

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 180611

Grade 18-3-6

### Statistical Summary

# Methods: 120

# Labs Reporting: 85

Issue Date : 07/31/2018

Method Code	Analyte & Method Sample # 180611	# 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)	Hornitz %RSD
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	4	4	1.393	0.5511	1.393		0.5511	0.3444	39.58%		0.0238	3.81%
001.99	Ammoniacal Nitrogen, Other (%)	17	16	1.338	0.5088	1.282		0.4384	0.1370	34.21%		0.0768	3.85%
002.99	Nitrate Nitrogen, Other (%)	2	2	9.195	12.38								
005.00	Urea Nitrogen, Urease (as N) (%)	1		11.44									
005.99	Urea Nitrogen, Other (%)	7	7	13.01	2.543	13.01		2.884	1.363	22.17%		0.5243	2.72%
007.00	Urea, Urease (as Urea) (%)	1		11.05									
007.99	Urea, Other (%)	2	2	11.68	0.9122								
010.11	Total Nitrogen, Modified Comprehensive (18%)	9	9	18.27	0.4993	18.27	0.7041	0.3335	0.1390	1.82%	1.10	0.0904	2.58%
010.12	Total Nitrogen, Salicylic (18%)	1		18.38									
010.17	Total Nitrogen, Comprehensive (18%)	1		18.15									
010.60	Total Nitrogen, Combustion (18%)	53	52	18.27	0.3663	18.25	0.7038	0.2544	0.0441	1.39%	0.84	0.2054	2.58%
010.99	Total Nitrogen, Other (18%)	12	11	18.04	0.3499	18.13	0.7019	0.1636	0.0617	0.90%	0.54	0.1377	2.59%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ..	4	4	3.128	0.0740	3.128		0.0740	0.0462	2.37%		0.0600	3.37%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb	15	15	3.140	0.1785	3.140		0.1890	0.0610	6.02%		0.1255	3.37%
020.40	Total Phosphorus as P2O5, Automated (%)	3	3	3.280	0.1431	3.280		0.1431	0.1033	4.36%		0.2067	3.34%
020.50	Total Phosphorus as P2O5, ICP (%)	21	20	3.205	0.2848	3.218		0.1808	0.0505	5.62%		0.1183	3.35%
020.99	Total Phosphorus as P2O5, Other (%)	4	4	2.712	1.051	2.712		1.051	0.6567	38.74%		0.1371	3.44%
040.20	Indirect Available Phosphorus as P2O5, Spectrophot...	1		2.870									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q..	4	4	3.098	0.0735	3.098	0.6700	0.0735	0.0460	2.37%	0.26	0.0300	3.37%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q..	5	5	3.168	0.1114	3.168	0.6700	0.1114	0.0623	3.52%	0.39	0.0303	3.36%
041.21	Direct Available Phosphorus as P2O5, Spectrophotom	2	2	3.178	0.1662								
041.40	Direct Available Phosphorus as P2O5, Automated (3%	1		3.135									
041.50	Direct Available Phosphorus as P2O5, ICP (3%)	3	3	3.098	0.0852	3.098	0.6700	0.0852	0.0615	2.75%	0.30	0.1033	3.37%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-...	10	10	3.079	0.2337	3.131	0.6700	0.1091	0.0431	3.49%	0.38	0.0621	3.37%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ..	9	9	2.662	0.9008	2.960	0.6700	0.3592	0.1497	12.13%	1.25	0.0774	3.40%
041.99	Direct Available Phosphorus as P2O5, Other (3%)	7	6	3.037	0.2387	3.063	0.6700	0.2066	0.1054	6.74%	0.72	0.0333	3.38%
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	1		3.170									
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	11	11	6.168	0.7137	5.967	0.4687	0.3030	0.1142	5.08%	1.51	0.0718	3.06%
050.30	Soluble Potassium as K2O, AA (Oxalate) (6%)	5	5	7.010	2.669	7.010	0.5307	2.669	1.492	38.08%	11.72	0.1560	2.98%
050.31	Soluble Potassium as K2O, AA (Citrate) (6%)	1		5.270									
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (6%)	2	2	5.400	0.0636								

Method Code	Analyte & Method Sample # 180611	# 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
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	8	8	5.683	0.2531	5.672	0.4569	0.2630	0.1162	4.64%	1.34	0.1720	3.08%
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	7	7	5.656	0.2887	5.656	0.4563	0.3274	0.1547	5.79%	1.67	0.0843	3.08%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	8	8	5.903	0.3019	5.890	0.4656	0.3141	0.1388	5.33%	1.57	0.1413	3.06%
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala	3	3	5.200	0.8670	5.200	0.4380	0.8670	0.6257	16.67%	4.61	0.0951	3.12%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra..	1		6.415									
050.62	Soluble Potassium as K2O, Flame Photometric (Citra..	7	7	5.688	0.1171	5.688	0.4575	0.1328	0.0628	2.34%	0.68	0.0355	3.08%
050.99	Soluble Potassium as K2O, Other (6%)	29	27	5.992	0.3670	5.995	0.4698	0.2394	0.0576	3.99%	1.19	0.1554	3.05%
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	1		0.0060									
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... ('	1		0.0053									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	1		0.0750									
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	2	2	0.0126	0.0105								
101.99	Acid Soluble Calcium, Other (%)	2	1	0.0105									
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	2	2	0.5954	0.8338								
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2...	1		0.0058									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (	1		0.0150									
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A...	1		0.0075									
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	4	4	0.0063	0.0033	0.0063	0.2003	0.0033	0.0021	52.54%	0.04	0.0002	8.59%
121.99	Acid Soluble Magnesium, Other (%)	4	3	0.0028	0.0024	0.0028	0.2001	0.0024	0.0017	83.40%	0.03	0.0003	9.67%
143.99	Elemental Sulfur, Other (%)	3	3	0.1268	0.1935	0.1268		0.1935	0.1397	152.57%		0.2037	5.46%
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	4	4	0.0472	0.0205	0.0472	0.2024	0.0205	0.0128	43.41%	0.24	0.0020	6.33%
148.99	Total Sulfur, Other (%)	2	2	0.0850	0.0212								
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	0.0768	0.0258								
151.30	Acid Soluble Arsenic , ICP (ppm)	3	3	0.9506	1.074	0.9506		1.074	0.7751	112.98%		1.194	16.12%
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	2	2	0.1438	0.1644								
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	2	0	0.0000									
151.99	Acid Soluble Arsenic , Other (ppm)	2	2	0.4405	0.4377								
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	2	2	0.0111	0.0016								
165.99	Acid Soluble Boron , Other (%)	4	3	0.0006	0.0004	0.0006	0.0031	0.0004	0.0003	63.81%	0.30	0.0001	12.12%
181.00	Acid Soluble Cadmium , AA, test portion 2006.03 m...	1		1.080									
181.30	Acid Soluble Cadmium , ICP (ppm)	8	7	1.273	0.1681	1.273		0.1906	0.0901	14.97%		0.0507	15.43%
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	3	3	1.091	0.5440	1.091		0.5440	0.3926	49.88%		0.0800	15.79%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppn	2	2	0.8681	1.019								
181.99	Acid Soluble Cadmium , Other (ppm)	4	4	1.209	0.1863	1.209		0.1863	0.1164	15.41%		0.0630	15.55%
190.00	Water Soluble Chlorine, Titrimetric (%)	2	2	4.603	0.1662								
191.00	Acid Soluble Chromium , AA, test portion 2006.03 ... (	1		10.05									
191.30	Acid Soluble Chromium , ICP (ppm)	6	6	15.79	1.458	15.79		1.654	0.8440	10.47%		1.491	10.56%
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	4	4	14.22	9.917	14.22		9.917	6.198	69.74%		0.3808	10.73%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppi	2	2	9.979	13.48								
191.99	Acid Soluble Chromium , Other (ppm)	4	4	17.51	1.527	17.51		1.527	0.9545	8.72%		0.4048	10.40%
202.30	Acid Soluble Cobalt , ICP (ppm)	3	3	0.1148	0.0604	0.1148	1.0344	0.0603	0.0436	52.58%	0.14	0.0166	22.16%
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	3	2	0.2665	0.3656	0.2665	1.0800	0.3656	0.3231	137.18%	0.79	0.0250	19.52%
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	2	1	0.1403									

