

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 124

Sample # 160911

Statistical Summary

Labs Reporting: 85

MAP

Issue Date : 10/31/2016

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	10	10	10.73	0.4225	10.69		0.3745	0.1480	3.50%		0.1330	2.80%
001.99	Ammoniacal Nitrogen, Other (%)	17	16	10.82	0.3409	10.86		0.2779	0.0868	2.56%		0.0663	2.79%
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	2	2	11.04	0.3465								
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	1		11.18									
010.11	Total Nitrogen, Modified Comprehensive (11%)	7	7	10.96	0.2346	10.96	0.5946	0.2633	0.1244	2.40%	2.71%	0.0861	2.79%
010.12	Total Nitrogen, Salicylic (11%)	1		11.78									
010.17	Total Nitrogen, Comprehensive (11%)	1		10.75									
010.60	Total Nitrogen, Combustion (11%)	52	50	10.96	0.2609	10.97	0.5946	0.2468	0.0436	2.25%	2.71%	0.0800	2.79%
010.99	Total Nitrogen, Other (11%)	9	9	10.91	0.3712	10.98	0.5946	0.2212	0.0921	2.01%	2.71%	0.0824	2.79%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	9	8	52.09	0.4289	52.09		0.4863	0.2149	0.93%		0.2288	2.21%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	20	20	51.26	3.049	51.89		0.9400	0.2627	1.81%		0.2776	2.21%
020.40	Total Phosphorus as P2O5, Automated (%)	7	6	51.70	0.3849	51.70		0.4365	0.2228	0.84%		0.1883	2.21%
020.50	Total Phosphorus as P2O5, ICP (%)	18	18	52.07	2.213	52.14		2.109	0.6213	4.04%		1.103	2.21%
020.99	Total Phosphorus as P2O5, Other (%)	4	4	51.96	0.3608	51.96		0.3608	0.2255	0.69%		0.0850	2.21%
030.20	Citrate Insoluble Phosphorus as P2O5, Spectrophoto... (%)	1		0.1400									
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.3550									
040.20	Indirect Available Phosphorus as P2O5, Spectrophot... (52%)	1		51.42									
040.40	Indirect Available Phosphorus as P2O5, Automated (52%)	1		51.66									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q... (52%)	5	5	51.92	0.2024	51.92	1.0942	0.2024	0.1132	0.39%	1.05%	0.2154	2.21%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q... (52%)	6	5	52.19	0.4050	52.19	1.0942	0.4050	0.2264	0.78%	1.05%	0.1754	2.21%
041.20	Direct Available Phosphorus as P2O5, Spectrophotom... (52%)	1		50.55									
041.21	Direct Available Phosphorus as P2O5, Spectrophotom... (52%)	2	2	51.21	1.089								
041.40	Direct Available Phosphorus as P2O5, Automated (52%)	1		53.54									
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	6	6	51.53	1.996	51.83	1.0942	1.522	0.7769	2.94%	1.06%	0.6549	2.21%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (52%)	5	5	51.48	0.9415	51.48	1.0942	0.9415	0.5263	1.83%	1.06%	0.8060	2.21%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (52%)	14	14	51.14	1.118	51.31	1.0942	0.7485	0.2500	1.46%	1.07%	0.2430	2.21%
041.99	Direct Available Phosphorus as P2O5, Other (52%)	4	4	50.65	1.847	50.65	1.0942	1.847	1.154	3.65%	1.08%	0.1300	2.22%
048.10	Water Soluble Phosphorus as P2O5, Gravimetric Quin... (%)	1		46.22									
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)	8	7	43.47	8.885	46.41		1.570	0.7418	3.38%		0.1475	2.24%
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		46.95									
048.99	Water Soluble Phosphorus as P2O5, Other (%)	4	4	46.30	1.024	46.30		1.024	0.6398	2.21%		1.293	2.25%

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (%)	1		0.0400									
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	2	2	0.1690	0.0127								
050.99	Soluble Potassium as K2O, Other (%)	7	6	0.1440	0.0292	0.1440		0.0331	0.0169	22.98%		0.0000	5.35%
060.00	Water (Free), Vacuum Oven (%)	2	2	2.030	0.1697								
060.20	Water (Free), Karl Fischer (%)	1		1.940									
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,... (%)	2	2	2.435	0.1626								
060.99	Water (Free), Other (%)	2	2	1.884	0.3620								
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	1		0.2525									
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... (%)	1		0.3870									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	6	6	0.3460	0.0280	0.3484		0.0260	0.0133	7.46%		0.0077	4.69%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C (%)	1		0.5034									
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	4	4	0.3635	0.0054	0.3635		0.0054	0.0034	1.48%		0.0079	4.66%
101.99	Acid Soluble Calcium, Other (%)	1		0.3350									
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	1		0.8235									
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2... (%)	1		0.7955									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (%)	5	5	0.8126	0.0676	0.8126		0.0676	0.0378	8.31%		0.0180	4.13%
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A... (%)	1		0.8671									
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A... (%)	4	4	0.8136	0.0602	0.8136		0.0601	0.0376	7.39%		0.0533	4.13%
121.99	Acid Soluble Magnesium, Other (%)	2	2	0.8172	0.0229								
143.99	Elemental Sulfur, Other (%)	2	2	1.293	0.0605								
148.00	Total Sulfur, Combustion (%)	1		1.460									
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (%)	4	4	1.250	0.0666	1.250		0.0666	0.0416	5.33%		0.0169	3.87%
148.99	Total Sulfur, Other (%)	4	4	1.274	0.0258	1.274		0.0258	0.0161	2.02%		0.0415	3.86%
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	1.359	0.0729								
151.00	Acid Soluble Arsenic , AA, test portion as in 2006... (ppm)	1		78.50									
151.30	Acid Soluble Arsenic , ICP (ppm)	5	5	70.41	20.94	70.41		20.94	11.70	29.74%		3.140	8.43%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3... (%)	5	5	81.92	14.30	81.92		14.30	7.994	17.46%		4.049	8.24%
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	2	2	74.80	0.6318								
151.99	Acid Soluble Arsenic , Other (ppm)	2	2	92.23	2.440								
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	3	2	0.0367	0.0075	0.0367		0.0075	0.0066	20.31%		0.0057	6.58%
165.99	Acid Soluble Boron , Other (%)	5	5	0.0079	0.0047	0.0079		0.0047	0.0027	59.78%		0.0021	8.28%
171.99	Water Soluble Boron , Other (%)	1		0.0300									
181.00	Acid Soluble Cadmium , AA, test portion as in 2006... (%)	1		595.0									
181.30	Acid Soluble Cadmium , ICP (ppm)	9	9	228.2	22.03	228.2		24.98	10.41	10.95%		4.265	7.06%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3... (%)	5	5	237.2	19.14	237.2		19.14	10.70	8.07%		10.55	7.02%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	2	2	232.6	6.521								
181.99	Acid Soluble Cadmium , Other (ppm)	3	3	235.6	44.04	235.6		44.04	31.78	18.69%		19.87	7.03%
191.30	Acid Soluble Chromium , ICP (ppm)	9	9	84.95	14.97	88.20		7.638	3.183	8.66%		1.147	8.15%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:... (%)	5	5	91.31	8.009	91.31		8.009	4.477	8.77%		3.785	8.11%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	2	2	86.66	1.848								
191.99	Acid Soluble Chromium , Other (ppm)	3	3	77.86	23.48	77.86		23.48	16.94	30.15%		4.877	8.31%
202.30	Acid Soluble Cobalt , ICP (ppm)	7	7	2.910	1.317	3.145		0.8887	0.4198	28.25%		0.0927	13.46%

