291.33	0
291	Acid Soluble Ni (ppm)	0444	5.435	0.5100	6.820	1.209	0.5901	20	-1.15	291.30	0
291	Acid Soluble Ni (ppm)	0572	5.607	0.2380	6.820	1.209	0.5901	20	-1.00	291.99	0
291	Acid Soluble Ni (ppm)	0524	5.644	0.0362	6.820	1.209	0.5901	20	-0.97	291.30	0
291	Acid Soluble Ni (ppm)	0389	6.045	0.0590	6.820	1.209	0.5901	20	-0.64	291.30	0
291	Acid Soluble Ni (ppm)	0136	6.374	0.1110	6.820	1.209	0.5901	20	-0.37	291.33	0
291	Acid Soluble Ni (ppm)	0300	6.441	0.0190	6.820	1.209	0.5901	20	-0.31	291.32	0
291	Acid Soluble Ni (ppm)	0494	6.640	0.7000	6.820	1.209	0.5901	20	-0.15	291.33	0
291	Acid Soluble Ni (ppm)	0037	6.934	0.2270	6.820	1.209	0.5901	20	0.09	291.33	0
291	Acid Soluble Ni (ppm)	0035	7.145	0.1500	6.820	1.209	0.5901	20	0.27	291.30	0
291	Acid Soluble Ni (ppm)	0368	7.300	0.2000	6.820	1.209	0.5901	20	0.40	291.34	0
291	Acid Soluble Ni (ppm)	0523	7.315	0.0700	6.820	1.209	0.5901	20	0.41	291.30	0
291	Acid Soluble Ni (ppm)	0527	7.333	0.3912	6.820	1.209	0.5901	20	0.42	291.33	0
291	Acid Soluble Ni (ppm)	0501	7.505	0.3500	6.820	1.209	0.5901	20	0.57	291.34	0
291	Acid Soluble Ni (ppm)	0419	7.699	1.725	6.820	1.209	0.5901	20	0.73	291.30	0
291	Acid Soluble Ni (ppm)	0405	8.000	0.0000	6.820	1.209	0.5901	20	0.98	291.32	0
291	Acid Soluble Ni (ppm)	0605	8.050	1.080	6.820	1.209	0.5901	20	1.02	291.30	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
291	Acid Soluble Ni (ppm)	0220	8.100	2.200	6.820	1.209	0.5901	20	1.06	291.99	0
291	Acid Soluble Ni (ppm)	0394	12.84	3.549	6.820	1.209	0.5901	20	4.98	291.30	0
291	Acid Soluble Ni (ppm)	0255	63.98	3.030	6.820	1.209	0.5901	20	47.28	291.99	2
291	Acid Soluble Ni (ppm)	0481	< 10		6.820	1.209	0.5901	20		291.99	5
301	Acid Soluble Se (ppm)	0524	0.7558	0.0952	1.305	0.5260	0.1557	7	-1.04	301.30	0
301	Acid Soluble Se (ppm)	0220	0.9000	0.2000	1.305	0.5260	0.1557	7	-0.77	301.99	0
301	Acid Soluble Se (ppm)	0043	1.115	0.3500	1.305	0.5260	0.1557	7	-0.36	301.33	0
301	Acid Soluble Se (ppm)	0572	1.175	0.2100	1.305	0.5260	0.1557	7	-0.25	301.99	0
301	Acid Soluble Se (ppm)	0523	1.425	0.0500	1.305	0.5260	0.1557	7	0.23	301.30	0
301	Acid Soluble Se (ppm)	0563	1.672	0.0347	1.305	0.5260	0.1557	7	0.70	301.33	0
301	Acid Soluble Se (ppm)	0501	2.685	0.1500	1.305	0.5260	0.1557	7	2.62	301.30	0
301	Acid Soluble Se (ppm)	0515	3.908	1.024	1.305	0.5260	0.1557	7	4.95	301.33	1
301	Acid Soluble Se (ppm)	0255	0.0000	0.0000	1.305	0.5260	0.1557	7		301.99	4
301	Acid Soluble Se (ppm)	0527	< 0.01		1.305	0.5260	0.1557	7		301.33	5
301	Acid Soluble Se (ppm)	0481	< 0.5		1.305	0.5260	0.1557	7		301.99	5
301	Acid Soluble Se (ppm)	0494	< 0.95		1.305	0.5260	0.1557	7		301.33	5
301	Acid Soluble Se (ppm)	0368	< 1		1.305	0.5260	0.1557	7		301.34	5
301	Acid Soluble Se (ppm)	0605	< 1.65		1.305	0.5260	0.1557	7		301.30	5
301	Acid Soluble Se (ppm)	0405	< 10		1.305	0.5260	0.1557	7		301.32	5
311	Sodium (%)	0572	0.1210	0.0029	0.1507	0.0270	0.0070	6	-0.98	311.99	0
311	Sodium (%)	0553	0.1280	0.0040	0.1507	0.0270	0.0070	6	-0.75	311.00	0
311	Sodium (%)	0423	0.1465	0.0010	0.1507	0.0270	0.0070	6	-0.14	311.33	0
311	Sodium (%)	0035	0.1605	0.0010	0.1507	0.0270	0.0070	6	0.32	311.33	0