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202.99	Acid Soluble Cobalt , Other (ppm)	2	2	0.0390	0.0509								
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	1		0.0004									
221.30	Acid Soluble Copper , ICP, test portion inorganic... (%)	2	1	0.0100									
221.33	Acid Soluble Copper , ICP, 2017.02 (%)	2	1	0.0003									
221.99	Acid Soluble Copper , Other (%)	4	2	0.0002	0.0001	0.0002	0.0050	0.0001	0.0001	47.14%	0.03	0.0000	15.05%
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	2	2	0.0185	0.0000								
241.03	Acid Soluble Iron , AA, 965.09, test portion 2006.... (%)	1		0.0165									
241.30	Acid Soluble Iron , ICP, test portion inorganic 96... (%)	5	5	0.0179	0.0027	0.0179	0.0068	0.0027	0.0015	14.83%	0.91	0.0042	7.33%
241.32	Acid Soluble Iron , ICP, test portion 2006.03A-C (%)	1		0.0165									
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	4	3	0.0123	0.0078	0.0123	0.0062	0.0078	0.0056	63.42%	2.92	0.0006	7.75%
241.99	Acid Soluble Iron , Other (%)	3	3	0.0067	0.0084	0.0067	0.0057	0.0084	0.0061	126.09%	3.47	0.0001	8.50%
251.00	Acid Soluble Lead , AA, test portion 2006.03 modi... (f	1		0.5150									
251.30	Acid Soluble Lead , ICP (ppm)	4	3	0.0127	0.0050	0.0127		0.0050	0.0036	39.00%		0.0097	30.85%
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	2	1	0.0500									
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	2	0	0.0070									
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	1		0.0010									
261.15	Acid Soluble Manganese , AA, 965.09, test portion... (	1		0.0013									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (f	2	2	0.0056	0.0062								
261.32	Acid Soluble Manganese , ICP, test portion inorga... (f	1		0.0000									
261.34	Acid Soluble Manganese , ICP, test portion 2006.0... (	1		0.0014									
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	3	2	0.0007	0.0005	0.0007	0.0051	0.0005	0.0004	76.15%	0.23	0.0000	12.07%
261.99	Acid Soluble Manganese , Other (%)	3	2	0.0008	0.0006	0.0008	0.0051	0.0006	0.0006	84.85%	0.29	0.0000	11.81%
281.30	Acid Soluble Mercury , ICP (ppm)	2	0	0.0000									
289.00	Acid Soluble Molybdenum , AA, test portion 2006.0...	1		1.035									
289.30	Acid Soluble Molybdenum , ICP (ppm)	5	5	1.507	0.7677	1.507	1.4521	0.7677	0.4291	50.94%	1.23	0.4196	15.04%
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	5	5	0.9048	0.3814	0.9048	1.2714	0.3814	0.2132	42.16%	0.70	0.0224	16.24%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (f	2	1	0.0945									
289.99	Acid Soluble Molybdenum , Other (ppm)	2	2	0.5808	0.2557								
291.00	Acid Soluble Nickel , AA, test portion 2006.03 mo... (p	1		1.870									
291.30	Acid Soluble Nickel , ICP (ppm)	4	4	3.503	6.732	3.503		6.732	4.208	192.17%		0.6079	13.25%
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	2	1	0.0800									
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	2	0	0.0200									
291.99	Acid Soluble Nickel , Other (ppm)	4	4	0.9633	0.9314	0.9633		0.9314	0.5821	96.69%		0.0782	16.09%
301.30	Acid Soluble Selenium , ICP (ppm)	3	3	0.3175	0.2163	0.3175		0.2163	0.1561	68.11%		0.0943	19.01%
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	2	2	0.1318	0.1015								
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppr	2	1	0.0890									
301.99	Acid Soluble Selenium , Other (ppm)	3	3	22.67	38.82	22.67		38.82	28.02	171.26%		3.220	10.00%
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.0735	0.0419	0.0735	0.0124	0.0419	0.0262	56.94%	7.90	0.0167	5.92%
311.99	Sodium, Other (%)	2	2	0.0650	0.0212								
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	4	4	0.0022	0.0004	0.0022	0.0052	0.0004	0.0002	16.87%	0.17	0.0006	10.03%
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006... (%)	1		0.0018									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 9... (%)	7	6	0.0033	0.0033	0.0023	0.0052	0.0011	0.0006	48.94%	0.51	0.0002	9.95%

Method Code	Analyte & Method Sample # 180611	# 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
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (%)	1		23.15									
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	5	4	0.0014	0.0013	0.0014	0.0051	0.0013	0.0008	95.13%	0.59	0.0001	10.78%
321.99	Acid Soluble Zinc , Other (%)	6	6	0.0017	0.0008	0.0018	0.0052	0.0008	0.0004	43.06%	0.35	0.0002	10.36%
325.00	Water Soluble Zinc , AA (%)	1		0.0035									
325.30	Water Soluble Zinc , ICP (%)	1		0.0000									

The Method IA Ratio =  $2.33 * \text{Robust SD} / \text{IA at the Method Assigned Value}$ . 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.

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 180611

Grade 18-3-6

### Method Precision Report

Issue Date : 07/31/2018

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 Nitrogen, Other (%)	17	14	1.230	0.3976	0.3960	0.0500	0.3992	32.19%	4.06%	32.44%	7.986
010.11	Total Nitrogen, Modified Comprehensive (18%)	9	9	18.27	0.4993	0.4955	0.0868	0.5031	2.71%	0.47%	2.75%	5.799
010.60	Total Nitrogen, Combustion (18%)	53	48	18.24	0.2434	0.2084	0.1778	0.2740	1.14%	0.98%	1.50%	1.541
010.99	Total Nitrogen, Other (18%)	12	10	18.12	0.2108	0.1857	0.1412	0.2332	1.02%	0.78%	1.29%	1.652
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	15	14	3.116	0.1584	0.1428	0.0969	0.1726	4.58%	3.11%	5.54%	1.780
020.50	Total Phosphorus as P2O5, ICP (%)	21	19	3.251	0.1983	0.1791	0.1205	0.2158	5.51%	3.70%	6.64%	1.792
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (3%)	10	9	3.149	0.0818	0.0747	0.0472	0.0884	2.37%	1.50%	2.81%	1.873
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (3%)	9	8	2.591	0.9357	0.9351	0.0448	0.9362	36.09%	1.73%	36.13%	20.88
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	11	9	6.016	0.4351	0.4327	0.0637	0.4374	7.19%	1.06%	7.27%	6.864
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	8	8	5.903	0.3019	0.2859	0.1371	0.3171	4.84%	2.32%	5.37%	2.313
050.99	Soluble Potassium as K2O, Other (6%)	29	24	5.997	0.2746	0.2616	0.1178	0.2869	4.36%	1.96%	4.78%	2.436

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)