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ... (p	3	3	2.103	1.455	2.103		1.455	1.050	69.18%		0.4559	14.30%
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	1		1.594									
202.99	Acid Soluble Cobalt , Other (ppm)	2	2	3.245	0.0071								
221.30	Acid Soluble Copper , ICP, test portion inorganic ... (%)	2	1	0.0002									
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-C (%)	2	1	0.0005									
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-C... (	2	1	0.0006									
221.99	Acid Soluble Copper , Other (%)	5	4	0.0102	0.0197	0.0102		0.0197	0.0123	192.50%		0.0134	7.97%
241.00	Acid Soluble Iron, AA, inorganic 965.09 (%)	1		1.230									
241.03	Acid Soluble Iron, AA, 965.09, test portion 2006.0... (%)	1		1.207									
241.30	Acid Soluble Iron, ICP, test portion inorganic 965... (%)	7	7	1.198	0.1007	1.191		0.0989	0.0467	8.30%		0.0177	3.90%
241.32	Acid Soluble Iron, ICP, test portion 2006.03A-C (%)	1		1.238									
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w... (%)	3	3	1.155	0.0605	1.155		0.0605	0.0437	5.24%		0.0047	3.91%
241.99	Acid Soluble Iron, Other (%)	2	2	1.283	0.1437								
251.00	Acid Soluble Lead , AA, test portion as in 2006.03... (p	1		1,245									
251.30	Acid Soluble Lead , ICP (ppm)	10	10	1,150	218.0	1,184		153.6	60.74	12.98%		22.54	5.51%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN...	5	5	1,029	576.8	1,029		576.8	322.4	56.03%		11.73	5.63%
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	2	2	1,383	216.1								
251.99	Acid Soluble Lead , Other (ppm)	3	3	1,272	234.8	1,272		234.8	169.5	18.46%		181.2	5.46%
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	1		0.0414									
261.15	Acid Soluble Manganese , AA, 965.09, test portion ... (	1		0.0414									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	5	5	0.0390	0.0020	0.0390		0.0020	0.0011	5.19%		0.0004	6.52%
261.31	Acid Soluble Manganese , ICP, test portion 972.02b (%)	1		0.0400									
261.32	Acid Soluble Manganese , ICP, test portion inorgan... (	1		0.0400									
261.34	Acid Soluble Manganese , ICP, test portion 2006.03... (	1		0.0400									
261.35	Acid Soluble Manganese , ICP, test portion 2006.03... (	4	4	0.0381	0.0013	0.0381		0.0013	0.0008	3.43%		0.0008	6.54%
261.99	Acid Soluble Manganese , Other (%)	2	2	0.0381	0.0015								
281.00	Acid Soluble Mercury , AA (ppm)	2	2	81.33	86.50								
281.30	Acid Soluble Mercury , ICP (ppm)	1		0.0000									
281.99	Acid Soluble Mercury , Other (ppm)	1		8.200									
289.30	Acid Soluble Molybdenum , ICP (ppm)	6	6	13.73	1.262	13.73		1.431	0.7303	10.42%		0.4242	10.78%
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	1		12.01									
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/..	5	5	13.38	0.5512	13.38		0.5512	0.3081	4.12%		0.5289	10.83%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (p	2	2	12.66	0.4801								
289.99	Acid Soluble Molybdenum , Other (ppm)	3	3	13.85	1.786	13.85		1.786	1.289	12.89%		0.3800	10.77%
291.30	Acid Soluble Nickel , ICP (ppm)	9	9	15.25	1.069	15.09		0.8157	0.3399	5.40%		0.4622	10.63%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (p	5	5	17.45	5.049	17.45		5.049	2.823	28.93%		0.4730	10.40%
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	2	2	14.79	0.5137								
291.99	Acid Soluble Nickel , Other (ppm)	2	2	16.10	0.1414								
301.30	Acid Soluble Selenium , ICP (ppm)	2	2	2.263	2.337								
301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9:...	2	1	0.5718									
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	1		0.0000									
301.99	Acid Soluble Selenium , Other (ppm)	2	2	9.248	9.260								

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.1686									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test .	3	3	0.1130	0.0232	0.1130		0.0232	0.0168	20.55%		0.0046	5.55%
311.99	Sodium, Other (%)	3	3	0.1318	0.0328	0.1318		0.0328	0.0237	24.87%		0.0003	5.43%
321	Acid Soluble Zinc , AA, inorganic 965.09 (%)	1		0.0067									
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006.... (%)	1		0.0061									
321.3	Acid Soluble Zinc , ICP, test portion inorganic 96... (%)	10	10	0.0075	0.0016	0.0075		0.0018	0.0007	24.39%		0.0003	8.36%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (%)	2	1	0.0062									
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (%)	5	5	0.0067	0.0019	0.0067		0.0019	0.0011	27.97%		0.0002	8.49%
321.99	Acid Soluble Zinc , Other (%)	8	8	0.0065	0.0019	0.0064		0.0012	0.0005	19.12%		0.0002	8.55%

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 160911

Method Precision Report

Issue Date : 10/31/2016

MAP

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility SR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	10	8	10.63	0.3001	0.2922	0.0968	0.3078	2.75%	0.91%	2.90%	3.181
001.99	Ammoniacal Nitrogen, Other (%)	17	15	10.87	0.2716	0.2676	0.0656	0.2755	2.46%	0.60%	2.53%	4.202
010.60	Total Nitrogen, Combustion (11%)	52	48	10.98	0.2400	0.2344	0.0730	0.2455	2.14%	0.66%	2.24%	3.365
010.99	Total Nitrogen, Other (11%)	9	8	11.02	0.1606	0.1504	0.0796	0.1701	1.36%	0.72%	1.54%	2.137
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium MolybdoP (%)	9	8	52.09	0.4289	0.4017	0.2124	0.4544	0.77%	0.41%	0.87%	2.140
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	20	18	52.06	0.7761	0.7583	0.2337	0.7935	1.46%	0.45%	1.52%	3.395
020.50	Total Phosphorus as P2O5, ICP (%)	18	18	52.07	2.213	2.048	1.185	2.366	3.93%	2.28%	4.54%	1.996
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (52%)	14	12	51.43	0.6324	0.6178	0.1913	0.6467	1.20%	0.37%	1.26%	3.381
181.30	Acid Soluble Cadmium , ICP (ppm)	9	9	228.2	22.03	21.85	3.911	22.20	9.58%	1.71%	9.73%	5.675
251.30	Acid Soluble Lead , ICP (ppm)	10	9	1,210	116.0	115.3	18.43	116.7	9.53%	1.52%	9.65%	6.333
291.30	Acid Soluble Nickel , ICP (ppm)	9	8	14.94	0.5922	0.5184	0.4049	0.6578	3.47%	2.71%	4.40%	1.625
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (%)	10	10	0.0075	0.0016	0.0016	0.0003	0.0016	21.27%	4.47%	21.74%	4.858
321.99	Acid Soluble Zinc , Other (%)	8	8	0.0065	0.0019	0.0019	0.0002	0.0019	29.14%	3.44%	29.34%	8.541

