

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 190811

11-52-0 MAP

Statistical Summary

Methods: 124

Labs Reporting: 88

Issue Date : 09/30/2019

Method Code	Analyte & Method Sample # 190811	# 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
001.10	Ammoniacal N, Magnesium Oxide Method (%)	7	7	10.78	0.2040	10.78		0.2314	0.1093	2.15%		0.0657	2.80%
001.99	Ammoniacal N, Other (%)	23	22	11.12	0.3701	11.13		0.2631	0.0701	2.36%		0.1702	2.78%
010.11	Total N, Modified Comprehensive (11%)	7	7	11.24	0.1730	11.23	0.5984	0.1697	0.0802	1.51%	0.66	0.1717	2.78%
010.12	Total N, Salicylic (11%)	1		10.50									
010.17	Total N, Comprehensive (11%)	1		9.810									
010.60	Total N, Combustion (11%)	54	53	11.08	0.2124	11.09	0.5964	0.1886	0.0324	1.70%	0.74	0.1145	2.78%
010.99	Total N, Other (11%)	12	11	11.17	0.1880	11.16	0.5974	0.1886	0.0711	1.69%	0.74	0.1116	2.78%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	3	3	51.70	1.153	51.70		1.153	0.8323	2.23%		1.700	2.21%
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	21	21	52.00	1.322	52.11		0.6672	0.1820	1.28%		0.2314	2.21%
020.40	Total P2O5, Automated (%)	3	3	51.84	0.3086	51.84		0.3086	0.2227	0.60%		0.3167	2.21%
020.50	Total P2O5, ICP (%)	18	17	50.57	4.377	50.82		3.548	1.076	6.98%		0.7261	2.21%
020.99	Total P2O5, Other (%)	4	4	53.05	1.953	53.05		1.953	1.221	3.68%		0.3766	2.20%
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	2	2	0.0175	0.0106								
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	1		0.0300									
040.20	Indirect Available P2O5, Spectrophotometric (52%)	3	3	52.34	0.3976	52.34	1.1051	0.3976	0.2869	0.76%	0.84	0.0233	2.20%
040.40	Indirect Available P2O5, Automated (52%)	1		51.87									
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	5	5	51.86	0.5802	51.86	1.0979	0.5802	0.3243	1.12%	1.23	0.3154	2.21%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	6	6	52.53	0.4177	52.53	1.1079	0.4737	0.2417	0.90%	1.00	0.2677	2.20%
041.20	Direct Available P2O5, Spectrophotometric (52%)	1		50.99									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	8	7	52.22	0.8248	52.09	1.1014	0.6040	0.2854	1.16%	1.28	0.1590	2.21%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	4	4	52.29	1.088	52.29	1.1044	1.088	0.6801	2.08%	2.30	0.3655	2.20%
041.50	Direct Available P2O5, ICP (52%)	4	4	52.45	0.8932	52.45	1.1068	0.8932	0.5583	1.70%	1.88	0.4225	2.20%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	7	7	51.78	0.8266	51.78	1.0966	0.9374	0.4429	1.81%	1.99	0.4956	2.21%
041.60	Direct Available P2O5, Citrate-EDTA Ext. (52%)	1		52.36									
041.99	Direct Available P2O5, Other (52%)	6	6	51.73	0.5975	51.73	1.0959	0.6776	0.3458	1.31%	1.44	0.2600	2.21%
042.99	Water Soluble OrthoP As P2O5, Other (%)	1		46.77									
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	1		46.00									
048.20	Water Soluble P2O5, Spectrophotometric (%)	10	10	46.04	2.219	46.02		2.316	0.9153	5.03%		0.4487	2.25%
048.40	Water Soluble P2O5, Automated (%)	1		46.43									
048.50	Water Soluble P2O5, ICP (%)	3	3	37.99	15.43	37.99		15.43	11.14	40.63%		0.3067	2.31%
048.99	Water Soluble P2O5, Other (%)	2	2	50.01	3.734								
050.50	Soluble K2O, ICP (Oxalate) (%)	1		0.2690									
050.51	Soluble K2O, ICP (Citrate) (%)	1		52.13									

Method Code	Analyte & Method Sample # 190811	# 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
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	1		0.2840									
050.61	Soluble K2O, Flame Photometric (Citrate) (%)	1		63.30									
050.99	Soluble K2O, Other (%)	7	5	0.2549	0.0549	0.2549	0.4100	0.0549	0.0307	21.53%	0.31	0.0240	4.91%
060.00	Water (Free), Vacuum Oven (%)	4	4	1.775	0.5112	1.775		0.5112	0.3195	28.80%		0.0520	3.67%
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%)	2	2	2.660	0.0071								
060.99	Water (Free), Other (%)	1		2.388									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	2	2	0.1045	0.1153								
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	1		0.3630									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	5	5	0.4096	0.0605	0.4096	0.2205	0.0605	0.0338	14.78%	0.64	0.0060	4.57%
101.99	Acid Soluble Ca, Other (%)	2	2	1.105	1.018								
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	2	2	1.323	0.0099								
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	6	6	1.423	0.1310	1.423	0.2712	0.1485	0.0758	10.43%	1.28	0.0222	3.79%
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	1		1.226									
121.99	Acid Soluble Mg, Other (%)	4	4	1.547	0.4883	1.547	0.2774	0.4883	0.3052	31.56%	4.10	0.3888	3.75%
143.99	Elemental S, Other (%)	2	2	1.560	0.1276								
148.07	Total S, ICP, test portion as in 2017.02 (%)	1		1.115									
148.99	Total S, Other (%)	3	3	1.578	0.1025	1.578	0.2789	0.1025	0.0740	6.49%	0.86	0.0367	3.73%
149.04	S - HNO3 soluble, ICP (%)	1		1.594									
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	2	1	0.1170									
151.30	Acid Soluble As, ICP (ppm)	7	5	1.909	1.166	1.909		1.166	0.6518	61.08%		0.4128	14.51%
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	1		0.0000									
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
151.99	Acid Soluble As, Other (ppm)	3	2	1.725	0.3536	1.725		0.3536	0.3125	20.50%		0.0100	14.74%
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	2	340.0	480.8								
165.99	Acid Soluble B, Other (%)	5	4	0.0173	0.0058	0.0173	0.0056	0.0058	0.0036	33.64%	2.42	0.0046	7.36%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	52.35	19.15								
181.30	Acid Soluble Cd, ICP (ppm)	13	11	62.85	13.28	65.13		8.480	3.196	13.02%		2.487	8.53%
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	2	2	59.64	7.895								
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		34.70									
181.99	Acid Soluble Cd, Other (ppm)	3	3	66.62	9.235	66.62		9.235	6.665	13.86%		0.9733	8.50%
190.00	Water Soluble Cl, Titrimetric (%)	1		48.35									
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	2	2	219.6	32.24								
191.30	Acid Soluble Cr, ICP (ppm)	12	11	244.3	122.5	257.7		109.0	41.08	42.30%		7.652	6.94%
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	2	2	420.8	149.2								
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		496.9									
191.99	Acid Soluble Cr, Other (ppm)	3	3	292.0	44.35	292.0		44.35	32.01	15.19%		2.180	6.81%
202.00	Acid Soluble Co, AA, test portion 2006.03 modified w/dual acid (ppm)	1		0.0100									
202.30	Acid Soluble Co, ICP (ppm)	8	6	2.490	1.315	2.490	1.7470	1.491	0.7608	59.87%	1.99	0.1110	13.94%
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	3	2	2.620	0.2613	2.620	1.7859	0.2613	0.2309	9.97%	0.34	0.5565	13.84%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
202.99	Acid Soluble Co, Other (ppm)	3	2	1.701	0.5172	1.701	1.5102	0.5172	0.4572	30.41%	0.80	0.9625	14.77%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		0.0002									
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	1		0.0045									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	5	2	0.1233	0.1721	0.1233	0.0173	0.1721	0.1521	139.59%	23.14	0.0753	5.48%