# Methods: 120

Sample # 180611

Lab Values

# Labs Reporting: 85

Grade 18-3-6

Issue Date : 07/31/2018

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 Nitrogen, Magnesium Oxide Method (%)	0451	1.050	0.0000	1.393	0.5511	0.0238	4	-0.62		0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	1.120	0.0600	1.393	0.5511	0.0238	4	-0.49		0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0177	1.185	0.0050	1.393	0.5511	0.0238	4	-0.38		0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0405	2.215	0.0300	1.393	0.5511	0.0238	4	1.49		0
001.99	Ammoniacal Nitrogen, Other (%)	0524	0.8250	0.0500	1.282	0.4384	0.0768	16	-1.04	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0532	0.9150	0.0300	1.282	0.4384	0.0768	16	-0.84	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0527	0.9210	0.0080	1.282	0.4384	0.0768	16	-0.82	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0520	0.9800	0.0600	1.282	0.4384	0.0768	16	-0.69	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0501	1.000	0.0000	1.282	0.4384	0.0768	16	-0.64	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	1.020	0.0200	1.282	0.4384	0.0768	16	-0.60	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	1.095	0.1050	1.282	0.4384	0.0768	16	-0.43	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0513	1.110	0.0200	1.282	0.4384	0.0768	16	-0.39	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0546	1.120	0.0800	1.282	0.4384	0.0768	16	-0.37	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0231	1.280	0.1200	1.282	0.4384	0.0768	16	0.00	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	1.285	0.0500	1.282	0.4384	0.0768	16	0.01	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0550	1.585	0.3500	1.282	0.4384	0.0768	16	0.69	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	1.588	0.0962	1.282	0.4384	0.0768	16	0.70	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	1.905	0.1100	1.282	0.4384	0.0768	16	1.42	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0255	2.180	0.0800	1.282	0.4384	0.0768	16	2.05	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0522	2.605	0.0500	1.282	0.4384	0.0768	16	3.02	NA	0
001.99	Ammoniacal Nitrogen, Other (%)	0541	7.545	3.710	1.282	0.4384	0.0768	16	14.29	NA	1
002.99	Nitrate Nitrogen, Other (%)	0550	0.4400	0.5200				2			0
002.99	Nitrate Nitrogen, Other (%)	0533	17.95	0.1400				2			0
005.00	Urea Nitrogen, Urease (as N) (%)	0368	11.44	0.2526				1			0
005.99	Urea Nitrogen, Other (%)	0356	9.950	0.5200	13.01	2.884	0.5243	7	-0.96	NA	0
005.99	Urea Nitrogen, Other (%)	0029	10.82	0.5100	13.01	2.884	0.5243	7	-0.69	NA	0
005.99	Urea Nitrogen, Other (%)	0394	11.05	0.1600	13.01	2.884	0.5243	7	-0.61	NA	0
005.99	Urea Nitrogen, Other (%)	0531	12.73	0.0600	13.01	2.884	0.5243	7	-0.09	NA	0
005.99	Urea Nitrogen, Other (%)	0405	14.35	0.1000	13.01	2.884	0.5243	7	0.42	NA	0
005.99	Urea Nitrogen, Other (%)	0506	16.05	1.900	13.01	2.884	0.5243	7	0.95	NA	0
005.99	Urea Nitrogen, Other (%)	0550	16.12	0.4200	13.01	2.884	0.5243	7	0.98	NA	0
007.00	Urea, Urease (as Urea) (%)	0117	11.05	0.3000				1			0
007.99	Urea, Other (%)	0220	11.04	0.0100				2			0

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			Value	Range	Rob Mean	Rob SD	R-bar				
007.99	Urea, Other (%)	0532	12.33	0.2500				2			0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0309	17.29	0.0200	18.27	0.3335	0.0904	9	-2.72	Low	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0531	18.12	0.0300	18.27	0.3335	0.0904	9	-0.44	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0416	18.13	0.0500	18.27	0.3335	0.0904	9	-0.41	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0535	18.15	0.1000	18.27	0.3335	0.0904	9	-0.34	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0114	18.21	0.1000	18.27	0.3335	0.0904	9	-0.18	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0105	18.33	0.0200	18.27	0.3335	0.0904	9	0.15	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0510	18.38	0.1936	18.27	0.3335	0.0904	9	0.28	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0220	18.62	0.0300	18.27	0.3335	0.0904	9	0.94	OK	0
010.11	Total Nitrogen, Modified Comprehensive (18%)	0546	19.19	0.2700	18.27	0.3335	0.0904	9	2.52	High	0
010.12	Total Nitrogen, Salicylic (18%)	0397	18.38	0.0499				1			0
010.17	Total Nitrogen, Comprehensive (18%)	0405	18.15	0.1700				1			0
010.60	Total Nitrogen, Combustion (18%)	0483	17.09	0.3100	18.25	0.2544	0.2054	52	-4.58	Low	0
010.60	Total Nitrogen, Combustion (18%)	0472	17.65	0.2300	18.25	0.2544	0.2054	52	-2.38	OK	0
010.60	Total Nitrogen, Combustion (18%)	0073	17.77	0.6400	18.25	0.2544	0.2054	52	-1.89	OK	0
010.60	Total Nitrogen, Combustion (18%)	0025	17.92	0.3930	18.25	0.2544	0.2054	52	-1.31	OK	0
010.60	Total Nitrogen, Combustion (18%)	0542	17.93	0.1700	18.25	0.2544	0.2054	52	-1.26	OK	0
010.60	Total Nitrogen, Combustion (18%)	0368	17.96	0.0060	18.25	0.2544	0.2054	52	-1.15	OK	0
010.60	Total Nitrogen, Combustion (18%)	0037	17.98	0.4060	18.25	0.2544	0.2054	52	-1.06	OK	0
010.60	Total Nitrogen, Combustion (18%)	0177	18.02	0.0600	18.25	0.2544	0.2054	52	-0.90	OK	0
010.60	Total Nitrogen, Combustion (18%)	0307	18.05	0.4810	18.25	0.2544	0.2054	52	-0.79	OK	0
010.60	Total Nitrogen, Combustion (18%)	0234	18.05	0.3000	18.25	0.2544	0.2054	52	-0.79	OK	0
010.60	Total Nitrogen, Combustion (18%)	0292	18.06	0.0100	18.25	0.2544	0.2054	52	-0.77	OK	0
010.60	Total Nitrogen, Combustion (18%)	0034	18.08	0.2000	18.25	0.2544	0.2054	52	-0.67	OK	0
010.60	Total Nitrogen, Combustion (18%)	0018	18.10	0.0000	18.25	0.2544	0.2054	52	-0.59	OK	0
010.60	Total Nitrogen, Combustion (18%)	0523	18.10	0.0000	18.25	0.2544	0.2054	52	-0.59	OK	0
010.60	Total Nitrogen, Combustion (18%)	0422	18.12	0.0100	18.25	0.2544	0.2054	52	-0.53	OK	0
010.60	Total Nitrogen, Combustion (18%)	0356	18.13	0.4700	18.25	0.2544	0.2054	52	-0.49	OK	0
010.60	Total Nitrogen, Combustion (18%)	0423	18.15	0.1100	18.25	0.2544	0.2054	52	-0.41	OK	0
010.60	Total Nitrogen, Combustion (18%)	0550	18.15	0.2500	18.25	0.2544	0.2054	52	-0.41	OK	0
010.60	Total Nitrogen, Combustion (18%)	0157	18.15	0.1000	18.25	0.2544	0.2054	52	-0.39	OK	0
010.60	Total Nitrogen, Combustion (18%)	0482	18.15	0.1000	18.25	0.2544	0.2054	52	-0.39	OK	0
010.60	Total Nitrogen, Combustion (18%)	0255	18.16	0.1770	18.25	0.2544	0.2054	52	-0.34	OK	0
010.60	Total Nitrogen, Combustion (18%)	0377	18.18	0.1500	18.25	0.2544	0.2054	52	-0.30	OK	0
010.60	Total Nitrogen, Combustion (18%)	0095	18.19	0.2500	18.25	0.2544	0.2054	52	-0.26	OK	0
010.60	Total Nitrogen, Combustion (18%)	0231	18.19	0.0200	18.25	0.2544	0.2054	52	-0.24	OK	0
010.60	Total Nitrogen, Combustion (18%)	0501	18.19	0.4200	18.25	0.2544	0.2054	52	-0.24	OK	0
010.60	Total Nitrogen, Combustion (18%)	0035	18.19	0.1800	18.25	0.2544	0.2054	52	-0.24	OK	0
010.60	Total Nitrogen, Combustion (18%)	0354	18.20	0.2000	18.25	0.2544	0.2054	52	-0.20	OK	0
010.60	Total Nitrogen, Combustion (18%)	0105	18.23	0.0000	18.25	0.2544	0.2054	52	-0.08	OK	0
010.60	Total Nitrogen, Combustion (18%)	0527	18.23	0.0800	18.25	0.2544	0.2054	52	-0.08	OK	0
010.60	Total Nitrogen, Combustion (18%)	0291	18.27	0.0200	18.25	0.2544	0.2054	52	0.08	OK	0
010.60	Total Nitrogen, Combustion (18%)	0547	18.29	0.2500	18.25	0.2544	0.2054	52	0.14	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (18%)	0324	18.30	0.0000	18.25	0.2544	0.2054	52	0.20	OK	0
010.60	Total Nitrogen, Combustion (18%)	0055	18.31	0.1300	18.25	0.2544	0.2054	52	0.22	OK	0
010.60	Total Nitrogen, Combustion (18%)	0233	18.32	0.0900	18.25	0.2544	0.2054	52	0.26	OK	0
010.60	Total Nitrogen, Combustion (18%)	0043	18.34	0.0400	18.25	0.2544	0.2054	52	0.35	OK	0
010.60	Total Nitrogen, Combustion (18%)	0451	18.35	0.6500	18.25	0.2544	0.2054	52	0.37	OK	0
010.60	Total Nitrogen, Combustion (18%)	0452	18.37	0.0200	18.25	0.2544	0.2054	52	0.47	OK	0
010.60	Total Nitrogen, Combustion (18%)	0023	18.37	0.4410	18.25	0.2544	0.2054	52	0.49	OK	0
010.60	Total Nitrogen, Combustion (18%)	0494	18.38	0.0700	18.25	0.2544	0.2054	52	0.49	OK	0
010.60	Total Nitrogen, Combustion (18%)	0444	18.42	0.4400	18.25	0.2544	0.2054	52	0.67	OK	0
010.60	Total Nitrogen, Combustion (18%)	0029	18.46	0.0900	18.25	0.2544	0.2054	52	0.81	OK	0
010.60	Total Nitrogen, Combustion (18%)	0041	18.46	0.1200	18.25	0.2544	0.2054	52	0.83	OK	0
010.60	Total Nitrogen, Combustion (18%)	0049	18.51	0.1200	18.25	0.2544	0.2054	52	1.02	OK	0
010.60	Total Nitrogen, Combustion (18%)	0102	18.55	0.1200	18.25	0.2544	0.2054	52	1.18	OK	0
010.60	Total Nitrogen, Combustion (18%)	0040	18.55	0.1000	18.25	0.2544	0.2054	52	1.18	OK	0
010.60	Total Nitrogen, Combustion (18%)	0106	18.56	0.2600	18.25	0.2544	0.2054	52	1.22	OK	0
010.60	Total Nitrogen, Combustion (18%)	0070	18.66	0.3000	18.25	0.2544	0.2054	52	1.61	OK	0
010.60	Total Nitrogen, Combustion (18%)	0007	18.80	0.2000	18.25	0.2544	0.2054	52	2.16	OK	0
010.60	Total Nitrogen, Combustion (18%)	0096	18.94	0.0900	18.25	0.2544	0.2054	52	2.69	OK	0
010.60	Total Nitrogen, Combustion (18%)	0325	19.05	0.7000	18.25	0.2544	0.2054	52	3.14	High	0
010.60	Total Nitrogen, Combustion (18%)	0485	19.25	0.2850	18.25	0.2544	0.2054	52	3.92	High	0
010.60	Total Nitrogen, Combustion (18%)	0360	19.29	0.4200	18.25	0.2544	0.2054	52	4.09	High	0
010.60	Total Nitrogen, Combustion (18%)	0521	120.8	201.2	18.25	0.2544	0.2054	52	403.19	High	2
010.99	Total Nitrogen, Other (18%)	0524	17.17	0.0813	18.13	0.1636	0.1377	11	-5.86	Low	0
010.99	Total Nitrogen, Other (18%)	0532	17.57	0.4400	18.13	0.1636	0.1377	11	-3.42	OK	0
010.99	Total Nitrogen, Other (18%)	0520	18.10	0.0700	18.13	0.1636	0.1377	11	-0.21	OK	0
010.99	Total Nitrogen, Other (18%)	0538	18.10	0.0900	18.13	0.1636	0.1377	11	-0.21	OK	0
010.99	Total Nitrogen, Other (18%)	0476	18.13	0.0232	18.13	0.1636	0.1377	11	0.00	OK	0
010.99	Total Nitrogen, Other (18%)	0545	18.14	0.0100	18.13	0.1636	0.1377	11	0.04	OK	0
010.99	Total Nitrogen, Other (18%)	0537	18.17	0.1200	18.13	0.1636	0.1377	11	0.25	OK	0
010.99	Total Nitrogen, Other (18%)	0493	18.18	0.0500	18.13	0.1636	0.1377	11	0.28	OK	0
010.99	Total Nitrogen, Other (18%)	0513	18.24	0.0700	18.13	0.1636	0.1377	11	0.65	OK	0
010.99	Total Nitrogen, Other (18%)	0508	18.26	0.2000	18.13	0.1636	0.1377	11	0.80	OK	0
010.99	Total Nitrogen, Other (18%)	0522	18.36	0.3600	18.13	0.1636	0.1377	11	1.41	OK	0
010.99	Total Nitrogen, Other (18%)	0506	18.00	1.800	18.13	0.1636	0.1377	11	-0.79	OK	1
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0049	3.045	0.1100	3.128	0.0740	0.0600	4	-1.11		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0493	3.100	0.1000	3.128	0.0740	0.0600	4	-0.37		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	3.145	0.0100	3.128	0.0740	0.0600	4	0.24		0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0114	3.220	0.0200	3.128	0.0740	0.0600	4	1.25		0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	2.815	0.1700	3.140	0.1890	0.1255	15	-1.72	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	2.875	0.1500	3.140	0.1890	0.1255	15	-1.40	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	2.930	0.2600	3.140	0.1890	0.1255	15	-1.11	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0476	2.990	0.1036	3.140	0.1890	0.1255	15	-0.79	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0522	3.135	0.1300	3.140	0.1890	0.1255	15	-0.02	NA	0