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: 124

Sample # 160911

Lab Values

Labs Reporting: 85

MAP

Issue Date : 10/31/2016

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0230	10.25	0.1000	10.69	0.3745	0.1330	10	-1.10	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0309	10.31	0.2900	10.69	0.3745	0.1330	10	-0.96	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0456	10.46	0.1200	10.69	0.3745	0.1330	10	-0.57	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0177	10.57	0.0196	10.69	0.3745	0.1330	10	-0.31	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0231	10.59	0.1800	10.69	0.3745	0.1330	10	-0.25	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	10.65	0.4700	10.69	0.3745	0.1330	10	-0.11	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0090	10.79	0.0700	10.69	0.3745	0.1330	10	0.23	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0117	11.00	0.0000	10.69	0.3745	0.1330	10	0.77	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0513	11.06	0.0600	10.69	0.3745	0.1330	10	0.92	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0486	11.67	0.0200	10.69	0.3745	0.1330	10	2.43	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0394	10.00	0.0610	10.86	0.2779	0.0663	16	-3.10	4%	0
001.99	Ammoniacal Nitrogen, Other (%)	0415	10.17	0.0027	10.86	0.2779	0.0663	16	-2.49	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0524	10.52	0.0300	10.86	0.2779	0.0663	16	-1.25	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	10.68	0.0700	10.86	0.2779	0.0663	16	-0.68	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	10.70	0.2000	10.86	0.2779	0.0663	16	-0.59	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0508	10.70	0.1200	10.86	0.2779	0.0663	16	-0.59	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0371	10.96	0.0100	10.86	0.2779	0.0663	16	0.33	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0522	10.97	0.0300	10.86	0.2779	0.0663	16	0.37	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0405	10.99	0.0700	10.86	0.2779	0.0663	16	0.44	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0520	10.99	0.0300	10.86	0.2779	0.0663	16	0.44	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0487	11.00	0.2000	10.86	0.2779	0.0663	16	0.49	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0493	11.00	0.1000	10.86	0.2779	0.0663	16	0.49	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	11.02	0.0000	10.86	0.2779	0.0663	16	0.57	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0513	11.07	0.0200	10.86	0.2779	0.0663	16	0.75	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	11.17	0.1070	10.86	0.2779	0.0663	16	1.09	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	11.18	0.0100	10.86	0.2779	0.0663	16	1.12	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0420	10.68	0.4400	10.86	0.2779	0.0663	16	-0.66	1%	1
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0489	10.80	0.1100				2			0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0444	11.29	0.4100				2			0
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	0513	11.18	0.0200				1			0
010.11	Total Nitrogen, Modified Comprehensive (11%)	0309	10.56	0.3400	10.96	0.2633	0.0861	7	-1.39	2%	0
010.11	Total Nitrogen, Modified Comprehensive (11%)	0456	10.75	0.1900	10.96	0.2633	0.0861	7	-0.75	1%	0
010.11	Total Nitrogen, Modified Comprehensive (11%)	0105	11.02	0.0300	10.96	0.2633	0.0861	7	0.18	0%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.11	Total Nitrogen, Modified Comprehensive (11%)	0220	11.02	0.0100	10.96	0.2633	0.0861	7	0.18	0%	0
010.11	Total Nitrogen, Modified Comprehensive (11%)	0371	11.05	0.0100	10.96	0.2633	0.0861	7	0.28	0%	0
010.11	Total Nitrogen, Modified Comprehensive (11%)	0500	11.09	0.0200	10.96	0.2633	0.0861	7	0.43	1%	0
010.11	Total Nitrogen, Modified Comprehensive (11%)	0510	11.27	0.0030	10.96	0.2633	0.0861	7	1.04	1%	0
010.12	Total Nitrogen, Salicylic (11%)	0455	11.78	0.0500				1			0
010.17	Total Nitrogen, Comprehensive (11%)	0211	10.75	0.0400				1			0
010.60	Total Nitrogen, Combustion (11%)	0095	10.20*	0.1800	10.97	0.2468	0.0800	50	-3.12	4%	0
010.60	Total Nitrogen, Combustion (11%)	0523	10.40	0.0000	10.97	0.2468	0.0800	50	-2.31	3%	0
010.60	Total Nitrogen, Combustion (11%)	0356	10.51	0.1800	10.97	0.2468	0.0800	50	-1.86	2%	0
010.60	Total Nitrogen, Combustion (11%)	0073	10.54	0.0900	10.97	0.2468	0.0800	50	-1.76	2%	0
010.60	Total Nitrogen, Combustion (11%)	0324	10.55	0.1000	10.97	0.2468	0.0800	50	-1.70	2%	0
010.60	Total Nitrogen, Combustion (11%)	0325	10.60	0.2000	10.97	0.2468	0.0800	50	-1.50	2%	0
010.60	Total Nitrogen, Combustion (11%)	0472	10.66	0.0200	10.97	0.2468	0.0800	50	-1.25	1%	0
010.60	Total Nitrogen, Combustion (11%)	0102	10.67	0.1100	10.97	0.2468	0.0800	50	-1.23	1%	0
010.60	Total Nitrogen, Combustion (11%)	0007	10.70	0.0000	10.97	0.2468	0.0800	50	-1.09	1%	0
010.60	Total Nitrogen, Combustion (11%)	0230	10.70	0.2000	10.97	0.2468	0.0800	50	-1.09	1%	0
010.60	Total Nitrogen, Combustion (11%)	0351	10.76	0.1872	10.97	0.2468	0.0800	50	-0.85	1%	0
010.60	Total Nitrogen, Combustion (11%)	0451	10.78	0.2900	10.97	0.2468	0.0800	50	-0.79	1%	0
010.60	Total Nitrogen, Combustion (11%)	0354	10.82	0.0110	10.97	0.2468	0.0800	50	-0.61	1%	0
010.60	Total Nitrogen, Combustion (11%)	0489	10.83	0.0500	10.97	0.2468	0.0800	50	-0.59	1%	0
010.60	Total Nitrogen, Combustion (11%)	0368	10.84	0.0010	10.97	0.2468	0.0800	50	-0.54	1%	0
010.60	Total Nitrogen, Combustion (11%)	0260	10.84	0.1800	10.97	0.2468	0.0800	50	-0.53	1%	0
010.60	Total Nitrogen, Combustion (11%)	0041	10.85	0.0600	10.97	0.2468	0.0800	50	-0.48	1%	0
010.60	Total Nitrogen, Combustion (11%)	0043	10.88	0.0200	10.97	0.2468	0.0800	50	-0.36	0%	0
010.60	Total Nitrogen, Combustion (11%)	0029	10.91	0.0000	10.97	0.2468	0.0800	50	-0.24	0%	0
010.60	Total Nitrogen, Combustion (11%)	0521	10.96	0.0000	10.97	0.2468	0.0800	50	-0.03	0%	0
010.60	Total Nitrogen, Combustion (11%)	0027	10.99	0.0450	10.97	0.2468	0.0800	50	0.07	0%	0
010.60	Total Nitrogen, Combustion (11%)	0042	11.00	0.0000	10.97	0.2468	0.0800	50	0.12	0%	0
010.60	Total Nitrogen, Combustion (11%)	0025	11.03	0.0400	10.97	0.2468	0.0800	50	0.24	0%	0
010.60	Total Nitrogen, Combustion (11%)	0105	11.04	0.0100	10.97	0.2468	0.0800	50	0.26	0%	0
010.60	Total Nitrogen, Combustion (11%)	0291	11.04	0.0100	10.97	0.2468	0.0800	50	0.26	0%	0
010.60	Total Nitrogen, Combustion (11%)	0494	11.04	0.0200	10.97	0.2468	0.0800	50	0.28	0%	0
010.60	Total Nitrogen, Combustion (11%)	0049	11.05	0.0500	10.97	0.2468	0.0800	50	0.31	0%	0
010.60	Total Nitrogen, Combustion (11%)	0422	11.05	0.0300	10.97	0.2468	0.0800	50	0.31	0%	0
010.60	Total Nitrogen, Combustion (11%)	0035	11.06	0.2100	10.97	0.2468	0.0800	50	0.35	0%	0
010.60	Total Nitrogen, Combustion (11%)	0231	11.07	0.0200	10.97	0.2468	0.0800	50	0.41	0%	0
010.60	Total Nitrogen, Combustion (11%)	0405	11.07	0.0200	10.97	0.2468	0.0800	50	0.41	0%	0
010.60	Total Nitrogen, Combustion (11%)	0177	11.08	0.1100	10.97	0.2468	0.0800	50	0.43	0%	0
010.60	Total Nitrogen, Combustion (11%)	0402	11.08	0.0100	10.97	0.2468	0.0800	50	0.43	0%	0
010.60	Total Nitrogen, Combustion (11%)	0233	11.08	0.0200	10.97	0.2468	0.0800	50	0.45	1%	0
010.60	Total Nitrogen, Combustion (11%)	0136	11.09	0.1100	10.97	0.2468	0.0800	50	0.47	1%	0
010.60	Total Nitrogen, Combustion (11%)	0157	11.10	0.2000	10.97	0.2468	0.0800	50	0.53	1%	0
010.60	Total Nitrogen, Combustion (11%)	0483	11.10	0.2600	10.97	0.2468	0.0800	50	0.53	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (11%)	0055	11.12	0.0740	10.97	0.2468	0.0800	50	0.60	1%	0
010.60	Total Nitrogen, Combustion (11%)	0023	11.14	0.1160	10.97	0.2468	0.0800	50	0.69	1%	0
010.60	Total Nitrogen, Combustion (11%)	0040	11.15	0.1000	10.97	0.2468	0.0800	50	0.73	1%	0
010.60	Total Nitrogen, Combustion (11%)	0482	11.15	0.1000	10.97	0.2468	0.0800	50	0.73	1%	0
010.60	Total Nitrogen, Combustion (11%)	0377	11.16	0.0500	10.97	0.2468	0.0800	50	0.75	1%	0