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221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0002									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	2	1	0.0014									
221.99	Acid Soluble Cu, Other (%)	4	3	0.0012	0.0011	0.0012	0.0051	0.0011	0.0008	90.68%	0.51	0.0005	10.96%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	1		1.596									
241.03	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	1		1.449									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	7	6	1.552	0.0631	1.552	0.1602	0.0716	0.0365	4.61%	1.04	0.0240	3.74%
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	1		1.635									
241.99	Acid Soluble Fe, Other (%)	3	3	1.849	0.3165	1.849	0.1899	0.3165	0.2284	17.12%	3.88	0.3597	3.65%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	2	1	16.38									
251.30	Acid Soluble Pb, ICP (ppm)	9	8	1.223	1.532	0.8192		0.5718	0.2527	69.80%		0.2291	16.48%
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	1		0.0000									
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
251.99	Acid Soluble Pb, Other (ppm)	2	1	0.3950									
261.15	Acid Soluble Mn, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	1		0.0233									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	4	4	0.0259	0.0043	0.0259	0.0076	0.0043	0.0027	16.45%	1.31	0.0002	6.93%
261.31	Acid Soluble Mn, ICP, test portion 972.02b (%)	1		0.0300									
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.5200									
261.99	Acid Soluble Mn, Other (%)	3	3	0.0287	0.0031	0.0287	0.0079	0.0031	0.0022	10.84%	0.92	0.0115	6.83%
281.00	Acid Soluble Hg, AA (ppm)	2	1	8.500									
281.30	Acid Soluble Hg, ICP (ppm)	3	1	0.0100		0.0287		0.0031	0.0039	10.84%		0.0000	27.30%
281.99	Acid Soluble Hg, Other (ppm)	3	2	0.0068	0.0045	0.0068		0.0045	0.0040	66.55%		0.0004	33.90%
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	1		13.89									
289.30	Acid Soluble Mo, ICP (ppm)	8	8	57.61	111.6	21.94	7.5810	16.77	7.411	76.45%	5.15	2.303	10.05%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		14.45									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	2	2	11.93	3.532								
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		6.895									
289.99	Acid Soluble Mo, Other (ppm)	2	1	11.88									
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	1		32.01									
291.30	Acid Soluble Ni, ICP (ppm)	11	10	43.13	14.96	46.75		5.651	2.234	12.09%		1.365	8.97%
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	2	2	49.67	2.280								
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	1		45.78									
291.99	Acid Soluble Ni, Other (ppm)	5	4	49.33	10.78	49.33		10.78	6.738	21.85%		10.73	8.90%
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)	3	1	0.3650		49.33		10.78	13.48	21.85%		0.5500	8.90%
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	1		0.0000									
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
301.99	Acid Soluble Se, Other (ppm)	4	2	6.530	9.221	6.530		9.221	8.150	141.20%		1.844	12.06%
311.00	Sodium, AA (%)	1		0.0475									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	1		0.2310									
311.99	Sodium, Other (%)	3	3	0.2433	0.0202	0.2433	0.0293	0.0202	0.0146	8.30%	1.61	0.0067	4.95%
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	2	2	0.0818	0.0145								
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	2	2	0.0978	0.0035								
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	11	10	0.1890	0.2973	0.0963	0.0146	0.0083	0.0033	8.59%	1.32	0.1099	5.69%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	2	2	0.0976	0.0011								

Method Code	Analyte & Method Sample # 190811	# 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
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	2	2	0.0550	0.0538								
321.99	Acid Soluble Zn, Other (%)	9	8	0.0777	0.0305	0.0777	0.0128	0.0346	0.0153	44.52%	6.31	0.0031	5.88%
325.30	Water Soluble Zn, ICP (%)	1		0.5000									

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 # 190811

Method Precision Report

11-52-0 MAP

Issue Date : 09/30/2019

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
001.99	Ammoniacal N, Other (%)	23	20	11.12	0.2328	0.2063	0.1524	0.2565	1.86%	1.37%	2.31%	1.683
010.60	Total N, Combustion (11%)	54	50	11.10	0.1773	0.1656	0.0896	0.1883	1.49%	0.81%	1.70%	2.101
010.99	Total N, Other (11%)	12	10	11.17	0.1967	0.1897	0.0735	0.2035	1.70%	0.66%	1.82%	2.767
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	21	20	52.23	0.8155	0.7994	0.2280	0.8313	1.53%	0.44%	1.59%	3.647
020.50	Total P2O5, ICP (%)	18	15	51.34	3.680	3.654	0.6225	3.706	7.12%	1.21%	7.22%	5.954
048.20	Water Soluble P2O5, Spectrophotometric (%)	10	9	46.47	1.876	1.866	0.2780	1.886	4.02%	0.60%	4.06%	6.785
181.30	Acid Soluble Cd, ICP (ppm)	13	9	65.84	6.643	6.502	1.923	6.780	9.88%	2.92%	10.30%	3.525
191.30	Acid Soluble Cr, ICP (ppm)	12	10	253.5	125.1	125.1	3.427	125.1	49.33%	1.35%	49.35%	36.50
291.30	Acid Soluble Ni, ICP (ppm)	11	8	46.77	3.433	3.347	1.083	3.518	7.16%	2.32%	7.52%	3.248
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	11	9	0.0950	0.0062	0.0050	0.0052	0.0072	5.28%	5.45%	7.59%	1.392
321.99	Acid Soluble Zn, Other (%)	9	8	0.0777	0.0305	0.0304	0.0039	0.0306	39.10%	5.01%	39.42%	7.865