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020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0177	3.136	0.0082	3.140	0.1890	0.1255	15	-0.02	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0550	3.155	0.0700	3.140	0.1890	0.1255	15	0.08	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	3.160	0.0200	3.140	0.1890	0.1255	15	0.11	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	3.180	0.0600	3.140	0.1890	0.1255	15	0.21	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0416	3.180	0.0000	3.140	0.1890	0.1255	15	0.21	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	3.205	0.0005	3.140	0.1890	0.1255	15	0.34	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	3.210	0.0400	3.140	0.1890	0.1255	15	0.37	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0547	3.275	0.2300	3.140	0.1890	0.1255	15	0.72	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	3.385	0.2300	3.140	0.1890	0.1255	15	1.30	NA	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0541	3.475	0.4100	3.140	0.1890	0.1255	15	1.77	NA	0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	3.145	0.0100	3.280	0.1431	0.2067	3	-0.94		0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	3.265	0.0300	3.280	0.1431	0.2067	3	-0.10		0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	3.430	0.5800	3.280	0.1431	0.2067	3	1.05		0
020.50	Total Phosphorus as P2O5, ICP (%)	0527	2.315	0.1500	3.218	0.1808	0.1183	20	-5.00	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0523	3.000	0.0000	3.218	0.1808	0.1183	20	-1.21	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	3.040	0.0000	3.218	0.1808	0.1183	20	-0.99	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	3.070	0.1200	3.218	0.1808	0.1183	20	-0.82	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	3.079	0.0359	3.218	0.1808	0.1183	20	-0.77	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0422	3.090	0.2400	3.218	0.1808	0.1183	20	-0.71	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	3.107	0.0540	3.218	0.1808	0.1183	20	-0.62	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	3.150	0.1000	3.218	0.1808	0.1183	20	-0.38	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0291	3.185	0.0100	3.218	0.1808	0.1183	20	-0.19	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0508	3.201	0.0560	3.218	0.1808	0.1183	20	-0.10	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0433	3.230	0.0400	3.218	0.1808	0.1183	20	0.06	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	3.235	0.1100	3.218	0.1808	0.1183	20	0.09	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0546	3.265	0.0300	3.218	0.1808	0.1183	20	0.26	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0255	3.309	0.3620	3.218	0.1808	0.1183	20	0.50	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0542	3.345	0.0900	3.218	0.1808	0.1183	20	0.70	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	3.355	0.0700	3.218	0.1808	0.1183	20	0.75	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0452	3.360	0.0200	3.218	0.1808	0.1183	20	0.78	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	3.427	0.1179	3.218	0.1808	0.1183	20	1.15	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	3.485	0.3700	3.218	0.1808	0.1183	20	1.47	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0552	3.845	0.3900	3.218	0.1808	0.1183	20	3.47	NA	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	23.51	0.0100	3.218	0.1808	0.1183	20	112.20	NA	2
020.99	Total Phosphorus as P2O5, Other (%)	0515	1.143	0.1983	2.712	1.051	0.1371	4	-1.49		0
020.99	Total Phosphorus as P2O5, Other (%)	0513	3.135	0.0300	2.712	1.051	0.1371	4	0.40		0
020.99	Total Phosphorus as P2O5, Other (%)	0520	3.200	0.0000	2.712	1.051	0.1371	4	0.46		0
020.99	Total Phosphorus as P2O5, Other (%)	0307	3.370	0.3200	2.712	1.051	0.1371	4	0.63		0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (3%)	0405	2.870	0.1400				1			0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0494	3.035	0.0900	3.098	0.0735	0.0300	4	-0.85		0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0041	3.055	0.0300	3.098	0.0735	0.0300	4	-0.58		0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0055	3.100	0.0000	3.098	0.0735	0.0300	4	0.03		0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0102	3.200	0.0000	3.098	0.0735	0.0300	4	1.39		0