010.60	Total Nitrogen, Combustion (11%)	0096	11.17	0.0200	10.97	0.2468	0.0800	50	0.81	1%	0
010.60	Total Nitrogen, Combustion (11%)	0444	11.22	0.2100	10.97	0.2468	0.0800	50	0.99	1%	0
010.60	Total Nitrogen, Combustion (11%)	0360	11.22	0.0200	10.97	0.2468	0.0800	50	1.01	1%	0
010.60	Total Nitrogen, Combustion (11%)	0389	11.25	0.0500	10.97	0.2468	0.0800	50	1.12	1%	0
010.60	Total Nitrogen, Combustion (11%)	0516	11.25	0.1000	10.97	0.2468	0.0800	50	1.14	1%	0
010.60	Total Nitrogen, Combustion (11%)	0452	11.30	0.0000	10.97	0.2468	0.0800	50	1.34	2%	0
010.60	Total Nitrogen, Combustion (11%)	0131	11.33	0.0170	10.97	0.2468	0.0800	50	1.44	2%	0
010.60	Total Nitrogen, Combustion (11%)	0421	11.56	0.1000	10.97	0.2468	0.0800	50	2.39	3%	0
010.60	Total Nitrogen, Combustion (11%)	0307	10.25*	0.6730	10.97	0.2468	0.0800	50	-2.93	3%	1
010.60	Total Nitrogen, Combustion (11%)	0406	10.72	0.4600	10.97	0.2468	0.0800	50	-1.01	1%	1
010.99	Total Nitrogen, Other (11%)	0394	10.00*	0.0000	10.98	0.2212	0.0824	9	-4.08	4%	0
010.99	Total Nitrogen, Other (11%)	0506	10.70	0.2000	10.98	0.2212	0.0824	9	-1.16	1%	0
010.99	Total Nitrogen, Other (11%)	0508	10.87	0.1300	10.98	0.2212	0.0824	9	-0.47	1%	0
010.99	Total Nitrogen, Other (11%)	0518	11.01	0.1500	10.98	0.2212	0.0824	9	0.12	0%	0
010.99	Total Nitrogen, Other (11%)	0524	11.05	0.0200	10.98	0.2212	0.0824	9	0.32	0%	0
010.99	Total Nitrogen, Other (11%)	0300	11.09	0.0020	10.98	0.2212	0.0824	9	0.48	1%	0
010.99	Total Nitrogen, Other (11%)	0520	11.11	0.1000	10.98	0.2212	0.0824	9	0.56	1%	0
010.99	Total Nitrogen, Other (11%)	0487	11.15	0.1000	10.98	0.2212	0.0824	9	0.72	1%	0
010.99	Total Nitrogen, Other (11%)	0420	11.17	0.0400	10.98	0.2212	0.0824	9	0.81	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0049	51.38	0.5400	52.09	0.4863	0.2288	8	-1.33	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0500	51.68	0.0000	52.09	0.4863	0.2288	8	-0.77	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0493	52.00	0.1000	52.09	0.4863	0.2288	8	-0.17	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0211	52.01	0.1000	52.09	0.4863	0.2288	8	-0.15	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0090	52.15	0.2400	52.09	0.4863	0.2288	8	0.11	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0157	52.25	0.1000	52.09	0.4863	0.2288	8	0.30	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	52.58	0.5500	52.09	0.4863	0.2288	8	0.91	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	52.67	0.2000	52.09	0.4863	0.2288	8	1.09	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0043	22.73	0.0600	52.09	0.4863	0.2288	8	-55.22	28%	2
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	39.03	0.0100	51.89	0.9400	0.2776	20	-13.68	12%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	49.00	1.000	51.89	0.9400	0.2776	20	-3.07	3%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0415	50.36	0.0501	51.89	0.9400	0.2776	20	-1.62	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0371	51.05	0.2300	51.89	0.9400	0.2776	20	-0.90	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0522	51.53	0.7000	51.89	0.9400	0.2776	20	-0.38	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	51.56	0.0500	51.89	0.9400	0.2776	20	-0.35	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0230	51.70	0.2000	51.89	0.9400	0.2776	20	-0.20	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	51.70	0.0000	51.89	0.9400	0.2776	20	-0.20	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0457	51.77	0.7200	51.89	0.9400	0.2776	20	-0.12	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	51.87	0.0920	51.89	0.9400	0.2776	20	-0.01	0%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0220	51.97	0.2300	51.89	0.9400	0.2776	20	0.08	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0489	51.98	0.0400	51.89	0.9400	0.2776	20	0.10	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	52.10	0.3800	51.89	0.9400	0.2776	20	0.23	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	52.11	0.1700	51.89	0.9400	0.2776	20	0.23	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	52.40	0.0000	51.89	0.9400	0.2776	20	0.55	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0420	52.50	0.2700	51.89	0.9400	0.2776	20	0.65	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0406	52.75	0.4200	51.89	0.9400	0.2776	20	0.92	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0428	52.91	0.1696	51.89	0.9400	0.2776	20	1.09	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0516	53.13	0.3400	51.89	0.9400	0.2776	20	1.32	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0027	53.72	0.4800	51.89	0.9400	0.2776	20	1.95	2%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0042	51.25	0.5000	51.70	0.4365	0.1883	6	-0.92	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0486	51.34	0.1500	51.70	0.4365	0.1883	6	-0.75	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0456	51.49	0.2700	51.70	0.4365	0.1883	6	-0.44	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	52.01	0.0200	51.70	0.4365	0.1883	6	0.63	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0500	52.06	0.0000	51.70	0.4365	0.1883	6	0.73	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	52.07	0.1900	51.70	0.4365	0.1883	6	0.74	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	54.77	3.450	51.70	0.4365	0.1883	6	6.25	3%	1
020.50	Total Phosphorus as P2O5, ICP (%)	0157	47.20	0.8000	52.14	2.109	1.103	18	-2.34	5%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0433	48.56	1.990	52.14	2.109	1.103	18	-1.70	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	50.20	1.000	52.14	2.109	1.103	18	-0.92	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0523	50.90	0.2000	52.14	2.109	1.103	18	-0.59	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	51.12	0.1300	52.14	2.109	1.103	18	-0.49	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0421	51.25	0.1000	52.14	2.109	1.103	18	-0.42	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0025	51.28	3.840	52.14	2.109	1.103	18	-0.41	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0508	51.73	0.3500	52.14	2.109	1.103	18	-0.20	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	52.02	1.870	52.14	2.109	1.103	18	-0.06	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0291	52.16	0.0100	52.14	2.109	1.103	18	0.01	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	52.33	0.4404	52.14	2.109	1.103	18	0.09	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	52.59	2.060	52.14	2.109	1.103	18	0.21	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0402	52.89	0.0300	52.14	2.109	1.103	18	0.35	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	53.31	3.763	52.14	2.109	1.103	18	0.56	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	53.41	2.790	52.14	2.109	1.103	18	0.60	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0521	55.00	0.0000	52.14	2.109	1.103	18	1.36	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	55.10	0.0740	52.14	2.109	1.103	18	1.40	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0422	56.30	0.4000	52.14	2.109	1.103	18	1.97	4%	0
020.99	Total Phosphorus as P2O5, Other (%)	0455	51.53	0.1500	51.96	0.3608	0.0850	4	-1.20	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0513	51.80	0.0700	51.96	0.3608	0.0850	4	-0.45	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0487	52.25	0.1000	51.96	0.3608	0.0850	4	0.81	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0520	52.26	0.0200	51.96	0.3608	0.0850	4	0.84	0%	0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0405	0.1400	0.0000				1			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.3550	0.0900				1			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (52%)	0405	51.42	0.0500				1			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (52%)	0096	51.66	0.0700				1			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041.10	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0177	51.68	0.2268	51.92	0.2024	0.2154	5	-1.22	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0102	51.80	0.0000	51.92	0.2024	0.2154	5	-0.61	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0041	51.94	0.4500	51.92	0.2024	0.2154	5	0.05	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0040	52.00	0.2000	51.92	0.2024	0.2154	5	0.37	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0494	52.21	0.2000	51.92	0.2024	0.2154	5	1.41	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0055	51.82	0.1000	52.19	0.4050	0.1754	5	-0.81	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0513	51.88	0.0400	52.19	0.4050	0.1754	5	-0.68	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0117	52.10	0.2000	52.19	0.4050	0.1754	5	-0.20	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0105	52.36	0.2800	52.19	0.4050	0.1754	5	0.36	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0485	52.81	0.2571	52.19	0.4050	0.1754	5	1.33	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (52%)	0185	47.37*	2.370	52.19	0.4050	0.1754	5	-10.41	5%	1