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

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 190811
11-52-0 MAP

Lab Values

Methods: 124

Labs Reporting: 88

Issue Date : 09/30/2019

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 (%)	0526	10.59	0.0000	10.78	0.2314	0.0657	7	-0.75	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0309	10.59	0.0000	10.78	0.2314	0.0657	7	-0.74	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0451	10.63	0.1500	10.78	0.2314	0.0657	7	-0.60	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0551	10.73	0.0500	10.78	0.2314	0.0657	7	-0.21	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0456	10.85	0.1400	10.78	0.2314	0.0657	7	0.28	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0481	10.95	0.1000	10.78	0.2314	0.0657	7	0.67	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0117	11.12	0.0200	10.78	0.2314	0.0657	7	1.34	NA	0
001.99	Ammoniacal N, Other (%)	0394	10.20	0.0720	11.13	0.2631	0.1702	22	-3.52	NA	0
001.99	Ammoniacal N, Other (%)	0553	10.55	0.7000	11.13	0.2631	0.1702	22	-2.20	NA	0
001.99	Ammoniacal N, Other (%)	0551	10.71	0.0400	11.13	0.2631	0.1702	22	-1.59	NA	0
001.99	Ammoniacal N, Other (%)	0513	10.72	0.0500	11.13	0.2631	0.1702	22	-1.57	NA	0
001.99	Ammoniacal N, Other (%)	0558	11.00	0.0000	11.13	0.2631	0.1702	22	-0.49	NA	0
001.99	Ammoniacal N, Other (%)	0520	11.02	0.2300	11.13	0.2631	0.1702	22	-0.43	NA	0
001.99	Ammoniacal N, Other (%)	0220	11.07	0.0200	11.13	0.2631	0.1702	22	-0.22	NA	0
001.99	Ammoniacal N, Other (%)	0532	11.09	0.0700	11.13	0.2631	0.1702	22	-0.16	NA	0
001.99	Ammoniacal N, Other (%)	0527	11.10	0.0000	11.13	0.2631	0.1702	22	-0.11	NA	0
001.99	Ammoniacal N, Other (%)	0027	11.10	0.0600	11.13	0.2631	0.1702	22	-0.11	NA	0
001.99	Ammoniacal N, Other (%)	0029	11.13	0.0600	11.13	0.2631	0.1702	22	0.01	NA	0
001.99	Ammoniacal N, Other (%)	0476	11.19	0.0423	11.13	0.2631	0.1702	22	0.23	NA	0
001.99	Ammoniacal N, Other (%)	0096	11.20	0.0400	11.13	0.2631	0.1702	22	0.27	NA	0
001.99	Ammoniacal N, Other (%)	0537	11.20	0.4600	11.13	0.2631	0.1702	22	0.27	NA	0
001.99	Ammoniacal N, Other (%)	0420	11.27	0.3100	11.13	0.2631	0.1702	22	0.52	NA	0
001.99	Ammoniacal N, Other (%)	0522	11.27	0.0450	11.13	0.2631	0.1702	22	0.55	NA	0
001.99	Ammoniacal N, Other (%)	0510	11.27	0.2174	11.13	0.2631	0.1702	22	0.55	NA	0
001.99	Ammoniacal N, Other (%)	0405	11.29	0.0400	11.13	0.2631	0.1702	22	0.61	NA	0
001.99	Ammoniacal N, Other (%)	0559	11.33	0.0500	11.13	0.2631	0.1702	22	0.75	NA	0
001.99	Ammoniacal N, Other (%)	0544	11.42	0.0600	11.13	0.2631	0.1702	22	1.11	NA	0
001.99	Ammoniacal N, Other (%)	0550	11.43	0.0400	11.13	0.2631	0.1702	22	1.15	NA	0
001.99	Ammoniacal N, Other (%)	0524	12.12	1.137	11.13	0.2631	0.1702	22	3.78	NA	0
001.99	Ammoniacal N, Other (%)	0255	12.09	1.480	11.13	0.2631	0.1702	22	3.65	NA	1
010.11	Total N, Modified Comprehensive (11%)	0309	10.96	0.2800	11.23	0.1697	0.1717	7	-1.44	OK	0
010.11	Total N, Modified Comprehensive (11%)	0220	11.17	0.1100	11.23	0.1697	0.1717	7	-0.35	OK	0
010.11	Total N, Modified Comprehensive (11%)	0105	11.20	0.0000	11.23	0.1697	0.1717	7	-0.16	OK	0
010.11	Total N, Modified Comprehensive (11%)	0456	11.22	0.0900	11.23	0.1697	0.1717	7	-0.08	OK	0
010.11	Total N, Modified Comprehensive (11%)	0416	11.26	0.0600	11.23	0.1697	0.1717	7	0.16	OK	0
010.11	Total N, Modified Comprehensive (11%)	0546	11.31	0.3000	11.23	0.1697	0.1717	7	0.43	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				
010.11	Total N, Modified Comprehensive (11%)	0510	11.54	0.3619	11.23	0.1697	0.1717	7	1.63	OK	0
010.12	Total N, Salicylic (11%)	0117	10.50	0.0000				1			0
010.17	Total N, Comprehensive (11%)	0526	9.810	0.0000				1			0
010.60	Total N, Combustion (11%)	0042	10.41	0.3200	11.09	0.1886	0.1145	53	-3.63	Low	0
010.60	Total N, Combustion (11%)	0356	10.51	0.4300	11.09	0.1886	0.1145	53	-3.12	OK	0
010.60	Total N, Combustion (11%)	0422	10.63	0.0200	11.09	0.1886	0.1145	53	-2.46	OK	0
010.60	Total N, Combustion (11%)	0117	10.70	0.0000	11.09	0.1886	0.1145	53	-2.09	OK	0
010.60	Total N, Combustion (11%)	0523	10.80	0.0000	11.09	0.1886	0.1145	53	-1.56	OK	0
010.60	Total N, Combustion (11%)	0073	10.82	0.2100	11.09	0.1886	0.1145	53	-1.48	OK	0
010.60	Total N, Combustion (11%)	0485	10.84	0.2600	11.09	0.1886	0.1145	53	-1.35	OK	0
010.60	Total N, Combustion (11%)	0450	10.85	0.1000	11.09	0.1886	0.1145	53	-1.29	OK	0
010.60	Total N, Combustion (11%)	0547	10.87	0.0700	11.09	0.1886	0.1145	53	-1.21	OK	0
010.60	Total N, Combustion (11%)	0481	10.90	0.2000	11.09	0.1886	0.1145	53	-1.03	OK	0
010.60	Total N, Combustion (11%)	0292	10.91	0.0600	11.09	0.1886	0.1145	53	-0.97	OK	0
010.60	Total N, Combustion (11%)	0234	10.95	0.1000	11.09	0.1886	0.1145	53	-0.76	OK	0
010.60	Total N, Combustion (11%)	0070	10.98	0.3000	11.09	0.1886	0.1145	53	-0.60	OK	0
010.60	Total N, Combustion (11%)	0444	10.98	0.0400	11.09	0.1886	0.1145	53	-0.60	OK	0
010.60	Total N, Combustion (11%)	0055	10.98	0.2230	11.09	0.1886	0.1145	53	-0.58	OK	0
010.60	Total N, Combustion (11%)	0086	11.01	0.1640	11.09	0.1886	0.1145	53	-0.47	OK	0
010.60	Total N, Combustion (11%)	0023	11.01	0.0900	11.09	0.1886	0.1145	53	-0.47	OK	0
010.60	Total N, Combustion (11%)	0255	11.02	0.6040	11.09	0.1886	0.1145	53	-0.37	OK	0
010.60	Total N, Combustion (11%)	0421	11.03	0.0100	11.09	0.1886	0.1145	53	-0.36	OK	0
010.60	Total N, Combustion (11%)	0177	11.04	0.0200	11.09	0.1886	0.1145	53	-0.29	OK	0
010.60	Total N, Combustion (11%)	0324	11.05	0.3000	11.09	0.1886	0.1145	53	-0.23	OK	0
010.60	Total N, Combustion (11%)	0096	11.08	0.0500	11.09	0.1886	0.1145	53	-0.10	OK	0
010.60	Total N, Combustion (11%)	0325	11.10	0.2000	11.09	0.1886	0.1145	53	0.03	OK	0
010.60	Total N, Combustion (11%)	0527	11.11	0.1840	11.09	0.1886	0.1145	53	0.06	OK	0
010.60	Total N, Combustion (11%)	0405	11.12	0.0200	11.09	0.1886	0.1145	53	0.14	OK	0
010.60	Total N, Combustion (11%)	0095	11.13	0.0800	11.09	0.1886	0.1145	53	0.19	OK	0