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041.11	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0185	3.040	0.0400	3.168	0.1114	0.0303	5	-1.15		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0513	3.110	0.0200	3.168	0.1114	0.0303	5	-0.52		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0485	3.163	0.0416	3.168	0.1114	0.0303	5	-0.04		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0105	3.185	0.0500	3.168	0.1114	0.0303	5	0.16		0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (3%)	0220	3.340	0.0000	3.168	0.1114	0.0303	5	1.55		0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (3%)	0106	3.060	0.0600				2			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (3%)	0522	3.295	0.0900				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (3%)	0018	3.135	0.0100				1			0
041.50	Direct Available Phosphorus as P2O5, ICP (3%)	0007	3.000	0.2000	3.098	0.0852	0.1033	3	-1.15		0
041.50	Direct Available Phosphorus as P2O5, ICP (3%)	0070	3.145	0.0100	3.098	0.0852	0.1033	3	0.55		0
041.50	Direct Available Phosphorus as P2O5, ICP (3%)	0325	3.150	0.1000	3.098	0.0852	0.1033	3	0.61		0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0233	2.452	0.1370	3.131	0.1091	0.0621	10	-5.79	Low	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0043	3.035	0.0500	3.131	0.1091	0.0621	10	-0.82	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0360	3.045	0.0700	3.131	0.1091	0.0621	10	-0.73	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0117	3.102	0.0260	3.131	0.1091	0.0621	10	-0.25	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0377	3.135	0.1500	3.131	0.1091	0.0621	10	0.03	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0423	3.145	0.0700	3.131	0.1091	0.0621	10	0.12	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0025	3.160	0.0400	3.131	0.1091	0.0621	10	0.25	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0040	3.200	0.0000	3.131	0.1091	0.0621	10	0.59	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0368	3.260	0.0375	3.131	0.1091	0.0621	10	1.10	OK	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (3%)	0023	3.260	0.0400	3.131	0.1091	0.0621	10	1.10	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0055	1.080	0.0200	2.960	0.3592	0.0774	9	-4.83	Low	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0472	1.080	0.0400	2.960	0.3592	0.0774	9	-4.83	Low	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0073	2.945	0.0300	2.960	0.3592	0.0774	9	-0.04	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0397	3.049	0.1255	2.960	0.3592	0.0774	9	0.23	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0034	3.098	0.0051	2.960	0.3592	0.0774	9	0.35	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0231	3.115	0.0500	2.960	0.3592	0.0774	9	0.40	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0037	3.161	0.0860	2.960	0.3592	0.0774	9	0.52	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0029	3.200	0.0600	2.960	0.3592	0.0774	9	0.62	OK	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (3%)	0354	3.230	0.2800	2.960	0.3592	0.0774	9	0.69	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0532	2.595	0.0500	3.063	0.2066	0.0333	6	-2.02	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0538	3.010	0.0600	3.063	0.2066	0.0333	6	-0.23	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0531	3.020	0.0200	3.063	0.2066	0.0333	6	-0.19	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0405	3.145	0.0300	3.063	0.2066	0.0333	6	0.35	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0545	3.170	0.0200	3.063	0.2066	0.0333	6	0.46	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0533	3.280	0.0200	3.063	0.2066	0.0333	6	0.94	OK	0
041.99	Direct Available Phosphorus as P2O5, Other (3%)	0537	3.090	0.2400	3.063	0.2066	0.0333	6	0.12	OK	1
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0444	3.170	0.0000				1			0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0220	5.630	0.0400	5.967	0.3030	0.0718	11	-1.04	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0522	5.745	0.3700	5.967	0.3030	0.0718	11	-0.68	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0049	5.775	0.0100	5.967	0.3030	0.0718	11	-0.59	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0405	5.835	0.0100	5.967	0.3030	0.0718	11	-0.41	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0494	5.845	0.0100	5.967	0.3030	0.0718	11	-0.38	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				
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0231	5.860	0.0600	5.967	0.3030	0.0718	11	-0.33	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0416	5.910	0.0000	5.967	0.3030	0.0718	11	-0.17	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0550	5.990	0.2600	5.967	0.3030	0.0718	11	0.07	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0102	6.200	0.0000	5.967	0.3030	0.0718	11	0.72	OK	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0114	7.100	0.0000	5.967	0.3030	0.0718	11	3.50	High	0
050.00	Soluble Potassium as K2O, STPB Oxalate (6%)	0055	7.955	0.0300	5.967	0.3030	0.0718	11	6.14	High	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (6%)	0356	5.645	0.0700	7.010	2.669	0.1560	5	-0.51		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (6%)	0157	5.765	0.2300	7.010	2.669	0.1560	5	-0.47		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (6%)	0040	5.900	0.2000	7.010	2.669	0.1560	5	-0.42		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (6%)	0073	5.960	0.0800	7.010	2.669	0.1560	5	-0.39		0
050.30	Soluble Potassium as K2O, AA (Oxalate) (6%)	0309	11.78	0.2000	7.010	2.669	0.1560	5	1.79		0
050.31	Soluble Potassium as K2O, AA (Citrate) (6%)	0472	5.270	0.1200				1			0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (6%)	0185	5.355	0.5700				2			0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (6%)	0485	5.445	0.0100				2			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0324	5.420	0.0800	5.672	0.2630	0.1720	8	-0.88	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0106	5.430	0.5800	5.672	0.2630	0.1720	8	-0.84	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0422	5.450	0.1000	5.672	0.2630	0.1720	8	-0.77	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0055	5.670	0.0800	5.672	0.2630	0.1720	8	-0.01	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0397	5.705	0.1217	5.672	0.2630	0.1720	8	0.11	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0292	5.765	0.1100	5.672	0.2630	0.1720	8	0.32	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0086	5.871	0.2640	5.672	0.2630	0.1720	8	0.69	OK	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (6%)	0444	6.150	0.0400	5.672	0.2630	0.1720	8	1.66	High	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0547	5.175	0.1100	5.656	0.3274	0.0843	7	-1.33	Low	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0452	5.420	0.0200	5.656	0.3274	0.0843	7	-0.65	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0007	5.650	0.1000	5.656	0.3274	0.0843	7	-0.02	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0483	5.715	0.2700	5.656	0.3274	0.0843	7	0.16	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0043	5.740	0.0200	5.656	0.3274	0.0843	7	0.23	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0070	5.820	0.0000	5.656	0.3274	0.0843	7	0.45	OK	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (6%)	0291	6.075	0.0700	5.656	0.3274	0.0843	7	1.16	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0025	5.545	0.2100	5.890	0.3141	0.1413	8	-1.01	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0360	5.630	0.0200	5.890	0.3141	0.1413	8	-0.76	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0117	5.726	0.0730	5.890	0.3141	0.1413	8	-0.48	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0377	5.745	0.0300	5.890	0.3141	0.1413	8	-0.42	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0423	5.965	0.2300	5.890	0.3141	0.1413	8	0.22	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0023	6.020	0.0200	5.890	0.3141	0.1413	8	0.38	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0354	6.130	0.1200	5.890	0.3141	0.1413	8	0.70	OK	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (6%)	0233	6.460	0.4270	5.890	0.3141	0.1413	8	1.66	High	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (6%)	0510	4.200	0.0054	5.200	0.8670	0.0951	3	-1.15		0
050.60	Soluble Potassium as K2O, Flame Photometric ... (6%)	0041	5.660	0.1400	5.200	0.8670	0.0951	3	0.53		0
050.60	Soluble Potassium as K2O, Flame Photometric ... (6%)	0105	5.740	0.1400	5.200	0.8670	0.0951	3	0.62		0
050.61	Soluble Potassium as K2O, Flame Photometric ... (6%)	0035	6.415	1.170				1			0
050.62	Soluble Potassium as K2O, Flame Photometric ... (6%)	0095	5.505	0.0100	5.688	0.1328	0.0355	7	-1.24	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (6%)	0034	5.599	0.0418	5.688	0.1328	0.0355	7	-0.60	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
050.62	Soluble Potassium as K2O, Flame Photometric (... (6%))	0029	5.650	0.0400	5.688	0.1328	0.0355	7	-0.26	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (6%))	0513	5.675	0.0300	5.688	0.1328	0.0355	7	-0.09	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (6%))	0037	5.739	0.1170	5.688	0.1328	0.0355	7	0.35	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (6%))	0018	5.805	0.0100	5.688	0.1328	0.0355	7	0.80	OK	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (6%))	0105	5.840	0.0000	5.688	0.1328	0.0355	7	1.04	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0325	5.050	0.7000	5.995	0.2394	0.1554	27	-3.95	Low	0
050.99	Soluble Potassium as K2O, Other (6%)	0506	5.215	0.1700	5.995	0.2394	0.1554	27	-3.26	Low	0
050.99	Soluble Potassium as K2O, Other (6%)	0527	5.770	0.0400	5.995	0.2394	0.1554	27	-0.94	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0433	5.790	0.0000	5.995	0.2394	0.1554	27	-0.86	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0307	5.796	0.2660	5.995	0.2394	0.1554	27	-0.83	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0546	5.815	0.1100	5.995	0.2394	0.1554	27	-0.75	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0476	5.845	0.0572	5.995	0.2394	0.1554	27	-0.63	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0177	5.851	0.0519	5.995	0.2394	0.1554	27	-0.60	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0255	5.897	0.6650	5.995	0.2394	0.1554	27	-0.41	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0482	5.900	0.0400	5.995	0.2394	0.1554	27	-0.40	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0535	5.900	0.1000	5.995	0.2394	0.1554	27	-0.40	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0533	5.905	0.0300	5.995	0.2394	0.1554	27	-0.38	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0368	5.914	0.1508	5.995	0.2394	0.1554	27	-0.34	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0493	5.950	0.1000	5.995	0.2394	0.1554	27	-0.19	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0523	5.950	0.1000	5.995	0.2394	0.1554	27	-0.19	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0520	6.005	0.1100	5.995	0.2394	0.1554	27	0.04	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0531	6.010	0.0200	5.995	0.2394	0.1554	27	0.06	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0501	6.075	0.3500	5.995	0.2394	0.1554	27	0.33	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0537	6.102	0.1580	5.995	0.2394	0.1554	27	0.45	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0545	6.140	0.0400	5.995	0.2394	0.1554	27	0.61	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0234	6.200	0.0000	5.995	0.2394	0.1554	27	0.86	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0524	6.227	0.1571	5.995	0.2394	0.1554	27	0.97	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0532	6.240	0.1200	5.995	0.2394	0.1554	27	1.02	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0538	6.250	0.1000	5.995	0.2394	0.1554	27	1.06	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0444	6.410	0.0000	5.995	0.2394	0.1554	27	1.73	OK	0
050.99	Soluble Potassium as K2O, Other (6%)	0552	6.665	0.5300	5.995	0.2394	0.1554	27	2.80	High	0
050.99	Soluble Potassium as K2O, Other (6%)	0542	6.925	0.0300	5.995	0.2394	0.1554	27	3.88	High	0
050.99	Soluble Potassium as K2O, Other (6%)	0541	5.100	1.080	5.995	0.2394	0.1554	27	-3.74	Low	1
050.99	Soluble Potassium as K2O, Other (6%)	0389	37.47	0.0700	5.995	0.2394	0.1554	27	131.43	High	2
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	0.0060	0.0020				1			0
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0105	0.0053	0.0004				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.0750	0.0300				1			0
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	0117	0.0052	0.0003				2			0
101.33	Acid Soluble Calcium, ICP, 2017.02 (%)	0527	0.0200	0.0000				2			0
101.99	Acid Soluble Calcium, Other (%)	0389	0.0105	0.0010				1			0
101.99	Acid Soluble Calcium, Other (%)	0552	0.0000	0.0000				1			4
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.0059	0.0001				2			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0309	1.185	0.0500				2			0