041.20	Direct Available Phosphorus as P2O5, Spectrop... (52%)	0027	50.55	0.4500				1			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (52%)	0522	50.44*	0.7200				2			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (52%)	0055	51.98	0.2600				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (52%)	0131	53.54	0.1700				1			0
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	0007	47.75*	1.500	51.83	1.522	0.6549	6	-2.39	4%	0
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	0325	51.45	0.5000	51.83	1.522	0.6549	6	-0.22	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	0494	51.60	0.0600	51.83	1.522	0.6549	6	-0.14	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	0368	52.35	0.1596	51.83	1.522	0.6549	6	0.30	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	0452	52.53	0.0500	51.83	1.522	0.6549	6	0.41	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (52%)	0233	53.52	1.660	51.83	1.522	0.6549	6	0.99	2%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (52%)	0117	49.84*	0.9900	51.48	0.9415	0.8060	5	-1.75	2%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (52%)	0023	51.75	1.810	51.48	0.9415	0.8060	5	0.28	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (52%)	0025	51.77	0.7700	51.48	0.9415	0.8060	5	0.30	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (52%)	0360	51.85	0.2100	51.48	0.9415	0.8060	5	0.38	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (52%)	0377	52.23	0.2500	51.48	0.9415	0.8060	5	0.79	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0042	47.85*	0.1000	51.31	0.7485	0.2430	14	-4.63	3%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0486	50.07*	0.3200	51.31	0.7485	0.2430	14	-1.66	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0472	50.67	0.6700	51.31	0.7485	0.2430	14	-0.87	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0230	50.95	0.9000	51.31	0.7485	0.2430	14	-0.48	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0231	51.05	0.0300	51.31	0.7485	0.2430	14	-0.36	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0177	51.14	0.0243	51.31	0.7485	0.2430	14	-0.23	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0043	51.17	0.0800	51.31	0.7485	0.2430	14	-0.19	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0029	51.51	0.1800	51.31	0.7485	0.2430	14	0.26	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0073	51.73	0.2900	51.31	0.7485	0.2430	14	0.55	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0105	51.73	0.0800	51.31	0.7485	0.2430	14	0.56	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0397	51.75	0.0080	51.31	0.7485	0.2430	14	0.58	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0354	52.00	0.1490	51.31	0.7485	0.2430	14	0.92	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0034	52.16	0.3600	51.31	0.7485	0.2430	14	1.13	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (52%)	0136	52.16	0.2100	51.31	0.7485	0.2430	14	1.13	1%	0
041.99	Direct Available Phosphorus as P2O5, Other (52%)	0230	48.00*	0.0000	50.65	1.847	0.1300	4	-1.43	3%	0
041.99	Direct Available Phosphorus as P2O5, Other (52%)	0506	50.80	0.4000	50.65	1.847	0.1300	4	0.08	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (52%)	0105	51.73	0.0700	50.65	1.847	0.1300	4	0.58	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
041.99	Direct Available Phosphorus as P2O5, Other (52%)	0518	52.08	0.0500	50.65	1.847	0.1300	4	0.77	1%	0
048.10	Water Soluble Phosphorus as P2O5, Gravimetric... (%)	0444	46.22	0.1600				1			0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0231	23.43	0.2300	46.41	1.570	0.1475	7	-13.24	25%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0415	45.49	0.0123	46.41	1.570	0.1475	7	-0.53	1%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0394	46.30	0.0000	46.41	1.570	0.1475	7	-0.07	0%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0405	46.36	0.0200	46.41	1.570	0.1475	7	-0.03	0%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0522	46.90	0.1700	46.41	1.570	0.1475	7	0.28	1%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0420	47.44	0.3700	46.41	1.570	0.1475	7	0.59	1%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0220	48.37	0.2300	46.41	1.570	0.1475	7	1.12	2%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0309	38.24	2.300	46.41	1.570	0.1475	7	-4.71	9%	1
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	46.95	0.4300				1			0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0520	44.80	5.010	46.30	1.024	1.293	4	-1.47	2%	0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0487	46.60	0.0000	46.30	1.024	1.293	4	0.29	0%	0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0513	46.72	0.1300	46.30	1.024	1.293	4	0.41	0%	0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0518	47.09	0.0300	46.30	1.024	1.293	4	0.77	1%	0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (%)	0185	0.0400	0.0400				1			0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0486	0.1600	0.0000				2			0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0354	0.1780	0.0020				2			0
050.99	Soluble Potassium as K2O, Other (%)	0325	0.1000	0.0000	0.1440	0.0331	0.0000	6	-1.18	15%	0
050.99	Soluble Potassium as K2O, Other (%)	0096	0.1200	0.0000	0.1440	0.0331	0.0000	6	-0.65	8%	0
050.99	Soluble Potassium as K2O, Other (%)	0389	0.1480	0.0000	0.1440	0.0331	0.0000	6	0.11	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0482	0.1500	0.0000	0.1440	0.0331	0.0000	6	0.16	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0421	0.1700	0.0000	0.1440	0.0331	0.0000	6	0.70	9%	0
050.99	Soluble Potassium as K2O, Other (%)	0521	0.1759	0.0000	0.1440	0.0331	0.0000	6	0.86	11%	0
050.99	Soluble Potassium as K2O, Other (%)	0524	0.1461	0.0243	0.1440	0.0331	0.0000	6	0.06	1%	1
060.00	Water (Free), Vacuum Oven (%)	0007	1.910	0.1800				2			0
060.00	Water (Free), Vacuum Oven (%)	0096	2.150	0.0400				2			0
060.20	Water (Free), Karl Fischer (%)	0394	1.940	0.0000				1			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0513	2.320	0.0200				2			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0394	2.550	0.0000				2			0
060.99	Water (Free), Other (%)	0510	1.628	0.0200				2			0
060.99	Water (Free), Other (%)	0513	2.140	0.0200				2			0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	0.2525	0.0130				1			0
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0105	0.3870	0.0080				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	0.2950	0.0100	0.3484	0.0260	0.0077	6	-1.83	8%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	0.3400	0.0000	0.3484	0.0260	0.0077	6	-0.29	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0307	0.3465	0.0190	0.3484	0.0260	0.0077	6	-0.07	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.3585	0.0030	0.3484	0.0260	0.0077	6	0.35	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	0.3590	0.0020	0.3484	0.0260	0.0077	6	0.36	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0035	0.3770	0.0120	0.3484	0.0260	0.0077	6	0.98	4%	0
