

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200411

Grade 19-19-19

Statistical Summary

Methods: 131

Labs Reporting: 93

Issue Date : 05/31/2020

Method Code	Analyte & Method Sample # 200411	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal N, Magnesium Oxide Method (%)	10	10	4.277	0.2690	4.256		0.2439	0.0964	5.73%		0.1170	3.22%
001.99	Ammoniacal N, Other (%)	24	24	4.580	0.5586	4.579		0.6314	0.1611	13.79%		0.1080	3.18%
005.00	Urea N, Urease (as N) (%)	3	3	14.23	1.287	14.23		1.287	0.9287	9.04%		0.3333	2.68%
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	1		14.94									
005.99	Urea N, Other (%)	17	17	14.49	0.5983	14.49		0.6782	0.2056	4.68%		0.1200	2.67%
007.00	Urea, Urease (as Urea) (%)	2	2	15.17	0.4985								
007.20	Urea, HPLC,85%acetoneitrilemobilephase (%)	1		14.38									
007.99	Urea, Other (%)	2	2	14.63	0.6824								
010.11	Total N, Modified Comprehensive (19%)	5	5	18.96	0.2565	18.96	0.7144	0.2565	0.1434	1.35%	0.84	0.1480	2.57%
010.12	Total N, Salicylic (19%)	3	3	19.22	0.6256	19.22	0.7183	0.6256	0.4515	3.26%	2.03	0.2133	2.56%
010.60	Total N, Combustion (19%)	59	57	19.27	0.3793	19.26	0.7189	0.3938	0.0652	2.04%	1.28	0.1600	2.56%
010.99	Total N, Other (19%)	22	20	18.93	0.3262	18.95	0.7143	0.3040	0.0850	1.60%	0.99	0.1074	2.57%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	3	3	18.10	0.0503	18.10		0.0503	0.0363	0.28%		0.2667	2.59%
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	15	15	18.23	0.5300	18.23		0.5983	0.1931	3.28%		0.3123	2.58%
020.40	Total P2O5, Automated (%)	3	3	18.22	0.1190	18.22		0.1190	0.0859	0.65%		0.2433	2.58%
020.50	Total P2O5, ICP (%)	17	16	17.52	0.9659	17.59		0.8268	0.2584	4.70%		0.3589	2.60%
020.99	Total P2O5, Other (%)	8	7	18.74	0.3310	18.74		0.3630	0.1715	1.94%		0.0886	2.57%
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	1		0.0750									
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	1		0.0900									
040.40	Indirect Available P2O5, Automated (19%)	1		18.03									
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	5	5	17.86	0.2296	17.86	0.7093	0.2296	0.1283	1.29%	0.75	0.1561	2.59%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	6	6	17.98	0.2716	17.98	0.7099	0.3080	0.1572	1.71%	1.01	0.1650	2.59%
041.20	Direct Available P2O5, Spectrophotometric (19%)	1		18.07									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	11	11	17.76	0.8598	17.88	0.7094	0.6526	0.2460	3.65%	2.14	0.1820	2.59%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	4	4	18.09	0.3465	18.09	0.7104	0.3465	0.2166	1.92%	1.14	0.3575	2.59%
041.50	Direct Available P2O5, ICP (19%)	4	4	18.06	0.8925	18.06	0.7103	0.8925	0.5578	4.94%	2.93	0.1708	2.59%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	10	10	17.49	1.321	17.69	0.7084	0.8958	0.3541	5.06%	2.95	0.3226	2.60%
041.99	Direct Available P2O5, Other (19%)	12	12	19.02	0.1771	19.01	0.7151	0.1911	0.0690	1.01%	0.62	0.1367	2.57%
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	1		16.69									
048.40	Water Soluble P2O5, Automated (%)	1		16.43									
048.50	Water Soluble P2O5, ICP (%)	1		16.45									
048.99	Water Soluble P2O5, Other (%)	2	2	17.66	1.902								
050.00	Soluble K2O, STPB Oxalate (19%)	11	10	19.49	0.7210	19.49	1.0620	0.8176	0.3232	4.20%	1.79	0.0960	2.56%

Method Code	Analyte & Method Sample # 200411	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Howitz %RSD
050.30	Soluble K2O, AA (Oxalate) (19%)	5	5	19.42	0.5566	19.42	1.0596	0.5566	0.3112	2.87%	1.22	0.3068	2.56%
050.31	Soluble K2O, AA (Citrate) (19%)	2	2	17.25	2.047								
050.32	Soluble K2O, AA (Citrate-EDTA) (19%)	1		19.65									
050.50	Soluble K2O, ICP (Oxalate) (19%)	7	7	19.49	0.9456	19.49	1.0620	1.072	0.5066	5.50%	2.35	0.3186	2.56%
050.51	Soluble K2O, ICP (Citrate) (19%)	3	3	20.20	0.2795	20.20	1.0871	0.2795	0.2017	1.38%	0.60	0.3200	2.54%
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	11	11	19.35	1.418	19.60	1.0661	0.6155	0.2320	3.14%	1.35	0.3936	2.56%
050.60	Soluble K2O, Flame Photometric (Oxalate) (19%)	1		19.44									
050.61	Soluble K2O, Flame Photometric (Citrate) (19%)	2	2	19.40	0.7778								
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	4	4	19.95	0.3643	19.95	1.0781	0.3643	0.2277	1.83%	0.79	0.1975	2.55%
050.99	Soluble K2O, Other (19%)	42	40	19.34	0.5597	19.33	1.0565	0.5693	0.1125	2.95%	1.26	0.2695	2.56%
060.00	Water (Free), Vacuum Oven (%)	3	3	0.4850	0.1682	0.4850		0.1682	0.1214	34.69%		0.0433	4.46%
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	4	4	0.1727	0.0178	0.1727	0.2086	0.0178	0.0111	10.29%	0.20	0.0177	5.21%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	2	2	0.2360	0.1003								
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	4	4	0.1539	0.0194	0.1539	0.2077	0.0193	0.0121	12.57%	0.22	0.0051	5.30%
101.99	Acid Soluble Ca, Other (%)	2	2	0.3750	0.2970								
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	5	5	0.4957	0.0274	0.4957	0.2248	0.0273	0.0153	5.52%	0.28	0.0159	4.45%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	2	2	0.4898	0.0195								
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	5	5	0.4585	0.0412	0.4585	0.2229	0.0412	0.0230	8.99%	0.43	0.0243	4.50%
121.99	Acid Soluble Mg, Other (%)	6	6	0.4689	0.0728	0.4689	0.2234	0.0826	0.0421	17.61%	0.86	0.0161	4.48%
143.99	Elemental S, Other (%)	2	2	0.8300	0.0495								
148.07	Total S, ICP, test portion as in 2017.02 (%)	4	4	0.7561	0.0801	0.7561	0.2378	0.0801	0.0500	10.59%	0.78	0.0250	4.17%
148.99	Total S, Other (%)	4	4	0.7814	0.0371	0.7814	0.2391	0.0371	0.0232	4.74%	0.36	0.0343	4.15%
149.04	S - HNO3 soluble, ICP (%)	3	3	0.8193	0.0575	0.8193		0.0575	0.0415	7.02%		0.0031	4.12%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	1		0.0800									
151.30	Acid Soluble As, ICP (ppm)	3	3	0.5421	0.1121	0.5421		0.1121	0.0809	20.68%		0.1165	17.54%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	1		1.450									
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	5	3	0.7474	0.1275	0.7474		0.1275	0.0920	17.06%		0.0149	16.71%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
151.99	Acid Soluble As, Other (ppm)	4	4	0.9374	0.3832	0.9374		0.3832	0.2395	40.88%		0.0288	16.15%
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	1	0.0069									
165.99	Acid Soluble B, Other (%)	10	7	0.0045	0.0026	0.0040	0.0036	0.0017	0.0008	43.69%	1.13	0.0001	9.19%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	19.65	5.020								
181.30	Acid Soluble Cd, ICP (ppm)	7	7	17.87	6.562	16.67		4.348	2.054	26.08%		0.6697	10.47%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	1		16.75									
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	5	5	19.21	0.9987	19.21		0.9987	0.5583	5.20%		1.357	10.25%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		21.51									
181.99	Acid Soluble Cd, Other (ppm)	4	4	18.15	1.285	18.15		1.285	0.8029	7.08%		0.4275	10.34%
190.99	Water Soluble Cl, Other (%)	1		14.90									
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	87.65	32.39								
191.30	Acid Soluble Cr, ICP (ppm)	7	6	93.25	16.26	93.25		18.44	9.410	19.77%		2.395	8.08%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	1		110.0									
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	4	4	111.5	9.742	111.5		9.742	6.089	8.74%		4.680	7.87%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		126.2									
191.99	Acid Soluble Cr, Other (ppm)	4	4	106.7	7.392	106.7		7.392	4.620	6.93%		2.650	7.92%