010.60	Total N, Combustion (11%)	0105	11.13	0.0400	11.09	0.1886	0.1145	53	0.19	OK	0
010.60	Total N, Combustion (11%)	0185	11.14	0.0500	11.09	0.1886	0.1145	53	0.22	OK	0
010.60	Total N, Combustion (11%)	0037	11.14	0.1140	11.09	0.1886	0.1145	53	0.24	OK	0
010.60	Total N, Combustion (11%)	0390	11.15	0.0300	11.09	0.1886	0.1145	53	0.27	OK	0
010.60	Total N, Combustion (11%)	0482	11.15	0.1000	11.09	0.1886	0.1145	53	0.30	OK	0
010.60	Total N, Combustion (11%)	0307	11.16	0.2500	11.09	0.1886	0.1145	53	0.32	OK	0
010.60	Total N, Combustion (11%)	0494	11.16	0.0100	11.09	0.1886	0.1145	53	0.32	OK	0
010.60	Total N, Combustion (11%)	0043	11.17	0.0700	11.09	0.1886	0.1145	53	0.38	OK	0
010.60	Total N, Combustion (11%)	0550	11.19	0.0200	11.09	0.1886	0.1145	53	0.51	OK	0
010.60	Total N, Combustion (11%)	0561	11.20	0.0500	11.09	0.1886	0.1145	53	0.54	OK	0
010.60	Total N, Combustion (11%)	0040	11.20	0.2000	11.09	0.1886	0.1145	53	0.56	OK	0
010.60	Total N, Combustion (11%)	0230	11.20	0.0000	11.09	0.1886	0.1145	53	0.56	OK	0
010.60	Total N, Combustion (11%)	0555	11.20	0.0000	11.09	0.1886	0.1145	53	0.56	OK	0
010.60	Total N, Combustion (11%)	0452	11.22	0.0500	11.09	0.1886	0.1145	53	0.64	OK	0
010.60	Total N, Combustion (11%)	0131	11.22	0.0370	11.09	0.1886	0.1145	53	0.66	OK	0
010.60	Total N, Combustion (11%)	0169	11.24	0.1200	11.09	0.1886	0.1145	53	0.78	OK	0
010.60	Total N, Combustion (11%)	0472	11.26	0.1500	11.09	0.1886	0.1145	53	0.85	OK	0
010.60	Total N, Combustion (11%)	0377	11.27	0.0400	11.09	0.1886	0.1145	53	0.93	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (11%)	0029	11.28	0.1100	11.09	0.1886	0.1145	53	0.96	OK	0
010.60	Total N, Combustion (11%)	0025	11.29	0.0300	11.09	0.1886	0.1145	53	1.01	OK	0
010.60	Total N, Combustion (11%)	0018	11.30	0.0000	11.09	0.1886	0.1145	53	1.09	OK	0
010.60	Total N, Combustion (11%)	0035	11.30	0.2000	11.09	0.1886	0.1145	53	1.09	OK	0
010.60	Total N, Combustion (11%)	0354	11.30	0.0000	11.09	0.1886	0.1145	53	1.09	OK	0
010.60	Total N, Combustion (11%)	0451	11.30	0.1600	11.09	0.1886	0.1145	53	1.09	OK	0
010.60	Total N, Combustion (11%)	0360	11.33	0.0200	11.09	0.1886	0.1145	53	1.25	OK	0
010.60	Total N, Combustion (11%)	0102	11.34	0.0800	11.09	0.1886	0.1145	53	1.31	OK	0
010.60	Total N, Combustion (11%)	0041	11.46	0.0800	11.09	0.1886	0.1145	53	1.94	OK	0
010.60	Total N, Combustion (11%)	0027	5,262	10,502	11.09	0.1886	0.1145	53	27843.55	High	2
010.99	Total N, Other (11%)	0394	10.90	0.0200	11.16	0.1886	0.1116	11	-1.39	OK	0
010.99	Total N, Other (11%)	0558	11.00	0.0000	11.16	0.1886	0.1116	11	-0.83	OK	0
010.99	Total N, Other (11%)	0493	11.05	0.1000	11.16	0.1886	0.1116	11	-0.57	OK	0
010.99	Total N, Other (11%)	0519	11.06	0.0200	11.16	0.1886	0.1116	11	-0.52	OK	0
010.99	Total N, Other (11%)	0518	11.10	0.4000	11.16	0.1886	0.1116	11	-0.30	OK	0
010.99	Total N, Other (11%)	0524	11.11	0.0676	11.16	0.1886	0.1116	11	-0.25	OK	0
010.99	Total N, Other (11%)	0481	11.15	0.1000	11.16	0.1886	0.1116	11	-0.04	OK	0
010.99	Total N, Other (11%)	0371	11.25	0.1900	11.16	0.1886	0.1116	11	0.46	OK	0
010.99	Total N, Other (11%)	0556	11.31	0.1900	11.16	0.1886	0.1116	11	0.78	OK	0
010.99	Total N, Other (11%)	0559	11.38	0.0500	11.16	0.1886	0.1116	11	1.15	OK	0
010.99	Total N, Other (11%)	0420	11.56	0.0900	11.16	0.1886	0.1116	11	2.11	OK	0
010.99	Total N, Other (11%)	0553	10.55	0.7000	11.16	0.1886	0.1116	11	-3.22	Low	1
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0157	50.40	5.000	51.70	1.153	1.700	3	-1.13		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0493	52.10	0.1000	51.70	1.153	1.700	3	0.35		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	52.60	0.0000	51.70	1.153	1.700	3	0.78		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0309	47.39	0.7600	52.11	0.6672	0.2314	21	-7.08	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	50.79	0.1000	52.11	0.6672	0.2314	21	-1.98	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	51.10	0.8000	52.11	0.6672	0.2314	21	-1.52	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0553	51.30	0.4000	52.11	0.6672	0.2314	21	-1.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0558	51.75	0.1000	52.11	0.6672	0.2314	21	-0.54	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	51.97	0.0100	52.11	0.6672	0.2314	21	-0.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0450	51.97	0.4100	52.11	0.6672	0.2314	21	-0.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0169	52.01	0.1500	52.11	0.6672	0.2314	21	-0.16	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	52.04	0.0073	52.11	0.6672	0.2314	21	-0.11	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	52.09	0.0100	52.11	0.6672	0.2314	21	-0.04	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0394	52.12	0.0260	52.11	0.6672	0.2314	21	0.02	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0476	52.19	0.0461	52.11	0.6672	0.2314	21	0.12	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0420	52.28	0.0500	52.11	0.6672	0.2314	21	0.25	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0027	52.31	0.6800	52.11	0.6672	0.2314	21	0.30	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	52.36	0.0600	52.11	0.6672	0.2314	21	0.37	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	52.40	0.4000	52.11	0.6672	0.2314	21	0.43	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0550	52.62	0.6400	52.11	0.6672	0.2314	21	0.76	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0220	52.76	0.0200	52.11	0.6672	0.2314	21	0.97	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0416	52.80	0.1600	52.11	0.6672	0.2314	21	1.03	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0522	52.95	0.0300	52.11	0.6672	0.2314	21	1.25	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0481	54.80	0.0000	52.11	0.6672	0.2314	21	4.03	NA	0
020.40	Total P2O5, Automated (%)	0035	51.50	0.6000	51.84	0.3086	0.3167	3	-1.11		0