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0521	0.5034	0.0000				1			0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0117	0.3572	0.0008	0.3635	0.0054	0.0079	4	-1.18	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0494	0.3619	0.0008	0.3635	0.0054	0.0079	4	-0.30	0%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0421	0.3650	0.0100	0.3635	0.0054	0.0079	4	0.27	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0009	0.3700	0.0200	0.3635	0.0054	0.0079	4	1.20	1%	0
101.99	Acid Soluble Calcium, Other (%)	0389	0.3350	0.0000				1			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.8235	0.0330				1			0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (%)	0105	0.7955	0.0230				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.7325	0.0350	0.8126	0.0676	0.0180	5	-1.19	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0096	0.7720	0.0120	0.8126	0.0676	0.0180	5	-0.60	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0307	0.8095	0.0110	0.8126	0.0676	0.0180	5	-0.05	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0035	0.8390	0.0320	0.8126	0.0676	0.0180	5	0.39	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0472	0.9100	0.0000	0.8126	0.0676	0.0180	5	1.44	6%	0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0521	0.8671	0.0000				1			0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0009	0.7650	0.0100	0.8136	0.0601	0.0533	4	-0.81	3%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0494	0.7715	0.0595	0.8136	0.0601	0.0533	4	-0.70	3%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0117	0.8230	0.0138	0.8136	0.0601	0.0533	4	0.16	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0421	0.8950	0.1300	0.8136	0.0601	0.0533	4	1.35	5%	0
121.99	Acid Soluble Magnesium, Other (%)	0389	0.8010	0.0120				2			0
121.99	Acid Soluble Magnesium, Other (%)	0524	0.8334	0.0231				2			0
143.99	Elemental Sulfur, Other (%)	0472	1.250	0.0000				2			0
143.99	Elemental Sulfur, Other (%)	0389	1.336	0.0070				2			0
148.00	Total Sulfur, Combustion (%)	0351	1.460	0.1030				1			0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0494	1.188	0.0097	1.250	0.0666	0.0169	4	-0.93	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0009	1.200	0.0000	1.250	0.0666	0.0169	4	-0.75	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0117	1.287	0.0080	1.250	0.0666	0.0169	4	0.55	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0421	1.325	0.0500	1.250	0.0666	0.0169	4	1.13	3%	0
148.99	Total Sulfur, Other (%)	0307	1.236	0.0950	1.274	0.0258	0.0415	4	-1.49	2%	0
148.99	Total Sulfur, Other (%)	0096	1.285	0.0100	1.274	0.0258	0.0415	4	0.43	0%	0
148.99	Total Sulfur, Other (%)	0354	1.286	0.0410	1.274	0.0258	0.0415	4	0.45	0%	0
148.99	Total Sulfur, Other (%)	0482	1.290	0.0200	1.274	0.0258	0.0415	4	0.62	1%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	1.307	0.0125				2			0
149.04	Sulfur - HNO3 soluble, ICP (%)	0521	1.410	0.0000				2			0
151.00	Acid Soluble Arsenic , AA, test portion as in... (ppm)	0136	78.50	1.000				1			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0027	42.15	3.100	70.41	20.94	3.140	5	-1.35	20%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	57.80	2.200	70.41	20.94	3.140	5	-0.60	9%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0444	72.65	2.990	70.41	20.94	3.140	5	0.11	2%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	85.00	5.600	70.41	20.94	3.140	5	0.70	10%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0102	94.45	1.809	70.41	20.94	3.140	5	1.15	17%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0515	70.08	5.160	81.92	14.30	4.049	5	-0.83	7%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0009	71.50	1.000	81.92	14.30	4.049	5	-0.73	6%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0117	77.52	0.8800	81.92	14.30	4.049	5	-0.31	3%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0494	85.38	1.826	81.92	14.30	4.049	5	0.24	2%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0105	105.1	11.38	81.92	14.30	4.049	5	1.62	14%	0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	74.36	4.889				2			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0230	75.25	1.500				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
151.99	Acid Soluble Arsenic , Other (ppm)	0009	90.50	3.000				2			0
151.99	Acid Soluble Arsenic , Other (ppm)	0042	93.95	13.70				2			0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0389	0.0315	0.0013				2			0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0354	0.0420	0.0100				2			0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0521	0.0000	0.0000				2			4
165.99	Acid Soluble Boron , Other (%)	0421	0.0030	0.0000	0.0079	0.0047	0.0021	5	-1.04	31%	0
165.99	Acid Soluble Boron , Other (%)	0009	0.0047	0.0001	0.0079	0.0047	0.0021	5	-0.69	21%	0
165.99	Acid Soluble Boron , Other (%)	0524	0.0071	0.0005	0.0079	0.0047	0.0021	5	-0.19	6%	0
165.99	Acid Soluble Boron , Other (%)	0482	0.0100	0.0000	0.0079	0.0047	0.0021	5	0.43	13%	0
165.99	Acid Soluble Boron , Other (%)	0472	0.0150	0.0100	0.0079	0.0047	0.0021	5	1.49	44%	0
171.99	Water Soluble Boron , Other (%)	0402	0.0300	0.0000				1			0
181.00	Acid Soluble Cadmium , AA, test portion as in... (ppm)	0136	595.0	10.00				1			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	196.0	10.00	228.2	24.98	4.265	9	-1.19	7%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	199.5	9.000	228.2	24.98	4.265	9	-1.06	6%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0523	209.2	1.960	228.2	24.98	4.265	9	-0.70	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	228.6	7.900	228.2	24.98	4.265	9	0.01	0%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0389	231.0	2.000	228.2	24.98	4.265	9	0.10	1%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	238.5	1.000	228.2	24.98	4.265	9	0.38	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	244.1	0.9100	228.2	24.98	4.265	9	0.59	3%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	250.3	4.617	228.2	24.98	4.265	9	0.82	5%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	256.5	1.000	228.2	24.98	4.265	9	1.05	6%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0515	213.5	7.609	237.2	19.14	10.55	5	-1.23	5%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0494	227.8	15.34	237.2	19.14	10.55	5	-0.49	2%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0117	234.9	1.800	237.2	19.14	10.55	5	-0.12	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0009	245.0	10.00	237.2	19.14	10.55	5	0.41	2%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0105	264.6	18.00	237.2	19.14	10.55	5	1.43	6%	0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0230	228.0	4.000				2			0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	237.2	2.749				2			0
181.99	Acid Soluble Cadmium , Other (ppm)	0042	200.4	2.600	235.6	44.04	19.87	3	-0.80	7%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0506	221.5	7.000	235.6	44.04	19.87	3	-0.32	3%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0009	285.0	50.00	235.6	44.04	19.87	3	1.12	10%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0027	47.50	1.400	88.20	7.638	1.147	9	-4.92	23%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	83.90	0.0000	88.20	7.638	1.147	9	-0.52	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	84.80	3.600	88.20	7.638	1.147	9	-0.41	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	85.57	0.4000	88.20	7.638	1.147	9	-0.32	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	85.60	0.8000	88.20	7.638	1.147	9	-0.31	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0523	89.99	1.730	88.20	7.638	1.147	9	0.22	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	94.10	1.400	88.20	7.638	1.147	9	0.71	3%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0389	94.20	0.4000	88.20	7.638	1.147	9	0.73	3%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	98.87	0.5965	88.20	7.638	1.147	9	1.29	6%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0009	85.00	0.0000	91.31	8.009	3.785	5	-0.79	3%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0117	85.79	0.4700	91.31	8.009	3.785	5	-0.69	3%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0494	87.36	6.541	91.31	8.009	3.785	5	-0.49	2%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0515	94.40	8.916	91.31	8.009	3.785	5	0.39	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0105	104.0	3.000	91.31	8.009	3.785	5	1.58	7%	0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0230	85.35	0.3000				2			0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0515	87.96	4.538				2			0