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202.30	Acid Soluble Co, ICP (ppm)	2	2	1.041	0.2320								
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	1		1.150									
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	5	3	1.671	1.919	1.671	1.5014	1.919	1.385	114.85%	2.98	0.9976	14.81%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	2	1.660	1.423								
202.99	Acid Soluble Co, Other (ppm)	4	3	0.8457	0.6664	0.8457	1.2537	0.6664	0.4809	78.80%	1.24	0.0573	16.41%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		1.000									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	5	0	0.0000		0.8457	0.0896	0.6664		78.80%	17.34	0.0000	4.10%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0001									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	5	2	0.0004	0.0004	0.0004	0.0050	0.0004	0.0003	101.02%	0.16	0.0002	13.25%
221.99	Acid Soluble Cu, Other (%)	7	5	0.0007	0.0004	0.0007	0.0051	0.0004	0.0002	67.63%	0.21	0.0001	12.04%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	6	5	0.4239	0.0042	0.4239	0.0474	0.0042	0.0023	0.98%	0.20	0.0042	4.55%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	2	2	0.4273	0.0215								
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	4	4	0.4479	0.1003	0.4479	0.0498	0.1003	0.0627	22.39%	4.69	0.1127	4.51%
241.99	Acid Soluble Fe, Other (%)	5	5	0.3992	0.0536	0.3992	0.0449	0.0536	0.0300	13.43%	2.78	0.0256	4.59%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	1		1.500									
251.30	Acid Soluble Pb, ICP (ppm)	4	4	0.4103	0.1476	0.4103		0.1476	0.0923	35.99%		0.0679	18.29%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	1		1.300									
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	4	3	2.033	3.252	2.033		3.252	2.347	159.97%		0.6885	14.38%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		2.666									
251.99	Acid Soluble Pb, Other (ppm)	3	3	0.9050	0.7437	0.9050		0.7437	0.5367	82.18%		0.0900	16.24%
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	3	2	0.0091	0.0012	0.0091	0.0059	0.0012	0.0011	13.56%	0.49	0.0001	8.11%
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.0300									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0077									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	4	3	0.0073	0.0011	0.0073	0.0057	0.0011	0.0008	15.79%	0.47	0.0001	8.39%
261.99	Acid Soluble Mn, Other (%)	5	5	0.0079	0.0011	0.0079	0.0058	0.0011	0.0006	14.26%	0.45	0.0014	8.29%
281.00	Acid Soluble Hg, AA (ppm)	1		10.15									
281.30	Acid Soluble Hg, ICP (ppm)	3	1	0.0053		0.0079		0.0011	0.0014	14.26%		0.0044	33.14%
281.99	Acid Soluble Hg, Other (ppm)	3	0	0.0100		0.0079		0.0011		14.26%		0.0000	33.14%
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	1		3.640									
289.30	Acid Soluble Mo, ICP (ppm)	4	4	6.156	5.899	6.156	2.8469	5.899	3.687	95.81%	4.83	2.611	12.17%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		3.750									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	4	27.65	45.60	27.65	9.2958	45.60	28.50	164.89%	11.43	3.629	9.71%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	2	13.44	10.91								
289.99	Acid Soluble Mo, Other (ppm)	3	2	4.895	1.266	4.895	2.4685	1.266	1.119	25.86%	1.19	0.3400	12.60%
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	6.080	3.847								
291.30	Acid Soluble Ni, ICP (ppm)	5	5	12.12	4.466	12.12		4.466	2.497	36.84%		1.014	10.99%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	1		12.30									
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	4	4	13.17	3.543	13.17		3.543	2.214	26.91%		0.9660	10.85%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	17.06	0.9816								
291.99	Acid Soluble Ni, Other (ppm)	5	5	10.19	3.530	10.19		3.530	1.973	34.63%		1.190	11.28%
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm)	1		0.0800									
301.30	Acid Soluble Se, ICP (ppm)	1		0.5763									
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		0.5000									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	3	3	1.764	1.106	1.764		1.106	0.7982	62.71%		0.4683	14.69%

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301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		1.734									
301.99	Acid Soluble Se, Other (ppm)	5	3	9.075	12.86	9.075		12.86	9.277	141.66%		1.948	11.48%
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.6193									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.4505	0.0918	0.4505	0.0501	0.0918	0.0574	20.37%	4.27	0.0096	4.51%
311.99	Sodium, Other (%)	2	2	0.4550	0.0212								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	2	2	0.0299	0.0002								
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	8	7	0.0359	0.0218	0.0287	0.0079	0.0038	0.0018	13.24%	1.12	0.0034	6.83%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	5	5	0.0275	0.0023	0.0275	0.0077	0.0023	0.0013	8.30%	0.69	0.0005	6.87%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	7	7	0.0263	0.0015	0.0263	0.0076	0.0017	0.0008	6.33%	0.51	0.0010	6.92%
321.99	Acid Soluble Zn, Other (%)	12	11	0.0463	0.0724	0.0258	0.0076	0.0065	0.0025	25.29%	2.01	0.0011	6.93%

The Method IA Ratio = 2.33 * Robust SD / IA at the Method 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.

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200411

Method Precision Report

Grade 19-19-19

Issue Date : 05/31/2020

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility sR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.10	Ammoniacal N, Magnesium Oxide Method (%)	10	10	4.277	0.2690	0.2592	0.1014	0.2783	6.06%	2.37%	6.51%	2.746
001.99	Ammoniacal N, Other (%)	24	24	4.580	0.5586	0.5546	0.0947	0.5626	12.11%	2.07%	12.28%	5.944
005.99	Urea N, Other (%)	17	16	14.51	0.6157	0.6121	0.0939	0.6193	4.22%	0.65%	4.27%	6.592
010.60	Total N, Combustion (19%)	59	55	19.24	0.3548	0.3399	0.1439	0.3691	1.77%	0.75%	1.92%	2.565
010.99	Total N, Other (19%)	22	19	18.90	0.3072	0.3016	0.0824	0.3126	1.60%	0.44%	1.65%	3.795
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	15	15	18.23	0.5300	0.4722	0.3405	0.5821	2.59%	1.87%	3.19%	1.710
020.50	Total P2O5, ICP (%)	17	14	17.74	0.7065	0.6924	0.1984	0.7203	3.90%	1.12%	4.06%	3.630
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	11	10	17.98	0.5009	0.4871	0.1648	0.5142	2.71%	0.92%	2.86%	3.120
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	10	9	17.85	0.7093	0.6805	0.2829	0.7370	3.81%	1.58%	4.13%	2.605
041.99	Direct Available P2O5, Other (19%)	12	12	19.02	0.1771	0.1598	0.1081	0.1929	0.84%	0.57%	1.01%	1.785
050.00	Soluble K2O, STPB Oxalate (19%)	11	10	19.49	0.7210	0.7181	0.0904	0.7238	3.69%	0.46%	3.71%	8.003
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	11	10	19.74	0.5739	0.5164	0.3542	0.6262	2.62%	1.79%	3.17%	1.768
050.99	Soluble K2O, Other (19%)	42	38	19.32	0.5586	0.5407	0.1986	0.5760	2.80%	1.03%	2.98%	2.900
321.99	Acid Soluble Zn, Other (%)	12	9	0.0258	0.0042	0.0041	0.0009	0.0042	16.06%	3.37%	16.41%	4.863

Notes: Precision data calculated when 8 or more Tests included.