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020.40	Total P2O5, Automated (%)	0096	51.93	0.1500	51.84	0.3086	0.3167	3	0.27		0
020.40	Total P2O5, Automated (%)	0456	52.10	0.2000	51.84	0.3086	0.3167	3	0.84		0
020.50	Total P2O5, ICP (%)	0523	40.25	0.1000	50.82	3.548	0.7261	17	-2.98	NA	0
020.50	Total P2O5, ICP (%)	0451	43.44	0.5600	50.82	3.548	0.7261	17	-2.08	NA	0
020.50	Total P2O5, ICP (%)	0157	46.75	0.7000	50.82	3.548	0.7261	17	-1.15	NA	0
020.50	Total P2O5, ICP (%)	0042	49.30	0.0000	50.82	3.548	0.7261	17	-0.43	NA	0
020.50	Total P2O5, ICP (%)	0527	49.31	0.1770	50.82	3.548	0.7261	17	-0.43	NA	0
020.50	Total P2O5, ICP (%)	0472	49.33	0.0600	50.82	3.548	0.7261	17	-0.42	NA	0
020.50	Total P2O5, ICP (%)	0390	49.34	3.030	50.82	3.548	0.7261	17	-0.42	NA	0
020.50	Total P2O5, ICP (%)	0444	51.03	0.2100	50.82	3.548	0.7261	17	0.06	NA	0
020.50	Total P2O5, ICP (%)	0433	51.11	0.1100	50.82	3.548	0.7261	17	0.08	NA	0
020.50	Total P2O5, ICP (%)	0389	51.31	1.890	50.82	3.548	0.7261	17	0.14	NA	0
020.50	Total P2O5, ICP (%)	0482	51.90	0.0000	50.82	3.548	0.7261	17	0.30	NA	0
020.50	Total P2O5, ICP (%)	0552	52.01	1.450	50.82	3.548	0.7261	17	0.33	NA	0
020.50	Total P2O5, ICP (%)	0547	52.25	0.3000	50.82	3.548	0.7261	17	0.40	NA	0
020.50	Total P2O5, ICP (%)	0234	53.30	0.2000	50.82	3.548	0.7261	17	0.70	NA	0
020.50	Total P2O5, ICP (%)	0255	54.23	1.557	50.82	3.548	0.7261	17	0.96	NA	0
020.50	Total P2O5, ICP (%)	0422	55.65	1.500	50.82	3.548	0.7261	17	1.36	NA	0
020.50	Total P2O5, ICP (%)	0542	59.17	0.5000	50.82	3.548	0.7261	17	2.35	NA	0
020.50	Total P2O5, ICP (%)	0524	55.08	8.312	50.82	3.548	0.7261	17	1.20	NA	1
020.99	Total P2O5, Other (%)	0520	51.59	0.5200	53.05	1.953	0.3766	4	-0.75		0
020.99	Total P2O5, Other (%)	0559	52.02	0.0700	53.05	1.953	0.3766	4	-0.53		0
020.99	Total P2O5, Other (%)	0513	52.69	0.0700	53.05	1.953	0.3766	4	-0.19		0
020.99	Total P2O5, Other (%)	0515	55.90	0.8465	53.05	1.953	0.3766	4	1.46		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0561	0.0100	0.0000				2			0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0220	0.0250	0.0100				2			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	0.0300	0.0000				1			0
040.20	Indirect Available P2O5, Spectrophotometric (52%)	0405	51.94	0.0000	52.34	0.3976	0.0233	3	-1.01		0
040.20	Indirect Available P2O5, Spectrophotometric (52%)	0561	52.35	0.0600	52.34	0.3976	0.0233	3	0.02		0
040.20	Indirect Available P2O5, Spectrophotometric (52%)	0220	52.74	0.0100	52.34	0.3976	0.0233	3	0.99		0
040.40	Indirect Available P2O5, Automated (52%)	0096	51.87	0.1000				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0049	51.00	0.2900	51.86	0.5802	0.3154	5	-1.49		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0102	51.55	0.9000	51.86	0.5802	0.3154	5	-0.54		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0177	52.13	0.1929	51.86	0.5802	0.3154	5	0.46		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0041	52.25	0.1100	51.86	0.5802	0.3154	5	0.66		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0086	52.39	0.0839	51.86	0.5802	0.3154	5	0.91		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0055	51.83	0.2600	52.53	0.4737	0.2677	6	-1.31	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0485	52.35	0.1860	52.53	0.4737	0.2677	6	-0.33	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0117	52.50	0.8000	52.53	0.4737	0.2677	6	-0.05	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0513	52.62	0.0300	52.53	0.4737	0.2677	6	0.17	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0220	52.84	0.0900	52.53	0.4737	0.2677	6	0.58	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0073	53.03	0.2400	52.53	0.4737	0.2677	6	0.95	OK	0
041.20	Direct Available P2O5, Spectrophotometric (52%)	0027	50.99	1.240				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0472	51.49	0.5600	52.09	0.6040	0.1590	7	-0.90	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0055	51.66	0.0100	52.09	0.6040	0.1590	7	-0.65	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0544	51.80	0.0400	52.09	0.6040	0.1590	7	-0.44	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0177	51.90	0.0528	52.09	0.6040	0.1590	7	-0.29	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				
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0522	52.30	0.2500	52.09	0.6040	0.1590	7	0.31	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0354	52.50	0.2000	52.09	0.6040	0.1590	7	0.61	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0526	53.91	0.0000	52.09	0.6040	0.1590	7	2.73	High	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0230	56.15	1.500	52.09	0.6040	0.1590	7	6.08	High	1
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	0095	51.11	0.6400	52.29	1.088	0.3655	4	-1.09		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	0018	52.10	0.6000	52.29	1.088	0.3655	4	-0.18		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	0037	52.21	0.0520	52.29	1.088	0.3655	4	-0.07		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	0029	53.75	0.1700	52.29	1.088	0.3655	4	1.34		0
041.50	Direct Available P2O5, ICP (52%)	0421	51.55	0.1000	52.45	0.8932	0.4225	4	-1.01		0
041.50	Direct Available P2O5, ICP (52%)	0452	52.23	0.3000	52.45	0.8932	0.4225	4	-0.25		0
041.50	Direct Available P2O5, ICP (52%)	0325	52.35	0.7000	52.45	0.8932	0.4225	4	-0.12		0
041.50	Direct Available P2O5, ICP (52%)	0555	53.69	0.5900	52.45	0.8932	0.4225	4	1.38		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0043	50.47	1.700	51.78	0.9374	0.4956	7	-1.26	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0377	50.79	0.0600	51.78	0.9374	0.4956	7	-0.95	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0360	51.83	0.2800	51.78	0.9374	0.4956	7	0.05	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0040	52.00	0.2000	51.78	0.9374	0.4956	7	0.22	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0117	52.33	0.1193	51.78	0.9374	0.4956	7	0.54	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0023	52.46	0.0100	51.78	0.9374	0.4956	7	0.66	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0025	52.55	1.100	51.78	0.9374	0.4956	7	0.75	OK	0
041.60	Direct Available P2O5, Citrate-EDTA Ext. (52%)	0394	52.36	0.2540				1			0
041.99	Direct Available P2O5, Other (52%)	0537	50.82	0.3400	51.73	0.6776	0.2600	6	-1.19	OK	0
041.99	Direct Available P2O5, Other (52%)	0532	51.36	0.4800	51.73	0.6776	0.2600	6	-0.48	OK	0
041.99	Direct Available P2O5, Other (52%)	0551	51.70	0.4000	51.73	0.6776	0.2600	6	-0.04	OK	0
041.99	Direct Available P2O5, Other (52%)	0405	51.83	0.0200	51.73	0.6776	0.2600	6	0.14	OK	0
041.99	Direct Available P2O5, Other (52%)	0519	52.10	0.0200	51.73	0.6776	0.2600	6	0.49	OK	0
041.99	Direct Available P2O5, Other (52%)	0518	52.55	0.3000	51.73	0.6776	0.2600	6	1.08	OK	0
042.99	Water Soluble OrthoP As P2O5, Other (%)	0559	46.77	0.0400				1			0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0444	46.00	0.0800				1			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0309	42.23	1.500	46.02	2.316	0.4487	10	-1.52	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0553	43.70	0.4000	46.02	2.316	0.4487	10	-0.93	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0526	44.14	0.3292	46.02	2.316	0.4487	10	-0.75	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0394	46.00	0.4880	46.02	2.316	0.4487	10	-0.01	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0558	46.10	0.2000	46.02	2.316	0.4487	10	0.03	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0405	46.61	0.1000	46.02	2.316	0.4487	10	0.24	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0561	46.96	0.2100	46.02	2.316	0.4487	10	0.38	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0420	47.22	0.8000	46.02	2.316	0.4487	10	0.48	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0220	47.40	0.0800	46.02	2.316	0.4487	10	0.56	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0550	50.08	0.3800	46.02	2.316	0.4487	10	1.63	NA	0
048.40	Water Soluble P2O5, Automated (%)	0096	46.43	0.0200				1			0
048.50	Water Soluble P2O5, ICP (%)	0389	20.17	0.3400	37.99	15.43	0.3067	3	-1.15		0
048.50	Water Soluble P2O5, ICP (%)	0546	46.59	0.0200	37.99	15.43	0.3067	3	0.56		0
048.50	Water Soluble P2O5, ICP (%)	0444	47.20	0.5600	37.99	15.43	0.3067	3	0.60		0
048.99	Water Soluble P2O5, Other (%)	0513	47.37	0.0600				2			0
048.99	Water Soluble P2O5, Other (%)	0556	52.65	0.3000				2			0
050.50	Soluble K2O, ICP (Oxalate) (%)	0422	0.2690	0.0300				1			0
050.51	Soluble K2O, ICP (Citrate) (%)	0070	52.13	0.4200				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.2840	0.0080				1			0