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121.03	Acid Soluble Magnesium, AA, 965.09, test port... (%)	0105	0.0058	0.0004				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.0150	0.0100				1			0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0423	0.0075	0.0010				1			0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0515	0.0020	0.0004	0.0063	0.0033	0.0002	4	-1.29		0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0117	0.0061	0.0001	0.0063	0.0033	0.0002	4	-0.06		0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0527	0.0070	0.0000	0.0063	0.0033	0.0002	4	0.23		0
121.33	Acid Soluble Magnesium, ICP, 2017.02 (%)	0106	0.0100	0.0001	0.0063	0.0033	0.0002	4	1.13		0
121.99	Acid Soluble Magnesium, Other (%)	0389	0.0010	0.0000	0.0028	0.0024	0.0003	3	-0.78		0
121.99	Acid Soluble Magnesium, Other (%)	0515	0.0020	0.0006	0.0028	0.0024	0.0003	3	-0.35		0
121.99	Acid Soluble Magnesium, Other (%)	0524	0.0055	0.0002	0.0028	0.0024	0.0003	3	1.13		0
121.99	Acid Soluble Magnesium, Other (%)	0552	0.0000	0.0000	0.0028	0.0024	0.0003	3			4
143.99	Elemental Sulfur, Other (%)	0389	0.0055	0.0010	0.1268	0.1935	0.2037	3	-0.63		0
143.99	Elemental Sulfur, Other (%)	0472	0.0250	0.0100	0.1268	0.1935	0.2037	3	-0.53		0
143.99	Elemental Sulfur, Other (%)	0541	0.3500	0.6000	0.1268	0.1935	0.2037	3	1.15		0
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0515	0.0166	0.0062	0.0472	0.0205	0.0020	4	-1.49		0
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0117	0.0556	0.0013	0.0472	0.0205	0.0020	4	0.41		0
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0494	0.0567	0.0003	0.0472	0.0205	0.0020	4	0.46		0
148.07	Total Sulfur, ICP, test portion as in 2017.02 (%)	0527	0.0600	0.0000	0.0472	0.0205	0.0020	4	0.62		0
148.99	Total Sulfur, Other (%)	0482	0.0700	0.0200				2			0
148.99	Total Sulfur, Other (%)	0354	0.1000	0.0000				2			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	0.0586	0.0007				2			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0423	0.0950	0.0100				2			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0255	0.1455	0.0250	0.9506	1.074	1.194	3	-0.75		0
151.30	Acid Soluble Arsenic , ICP (ppm)	0524	0.5363	0.1155	0.9506	1.074	1.194	3	-0.39		0
151.30	Acid Soluble Arsenic , ICP (ppm)	0541	2.170	3.440	0.9506	1.074	1.194	3	1.14		0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0515	0.0275	0.0350				2			0
151.33	Acid Soluble Arsenic , ICP, 2017.02 (ppm)	0527	0.2600	0.0400				2			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0368	0.9625	1.925				0			4
151.99	Acid Soluble Arsenic , Other (ppm)	0476	0.1310	0.0133				2			0
151.99	Acid Soluble Arsenic , Other (ppm)	0220	0.7500	0.1000				2			0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0354	0.0100	0.0000				2			0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0106	0.0123	0.0023				2			0
165.99	Acid Soluble Boron , Other (%)	0515	0.0002	0.0000	0.0006	0.0004	0.0001	3	-1.07		0
165.99	Acid Soluble Boron , Other (%)	0524	0.0007	0.0000	0.0006	0.0004	0.0001	3	0.16		0
165.99	Acid Soluble Boron , Other (%)	0423	0.0010	0.0002	0.0006	0.0004	0.0001	3	0.91		0
165.99	Acid Soluble Boron , Other (%)	0552	0.0000	0.0000	0.0006	0.0004	0.0001	3			4
181.00	Acid Soluble Cadmium , AA, test portion 2006... (ppm)	0550	1.080	0.4800				1			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	1.090	0.0400	1.273	0.1906	0.0507	7	-0.87	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	1.135	0.0647	1.273	0.1906	0.0507	7	-0.65	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0255	1.164	0.0080	1.273	0.1906	0.0507	7	-0.52	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0523	1.216	0.0550	1.273	0.1906	0.0507	7	-0.27	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	1.350	0.1000	1.273	0.1906	0.0507	7	0.37	NA	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				
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	1.400	0.0800	1.273	0.1906	0.0507	7	0.60	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	1.556	0.0070	1.273	0.1906	0.0507	7	1.34	NA	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0541	0.8800	0.6800	1.273	0.1906	0.0507	7	-1.86	NA	1
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0515	0.4625	0.2150	1.091	0.5440	0.0800	3	-1.15		0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0037	1.405	0.0150	1.091	0.5440	0.0800	3	0.58		0
181.33	Acid Soluble Cadmium , ICP, 2017.02 (ppm)	0527	1.405	0.0100	1.091	0.5440	0.0800	3	0.58		0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	0.1475	0.1530				2			0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0368	1.589	0.0630				2			0
181.99	Acid Soluble Cadmium , Other (ppm)	0506	1.020	0.0200	1.209	0.1863	0.0630	4	-1.01		0
181.99	Acid Soluble Cadmium , Other (ppm)	0476	1.116	0.0319	1.209	0.1863	0.0630	4	-0.50		0
181.99	Acid Soluble Cadmium , Other (ppm)	0220	1.250	0.1000	1.209	0.1863	0.0630	4	0.22		0
181.99	Acid Soluble Cadmium , Other (ppm)	0520	1.450	0.1000	1.209	0.1863	0.0630	4	1.29		0
190.00	Water Soluble Chlorine, Titrimetric (%)	0105	4.485	0.0700				2			0
190.00	Water Soluble Chlorine, Titrimetric (%)	0513	4.720	0.0200				2			0
191.00	Acid Soluble Chromium , AA, test portion 200... (ppm)	0550	10.05	6.150				1			0
191.30	Acid Soluble Chromium , ICP (ppm)	0523	13.40	0.2900	15.79	1.654	1.491	6	-1.29	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0541	15.00	2.000	15.79	1.654	1.491	6	-0.43	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	15.65	1.300	15.79	1.654	1.491	6	-0.08	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	16.50	4.200	15.79	1.654	1.491	6	0.38	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	16.74	0.6900	15.79	1.654	1.491	6	0.51	NA	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	17.48	0.4650	15.79	1.654	1.491	6	0.91	NA	0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0515	0.1755	0.0410	14.22	9.917	0.3808	4	-1.42		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0527	16.43	0.6300	14.22	9.917	0.3808	4	0.22		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0117	16.76	0.4800	14.22	9.917	0.3808	4	0.26		0
191.33	Acid Soluble Chromium , ICP, 2017.02 (ppm)	0037	23.52	0.3720	14.22	9.917	0.3808	4	0.94		0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0515	0.4495	0.0831				2			0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0368	19.51	0.0789				2			0
191.99	Acid Soluble Chromium , Other (ppm)	0220	16.25	0.5000	17.51	1.527	0.4048	4	-0.83		0
191.99	Acid Soluble Chromium , Other (ppm)	0506	16.60	0.2000	17.51	1.527	0.4048	4	-0.60		0
191.99	Acid Soluble Chromium , Other (ppm)	0476	17.55	0.8193	17.51	1.527	0.4048	4	0.02		0
191.99	Acid Soluble Chromium , Other (ppm)	0520	19.65	0.1000	17.51	1.527	0.4048	4	1.40		0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	0.0733	0.0058	0.1148	0.0603	0.0166	3	-0.69		0
202.30	Acid Soluble Cobalt , ICP (ppm)	0523	0.0870	0.0220	0.1148	0.0603	0.0166	3	-0.46		0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	0.1840	0.0220	0.1148	0.0603	0.0166	3	1.15		0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0527	0.0080	0.0000				2			0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0550	0.5250	0.0500				2			0
202.33	Acid Soluble Cobalt , ICP, 2017.02 (ppm)	0515	0.0000	0.0000				2			4
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0368	0.1403	0.1724				1			0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	0.0185	0.0370				1			4
202.99	Acid Soluble Cobalt , Other (ppm)	0255	0.0030	0.0040				2			0
202.99	Acid Soluble Cobalt , Other (ppm)	0220	0.0750	0.0100				2			0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0550	0.0004	0.0001				1			0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0354	0.0100	0.0000				1			0