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200411

Grade 19-19-19

Lab Values

Methods: 131

Labs Reporting: 93

Issue Date : 05/31/2020

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0309	3.865	0.0500	4.256	0.2439	0.1170	10	-1.49	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0481	4.050	0.0200	4.256	0.2439	0.1170	10	-0.79	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0563	4.080	0.2400	4.256	0.2439	0.1170	10	-0.67	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	4.180	0.3000	4.256	0.2439	0.1170	10	-0.29	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0456	4.220	0.0600	4.256	0.2439	0.1170	10	-0.14	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0117	4.335	0.0700	4.256	0.2439	0.1170	10	0.30	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0231	4.355	0.1100	4.256	0.2439	0.1170	10	0.38	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0230	4.380	0.1200	4.256	0.2439	0.1170	10	0.47	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0136	4.450	0.1000	4.256	0.2439	0.1170	10	0.74	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0498	4.850	0.1000	4.256	0.2439	0.1170	10	2.26	NA	0
001.99	Ammoniacal N, Other (%)	0394	3.924	0.0590	4.579	0.6314	0.1080	24	-1.04	NA	0
001.99	Ammoniacal N, Other (%)	0027	3.928	0.0530	4.579	0.6314	0.1080	24	-1.03	NA	0
001.99	Ammoniacal N, Other (%)	0423	3.931	0.0390	4.579	0.6314	0.1080	24	-1.03	NA	0
001.99	Ammoniacal N, Other (%)	0533	3.980	0.0600	4.579	0.6314	0.1080	24	-0.95	NA	0
001.99	Ammoniacal N, Other (%)	0536	3.980	0.0600	4.579	0.6314	0.1080	24	-0.95	NA	0
001.99	Ammoniacal N, Other (%)	0532	4.040	0.1200	4.579	0.6314	0.1080	24	-0.85	NA	0
001.99	Ammoniacal N, Other (%)	0538	4.060	0.0400	4.579	0.6314	0.1080	24	-0.82	NA	0
001.99	Ammoniacal N, Other (%)	0506	4.075	0.0300	4.579	0.6314	0.1080	24	-0.80	NA	0
001.99	Ammoniacal N, Other (%)	0524	4.141	0.2127	4.579	0.6314	0.1080	24	-0.69	NA	0
001.99	Ammoniacal N, Other (%)	0096	4.315	0.1900	4.579	0.6314	0.1080	24	-0.42	NA	0
001.99	Ammoniacal N, Other (%)	0405	4.370	0.3000	4.579	0.6314	0.1080	24	-0.33	NA	0
001.99	Ammoniacal N, Other (%)	0558	4.410	0.1400	4.579	0.6314	0.1080	24	-0.27	NA	0
001.99	Ammoniacal N, Other (%)	0550	4.515	0.0100	4.579	0.6314	0.1080	24	-0.10	NA	0
001.99	Ammoniacal N, Other (%)	0549	4.595	0.1100	4.579	0.6314	0.1080	24	0.03	NA	0
001.99	Ammoniacal N, Other (%)	0560	4.650	0.3000	4.579	0.6314	0.1080	24	0.11	NA	0
001.99	Ammoniacal N, Other (%)	0522	4.875	0.1900	4.579	0.6314	0.1080	24	0.47	NA	0
001.99	Ammoniacal N, Other (%)	0255	5.127	0.1280	4.579	0.6314	0.1080	24	0.87	NA	0
001.99	Ammoniacal N, Other (%)	0564	5.150	0.1000	4.579	0.6314	0.1080	24	0.90	NA	0
001.99	Ammoniacal N, Other (%)	0567	5.150	0.1000	4.579	0.6314	0.1080	24	0.90	NA	0
001.99	Ammoniacal N, Other (%)	0559	5.220	0.0200	4.579	0.6314	0.1080	24	1.02	NA	0
001.99	Ammoniacal N, Other (%)	0565	5.225	0.0500	4.579	0.6314	0.1080	24	1.02	NA	0
001.99	Ammoniacal N, Other (%)	0562	5.280	0.1400	4.579	0.6314	0.1080	24	1.11	NA	0
001.99	Ammoniacal N, Other (%)	0544	5.430	0.0600	4.579	0.6314	0.1080	24	1.35	NA	0
001.99	Ammoniacal N, Other (%)	0220	5.550	0.0800	4.579	0.6314	0.1080	24	1.54	NA	0
005.00	Urea N, Urease (as N) (%)	0230	12.75	0.1000	14.23	1.287	0.3333	3	-1.15		0
005.00	Urea N, Urease (as N) (%)	0136	14.90	0.2000	14.23	1.287	0.3333	3	0.52		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
005.00	Urea N, Urease (as N) (%)	0498	15.05	0.7000	14.23	1.287	0.3333	3	0.63		0
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	0394	14.94	0.1300				1			0
005.99	Urea N, Other (%)	0564	13.48	0.0500	14.49	0.6782	0.1200	17	-1.50	NA	0
005.99	Urea N, Other (%)	0565	13.48	0.0600	14.49	0.6782	0.1200	17	-1.50	NA	0
005.99	Urea N, Other (%)	0559	13.50	0.0100	14.49	0.6782	0.1200	17	-1.47	NA	0
005.99	Urea N, Other (%)	0562	14.04	0.1700	14.49	0.6782	0.1200	17	-0.68	NA	0
005.99	Urea N, Other (%)	0567	14.15	0.1000	14.49	0.6782	0.1200	17	-0.51	NA	0
005.99	Urea N, Other (%)	0560	14.25	0.3400	14.49	0.6782	0.1200	17	-0.36	NA	0
005.99	Urea N, Other (%)	0558	14.30	0.4000	14.49	0.6782	0.1200	17	-0.29	NA	0
005.99	Urea N, Other (%)	0029	14.50	0.1100	14.49	0.6782	0.1200	17	0.00	NA	0
005.99	Urea N, Other (%)	0027	14.76	0.1400	14.49	0.6782	0.1200	17	0.39	NA	0
005.99	Urea N, Other (%)	0536	14.77	0.1700	14.49	0.6782	0.1200	17	0.40	NA	0
005.99	Urea N, Other (%)	0309	14.80	0.0400	14.49	0.6782	0.1200	17	0.45	NA	0
005.99	Urea N, Other (%)	0533	15.01	0.0500	14.49	0.6782	0.1200	17	0.75	NA	0
005.99	Urea N, Other (%)	0532	15.01	0.1400	14.49	0.6782	0.1200	17	0.76	NA	0
005.99	Urea N, Other (%)	0405	15.02	0.1800	14.49	0.6782	0.1200	17	0.78	NA	0
005.99	Urea N, Other (%)	0538	15.04	0.0700	14.49	0.6782	0.1200	17	0.80	NA	0
005.99	Urea N, Other (%)	0506	15.10	0.0000	14.49	0.6782	0.1200	17	0.89	NA	0
005.99	Urea N, Other (%)	0550	15.23	0.0100	14.49	0.6782	0.1200	17	1.08	NA	0
007.00	Urea, Urease (as Urea) (%)	0444	14.82	0.0800				2			0
007.00	Urea, Urease (as Urea) (%)	0117	15.53	0.1300				2			0
007.20	Urea, HPLC,85%acetoneitrilemobilephase (%)	0220	14.38	0.0100				1			0
007.99	Urea, Other (%)	0549	14.15	0.2200				2			0
007.99	Urea, Other (%)	0220	15.12	0.1300				2			0
010.11	Total N, Modified Comprehensive (19%)	0536	18.75	0.2300	18.96	0.2565	0.1480	5	-0.83		0
010.11	Total N, Modified Comprehensive (19%)	0551	18.83	0.0500	18.96	0.2565	0.1480	5	-0.52		0
010.11	Total N, Modified Comprehensive (19%)	0309	18.85	0.2900	18.96	0.2565	0.1480	5	-0.44		0
010.11	Total N, Modified Comprehensive (19%)	0533	18.99	0.1100	18.96	0.2565	0.1480	5	0.11		0
010.11	Total N, Modified Comprehensive (19%)	0456	19.39	0.0600	18.96	0.2565	0.1480	5	1.68		0
010.12	Total N, Salicylic (19%)	0563	18.51	0.3200	19.22	0.6256	0.2133	3	-1.13		0
010.12	Total N, Salicylic (19%)	0481	19.44	0.1200	19.22	0.6256	0.2133	3	0.36		0
010.12	Total N, Salicylic (19%)	0498	19.70	0.2000	19.22	0.6256	0.2133	3	0.77		0
010.60	Total N, Combustion (19%)	0421	18.44	0.0020	19.26	0.3938	0.1600	57	-2.08	Low	0
010.60	Total N, Combustion (19%)	0102	18.69	0.3000	19.26	0.3938	0.1600	57	-1.45	OK	0
010.60	Total N, Combustion (19%)	0041	18.70	0.4000	19.26	0.3938	0.1600	57	-1.43	OK	0
010.60	Total N, Combustion (19%)	0360	18.71	0.0000	19.26	0.3938	0.1600	57	-1.40	OK	0
010.60	Total N, Combustion (19%)	0525	18.72	0.4400	19.26	0.3938	0.1600	57	-1.37	OK	0
010.60	Total N, Combustion (19%)	0231	18.80	0.0200	19.26	0.3938	0.1600	57	-1.17	OK	0
010.60	Total N, Combustion (19%)	0307	18.81	0.1000	19.26	0.3938	0.1600	57	-1.15	OK	0
010.60	Total N, Combustion (19%)	0486	18.82	0.0300	19.26	0.3938	0.1600	57	-1.13	OK	0
010.60	Total N, Combustion (19%)	0521	18.82	0.0000	19.26	0.3938	0.1600	57	-1.12	OK	0
010.60	Total N, Combustion (19%)	0096	18.84	0.0900	19.26	0.3938	0.1600	57	-1.08	OK	0
010.60	Total N, Combustion (19%)	0389	18.87	0.0700	19.26	0.3938	0.1600	57	-1.01	OK	0
010.60	Total N, Combustion (19%)	0024	18.90	0.0000	19.26	0.3938	0.1600	57	-0.92	OK	0
010.60	Total N, Combustion (19%)	0027	18.95	0.5000	19.26	0.3938	0.1600	57	-0.79	OK	0
010.60	Total N, Combustion (19%)	0177	18.99	0.0300	19.26	0.3938	0.1600	57	-0.70	OK	0
010.60	Total N, Combustion (19%)	0086	18.99	0.0040	19.26	0.3938	0.1600	57	-0.69	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (19%)	0220	18.99	0.1000	19.26	0.3938	0.1600	57	-0.69	OK	0
010.60	Total N, Combustion (19%)	0018	19.00	0.2000	19.26	0.3938	0.1600	57	-0.66	OK	0
010.60	Total N, Combustion (19%)	0043	19.00	0.0400	19.26	0.3938	0.1600	57	-0.66	OK	0
010.60	Total N, Combustion (19%)	0444	19.01	0.2100	19.26	0.3938	0.1600	57	-0.65	OK	0
010.60	Total N, Combustion (19%)	0356	19.04	0.1020	19.26	0.3938	0.1600	57	-0.55	OK	0
010.60	Total N, Combustion (19%)	0049	19.15	0.1200	19.26	0.3938	0.1600	57	-0.28	OK	0
010.60	Total N, Combustion (19%)	0117	19.20	0.4000	19.26	0.3938	0.1600	57	-0.16	OK	0
010.60	Total N, Combustion (19%)	0561	19.20	0.0800	19.26	0.3938	0.1600	57	-0.16	OK	0
010.60	Total N, Combustion (19%)	0291	19.21	0.0100	19.26	0.3938	0.1600	57	-0.14	OK	0
010.60	Total N, Combustion (19%)	0255	19.21	0.0760	19.26	0.3938	0.1600	57	-0.12	OK	0
010.60	Total N, Combustion (19%)	0423	19.22	0.1000	19.26	0.3938	0.1600	57	-0.10	OK	0
010.60	Total N, Combustion (19%)	0325	19.25	0.3000	19.26	0.3938	0.1600	57	-0.03	OK	0
010.60	Total N, Combustion (19%)	0377	19.26	0.0700	19.26	0.3938	0.1600	57	-0.02	OK	0
010.60	Total N, Combustion (19%)	0494	19.28	0.0600	19.26	0.3938	0.1600	57	0.05	OK	0
010.60	Total N, Combustion (19%)	0527	19.29	0.0860	19.26	0.3938	0.1600	57	0.08	OK	0
010.60	Total N, Combustion (19%)	0354	19.30	0.0000	19.26	0.3938	0.1600	57	0.10	OK	0
010.60	Total N, Combustion (19%)	0073	19.31	0.1500	19.26	0.3938	0.1600	57	0.11	OK	0
010.60	Total N, Combustion (19%)	0542	19.33	0.3020	19.26	0.3938	0.1600	57	0.18	OK	0
010.60	Total N, Combustion (19%)	0023	19.35	0.1000	19.26	0.3938	0.1600	57	0.23	OK	0
010.60	Total N, Combustion (19%)	0405	19.39	0.1300	19.26	0.3938	0.1600	57	0.31	OK	0
010.60	Total N, Combustion (19%)	0523	19.40	0.0000	19.26	0.3938	0.1600	57	0.35	OK	0
010.60	Total N, Combustion (19%)	0390	19.42	0.2600	19.26	0.3938	0.1600	57	0.40	OK	0
010.60	Total N, Combustion (19%)	0007	19.50	0.8000	19.26	0.3938	0.1600	57	0.61	OK	0
010.60	Total N, Combustion (19%)	0040	19.50	0.4000	19.26	0.3938	0.1600	57	0.61	OK	0
010.60	Total N, Combustion (19%)	0324	19.50	0.0000	19.26	0.3938	0.1600	57	0.61	OK	0
010.60	Total N, Combustion (19%)	0547	19.50	0.2000	19.26	0.3938	0.1600	57	0.61	OK	0
010.60	Total N, Combustion (19%)	0025	19.52	0.2600	19.26	0.3938	0.1600	57	0.66	OK	0
010.60	Total N, Combustion (19%)	0055	19.55	0.2500	19.26	0.3938	0.1600	57	0.72	OK	0
010.60	Total N, Combustion (19%)	0422	19.57	0.1700	19.26	0.3938	0.1600	57	0.77	OK	0
010.60	Total N, Combustion (19%)	0095	19.57	0.3200	19.26	0.3938	0.1600	57	0.78	OK	0
010.60	Total N, Combustion (19%)	0501	19.59	0.3400	19.26	0.3938	0.1600	57	0.84	OK	0
010.60	Total N, Combustion (19%)	0136	19.60	0.0000	19.26	0.3938	0.1600	57	0.86	OK	0
010.60	Total N, Combustion (19%)	0351	19.60	0.2600	19.26	0.3938	0.1600	57	0.86	OK	0
010.60	Total N, Combustion (19%)	0472	19.60	0.0800	19.26	0.3938	0.1600	57	0.86	OK	0
010.60	Total N, Combustion (19%)	0292	19.65	0.0300	19.26	0.3938	0.1600	57	0.97	OK	0
010.60	Total N, Combustion (19%)	0035	19.70	0.2000	19.26	0.3938	0.1600	57	1.11	OK	0
010.60	Total N, Combustion (19%)	0550	19.74	0.0400	19.26	0.3938	0.1600	57	1.22	OK	0
010.60	Total N, Combustion (19%)	0452	19.76	0.1100	19.26	0.3938	0.1600	57	1.25	OK	0
010.60	Total N, Combustion (19%)	0481	19.85	0.0700	19.26	0.3938	0.1600	57	1.48	OK	0
010.60	Total N, Combustion (19%)	0233	19.85	0.4000	19.26	0.3938	0.1600	57	1.50	OK	0
010.60	Total N, Combustion (19%)	0443	19.97	0.2700	19.26	0.3938	0.1600	57	1.79	OK	0
010.60	Total N, Combustion (19%)	0029	20.35	0.0400	19.26	0.3938	0.1600	57	2.77	High	0
010.60	Total N, Combustion (19%)	0230	19.30	1.400	19.26	0.3938	0.1600	57	0.10	OK	1
010.60	Total N, Combustion (19%)	0516	19.31	1.190	19.26	0.3938	0.1600	57	0.11	OK	1
010.99	Total N, Other (19%)	0524	18.23	0.1974	18.95	0.3040	0.1074	20	-2.37	Low	0
010.99	Total N, Other (19%)	0493	18.35	0.1000	18.95	0.3040	0.1074	20	-1.99	OK	0
010.99	Total N, Other (19%)	0563	18.38	0.1500	18.95	0.3040	0.1074	20	-1.90	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.99	Total N, Other (19%)	0371	18.67	0.0200	18.95	0.3040	0.1074	20	-0.93	OK	0
010.99	Total N, Other (19%)	0394	18.86	0.0710	18.95	0.3040	0.1074	20	-0.31	OK	0
010.99	Total N, Other (19%)	0564	18.88	0.0500	18.95	0.3040	0.1074	20	-0.26	OK	0
010.99	Total N, Other (19%)	0551	18.89	0.1100	18.95	0.3040	0.1074	20	-0.23	OK	0
010.99	Total N, Other (19%)	0559	18.89	0.0100	18.95	0.3040	0.1074	20	-0.23	OK	0
010.99	Total N, Other (19%)	0560	18.90	0.0400	18.95	0.3040	0.1074	20	-0.18	OK	0
010.99	Total N, Other (19%)	0513	18.92	0.0300	18.95	0.3040	0.1074	20	-0.13	OK	0
010.99	Total N, Other (19%)	0565	18.95	0.0800	18.95	0.3040	0.1074	20	-0.01	OK	0
010.99	Total N, Other (19%)	0545	18.96	0.0400	18.95	0.3040	0.1074	20	0.02	OK	0
010.99	Total N, Other (19%)	0544	19.04	0.1300	18.95	0.3040	0.1074	20	0.27	OK	0
010.99	Total N, Other (19%)	0538	19.10	0.0300	18.95	0.3040	0.1074	20	0.47	OK	0
010.99	Total N, Other (19%)	0518	19.13	0.1600	18.95	0.3040	0.1074	20	0.58	OK	0
010.99	Total N, Other (19%)	0506	19.20	0.0000	18.95	0.3040	0.1074	20	0.81	OK	0
010.99	Total N, Other (19%)	0562	19.21	0.1800	18.95	0.3040	0.1074	20	0.84	OK	0
010.99	Total N, Other (19%)	0556	19.30	0.2000	18.95	0.3040	0.1074	20	1.14	OK	0
010.99	Total N, Other (19%)	0567	19.30	0.2000	18.95	0.3040	0.1074	20	1.14	OK	0
010.99	Total N, Other (19%)	0537	19.49	0.3500	18.95	0.3040	0.1074	20	1.75	OK	0
010.99	Total N, Other (19%)	0558	18.70	0.6000	18.95	0.3040	0.1074	20	-0.83	OK	1
010.99	Total N, Other (19%)	0522	9.575	0.0900	18.95	0.3040	0.1074	20	-30.85	Low	2
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0157	18.05	0.5000	18.10	0.0503	0.2667	3	-0.93		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	18.09	0.2000	18.10	0.0503	0.2667	3	-0.13		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0493	18.15	0.1000	18.10	0.0503	0.2667	3	1.06		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0547	17.45	0.3000	18.23	0.5983	0.3123	15	-1.31	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0558	17.55	1.100	18.23	0.5983	0.3123	15	-1.14	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	17.56	0.1300	18.23	0.5983	0.3123	15	-1.13	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0522	17.73	0.0090	18.23	0.5983	0.3123	15	-0.85	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	17.85	0.1000	18.23	0.5983	0.3123	15	-0.64	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	17.97	0.1600	18.23	0.5983	0.3123	15	-0.44	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	18.30	0.2000	18.23	0.5983	0.3123	15	0.11	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0481	18.32	0.0200	18.23	0.5983	0.3123	15	0.15	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	18.33	0.2050	18.23	0.5983	0.3123	15	0.17	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	18.42	0.0400	18.23	0.5983	0.3123	15	0.31	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0498	18.60	1.000	18.23	0.5983	0.3123	15	0.61	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	18.61	0.3300	18.23	0.5983	0.3123	15	0.62	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0550	18.78	0.9600	18.23	0.5983	0.3123	15	0.91	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0309	18.91	0.0300	18.23	0.5983	0.3123	15	1.12	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0506	19.15	0.1000	18.23	0.5983	0.3123	15	1.53	NA	0
020.40	Total P2O5, Automated (%)	0096	18.12	0.0300	18.22	0.1190	0.2433	3	-0.90		0
020.40	Total P2O5, Automated (%)	0456	18.20	0.2000	18.22	0.1190	0.2433	3	-0.18		0
020.40	Total P2O5, Automated (%)	0035	18.35	0.5000	18.22	0.1190	0.2433	3	1.08		0
020.50	Total P2O5, ICP (%)	0516	14.95	1.349	17.59	0.8268	0.3589	16	-3.19	NA	0
020.50	Total P2O5, ICP (%)	0524	16.39	0.2523	17.59	0.8268	0.3589	16	-1.45	NA	0
020.50	Total P2O5, ICP (%)	0389	17.00	0.0700	17.59	0.8268	0.3589	16	-0.72	NA	0
020.50	Total P2O5, ICP (%)	0552	17.03	1.410	17.59	0.8268	0.3589	16	-0.68	NA	0
020.50	Total P2O5, ICP (%)	0390	17.31	0.4100	17.59	0.8268	0.3589	16	-0.34	NA	0
020.50	Total P2O5, ICP (%)	0472	17.34	0.1200	17.59	0.8268	0.3589	16	-0.30	NA	0
020.50	Total P2O5, ICP (%)	0157	17.35	0.5000	17.59	0.8268	0.3589	16	-0.29	NA	0