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			Value	Range	Rob Mean	Rob SD	R-bar				
050.61	Soluble K2O, Flame Photometric (Citrate) (%)	0035	63.30	1.200				1			0
050.99	Soluble K2O, Other (%)	0524	0.1595	0.0702	0.2549	0.0549	0.0240	5	-1.52		0
050.99	Soluble K2O, Other (%)	0096	0.2650	0.0100	0.2549	0.0549	0.0240	5	0.16		0
050.99	Soluble K2O, Other (%)	0482	0.2750	0.0100	0.2549	0.0549	0.0240	5	0.32		0
050.99	Soluble K2O, Other (%)	0542	0.2750	0.0300	0.2549	0.0549	0.0240	5	0.32		0
050.99	Soluble K2O, Other (%)	0389	0.3000	0.0000	0.2549	0.0549	0.0240	5	0.72		0
050.99	Soluble K2O, Other (%)	0325	0.2000	0.2000	0.2549	0.0549	0.0240	5	-0.87		1
050.99	Soluble K2O, Other (%)	0552	0.0000	0.0000	0.2549	0.0549	0.0240	5			4
060.00	Water (Free), Vacuum Oven (%)	0513	1.035	0.0100	1.775	0.5112	0.0520	4	-1.45		0
060.00	Water (Free), Vacuum Oven (%)	0456	1.875	0.1100	1.775	0.5112	0.0520	4	0.20		0
060.00	Water (Free), Vacuum Oven (%)	0416	1.989	0.0078	1.775	0.5112	0.0520	4	0.42		0
060.00	Water (Free), Vacuum Oven (%)	0096	2.200	0.0800	1.775	0.5112	0.0520	4	0.83		0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%)	0513	2.655	0.0100				2			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%)	0518	2.665	0.0500				2			0
060.99	Water (Free), Other (%)	0510	2.388	0.0432				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0553	0.0230	0.0040				2			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0105	0.1860	0.0060				2			0
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	0105	0.3630	0.0380				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0472	0.3300	0.0000	0.4096	0.0605	0.0060	5	-1.32		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0482	0.4000	0.0000	0.4096	0.0605	0.0060	5	-0.16		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.4040	0.0060	0.4096	0.0605	0.0060	5	-0.09		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	0.4140	0.0040	0.4096	0.0605	0.0060	5	0.07		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.5000	0.0200	0.4096	0.0605	0.0060	5	1.49		0
101.99	Acid Soluble Ca, Other (%)	0389	0.3850	0.0100				2			0
101.99	Acid Soluble Ca, Other (%)	0552	1.825	1.430				2			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0105	1.316	0.0220				2			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	1.330	0.2200				2			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0482	1.295	0.0100	1.423	0.1485	0.0222	6	-0.77	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	1.320	0.0200	1.423	0.1485	0.0222	6	-0.62	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	1.365	0.0300	1.423	0.1485	0.0222	6	-0.35	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	1.395	0.0500	1.423	0.1485	0.0222	6	-0.17	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0390	1.541	0.0130	1.423	0.1485	0.0222	6	0.70	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0472	1.625	0.0100	1.423	0.1485	0.0222	6	1.21	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	1.226	0.0933				1			0
121.99	Acid Soluble Mg, Other (%)	0515	1.092	0.4206	1.547	0.4883	0.3888	4	-0.93		0
121.99	Acid Soluble Mg, Other (%)	0524	1.313	0.0047	1.547	0.4883	0.3888	4	-0.48		0
121.99	Acid Soluble Mg, Other (%)	0389	1.565	0.0900	1.547	0.4883	0.3888	4	0.04		0
121.99	Acid Soluble Mg, Other (%)	0552	2.220	1.040	1.547	0.4883	0.3888	4	1.38		0
143.99	Elemental S, Other (%)	0472	1.470	0.0000				2			0
143.99	Elemental S, Other (%)	0390	1.651	0.0170				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	1.115	0.1195				1			0
148.99	Total S, Other (%)	0096	1.475	0.0300	1.578	0.1025	0.0367	3	-1.01		0
148.99	Total S, Other (%)	0354	1.580	0.0400	1.578	0.1025	0.0367	3	0.02		0
148.99	Total S, Other (%)	0482	1.680	0.0400	1.578	0.1025	0.0367	3	0.99		0
149.04	S - HNO3 soluble, ICP (%)	0524	1.594	0.0314				1			0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	0.1170	0.0020				1			0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm)	0526	< 50					1			5