191.99	Acid Soluble Chromium , Other (ppm)	0506	50.75	1.500	77.86	23.48	4.877	3	-1.15	17%	0
191.99	Acid Soluble Chromium , Other (ppm)	0042	91.33	4.130	77.86	23.48	4.877	3	0.57	9%	0
191.99	Acid Soluble Chromium , Other (ppm)	0009	91.50	9.000	77.86	23.48	4.877	3	0.58	9%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	0.1650	0.0100	3.145	0.8887	0.0927	7	-3.03	47%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	2.445	0.0300	3.145	0.8887	0.0927	7	-0.71	11%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0389	3.100	0.0000	3.145	0.8887	0.0927	7	-0.05	1%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0523	3.195	0.0500	3.145	0.8887	0.0927	7	0.05	1%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	3.670	0.1800	3.145	0.8887	0.0927	7	0.53	8%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	3.846	0.0790	3.145	0.8887	0.0927	7	0.71	11%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	3.950	0.3000	3.145	0.8887	0.0927	7	0.82	13%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0009	1.200	0.2000	2.103	1.455	0.4559	3	-0.62	21%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0515	1.328	0.5050	2.103	1.455	0.4559	3	-0.53	18%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0494	3.781	0.6628	2.103	1.455	0.4559	3	1.15	40%	0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	1.594	0.2200				1			0
202.99	Acid Soluble Cobalt , Other (ppm)	0042	3.240	0.0800				2			0
202.99	Acid Soluble Cobalt , Other (ppm)	0009	3.250	0.5000				2			0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0433	0.0002	0.0001				1			0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0354	0.0000	0.0000				1			4
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0394	0.0005	0.0000				1			0
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0521	0.0000	0.0000				1			4
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0515	0.0006	0.0001				1			0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0009	0.0000	0.0000				1			4
221.99	Acid Soluble Copper , Other (%)	0523	0.0003	0.0001	0.0102	0.0197	0.0134	4	-0.51	49%	0
221.99	Acid Soluble Copper , Other (%)	0506	0.0005	0.0001	0.0102	0.0197	0.0134	4	-0.50	48%	0
221.99	Acid Soluble Copper , Other (%)	0515	0.0005	0.0001	0.0102	0.0197	0.0134	4	-0.50	48%	0
221.99	Acid Soluble Copper , Other (%)	0524	0.0398	0.0533	0.0102	0.0197	0.0134	4	1.50	144%	0
221.99	Acid Soluble Copper , Other (%)	0009	0.0000	0.0000	0.0102	0.0197	0.0134	4			4
241.00	Acid Soluble Iron, AA, inorganic 965.09 (%)	0105	1.230	0.0210				1			0
241.03	Acid Soluble Iron, AA, 965.09, test portion 2... (%)	0105	1.207	0.0150				1			0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0354	1.079	0.0360	1.191	0.0989	0.0177	7	-1.03	5%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0096	1.120	0.0200	1.191	0.0989	0.0177	7	-0.65	3%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0402	1.160	0.0000	1.191	0.0989	0.0177	7	-0.29	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0307	1.165	0.0280	1.191	0.0989	0.0177	7	-0.24	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0035	1.235	0.0100	1.191	0.0989	0.0177	7	0.40	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0482	1.240	0.0200	1.191	0.0989	0.0177	7	0.45	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0472	1.385	0.0100	1.191	0.0989	0.0177	7	1.77	8%	0
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0521	1.238	0.0000				1			0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0009	1.100	0.0000	1.155	0.0605	0.0047	3	-0.91	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0117	1.146	0.0140	1.155	0.0605	0.0047	3	-0.15	0%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0421	1.220	0.0000	1.155	0.0605	0.0047	3	1.07	3%	0
241.99	Acid Soluble Iron, Other (%)	0389	1.182	0.0210				2			0
241.99	Acid Soluble Iron, Other (%)	0524	1.385	0.0575				2			0
251.00	Acid Soluble Lead , AA, test portion as in 20... (ppm)	0136	1,245	10.00				1			0
251.30	Acid Soluble Lead , ICP (ppm)	0027	613.5	13.00	1,184	153.6	22.54	10	-3.45	24%	0
251.30	Acid Soluble Lead , ICP (ppm)	0444	1,039	31.00	1,184	153.6	22.54	10	-0.88	6%	0
251.30	Acid Soluble Lead , ICP (ppm)	0523	1,096	6.690	1,184	153.6	22.54	10	-0.53	4%	0
251.30	Acid Soluble Lead , ICP (ppm)	0035	1,133	44.00	1,184	153.6	22.54	10	-0.31	2%	0
251.30	Acid Soluble Lead , ICP (ppm)	0482	1,179	29.00	1,184	153.6	22.54	10	-0.03	0%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	1,210	20.00	1,184	153.6	22.54	10	0.16	1%	0
251.30	Acid Soluble Lead , ICP (ppm)	0389	1,225	10.00	1,184	153.6	22.54	10	0.25	2%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	1,287	18.00	1,184	153.6	22.54	10	0.62	4%	0
251.30	Acid Soluble Lead , ICP (ppm)	0524	1,304	21.19	1,184	153.6	22.54	10	0.73	5%	0
251.30	Acid Soluble Lead , ICP (ppm)	0102	1,418	32.54	1,184	153.6	22.54	10	1.42	10%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0494	1.158	0.0706	1,029	576.8	11.73	5	-1.78	50%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0117	1,208	1.000	1,029	576.8	11.73	5	0.31	9%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0009	1,300	0.0000	1,029	576.8	11.73	5	0.47	13%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0515	1,302	20.49	1,029	576.8	11.73	5	0.47	13%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0105	1,337	37.10	1,029	576.8	11.73	5	0.53	15%	0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0230	1,230	0.0000				2			0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	1,536	98.14				2			0
251.99	Acid Soluble Lead , Other (ppm)	0042	1,031	143.7	1,272	234.8	181.2	3	-1.03	9%	0
251.99	Acid Soluble Lead , Other (ppm)	0506	1,285	0.0000	1,272	234.8	181.2	3	0.06	1%	0
251.99	Acid Soluble Lead , Other (ppm)	0009	1,500	400.0	1,272	234.8	181.2	3	0.97	9%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0105	0.0414	0.0016				1			0
261.15	Acid Soluble Manganese , AA, 965.09, test por... (%)	0105	0.0414	0.0015				1			0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0354	0.0360	0.0000	0.0390	0.0020	0.0004	5	-1.47	4%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0096	0.0381	0.0002	0.0390	0.0020	0.0004	5	-0.44	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0307	0.0395	0.0010	0.0390	0.0020	0.0004	5	0.26	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0472	0.0400	0.0000	0.0390	0.0020	0.0004	5	0.50	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0035	0.0413	0.0008	0.0390	0.0020	0.0004	5	1.15	3%	0
261.31	Acid Soluble Manganese , ICP, test portion 97... (%)	0482	0.0400	0.0000				1			0
261.32	Acid Soluble Manganese , ICP, test portion in... (%)	0402	0.0400	0.0000				1			0
261.34	Acid Soluble Manganese , ICP, test portion 20... (%)	0521	0.0400	0.0000				1			0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0494	0.0372	0.0021	0.0381	0.0013	0.0008	4	-0.70	1%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0009	0.0375	0.0010	0.0381	0.0013	0.0008	4	-0.43	1%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0117	0.0376	0.0000	0.0381	0.0013	0.0008	4	-0.35	1%	0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0421	0.0400	0.0000	0.0381	0.0013	0.0008	4	1.48	3%	0
261.99	Acid Soluble Manganese , Other (%)	0389	0.0371	0.0001				2			0
261.99	Acid Soluble Manganese , Other (%)	0524	0.0392	0.0007				2			0
281.00	Acid Soluble Mercury , AA (ppm)	0117	20.17	1.530				2			0
281.00	Acid Soluble Mercury , AA (ppm)	0506	142.5	3.000				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000				0			4