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020.50	Total P2O5, ICP (%)	0444	17.45	0.2400	17.59	0.8268	0.3589	16	-0.17	NA	0
020.50	Total P2O5, ICP (%)	0423	17.59	0.0600	17.59	0.8268	0.3589	16	0.00	NA	0
020.50	Total P2O5, ICP (%)	0525	17.66	0.6600	17.59	0.8268	0.3589	16	0.09	NA	0
020.50	Total P2O5, ICP (%)	0433	17.87	0.1600	17.59	0.8268	0.3589	16	0.34	NA	0
020.50	Total P2O5, ICP (%)	0523	18.00	0.2000	17.59	0.8268	0.3589	16	0.50	NA	0
020.50	Total P2O5, ICP (%)	0521	18.06	0.0000	17.59	0.8268	0.3589	16	0.57	NA	0
020.50	Total P2O5, ICP (%)	0527	18.45	0.1698	17.59	0.8268	0.3589	16	1.04	NA	0
020.50	Total P2O5, ICP (%)	0291	18.76	0.0700	17.59	0.8268	0.3589	16	1.41	NA	0
020.50	Total P2O5, ICP (%)	0255	19.07	0.0710	17.59	0.8268	0.3589	16	1.80	NA	0
020.50	Total P2O5, ICP (%)	0422	19.85	3.300	17.59	0.8268	0.3589	16	2.74	NA	1
020.99	Total P2O5, Other (%)	0513	18.16	0.0600	18.74	0.3630	0.0886	7	-1.45	NA	0
020.99	Total P2O5, Other (%)	0559	18.55	0.0200	18.74	0.3630	0.0886	7	-0.48	NA	0
020.99	Total P2O5, Other (%)	0564	18.75	0.1000	18.74	0.3630	0.0886	7	0.02	NA	0
020.99	Total P2O5, Other (%)	0567	18.75	0.1000	18.74	0.3630	0.0886	7	0.02	NA	0
020.99	Total P2O5, Other (%)	0565	18.81	0.0100	18.74	0.3630	0.0886	7	0.16	NA	0
020.99	Total P2O5, Other (%)	0562	18.90	0.1000	18.74	0.3630	0.0886	7	0.39	NA	0
020.99	Total P2O5, Other (%)	0443	19.25	0.2300	18.74	0.3630	0.0886	7	1.25	NA	0
020.99	Total P2O5, Other (%)	0515	21.51	0.9567	18.74	0.3630	0.0886	7	6.90	NA	1
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0405	0.0750	0.0100				1			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	0.0900	0.0400				1			0
040.40	Indirect Available P2O5, Automated (19%)	0096	18.03	0.0100				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0494	17.53	0.2500	17.86	0.2296	0.1561	5	-1.45		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0102	17.75	0.3000	17.86	0.2296	0.1561	5	-0.47		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0049	17.89	0.1500	17.86	0.2296	0.1561	5	0.12		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0086	18.04	0.0142	17.86	0.2296	0.1561	5	0.78		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0177	18.09	0.0661	17.86	0.2296	0.1561	5	1.03		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	0351	17.67	0.1200	17.98	0.3080	0.1650	6	-0.91	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	0055	17.73	0.1600	17.98	0.3080	0.1650	6	-0.74	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	0513	17.96	0.0700	17.98	0.3080	0.1650	6	-0.08	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	0073	18.00	0.4900	17.98	0.3080	0.1650	6	0.03	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	0185	18.15	0.0600	17.98	0.3080	0.1650	6	0.48	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (19%)	0220	18.41	0.0900	17.98	0.3080	0.1650	6	1.22	OK	0
041.20	Direct Available P2O5, Spectrophotometric (19%)	0027	18.07	0.6300				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0230	15.60	0.2000	17.88	0.6526	0.1820	11	-3.27	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0055	17.29	0.1100	17.88	0.6526	0.1820	11	-0.85	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0522	17.48	0.1350	17.88	0.6526	0.1820	11	-0.58	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0405	17.68	0.4800	17.88	0.6526	0.1820	11	-0.29	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0394	17.81	0.1580	17.88	0.6526	0.1820	11	-0.10	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0472	17.88	0.0100	17.88	0.6526	0.1820	11	-0.01	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0177	17.88	0.1085	17.88	0.6526	0.1820	11	0.01	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0354	18.05	0.1000	17.88	0.6526	0.1820	11	0.25	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0231	18.10	0.2400	17.88	0.6526	0.1820	11	0.32	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0544	18.78	0.0400	17.88	0.6526	0.1820	11	1.29	High	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (19%)	0563	18.83	0.4200	17.88	0.6526	0.1820	11	1.36	High	0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0024	17.60	0.4000	18.09	0.3465	0.3575	4	-1.40		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0095	18.10	0.2600	18.09	0.3465	0.3575	4	0.04		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0029	18.25	0.1700	18.09	0.3465	0.3575	4	0.46		0