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			Value	Range	Rob Mean	Rob SD	R-bar				
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0552	0.0000	0.0000				1			4
221.33	Acid Soluble Copper , ICP, 2017.02 (%)	0106	0.0003	0.0001				1			0
221.33	Acid Soluble Copper , ICP, 2017.02 (%)	0515	0.0000	0.0000				1			4
221.99	Acid Soluble Copper , Other (%)	0541	0.0001	0.0000				2			0
221.99	Acid Soluble Copper , Other (%)	0389	0.0002	0.0000				2			0
221.99	Acid Soluble Copper , Other (%)	0368	0.0000	0.0000				2			4
221.99	Acid Soluble Copper , Other (%)	0515	0.0000	0.0000				2			4
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	0105	0.0185	0.0030				2			0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	0535	0.0186	0.0009				2			0
241.03	Acid Soluble Iron , AA, 965.09, test portion ... (%)	0105	0.0165	0.0030				1			0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0354	0.0150	0.0100	0.0179	0.0027	0.0042	5	-1.09		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0552	0.0150	0.0100	0.0179	0.0027	0.0042	5	-1.09		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0035	0.0195	0.0010	0.0179	0.0027	0.0042	5	0.60		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0472	0.0200	0.0000	0.0179	0.0027	0.0042	5	0.79		0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0482	0.0200	0.0000	0.0179	0.0027	0.0042	5	0.79		0
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (%)	0423	0.0165	0.0010				1			0
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	0106	0.0033	0.0006	0.0123	0.0078	0.0006	3	-1.15		0
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	0117	0.0167	0.0011	0.0123	0.0078	0.0006	3	0.55		0
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	0527	0.0170	0.0000	0.0123	0.0078	0.0006	3	0.60		0
241.33	Acid Soluble Iron , ICP, 2017.02 (%)	0515	0.0001	0.0001	0.0123	0.0078	0.0006	3			4
241.99	Acid Soluble Iron , Other (%)	0515	0.0004	0.0002	0.0067	0.0084	0.0001	3	-0.75		0
241.99	Acid Soluble Iron , Other (%)	0389	0.0034	0.0000	0.0067	0.0084	0.0001	3	-0.39		0
241.99	Acid Soluble Iron , Other (%)	0524	0.0163	0.0000	0.0067	0.0084	0.0001	3	1.14		0
251.00	Acid Soluble Lead , AA, test portion 2006.03... (ppm)	0550	0.5150	0.8100				1			0
251.30	Acid Soluble Lead , ICP (ppm)	0255	0.0085	0.0150	0.0127	0.0050	0.0097	3	-0.85		0
251.30	Acid Soluble Lead , ICP (ppm)	0523	0.0115	0.0010	0.0127	0.0050	0.0097	3	-0.25		0
251.30	Acid Soluble Lead , ICP (ppm)	0524	0.0182	0.0130	0.0127	0.0050	0.0097	3	1.10		0
251.30	Acid Soluble Lead , ICP (ppm)	0541	1.550	3.100	0.0127	0.0050	0.0097	3			4
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0527	0.0500	0.0000				1			0
251.33	Acid Soluble Lead , ICP, 2017.02 (ppm)	0515	0.0290	0.0580				1			4
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	0.0070	0.0140				0			4
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0368	4.249	8.498				0			4
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0105	0.0010	0.0002				1			0
261.15	Acid Soluble Manganese , AA, 965.09, test po... (%)	0105	0.0013	0.0002				1			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0035	0.0012	0.0002				2			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0354	0.0100	0.0000				2			0
261.32	Acid Soluble Manganese , ICP, test portion i... (%)	0552	0.0000	0.0000				0			4
261.34	Acid Soluble Manganese , ICP, test portion 2... (%)	0423	0.0014	0.0001				1			0
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	0106	0.0003	0.0000				2			0
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	0527	0.0010	0.0000				2			0
261.35	Acid Soluble Manganese , ICP, 2017.02 (%)	0515	0.0000	0.0000				2			4
261.99	Acid Soluble Manganese , Other (%)	0389	0.0003	0.0000				2			0
261.99	Acid Soluble Manganese , Other (%)	0524	0.0012	0.0000				2			0