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151.30	Acid Soluble As, ICP (ppm)	0405	1.000	0.0000	1.909	1.166	0.4128	5	-0.68		0
151.30	Acid Soluble As, ICP (ppm)	0096	1.150	0.1000	1.909	1.166	0.4128	5	-0.57		0
151.30	Acid Soluble As, ICP (ppm)	0524	1.558	0.0050	1.909	1.166	0.4128	5	-0.26		0
151.30	Acid Soluble As, ICP (ppm)	0450	1.950	0.1000	1.909	1.166	0.4128	5	0.03		0
151.30	Acid Soluble As, ICP (ppm)	0255	3.887	1.859	1.909	1.166	0.4128	5	1.48		0
151.30	Acid Soluble As, ICP (ppm)	0555	4,349	425.2	1.909	1.166	0.4128	5	3254.30		2
151.30	Acid Soluble As, ICP (ppm)	0027	< 0.002		1.909	1.166	0.4128	5			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				0			4
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
151.99	Acid Soluble As, Other (ppm)	0519	1.475	0.0100				2			0
151.99	Acid Soluble As, Other (ppm)	0481	1.975	0.0100				2			0
151.99	Acid Soluble As, Other (ppm)	0520	< 0.04					2			5
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	0.0250	0.0100				2			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0389	680.0	10.00				2			0
165.99	Acid Soluble B, Other (%)	0524	0.0105	0.0003	0.0173	0.0058	0.0046	4	-1.18		0
165.99	Acid Soluble B, Other (%)	0482	0.0150	0.0100	0.0173	0.0058	0.0046	4	-0.40		0
165.99	Acid Soluble B, Other (%)	0472	0.0200	0.0000	0.0173	0.0058	0.0046	4	0.46		0
165.99	Acid Soluble B, Other (%)	0515	0.0238	0.0080	0.0173	0.0058	0.0046	4	1.11		0
165.99	Acid Soluble B, Other (%)	0552	0.0000	0.0000	0.0173	0.0058	0.0046	4			4
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	38.81	20.64				2			0
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm)	0526	65.89	0.0000				2			0
181.30	Acid Soluble Cd, ICP (ppm)	0389	27.40	0.8000	65.13	8.480	2.487	11	-4.45	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	54.72	0.8300	65.13	8.480	2.487	11	-1.23	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	54.95	3.300	65.13	8.480	2.487	11	-1.20	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	65.55	0.3000	65.13	8.480	2.487	11	0.05	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0096	66.80	0.2000	65.13	8.480	2.487	11	0.20	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0405	67.30	4.200	65.13	8.480	2.487	11	0.26	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	69.31	0.0397	65.13	8.480	2.487	11	0.49	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0450	70.30	1.400	65.13	8.480	2.487	11	0.61	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	70.39	5.476	65.13	8.480	2.487	11	0.62	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0102	71.44	8.512	65.13	8.480	2.487	11	0.74	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0482	73.25	2.300	65.13	8.480	2.487	11	0.96	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0027	< 0.002		65.13	8.480	2.487	11			5
181.30	Acid Soluble Cd, ICP (ppm)	0555	< 0.5		65.13	8.480	2.487	11			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	54.05	3.313				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0037	65.22	6.344				2			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	34.70	38.19				1			0
181.99	Acid Soluble Cd, Other (ppm)	0519	56.06	0.0500	66.62	9.235	0.9733	3	-1.14		0
181.99	Acid Soluble Cd, Other (ppm)	0481	70.65	0.1000	66.62	9.235	0.9733	3	0.44		0
181.99	Acid Soluble Cd, Other (ppm)	0520	73.16	2.770	66.62	9.235	0.9733	3	0.71		0
190.00	Water Soluble Cl, Titrimetric (%)	0534	48.35	0.3000				1			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	196.8	99.95				2			0
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm)	0526	242.4	0.0000				2			0
191.30	Acid Soluble Cr, ICP (ppm)	0027	0.0136	0.0000	257.7	109.0	7.652	11	-2.36	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	41.40	0.6000	257.7	109.0	7.652	11	-1.98	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0555	152.4	49.63	257.7	109.0	7.652	11	-0.97	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0444	273.0	2.000	257.7	109.0	7.652	11	0.14	NA	0