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041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0018	18.40	0.6000	18.09	0.3465	0.3575	4	0.91		0
041.50	Direct Available P2O5, ICP (19%)	0325	16.95	0.1000	18.06	0.8925	0.1708	4	-1.25		0
041.50	Direct Available P2O5, ICP (19%)	0421	17.88	0.0030	18.06	0.8925	0.1708	4	-0.21		0
041.50	Direct Available P2O5, ICP (19%)	0007	18.35	0.5000	18.06	0.8925	0.1708	4	0.32		0
041.50	Direct Available P2O5, ICP (19%)	0452	19.08	0.0800	18.06	0.8925	0.1708	4	1.14		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0025	14.25	0.3000	17.69	0.8958	0.3226	10	-3.57	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0423	16.60	0.2100	17.69	0.8958	0.3226	10	-1.13	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0377	17.34	0.1200	17.69	0.8958	0.3226	10	-0.36	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0486	17.53	0.2200	17.69	0.8958	0.3226	10	-0.16	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0136	17.75	0.7000	17.69	0.8958	0.3226	10	0.07	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0494	17.88	0.3800	17.69	0.8958	0.3226	10	0.20	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0117	18.05	0.6556	17.69	0.8958	0.3226	10	0.37	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0040	18.05	0.5000	17.69	0.8958	0.3226	10	0.38	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0023	18.30	0.0000	17.69	0.8958	0.3226	10	0.64	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0043	19.19	0.1400	17.69	0.8958	0.3226	10	1.56	High	0
041.99	Direct Available P2O5, Other (19%)	0562	18.73	0.1500	19.01	0.1911	0.1367	12	-1.49	OK	0
041.99	Direct Available P2O5, Other (19%)	0551	18.84	0.1300	19.01	0.1911	0.1367	12	-0.92	OK	0
041.99	Direct Available P2O5, Other (19%)	0537	18.86	0.1000	19.01	0.1911	0.1367	12	-0.79	OK	0
041.99	Direct Available P2O5, Other (19%)	0538	18.94	0.0800	19.01	0.1911	0.1367	12	-0.37	OK	0
041.99	Direct Available P2O5, Other (19%)	0549	18.95	0.1300	19.01	0.1911	0.1367	12	-0.34	OK	0
041.99	Direct Available P2O5, Other (19%)	0536	18.99	0.1400	19.01	0.1911	0.1367	12	-0.11	OK	0
041.99	Direct Available P2O5, Other (19%)	0533	19.00	0.1000	19.01	0.1911	0.1367	12	-0.06	OK	0
041.99	Direct Available P2O5, Other (19%)	0560	19.04	0.3500	19.01	0.1911	0.1367	12	0.13	OK	0
041.99	Direct Available P2O5, Other (19%)	0532	19.10	0.1600	19.01	0.1911	0.1367	12	0.47	OK	0
041.99	Direct Available P2O5, Other (19%)	0506	19.15	0.1000	19.01	0.1911	0.1367	12	0.73	OK	0
041.99	Direct Available P2O5, Other (19%)	0518	19.25	0.1000	19.01	0.1911	0.1367	12	1.25	OK	0
041.99	Direct Available P2O5, Other (19%)	0545	19.35	0.1000	19.01	0.1911	0.1367	12	1.78	OK	0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0444	16.69	1.110				1			0
048.40	Water Soluble P2O5, Automated (%)	0096	16.43	0.0600				1			0
048.50	Water Soluble P2O5, ICP (%)	0444	16.45	0.5800				1			0
048.99	Water Soluble P2O5, Other (%)	0513	16.31	0.0200				2			0
048.99	Water Soluble P2O5, Other (%)	0556	19.00	0.2000				2			0
050.00	Soluble K2O, STPB Oxalate (19%)	0055	18.61	0.2700	19.49	0.8176	0.0960	10	-1.00	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0494	18.66	0.0700	19.49	0.8176	0.0960	10	-0.95	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0102	19.00	0.0000	19.49	0.8176	0.0960	10	-0.55	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0544	19.02	0.1800	19.49	0.8176	0.0960	10	-0.53	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0522	19.31	0.0800	19.49	0.8176	0.0960	10	-0.20	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0231	19.48	0.0600	19.49	0.8176	0.0960	10	-0.01	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0220	19.68	0.1200	19.49	0.8176	0.0960	10	0.22	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0405	19.91	0.0100	19.49	0.8176	0.0960	10	0.48	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0230	20.50	0.0000	19.49	0.8176	0.0960	10	1.15	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0049	20.71	0.1700	19.49	0.8176	0.0960	10	1.39	High	0
050.00	Soluble K2O, STPB Oxalate (19%)	0444	19.95	2.010	19.49	0.8176	0.0960	10	0.52	OK	1
050.30	Soluble K2O, AA (Oxalate) (19%)	0356	18.54	0.0640	19.42	0.5566	0.3068	5	-1.58		0
050.30	Soluble K2O, AA (Oxalate) (19%)	0309	19.24	0.0300	19.42	0.5566	0.3068	5	-0.33		0
050.30	Soluble K2O, AA (Oxalate) (19%)	0040	19.60	0.0000	19.42	0.5566	0.3068	5	0.33		0
050.30	Soluble K2O, AA (Oxalate) (19%)	0073	19.76	0.7400	19.42	0.5566	0.3068	5	0.62		0