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261.99	Acid Soluble Manganese , Other (%)	0515	0.0001	0.0001				2			4
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000				0			4
281.30	Acid Soluble Mercury , ICP (ppm)	0541	0.1650	0.3300				0			4
289.00	Acid Soluble Molybdenum , AA, test portion 2... (ppm)	0550	1.035	0.5100				1			0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0524	0.9021	0.0010	1.507	0.7677	0.4196	5	-0.79		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	0.9350	0.0060	1.507	0.7677	0.4196	5	-0.75		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0102	1.030	0.1380	1.507	0.7677	0.4196	5	-0.62		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0541	2.150	1.900	1.507	0.7677	0.4196	5	0.84		0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0255	2.519	0.0530	1.507	0.7677	0.4196	5	1.32		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0515	0.2670	0.0380	0.9048	0.3814	0.0224	5	-1.67		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0037	0.9320	0.0680	0.9048	0.3814	0.0224	5	0.07		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0106	1.000	0.0000	0.9048	0.3814	0.0224	5	0.25		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0527	1.035	0.0060	0.9048	0.3814	0.0224	5	0.34		0
289.33	Acid Soluble Molybdenum , ICP, 2017.02 (ppm)	0546	1.290	0.0000	0.9048	0.3814	0.0224	5	1.01		0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm)	0515	0.0945	0.0610				1			0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm)	0368	0.7884	1.577				1			4
289.99	Acid Soluble Molybdenum , Other (ppm)	0220	0.4000	0.2000				2			0
289.99	Acid Soluble Molybdenum , Other (ppm)	0476	0.7617	0.0329				2			0
291.00	Acid Soluble Nickel , AA, test portion 2006.... (ppm)	0550	1.870	0.0000				1			0
291.30	Acid Soluble Nickel , ICP (ppm)	0523	0.0180	0.0060	3.503	6.732	0.6079	4	-0.52		0
291.30	Acid Soluble Nickel , ICP (ppm)	0524	0.0863	0.0156	3.503	6.732	0.6079	4	-0.51		0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	0.3090	0.0100	3.503	6.732	0.6079	4	-0.47		0
291.30	Acid Soluble Nickel , ICP (ppm)	0541	13.60	2.400	3.503	6.732	0.6079	4	1.50		0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0527	0.0800	0.0000				1			0
291.33	Acid Soluble Nickel , ICP, 2017.02 (ppm)	0515	0.0000	0.0000				1			4
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	0.0200	0.0400				0			4
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0368	0.1667	0.3333				0			4
291.99	Acid Soluble Nickel , Other (ppm)	0220	0.4000	0.0000	0.9633	0.9314	0.0782	4	-0.60		0
291.99	Acid Soluble Nickel , Other (ppm)	0476	0.4433	0.1526	0.9633	0.9314	0.0782	4	-0.56		0
291.99	Acid Soluble Nickel , Other (ppm)	0520	0.6600	0.0600	0.9633	0.9314	0.0782	4	-0.33		0
291.99	Acid Soluble Nickel , Other (ppm)	0506	2.350	0.1000	0.9633	0.9314	0.0782	4	1.49		0
301.30	Acid Soluble Selenium , ICP (ppm)	0523	0.1025	0.0130	0.3175	0.2163	0.0943	3	-0.99		0
301.30	Acid Soluble Selenium , ICP (ppm)	0541	0.3150	0.2100	0.3175	0.2163	0.0943	3	-0.01		0
301.30	Acid Soluble Selenium , ICP (ppm)	0524	0.5350	0.0600	0.3175	0.2163	0.0943	3	1.01		0
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	0527	0.0600	0.0000				2			0
301.33	Acid Soluble Selenium , ICP, 2017.02 (ppm)	0515	0.2035	0.1550				2			0
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0515	0.0890	0.0340				1			0
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0368	0.3565	0.7129				1			4
301.99	Acid Soluble Selenium , Other (ppm)	0255	0.2090	0.0600	22.67	38.82	3.220	3	-0.58		0
301.99	Acid Soluble Selenium , Other (ppm)	0220	0.3000	0.0000	22.67	38.82	3.220	3	-0.58		0
301.99	Acid Soluble Selenium , Other (ppm)	0506	67.50	9.600	22.67	38.82	3.220	3	1.15		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0465	0.0010	0.0735	0.0419	0.0167	4	-0.65		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0117	0.0476	0.0099	0.0735	0.0419	0.0167	4	-0.62		0



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311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0650	0.0460	0.0735	0.0419	0.0167	4	-0.20		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.1350	0.0100	0.0735	0.0419	0.0167	4	1.47		0
311.99	Sodium, Other (%)	0482	0.0500	0.0000				2			0
311.99	Sodium, Other (%)	0354	0.0800	0.0200				2			0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0105	0.0018	0.0000	0.0022	0.0004	0.0006	4	-1.13		0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0533	0.0021	0.0001	0.0022	0.0004	0.0006	4	-0.47		0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0550	0.0024	0.0020	0.0022	0.0004	0.0006	4	0.47		0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0535	0.0027	0.0003	0.0022	0.0004	0.0006	4	1.13		0
321.03	Acid Soluble Zinc , AA, 965.09, test portion...	0105	0.0018	0.0001				1			0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0255	0.0010	0.0000	0.0023	0.0011	0.0002	6	-1.04	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0444	0.0020	0.0005	0.0023	0.0011	0.0002	6	-0.31	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0433	0.0020	0.0000	0.0023	0.0011	0.0002	6	-0.27	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0035	0.0025	0.0005	0.0023	0.0011	0.0002	6	0.08	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0102	0.0026	0.0000	0.0023	0.0011	0.0002	6	0.20	OK	0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0354	0.0100	0.0000	0.0023	0.0011	0.0002	6	5.94	High	0
321.30	Acid Soluble Zinc , ICP, test portion inorga...	0552	0.0000	0.0000	0.0023	0.0011	0.0002	6			4
321.32	Acid Soluble Zinc , ICP, test portion 2006.0...	0423	23.15	0.5000				0			3
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0106	0.0002	0.0001	0.0014	0.0013	0.0001	4	-0.94		0
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0515	0.0005	0.0000	0.0014	0.0013	0.0001	4	-0.67		0
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0546	0.0019	0.0003	0.0014	0.0013	0.0001	4	0.36		0
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0527	0.0030	0.0000	0.0014	0.0013	0.0001	4	1.24		0
321.33	Acid Soluble Zinc , ICP, 2017.02 (%)	0037	17.19	1.300	0.0014	0.0013	0.0001	4	13141.27		3
321.99	Acid Soluble Zinc , Other (%)	0515	0.0002	0.0002	0.0018	0.0008	0.0002	6	-1.84	OK	0
321.99	Acid Soluble Zinc , Other (%)	0389	0.0015	0.0001	0.0018	0.0008	0.0002	6	-0.40	OK	0
321.99	Acid Soluble Zinc , Other (%)	0476	0.0018	0.0000	0.0018	0.0008	0.0002	6	0.00	OK	0
321.99	Acid Soluble Zinc , Other (%)	0524	0.0021	0.0001	0.0018	0.0008	0.0002	6	0.29	OK	0
321.99	Acid Soluble Zinc , Other (%)	0368	0.0024	0.0001	0.0018	0.0008	0.0002	6	0.64	OK	0
321.99	Acid Soluble Zinc , Other (%)	0220	0.0025	0.0004	0.0018	0.0008	0.0002	6	0.81	OK	0
325.00	Water Soluble Zinc , AA (%)	0506	0.0035	0.0030				1			0
325.30	Water Soluble Zinc , ICP (%)	0541	0.0000	0.0000				0			4

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.