311	Sodium (%)	0527	0.1631	0.0028	0.1507	0.0270	0.0070	6	0.41	311.33	0
311	Sodium (%)	0354	0.1850	0.0300	0.1507	0.0270	0.0070	6	1.13	311.99	0
311	Sodium (%)	0419	1.705	0.0929	0.1507	0.0270	0.0070	6	51.17	311.33	1
321	Acid Soluble Zn (%)	0220	0.0001	0.0000	0.0051	0.0011	0.0130	30	-4.75	321.99	0
321	Acid Soluble Zn (%)	0106	0.0008	0.0008	0.0051	0.0011	0.0130	30	-4.09	321.33	0
321	Acid Soluble Zn (%)	0572	0.0038	0.0013	0.0051	0.0011	0.0130	30	-1.29	321.99	0
321	Acid Soluble Zn (%)	0402	0.0038	0.0006	0.0051	0.0011	0.0130	30	-1.24	321.30	0
321	Acid Soluble Zn (%)	0527	0.0040	0.0001	0.0051	0.0011	0.0130	30	-1.10	321.33	0
321	Acid Soluble Zn (%)	0419	0.0040	0.0000	0.0051	0.0011	0.0130	30	-1.05	321.33	0
321	Acid Soluble Zn (%)	0515	0.0041	0.0002	0.0051	0.0011	0.0130	30	-0.96	321.33	0
321	Acid Soluble Zn (%)	0136	0.0047	0.0003	0.0051	0.0011	0.0130	30	-0.44	321.33	0
321	Acid Soluble Zn (%)	0027	0.0049	0.0003	0.0051	0.0011	0.0130	30	-0.25	321.99	0
321	Acid Soluble Zn (%)	0300	0.0049	0.0000	0.0051	0.0011	0.0130	30	-0.20	321.32	0
321	Acid Soluble Zn (%)	0563	0.0050	0.0003	0.0051	0.0011	0.0130	30	-0.15	321.33	0
321	Acid Soluble Zn (%)	0553	0.0050	0.0000	0.0051	0.0011	0.0130	30	-0.11	321.00	0
321	Acid Soluble Zn (%)	0481	0.0050	0.0000	0.0051	0.0011	0.0130	30	-0.11	321.99	0
321	Acid Soluble Zn (%)	0405	0.0051	0.0000	0.0051	0.0011	0.0130	30	-0.01	321.32	0
321	Acid Soluble Zn (%)	0524	0.0051	0.0002	0.0051	0.0011	0.0130	30	-0.01	321.99	0
321	Acid Soluble Zn (%)	0368	0.0052	0.0001	0.0051	0.0011	0.0130	30	0.04	321.99	0
321	Acid Soluble Zn (%)	0394	0.0052	0.0000	0.0051	0.0011	0.0130	30	0.08	321.32	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321	Acid Soluble Zn (%)	0389	0.0052	0.0000	0.0051	0.0011	0.0130	30	0.08	321.99	0
321	Acid Soluble Zn (%)	0485	0.0053	0.0005	0.0051	0.0011	0.0130	30	0.13	321.30	0
321	Acid Soluble Zn (%)	0255	0.0055	0.0010	0.0051	0.0011	0.0130	30	0.37	321.30	0
321	Acid Soluble Zn (%)	0423	0.0055	0.0010	0.0051	0.0011	0.0130	30	0.37	321.32	0
321	Acid Soluble Zn (%)	0037	0.0055	0.0010	0.0051	0.0011	0.0130	30	0.37	321.33	0
321	Acid Soluble Zn (%)	0043	0.0055	0.0010	0.0051	0.0011	0.0130	30	0.37	321.33	0
321	Acid Soluble Zn (%)	0485	0.0056	0.0001	0.0051	0.0011	0.0130	30	0.42	321.00	0
321	Acid Soluble Zn (%)	0515	0.0057	0.0004	0.0051	0.0011	0.0130	30	0.56	321.99	0
321	Acid Soluble Zn (%)	0095	0.0065	0.0020	0.0051	0.0011	0.0130	30	1.32	321.32	0
321	Acid Soluble Zn (%)	0035	0.0065	0.0010	0.0051	0.0011	0.0130	30	1.32	321.30	0
321	Acid Soluble Zn (%)	0605	0.0089	0.0005	0.0051	0.0011	0.0130	30	3.54	321.99	0
321	Acid Soluble Zn (%)	0494	0.0381	0.0473	0.0051	0.0011	0.0130	30	31.21	321.33	0
321	Acid Soluble Zn (%)	0552	0.2050	0.3300	0.0051	0.0011	0.0130	30	189.43	321.30	0
321	Acid Soluble Zn (%)	0501	42.45	3.150	0.0051	0.0011	0.0130	30	40218.66	321.99	2
321	Acid Soluble Zn (%)	0354	< 0.01		0.0051	0.0011	0.0130	30		321.30	5
325	Water Soluble Zn (%)	0444	0.0001	0.0000				1		325.30	0
325	Water Soluble Zn (%)	0572	< 0.0003					1		325.99	5
431	Soluble Si in nonliquids (%)	0572	< 0.006					0		431.99	5

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.