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050.30	Soluble K2O, AA (Oxalate) (19%)	0157	19.95	0.7000	19.42	0.5566	0.3068	5	0.96		0
050.31	Soluble K2O, AA (Citrate) (19%)	0472	15.81	0.2100				2			0
050.31	Soluble K2O, AA (Citrate) (19%)	0498	18.70	0.0000				2			0
050.32	Soluble K2O, AA (Citrate-EDTA) (19%)	0185	19.65	0.2200				1			0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0390	17.90	0.6000	19.49	1.072	0.3186	7	-1.34	Low	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0157	18.95	0.1000	19.49	1.072	0.3186	7	-0.45	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0444	19.05	0.1200	19.49	1.072	0.3186	7	-0.37	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0055	19.48	0.0100	19.49	1.072	0.3186	7	-0.01	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0324	20.05	0.3000	19.49	1.072	0.3186	7	0.48	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0422	20.32	0.8700	19.49	1.072	0.3186	7	0.70	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0292	20.66	0.2300	19.49	1.072	0.3186	7	0.99	High	0
050.51	Soluble K2O, ICP (Citrate) (19%)	0452	19.95	0.0700	20.20	0.2795	0.3200	3	-0.92		0
050.51	Soluble K2O, ICP (Citrate) (19%)	0291	20.17	0.0900	20.20	0.2795	0.3200	3	-0.14		0
050.51	Soluble K2O, ICP (Citrate) (19%)	0007	20.50	0.8000	20.20	0.2795	0.3200	3	1.06		0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0025	15.40	0.8000	19.60	0.6155	0.3936	11	-6.39	Low	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0136	18.90	0.2000	19.60	0.6155	0.3936	11	-1.07	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0377	19.08	0.0800	19.60	0.6155	0.3936	11	-0.80	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0023	19.50	0.0000	19.60	0.6155	0.3936	11	-0.16	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0423	19.60	0.1700	19.60	0.6155	0.3936	11	-0.01	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0354	19.65	0.1000	19.60	0.6155	0.3936	11	0.07	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0351	19.78	0.8100	19.60	0.6155	0.3936	11	0.26	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0486	19.90	0.0900	19.60	0.6155	0.3936	11	0.44	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0494	19.96	1.020	19.60	0.6155	0.3936	11	0.54	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0043	20.08	0.2500	19.60	0.6155	0.3936	11	0.72	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0117	20.99	0.8101	19.60	0.6155	0.3936	11	2.10	High	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (19%)	0443	19.44	0.3800				1			0
050.61	Soluble K2O, Flame Photometric (Citrate) (19%)	0456	18.85	0.1000				2			0
050.61	Soluble K2O, Flame Photometric (Citrate) (19%)	0035	19.95	0.1000				2			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0018	19.60	0.2000	19.95	0.3643	0.1975	4	-0.95		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0024	19.85	0.1000	19.95	0.3643	0.1975	4	-0.26		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0513	19.88	0.0500	19.95	0.3643	0.1975	4	-0.20		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0095	20.46	0.4400	19.95	0.3643	0.1975	4	1.41		0
050.99	Soluble K2O, Other (19%)	0563	18.22	0.4520	19.33	0.5693	0.2695	40	-1.95	Low	0
050.99	Soluble K2O, Other (19%)	0558	18.35	0.3000	19.33	0.5693	0.2695	40	-1.72	OK	0
050.99	Soluble K2O, Other (19%)	0524	18.53	0.8745	19.33	0.5693	0.2695	40	-1.39	OK	0
050.99	Soluble K2O, Other (19%)	0394	18.56	0.2500	19.33	0.5693	0.2695	40	-1.35	OK	0
050.99	Soluble K2O, Other (19%)	0551	18.80	0.1000	19.33	0.5693	0.2695	40	-0.93	OK	0
050.99	Soluble K2O, Other (19%)	0552	18.82	0.6400	19.33	0.5693	0.2695	40	-0.89	OK	0
050.99	Soluble K2O, Other (19%)	0533	18.84	0.2400	19.33	0.5693	0.2695	40	-0.86	OK	0
050.99	Soluble K2O, Other (19%)	0523	18.85	0.1000	19.33	0.5693	0.2695	40	-0.84	OK	0
050.99	Soluble K2O, Other (19%)	0096	18.90	0.0200	19.33	0.5693	0.2695	40	-0.75	OK	0
050.99	Soluble K2O, Other (19%)	0506	18.90	0.0000	19.33	0.5693	0.2695	40	-0.75	OK	0
050.99	Soluble K2O, Other (19%)	0556	18.90	0.2000	19.33	0.5693	0.2695	40	-0.75	OK	0
050.99	Soluble K2O, Other (19%)	0518	19.00	0.4000	19.33	0.5693	0.2695	40	-0.58	OK	0
050.99	Soluble K2O, Other (19%)	0545	19.03	0.0300	19.33	0.5693	0.2695	40	-0.53	OK	0
050.99	Soluble K2O, Other (19%)	0501	19.06	0.2000	19.33	0.5693	0.2695	40	-0.47	OK	0
050.99	Soluble K2O, Other (19%)	0549	19.15	0.1000	19.33	0.5693	0.2695	40	-0.31	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.99	Soluble K2O, Other (19%)	0536	19.19	0.1300	19.33	0.5693	0.2695	40	-0.25	OK	0
050.99	Soluble K2O, Other (19%)	0559	19.20	0.0100	19.33	0.5693	0.2695	40	-0.23	OK	0
050.99	Soluble K2O, Other (19%)	0532	19.21	0.3900	19.33	0.5693	0.2695	40	-0.22	OK	0
050.99	Soluble K2O, Other (19%)	0325	19.25	1.700	19.33	0.5693	0.2695	40	-0.14	OK	0
050.99	Soluble K2O, Other (19%)	0560	19.29	0.1400	19.33	0.5693	0.2695	40	-0.07	OK	0
050.99	Soluble K2O, Other (19%)	0565	19.32	0.0400	19.33	0.5693	0.2695	40	-0.01	OK	0
050.99	Soluble K2O, Other (19%)	0562	19.35	0.2000	19.33	0.5693	0.2695	40	0.04	OK	0
050.99	Soluble K2O, Other (19%)	0564	19.35	0.1000	19.33	0.5693	0.2695	40	0.04	OK	0
050.99	Soluble K2O, Other (19%)	0567	19.35	0.1000	19.33	0.5693	0.2695	40	0.04	OK	0
050.99	Soluble K2O, Other (19%)	0433	19.36	0.0300	19.33	0.5693	0.2695	40	0.05	OK	0
050.99	Soluble K2O, Other (19%)	0537	19.51	0.1800	19.33	0.5693	0.2695	40	0.32	OK	0
050.99	Soluble K2O, Other (19%)	0389	19.52	0.1600	19.33	0.5693	0.2695	40	0.34	OK	0
050.99	Soluble K2O, Other (19%)	0481	19.53	0.2000	19.33	0.5693	0.2695	40	0.36	OK	0
050.99	Soluble K2O, Other (19%)	0521	19.60	0.0000	19.33	0.5693	0.2695	40	0.48	OK	0
050.99	Soluble K2O, Other (19%)	0538	19.65	0.3000	19.33	0.5693	0.2695	40	0.57	OK	0
050.99	Soluble K2O, Other (19%)	0493	19.80	0.1000	19.33	0.5693	0.2695	40	0.83	OK	0
050.99	Soluble K2O, Other (19%)	0177	19.81	0.0199	19.33	0.5693	0.2695	40	0.86	OK	0
050.99	Soluble K2O, Other (19%)	0421	19.89	0.0050	19.33	0.5693	0.2695	40	0.99	OK	0
050.99	Soluble K2O, Other (19%)	0561	19.93	0.4000	19.33	0.5693	0.2695	40	1.06	OK	0
050.99	Soluble K2O, Other (19%)	0525	19.95	0.2200	19.33	0.5693	0.2695	40	1.09	OK	0
050.99	Soluble K2O, Other (19%)	0027	20.08	0.3720	19.33	0.5693	0.2695	40	1.33	OK	0
050.99	Soluble K2O, Other (19%)	0255	20.14	1.096	19.33	0.5693	0.2695	40	1.43	OK	0
050.99	Soluble K2O, Other (19%)	0547	20.24	0.3200	19.33	0.5693	0.2695	40	1.60	OK	0
050.99	Soluble K2O, Other (19%)	0527	20.48	0.2319	19.33	0.5693	0.2695	40	2.03	High	0
050.99	Soluble K2O, Other (19%)	0371	20.63	0.4300	19.33	0.5693	0.2695	40	2.28	High	0
050.99	Soluble K2O, Other (19%)	0516	17.19	1.842	19.33	0.5693	0.2695	40	-3.76	Low	1
050.99	Soluble K2O, Other (19%)	0515	21.44	1.821	19.33	0.5693	0.2695	40	3.70	High	1
060.00	Water (Free), Vacuum Oven (%)	0513	0.2950	0.0100	0.4850	0.1682	0.0433	3	-1.13		0
060.00	Water (Free), Vacuum Oven (%)	0096	0.5450	0.1100	0.4850	0.1682	0.0433	3	0.36		0
060.00	Water (Free), Vacuum Oven (%)	0456	0.6150	0.0100	0.4850	0.1682	0.0433	3	0.77		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0472	0.1550	0.0300	0.1727	0.0178	0.0177	4	-1.00		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.1600	0.0200	0.1727	0.0178	0.0177	4	-0.71		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	0.1855	0.0150	0.1727	0.0178	0.0177	4	0.72		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0351	0.1903	0.0059	0.1727	0.0178	0.0177	4	0.99		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	0.1650	0.0100				2			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0521	0.3069	0.0000				2			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0136	0.1300	0.0000	0.1539	0.0193	0.0051	4	-1.24		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0421	0.1490	0.0031	0.1539	0.0193	0.0051	4	-0.26		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0563	0.1611	0.0106	0.1539	0.0193	0.0051	4	0.37		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	0.1757	0.0066	0.1539	0.0193	0.0051	4	1.12		0
101.99	Acid Soluble Ca, Other (%)	0389	0.1650	0.0100				2			0
101.99	Acid Soluble Ca, Other (%)	0552	0.5850	0.1100				2			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.4750	0.0100	0.4957	0.0273	0.0159	5	-0.76		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0444	0.4750	0.0300	0.4957	0.0273	0.0159	5	-0.76		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	0.4850	0.0100	0.4957	0.0273	0.0159	5	-0.39		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0351	0.5033	0.0096	0.4957	0.0273	0.0159	5	0.28		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0472	0.5400	0.0200	0.4957	0.0273	0.0159	5	1.62		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.4760	0.0100				2			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0521	0.5035	0.0000				2			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0563	0.3919	0.0147	0.4585	0.0412	0.0243	5	-1.62		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.4485	0.0748	0.4585	0.0412	0.0243	5	-0.24		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0136	0.4750	0.0300	0.4585	0.0412	0.0243	5	0.40		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0421	0.4797	0.0008	0.4585	0.0412	0.0243	5	0.51		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.4976	0.0014	0.4585	0.0412	0.0243	5	0.95		0
121.99	Acid Soluble Mg, Other (%)	0524	0.3587	0.0127	0.4689	0.0826	0.0161	6	-1.19	OK	0
121.99	Acid Soluble Mg, Other (%)	0516	0.4200	0.0460	0.4689	0.0826	0.0161	6	-0.53	OK	0
121.99	Acid Soluble Mg, Other (%)	0389	0.4600	0.0000	0.4689	0.0826	0.0161	6	-0.10	OK	0
121.99	Acid Soluble Mg, Other (%)	0523	0.5000	0.0000	0.4689	0.0826	0.0161	6	0.34	OK	0
121.99	Acid Soluble Mg, Other (%)	0515	0.5098	0.0076	0.4689	0.0826	0.0161	6	0.44	OK	0
121.99	Acid Soluble Mg, Other (%)	0552	0.5650	0.0300	0.4689	0.0826	0.0161	6	1.04	OK	0
143.99	Elemental S, Other (%)	0472	0.7950	0.0100				2			0
143.99	Elemental S, Other (%)	0389	0.8650	0.0100				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	0.6753	0.0277	0.7561	0.0801	0.0250	4	-1.01		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	0.7022	0.0429	0.7561	0.0801	0.0250	4	-0.67		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0563	0.8049	0.0163	0.7561	0.0801	0.0250	4	0.61		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0421	0.8422	0.0132	0.7561	0.0801	0.0250	4	1.08		0
148.99	Total S, Other (%)	0516	0.7295	0.0930	0.7814	0.0371	0.0343	4	-1.40		0
148.99	Total S, Other (%)	0354	0.7800	0.0200	0.7814	0.0371	0.0343	4	-0.04		0
148.99	Total S, Other (%)	0096	0.8060	0.0240	0.7814	0.0371	0.0343	4	0.66		0
148.99	Total S, Other (%)	0523	0.8100	0.0000	0.7814	0.0371	0.0343	4	0.77		0