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191.30	Acid Soluble Cr, ICP (ppm)	0035	274.5	3.000	257.7	109.0	7.652	11	0.15	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	306.0	2.000	257.7	109.0	7.652	11	0.44	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0096	319.7	3.000	257.7	109.0	7.652	11	0.57	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0405	324.0	4.000	257.7	109.0	7.652	11	0.61	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0482	326.0	4.000	257.7	109.0	7.652	11	0.63	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0450	330.5	3.000	257.7	109.0	7.652	11	0.67	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0102	339.9	12.95	257.7	109.0	7.652	11	0.75	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	306.0	76.08	257.7	109.0	7.652	11	0.44	NA	1
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0037	315.3	25.53				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	526.3	296.0				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	496.9	389.4				1			0
191.99	Acid Soluble Cr, Other (ppm)	0519	240.8	0.0400	292.0	44.35	2.180	3	-1.15		0
191.99	Acid Soluble Cr, Other (ppm)	0520	315.1	2.500	292.0	44.35	2.180	3	0.52		0
191.99	Acid Soluble Cr, Other (ppm)	0481	320.0	4.000	292.0	44.35	2.180	3	0.63		0
202.00	Acid Soluble Co, AA, test portion 2006.03 modified w/dual acid (ppm)	0526	< 0.01					0			5
202.30	Acid Soluble Co, ICP (ppm)	0389	0.2760	0.0120	2.490	1.491	0.1110	6	-1.32	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0405	2.050	0.1000	2.490	1.491	0.1110	6	-0.26	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0482	2.400	0.0000	2.490	1.491	0.1110	6	-0.05	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0035	2.585	0.2900	2.490	1.491	0.1110	6	0.06	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0102	3.715	0.1790	2.490	1.491	0.1110	6	0.73	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0524	3.915	0.0852	2.490	1.491	0.1110	6	0.85	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0027	< 0.002		2.490	1.491	0.1110	6			5
202.30	Acid Soluble Co, ICP (ppm)	0555	< 0.5		2.490	1.491	0.1110	6			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0550	2.435	1.090				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0037	2.805	0.0230				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				2			4
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
202.99	Acid Soluble Co, Other (ppm)	0519	1.335	0.0100				2			0
202.99	Acid Soluble Co, Other (ppm)	0255	2.067	1.915				2			0
202.99	Acid Soluble Co, Other (ppm)	0481	< 10					2			5
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0550	< 0.0002					0			5
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	0526	< 0.0045					0			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0016	0.0006				2			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.2450	0.1500				2			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000				2			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0450	0.0000	0.0000				2			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					2			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0095	0.0002	0.0001				1			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0014	0.0000				1			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0555	< 0.5					1			5
221.99	Acid Soluble Cu, Other (%)	0524	0.0003	0.0001	0.0012	0.0011	0.0005	3	-0.88		0
221.99	Acid Soluble Cu, Other (%)	0519	0.0010	0.0000	0.0012	0.0011	0.0005	3	-0.21		0
221.99	Acid Soluble Cu, Other (%)	0515	0.0025	0.0013	0.0012	0.0011	0.0005	3	1.09		0
221.99	Acid Soluble Cu, Other (%)	0481	< 0.001		0.0012	0.0011	0.0005	3			5
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0105	1.596	0.1890				1			0
241.03	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	0105	1.449	0.0800				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	1.475	0.0100	1.552	0.0716	0.0240	6	-0.96	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				
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0390	1.477	0.0340	1.552	0.0716	0.0240	6	-0.93	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0472	1.560	0.0000	1.552	0.0716	0.0240	6	0.10	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	1.580	0.0800	1.552	0.0716	0.0240	6	0.35	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	1.590	0.0200	1.552	0.0716	0.0240	6	0.47	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0482	1.630	0.0000	1.552	0.0716	0.0240	6	0.97	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	2.025	0.5100	1.552	0.0716	0.0240	6	5.88	High	1
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	1.635	0.0220				1			0
241.99	Acid Soluble Fe, Other (%)	0524	1.567	0.0049	1.849	0.3165	0.3597	3	-0.89		0
241.99	Acid Soluble Fe, Other (%)	0389	1.790	0.0400	1.849	0.3165	0.3597	3	-0.19		0
241.99	Acid Soluble Fe, Other (%)	0515	2.191	1.034	1.849	0.3165	0.3597	3	1.08		0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	16.38	5.360				1			0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm)	0526	< 0.013					1			5
251.30	Acid Soluble Pb, ICP (ppm)	0389	0.2430	0.0060	0.8192	0.5718	0.2291	8	-0.92	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0450	0.4000	0.0000	0.8192	0.5718	0.2291	8	-0.67	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.4497	0.3151	0.8192	0.5718	0.2291	8	-0.59	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0405	0.5000	0.0000	0.8192	0.5718	0.2291	8	-0.51	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0394	0.8800	0.0100	0.8192	0.5718	0.2291	8	0.10	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0255	1.177	0.1900	0.8192	0.5718	0.2291	8	0.57	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0102	1.227	0.6620	0.8192	0.5718	0.2291	8	0.65	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0482	4.905	0.6500	0.8192	0.5718	0.2291	8	6.54	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0555	< 0.5		0.8192	0.5718	0.2291	8			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				0			4
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
251.99	Acid Soluble Pb, Other (ppm)	0519	0.3950	0.0100				1			0
251.99	Acid Soluble Pb, Other (ppm)	0481	< 2					1			5
261.15	Acid Soluble Mn, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	0105	0.0233	0.0007				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	0.0200	0.0000	0.0259	0.0043	0.0002	4	-1.39		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	0.0261	0.0003	0.0259	0.0043	0.0002	4	0.03		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0276	0.0006	0.0259	0.0043	0.0002	4	0.40		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0472	0.0300	0.0000	0.0259	0.0043	0.0002	4	0.96		0
261.31	Acid Soluble Mn, ICP, test portion 972.02b (%)	0482	0.0300	0.0000				1			0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.5200	0.5200				1			0
261.99	Acid Soluble Mn, Other (%)	0524	0.0252	0.0003	0.0287	0.0031	0.0115	3	-1.14		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0300	0.0000	0.0287	0.0031	0.0115	3	0.42		0
261.99	Acid Soluble Mn, Other (%)	0515	0.0310	0.0341	0.0287	0.0031	0.0115	3	0.72		0
281.00	Acid Soluble Hg, AA (ppm)	0550	8.500	6.000				1			0
281.00	Acid Soluble Hg, AA (ppm)	0526	< 60					1			5
281.30	Acid Soluble Hg, ICP (ppm)	0450	0.0100	0.0000				1			0
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.0000	0.0000				1			4
281.30	Acid Soluble Hg, ICP (ppm)	0405	< 0.01					1			5
281.99	Acid Soluble Hg, Other (ppm)	0035	0.0036	0.0008				2			0
281.99	Acid Soluble Hg, Other (ppm)	0519	0.0100	0.0000				2			0
281.99	Acid Soluble Hg, Other (ppm)	0481	< 0.5					2			5
289.00	Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm)	0526	13.89	0.0000				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0035	9.120	3.760	21.94	16.77	2.303	8	-0.70	Low	0
289.30	Acid Soluble Mo, ICP (ppm)	0102	13.60	0.7900	21.94	16.77	2.303	8	-0.45	Low	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	13.92	0.0851	21.94	16.77	2.303	8	-0.44	Low	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				
289.30	Acid Soluble Mo, ICP (ppm)	0096	14.40	0.2000	21.94	16.77	2.303	8	-0.41	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0405	15.25	1.100	21.94	16.77	2.303	8	-0.36	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0255	18.16	7.379	21.94	16.77	2.303	8	-0.21	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0519	43.95	0.1100	21.94	16.77	2.303	8	1.20	High	0
289.30	Acid Soluble Mo, ICP (ppm)	0555	332.5	5.000	21.94	16.77	2.303	8	16.94	High	0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0394	14.45	0.1000				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	9.434	6.078				2			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0037	14.43	1.624				2			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	6.895	6.530				1			0
289.99	Acid Soluble Mo, Other (ppm)	0520	11.88	0.1600				1			0
289.99	Acid Soluble Mo, Other (ppm)	0481	< 62.5					1			5
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm)	0550	32.01	15.38				1			0
291.30	Acid Soluble Ni, ICP (ppm)	0389	2.100	0.0000	46.75	5.651	1.365	10	-7.35	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0444	40.63	0.3900	46.75	5.651	1.365	10	-1.01	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	45.20	3.800	46.75	5.651	1.365	10	-0.25	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	45.25	0.3598	46.75	5.651	1.365	10	-0.25	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0482	45.40	0.0000	46.75	5.651	1.365	10	-0.22	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	47.25	0.1000	46.75	5.651	1.365	10	0.08	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0405	48.80	0.0000	46.75	5.651	1.365	10	0.34	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0450	50.00	2.000	46.75	5.651	1.365	10	0.54	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0096	51.60	0.2000	46.75	5.651	1.365	10	0.80	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0102	55.06	6.803	46.75	5.651	1.365	10	1.37	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0555	310.3	29.63	46.75	5.651	1.365	10	43.38	NA	1
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	48.06	3.156				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0037	51.29	5.191				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	45.78	3.910				1			0
291.99	Acid Soluble Ni, Other (ppm)	0519	36.42	0.0400	49.33	10.78	10.73	4	-1.20		0
291.99	Acid Soluble Ni, Other (ppm)	0481	44.70	0.0000	49.33	10.78	10.73	4	-0.43		0
291.99	Acid Soluble Ni, Other (ppm)	0520	56.30	3.000	49.33	10.78	10.73	4	0.65		0
291.99	Acid Soluble Ni, Other (ppm)	0255	59.91	39.86	49.33	10.78	10.73	4	0.98		0
291.99	Acid Soluble Ni, Other (ppm)	0027	< 0.002		49.33	10.78	10.73	4			5
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)	0524	0.3650	0.5500				1			0
301.30	Acid Soluble Se, ICP (ppm)	0555	< 0.5					1			5
301.30	Acid Soluble Se, ICP (ppm)	0405	< 1					1			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				0			4
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
301.99	Acid Soluble Se, Other (ppm)	0519	0.0100	0.0000				2			0
301.99	Acid Soluble Se, Other (ppm)	0255	13.05	3.687				2			0
301.99	Acid Soluble Se, Other (ppm)	0027	< 0.002					2			5
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.15					2			5
311.00	Sodium, AA (%)	0534	0.0475	0.0010				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.2310	0.0160				1			0
311.99	Sodium, Other (%)	0096	0.2250	0.0100	0.2433	0.0202	0.0067	3	-0.91		0
311.99	Sodium, Other (%)	0482	0.2400	0.0000	0.2433	0.0202	0.0067	3	-0.16		0
311.99	Sodium, Other (%)	0354	0.2650	0.0100	0.2433	0.0202	0.0067	3	1.07		0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0550	0.0716	0.0425				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				
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0105	0.0920	0.0012				2			0
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	0105	0.0954	0.0021				2			0
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual acid (%)	0526	0.1003	0.0000				2			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0390	0.0892	0.0017	0.0963	0.0083	0.1099	10	-0.81	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0895	0.0090	0.0963	0.0083	0.1099	10	-0.77	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0472	0.0900	0.0000	0.0963	0.0083	0.1099	10	-0.71	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0482	0.0900	0.0000	0.0963	0.0083	0.1099	10	-0.71	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	0.0925	0.0007	0.0963	0.0083	0.1099	10	-0.44	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.0950	0.0100	0.0963	0.0083	0.1099	10	-0.15	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0450	0.1015	0.0050	0.0963	0.0083	0.1099	10	0.58	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	0.1030	0.0140	0.0963	0.0083	0.1099	10	0.75	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.1040	0.0088	0.0963	0.0083	0.1099	10	0.86	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	1.035	1.050	0.0963	0.0083	0.1099	10	105.47	High	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0102	937.3	67.17	0.0963	0.0083	0.1099	10	105305.94	High	2
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.0969	0.0001				2			0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0984	0.0054				2			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0170	0.0000				2			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0931	0.0051				2			0
321.99	Acid Soluble Zn, Other (%)	0519	0.0300	0.0000	0.0777	0.0346	0.0031	8	-1.26	Low	0
321.99	Acid Soluble Zn, Other (%)	0027	0.0352	0.0001	0.0777	0.0346	0.0031	8	-1.12	Low	0
321.99	Acid Soluble Zn, Other (%)	0558	0.0700	0.0000	0.0777	0.0346	0.0031	8	-0.20	OK	0
321.99	Acid Soluble Zn, Other (%)	0481	0.0865	0.0010	0.0777	0.0346	0.0031	8	0.23	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0936	0.0118	0.0777	0.0346	0.0031	8	0.42	High	0
321.99	Acid Soluble Zn, Other (%)	0405	0.0939	0.0008	0.0777	0.0346	0.0031	8	0.43	High	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0971	0.0012	0.0777	0.0346	0.0031	8	0.51	High	0
321.99	Acid Soluble Zn, Other (%)	0520	0.1150	0.0100	0.0777	0.0346	0.0031	8	0.99	High	0
321.99	Acid Soluble Zn, Other (%)	0389	0.0850	0.0300	0.0777	0.0346	0.0031	8	0.19	OK	1
325.30	Water Soluble Zn, ICP (%)	0555	< 0.5					0			5

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