149.04	S - HNO3 soluble, ICP (%)	0524	0.7530	0.0043	0.8193	0.0575	0.0031	3	-1.15		0
149.04	S - HNO3 soluble, ICP (%)	0423	0.8505	0.0050	0.8193	0.0575	0.0031	3	0.54		0
149.04	S - HNO3 soluble, ICP (%)	0521	0.8544	0.0000	0.8193	0.0575	0.0031	3	0.61		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	< 0.08					0			5
151.30	Acid Soluble As, ICP (ppm)	0524	0.4510	0.0980	0.5421	0.1121	0.1165	3	-0.81		0
151.30	Acid Soluble As, ICP (ppm)	0255	0.5080	0.2060	0.5421	0.1121	0.1165	3	-0.30		0
151.30	Acid Soluble As, ICP (ppm)	0501	0.6673	0.0454	0.5421	0.1121	0.1165	3	1.12		0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	1.450	0.1000				1			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	0.6588	0.0137	0.7474	0.1275	0.0149	3	-0.70		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	0.6900	0.0200	0.7474	0.1275	0.0149	3	-0.45		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	0.8935	0.0110	0.7474	0.1275	0.0149	3	1.15		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	0.0000	0.0000	0.7474	0.1275	0.0149	3			4
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0117	< 10		0.7474	0.1275	0.0149	3			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
151.99	Acid Soluble As, Other (ppm)	0481	0.5850	0.0100	0.9374	0.3832	0.0288	4	-0.92		0
151.99	Acid Soluble As, Other (ppm)	0506	0.7145	0.0050	0.9374	0.3832	0.0288	4	-0.58		0
151.99	Acid Soluble As, Other (ppm)	0405	1.000	0.0000	0.9374	0.3832	0.0288	4	0.16		0
151.99	Acid Soluble As, Other (ppm)	0220	1.450	0.1000	0.9374	0.3832	0.0288	4	1.34		0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0521	0.0069	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					1			5
165.99	Acid Soluble B, Other (%)	0516	0.0020	0.0000	0.0040	0.0017	0.0001	7	-1.03	OK	0
165.99	Acid Soluble B, Other (%)	0136	0.0028	0.0002	0.0040	0.0017	0.0001	7	-0.62	OK	0
165.99	Acid Soluble B, Other (%)	0524	0.0032	0.0003	0.0040	0.0017	0.0001	7	-0.43	OK	0
165.99	Acid Soluble B, Other (%)	0563	0.0038	0.0002	0.0040	0.0017	0.0001	7	-0.10	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
165.99	Acid Soluble B, Other (%)	0527	0.0048	0.0001	0.0040	0.0017	0.0001	7	0.40	OK	0
165.99	Acid Soluble B, Other (%)	0423	0.0048	0.0000	0.0040	0.0017	0.0001	7	0.42	OK	0
165.99	Acid Soluble B, Other (%)	0472	0.0100	0.0000	0.0040	0.0017	0.0001	7	3.12	High	0
165.99	Acid Soluble B, Other (%)	0515	0.0048	0.0012	0.0040	0.0017	0.0001	7	0.42	OK	1
165.99	Acid Soluble B, Other (%)	0552	0.0000	0.0000	0.0040	0.0017	0.0001	7			4
165.99	Acid Soluble B, Other (%)	0421	< 0.0018		0.0040	0.0017	0.0001	7			5
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	16.10	0.2000				2			0
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	23.20	2.000				2			0
181.30	Acid Soluble Cd, ICP (ppm)	0524	12.42	0.7036	16.67	4.348	0.6697	7	-0.88	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	12.78	0.0100	16.67	4.348	0.6697	7	-0.81	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	14.35	1.844	16.67	4.348	0.6697	7	-0.48	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0501	17.08	1.330	16.67	4.348	0.6697	7	0.08	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	17.95	0.1000	16.67	4.348	0.6697	7	0.27	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0096	18.95	0.3000	16.67	4.348	0.6697	7	0.47	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0389	31.60	0.4000	16.67	4.348	0.6697	7	3.10	NA	0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	16.75	0.3000				1			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	18.30	0.8000	19.21	0.9987	1.357	5	-0.91		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0117	18.43	0.1350	19.21	0.9987	1.357	5	-0.78		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	18.80	4.705	19.21	0.9987	1.357	5	-0.41		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	19.97	0.3499	19.21	0.9987	1.357	5	0.76		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	20.55	0.7962	19.21	0.9987	1.357	5	1.34		0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	21.51	0.2950				1			0
181.99	Acid Soluble Cd, Other (ppm)	0220	16.90	1.000	18.15	1.285	0.4275	4	-0.97		0
181.99	Acid Soluble Cd, Other (ppm)	0506	17.25	0.3000	18.15	1.285	0.4275	4	-0.70		0
181.99	Acid Soluble Cd, Other (ppm)	0405	18.85	0.3000	18.15	1.285	0.4275	4	0.55		0
181.99	Acid Soluble Cd, Other (ppm)	0481	19.60	0.1100	18.15	1.285	0.4275	4	1.13		0
190.99	Water Soluble Cl, Other (%)	0513	14.90	0.0900				1			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	64.75	0.4400				2			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	110.6	3.700				2			0
191.30	Acid Soluble Cr, ICP (ppm)	0524	72.75	3.278	93.25	18.44	2.395	6	-0.99	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0027	76.00	4.000	93.25	18.44	2.395	6	-0.83	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	94.75	2.300	93.25	18.44	2.395	6	0.07	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	95.60	3.000	93.25	18.44	2.395	6	0.11	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0501	107.0	0.6900	93.25	18.44	2.395	6	0.66	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0096	113.5	1.100	93.25	18.44	2.395	6	0.98	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0444	90.15	25.71	93.25	18.44	2.395	6	-0.15	NA	1
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	110.0	0.0000				1			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	100.4	1.045	111.5	9.742	4.680	4	-1.13		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0117	108.7	0.3600	111.5	9.742	4.680	4	-0.28		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	112.8	1.266	111.5	9.742	4.680	4	0.14		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	123.9	16.05	111.5	9.742	4.680	4	1.27		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	126.2	10.92				1			0
191.99	Acid Soluble Cr, Other (ppm)	0506	96.10	0.4000	106.7	7.392	2.650	4	-1.43		0
191.99	Acid Soluble Cr, Other (ppm)	0481	107.7	2.200	106.7	7.392	2.650	4	0.14		0
191.99	Acid Soluble Cr, Other (ppm)	0220	110.0	6.000	106.7	7.392	2.650	4	0.45		0
191.99	Acid Soluble Cr, Other (ppm)	0405	113.0	2.000	106.7	7.392	2.650	4	0.85		0
202.30	Acid Soluble Co, ICP (ppm)	0524	0.8770	0.0617				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
202.30	Acid Soluble Co, ICP (ppm)	0389	1.205	0.0100				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	1.150	0.1000				1			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	0.5436	0.0212	1.671	1.919	0.9976	3	-0.59		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	0.5827	0.0020	1.671	1.919	0.9976	3	-0.57		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	3.888	2.970	1.671	1.919	0.9976	3	1.15		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0550	< 0.09		1.671	1.919	0.9976	3			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0117	< 5		1.671	1.919	0.9976	3			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0501	0.6540	0.0220				2			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	2.667	3.491				2			0
202.99	Acid Soluble Co, Other (ppm)	0255	0.3370	0.1720	0.8457	0.6664	0.0573	3	-0.76		0
202.99	Acid Soluble Co, Other (ppm)	0405	0.6000	0.0000	0.8457	0.6664	0.0573	3	-0.37		0
202.99	Acid Soluble Co, Other (ppm)	0220	1.600	0.0000	0.8457	0.6664	0.0573	3	1.13		0
202.99	Acid Soluble Co, Other (ppm)	0481	< 20		0.8457	0.6664	0.0573	3			5
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0550	< 1					0			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000				0			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0472	0.0000	0.0000				0			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0000	0.0000				0			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0041	< 0.001					0			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					0			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0095	0.0001	0.0001				0			4
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0001	0.0000				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0006	0.0004				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	< 0.0001					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0421	< 0.0015					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0117	< 0.0025					2			5
221.99	Acid Soluble Cu, Other (%)	0524	0.0001	0.0000	0.0007	0.0004	0.0001	5	-1.10		0
221.99	Acid Soluble Cu, Other (%)	0501	0.0003	0.0001	0.0007	0.0004	0.0001	5	-0.80		0
221.99	Acid Soluble Cu, Other (%)	0515	0.0010	0.0005	0.0007	0.0004	0.0001	5	0.57		0
221.99	Acid Soluble Cu, Other (%)	0516	0.0010	0.0000	0.0007	0.0004	0.0001	5	0.66		0
221.99	Acid Soluble Cu, Other (%)	0523	0.0010	0.0000	0.0007	0.0004	0.0001	5	0.66		0
221.99	Acid Soluble Cu, Other (%)	0481	< 0.001		0.0007	0.0004	0.0001	5			5
221.99	Acid Soluble Cu, Other (%)	0405	< 0.5		0.0007	0.0004	0.0001	5			5
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0444	0.4200	0.0000	0.4239	0.0042	0.0042	5	-0.82		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0472	0.4200	0.0000	0.4239	0.0042	0.0042	5	-0.82		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0351	0.4246	0.0112	0.4239	0.0042	0.0042	5	0.14		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.4250	0.0100	0.4239	0.0042	0.0042	5	0.23		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	0.4300	0.0000	0.4239	0.0042	0.0042	5	1.27		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	0.4400	0.1000	0.4239	0.0042	0.0042	5	3.37		1
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0521	0.4121	0.0000				2			0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.4425	0.0030				2			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0563	0.3715	0.0157	0.4479	0.1003	0.1127	4	-0.76		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0136	0.3950	0.0300	0.4479	0.1003	0.1127	4	-0.53		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.4316	0.0050	0.4479	0.1003	0.1127	4	-0.16		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	0.5937	0.4000	0.4479	0.1003	0.1127	4	1.45		0
241.99	Acid Soluble Fe, Other (%)	0524	0.3361	0.0093	0.3992	0.0536	0.0256	5	-1.18		0
241.99	Acid Soluble Fe, Other (%)	0516	0.3565	0.0450	0.3992	0.0536	0.0256	5	-0.80		0
241.99	Acid Soluble Fe, Other (%)	0389	0.4000	0.0000	0.3992	0.0536	0.0256	5	0.01		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241.99	Acid Soluble Fe, Other (%)	0523	0.4425	0.0010	0.3992	0.0536	0.0256	5	0.81		0
241.99	Acid Soluble Fe, Other (%)	0515	0.4610	0.0727	0.3992	0.0536	0.0256	5	1.15		0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	< 1.5					0			5
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.1988	0.0253	0.4103	0.1476	0.0679	4	-1.43		0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.4250	0.2160	0.4103	0.1476	0.0679	4	0.10		0
251.30	Acid Soluble Pb, ICP (ppm)	0501	0.4853	0.0163	0.4103	0.1476	0.0679	4	0.51		0
251.30	Acid Soluble Pb, ICP (ppm)	0394	0.5320	0.0140	0.4103	0.1476	0.0679	4	0.82		0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	1.300	0.4000				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	0.1364	0.0003	2.033	3.252	0.6885	3	-0.58		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	0.1744	0.0093	2.033	3.252	0.6885	3	-0.57		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	5.788	2.056	2.033	3.252	0.6885	3	1.15		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0117	< 5		2.033	3.252	0.6885	3			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	2.666	1.271				1			0
251.99	Acid Soluble Pb, Other (ppm)	0405	0.3500	0.1000	0.9050	0.7437	0.0900	3	-0.75		0
251.99	Acid Soluble Pb, Other (ppm)	0481	0.6150	0.0700	0.9050	0.7437	0.0900	3	-0.39		0
251.99	Acid Soluble Pb, Other (ppm)	0220	1.750	0.1000	0.9050	0.7437	0.0900	3	1.14		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	0.0083	0.0001				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0472	0.0100	0.0000				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					2			5
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.0300	0.0400				1			0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0077	0.0001				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0136	0.0060	0.0001	0.0073	0.0011	0.0001	3	-1.15		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0563	0.0078	0.0002	0.0073	0.0011	0.0001	3	0.46		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0081	0.0001	0.0073	0.0011	0.0001	3	0.68		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0112	0.0224	0.0073	0.0011	0.0001	3			4
261.99	Acid Soluble Mn, Other (%)	0524	0.0069	0.0002	0.0079	0.0011	0.0014	5	-0.90		0
261.99	Acid Soluble Mn, Other (%)	0516	0.0070	0.0020	0.0079	0.0011	0.0014	5	-0.81		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0074	0.0000	0.0079	0.0011	0.0014	5	-0.45		0
261.99	Acid Soluble Mn, Other (%)	0523	0.0090	0.0000	0.0079	0.0011	0.0014	5	0.97		0
261.99	Acid Soluble Mn, Other (%)	0515	0.0093	0.0049	0.0079	0.0011	0.0014	5	1.19		0
281.00	Acid Soluble Hg, AA (ppm)	0550	10.15	1.500				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0563	0.0053	0.0044				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.0000	0.0000				1			4
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					1			5
281.99	Acid Soluble Hg, Other (ppm)	0220	< 0.01					0			5
281.99	Acid Soluble Hg, Other (ppm)	0405	< 0.01					0			5
281.99	Acid Soluble Hg, Other (ppm)	0481	< 0.5					0			5
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	3.640	0.1800				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0255	3.008	0.3450	6.156	5.899	2.611	4	-0.53		0
289.30	Acid Soluble Mo, ICP (ppm)	0524	3.168	0.0000	6.156	5.899	2.611	4	-0.51		0
289.30	Acid Soluble Mo, ICP (ppm)	0096	3.450	0.1000	6.156	5.899	2.611	4	-0.46		0
289.30	Acid Soluble Mo, ICP (ppm)	0516	15.00	10.00	6.156	5.899	2.611	4	1.50		0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	3.750	0.7000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	4.245	0.0339	27.65	45.60	3.629	4	-0.51		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	4.605	0.7900	27.65	45.60	3.629	4	-0.51		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	5.718	0.0977	27.65	45.60	3.629	4	-0.48		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	96.04	13.60	27.65	45.60	3.629	4	1.50		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0117	< 5		27.65	45.60	3.629	4			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0501	5.722	0.4340				2			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	21.16	34.19				2			0
289.99	Acid Soluble Mo, Other (ppm)	0220	4.000	0.6000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0405	5.790	0.0800				2			0
289.99	Acid Soluble Mo, Other (ppm)	0481	< 100					2			5
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	3.360	0.3200				2			0
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	0498	8.800	0.2000				2			0
291.30	Acid Soluble Ni, ICP (ppm)	0524	7.756	0.0720	12.12	4.466	1.014	5	-0.98		0
291.30	Acid Soluble Ni, ICP (ppm)	0444	8.390	0.7400	12.12	4.466	1.014	5	-0.84		0
291.30	Acid Soluble Ni, ICP (ppm)	0394	11.10	0.2000	12.12	4.466	1.014	5	-0.23		0
291.30	Acid Soluble Ni, ICP (ppm)	0096	15.25	0.5000	12.12	4.466	1.014	5	0.70		0
291.30	Acid Soluble Ni, ICP (ppm)	0389	18.12	3.560	12.12	4.466	1.014	5	1.34		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	12.30	0.2000				1			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	9.075	0.5693	13.17	3.543	0.9660	4	-1.16		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0117	12.85	0.2220	13.17	3.543	0.9660	4	-0.09		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	13.02	0.3295	13.17	3.543	0.9660	4	-0.04		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	17.73	2.743	13.17	3.543	0.9660	4	1.29		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0501	16.36	0.5825				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	17.75	7.255				2			0
291.99	Acid Soluble Ni, Other (ppm)	0255	4.173	5.109	10.19	3.530	1.190	5	-1.71		0
291.99	Acid Soluble Ni, Other (ppm)	0481	9.890	0.0400	10.19	3.530	1.190	5	-0.09		0
291.99	Acid Soluble Ni, Other (ppm)	0220	12.10	0.4000	10.19	3.530	1.190	5	0.54		0
291.99	Acid Soluble Ni, Other (ppm)	0506	12.15	0.1000	10.19	3.530	1.190	5	0.55		0
291.99	Acid Soluble Ni, Other (ppm)	0405	12.65	0.3000	10.19	3.530	1.190	5	0.70		0
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	< 0.08					0			5
301.30	Acid Soluble Se, ICP (ppm)	0501	0.5763	0.0085				1			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.5000	0.0000				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	0.4887	0.0496	1.764	1.106	0.4683	3	-1.15		0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	2.337	0.0272	1.764	1.106	0.4683	3	0.52		0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	2.465	1.328	1.764	1.106	0.4683	3	0.63		0
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	1.734	0.5090				1			0
301.99	Acid Soluble Se, Other (ppm)	0220	0.4500	0.1000	9.075	12.86	1.948	3	-0.67		0
301.99	Acid Soluble Se, Other (ppm)	0255	2.925	0.0440	9.075	12.86	1.948	3	-0.48		0
301.99	Acid Soluble Se, Other (ppm)	0506	23.85	5.700	9.075	12.86	1.948	3	1.15		0
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5		9.075	12.86	1.948	3			5
301.99	Acid Soluble Se, Other (ppm)	0405	< 1		9.075	12.86	1.948	3			5
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.6193	0.0000				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0563	0.3664	0.0182	0.4505	0.0918	0.0096	4	-0.92		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0136	0.4050	0.0100	0.4505	0.0918	0.0096	4	-0.50		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.4533	0.0051	0.4505	0.0918	0.0096	4	0.03		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.5775	0.0050	0.4505	0.0918	0.0096	4	1.38		0
311.99	Sodium, Other (%)	0096	0.4400	0.0200				2			0
311.99	Sodium, Other (%)	0354	0.4700	0.0400				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0550	0.0297	0.0048				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0498	0.0300	0.0000				2			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0245	0.0010	0.0287	0.0038	0.0034	7	-1.00	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.0250	0.0100	0.0287	0.0038	0.0034	7	-0.88	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0041	0.0280	0.0000	0.0287	0.0038	0.0034	7	-0.16	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	0.0290	0.0020	0.0287	0.0038	0.0034	7	0.08	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0351	0.0299	0.0006	0.0287	0.0038	0.0034	7	0.29	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0472	0.0300	0.0000	0.0287	0.0038	0.0034	7	0.31	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.0850	0.0100	0.0287	0.0038	0.0034	7	13.41	High	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	311.3	4.300	0.0287	0.0038	0.0034	7	74102.96	High	2
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0250	0.0003	0.0275	0.0023	0.0005	5	-1.10		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.0255	0.0010	0.0275	0.0023	0.0005	5	-0.86		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0521	0.0273	0.0000	0.0275	0.0023	0.0005	5	-0.07		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0295	0.0010	0.0275	0.0023	0.0005	5	0.90		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0300	0.0000	0.0275	0.0023	0.0005	5	1.12		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0421	0.0244	0.0004	0.0263	0.0017	0.0010	7	-1.01	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0245	0.0010	0.0263	0.0017	0.0010	7	-0.95	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0563	0.0260	0.0025	0.0263	0.0017	0.0010	7	-0.16	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0261	0.0025	0.0263	0.0017	0.0010	7	-0.11	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0270	0.0000	0.0263	0.0017	0.0010	7	0.41	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0117	0.0277	0.0006	0.0263	0.0017	0.0010	7	0.79	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0282	0.0001	0.0263	0.0017	0.0010	7	1.03	OK	0
321.99	Acid Soluble Zn, Other (%)	0516	0.0125	0.0050	0.0258	0.0065	0.0011	11	-2.04	Low	0
321.99	Acid Soluble Zn, Other (%)	0027	0.0185	0.0010	0.0258	0.0065	0.0011	11	-1.12	OK	0
321.99	Acid Soluble Zn, Other (%)	0558	0.0200	0.0000	0.0258	0.0065	0.0011	11	-0.89	OK	0
321.99	Acid Soluble Zn, Other (%)	0220	0.0255	0.0014	0.0258	0.0065	0.0011	11	-0.05	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0257	0.0006	0.0258	0.0065	0.0011	11	-0.02	OK	0
321.99	Acid Soluble Zn, Other (%)	0506	0.0260	0.0000	0.0258	0.0065	0.0011	11	0.03	OK	0
321.99	Acid Soluble Zn, Other (%)	0405	0.0269	0.0006	0.0258	0.0065	0.0011	11	0.16	OK	0
321.99	Acid Soluble Zn, Other (%)	0501	0.0295	0.0010	0.0258	0.0065	0.0011	11	0.56	OK	0
321.99	Acid Soluble Zn, Other (%)	0481	0.0300	0.0000	0.0258	0.0065	0.0011	11	0.64	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0304	0.0030	0.0258	0.0065	0.0011	11	0.70	OK	0
321.99	Acid Soluble Zn, Other (%)	0389	0.2640	0.0000	0.0258	0.0065	0.0011	11	36.46	High	0
321.99	Acid Soluble Zn, Other (%)	0523	0.1640	0.2720	0.0258	0.0065	0.0011	11	21.15	High	1

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for information only. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower, Green indicates within the IA range. Method 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.