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
281.99	Acid Soluble Mercury , Other (ppm)	0042	8.200	0.3000				1			0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	12.21	0.1600	13.73	1.431	0.4242	6	-0.95	6%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	12.45	0.7000	13.73	1.431	0.4242	6	-0.80	5%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0521	13.70	0.0000	13.73	1.431	0.4242	6	-0.02	0%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	13.75	0.9000	13.73	1.431	0.4242	6	0.01	0%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0524	15.14	0.3900	13.73	1.431	0.4242	6	0.87	5%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0102	15.16	0.3950	13.73	1.431	0.4242	6	0.89	5%	0
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	0394	12.01	0.0500				1			0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0515	12.67	1.072	13.38	0.5512	0.5289	5	-1.29	3%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0009	13.00	0.0000	13.38	0.5512	0.5289	5	-0.69	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0494	13.46	0.3031	13.38	0.5512	0.5289	5	0.15	0%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0117	13.73	0.3000	13.38	0.5512	0.5289	5	0.63	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0105	14.05	0.9700	13.38	0.5512	0.5289	5	1.20	2%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0515	12.32	2.318				2			0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0230	13.00	0.0000				2			0
289.99	Acid Soluble Molybdenum , Other (ppm)	0042	11.79	0.6400	13.85	1.786	0.3800	3	-1.15	7%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0506	14.75	0.5000	13.85	1.786	0.3800	3	0.51	3%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0009	15.00	0.0000	13.85	1.786	0.3800	3	0.65	4%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	14.25	0.1900	15.09	0.8157	0.4622	9	-0.96	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	14.40	0.8000	15.09	0.8157	0.4622	9	-0.79	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0523	14.47	0.3800	15.09	0.8157	0.4622	9	-0.71	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	14.80	0.6000	15.09	0.8157	0.4622	9	-0.33	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	14.95	0.7000	15.09	0.8157	0.4622	9	-0.16	0%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	15.10	0.4000	15.09	0.8157	0.4622	9	0.01	0%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0521	15.76	0.0000	15.09	0.8157	0.4622	9	0.75	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0524	15.81	0.8900	15.09	0.8157	0.4622	9	0.80	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	17.69	0.2000	15.09	0.8157	0.4622	9	2.93	9%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0515	12.80	1.019	17.45	5.049	0.4730	5	-0.92	13%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0494	15.79	0.5960	17.45	5.049	0.4730	5	-0.33	5%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0009	16.00	0.0000	17.45	5.049	0.4730	5	-0.29	4%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0117	16.59	0.2800	17.45	5.049	0.4730	5	-0.17	2%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0105	26.10	0.4700	17.45	5.049	0.4730	5	1.71	25%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	14.42	0.6030				2			0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0230	15.15	0.1000				2			0
291.99	Acid Soluble Nickel , Other (ppm)	0009	16.00	0.0000				2			0
291.99	Acid Soluble Nickel , Other (ppm)	0042	16.20	1.000				2			0
301.30	Acid Soluble Selenium , ICP (ppm)	0524	0.6102	0.0281				2			0
301.30	Acid Soluble Selenium , ICP (ppm)	0523	3.915	0.0900				2			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0515	0.5718	0.4826				1			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified... (ppm)	0009	1.200	2.400				1			4
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
301.99	Acid Soluble Selenium , Other (ppm)	0009	2.700	0.2000				2			0
301.99	Acid Soluble Selenium , Other (ppm)	0042	15.80	0.4500				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.1686	0.0000				1			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0009	0.0960	0.0040	0.1130	0.0232	0.0046	3	-0.73	8%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0494	0.1036	0.0088	0.1130	0.0232	0.0046	3	-0.41	4%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0035	0.1395	0.0010	0.1130	0.0232	0.0046	3	1.14	12%	0
311.99	Sodium, Other (%)	0482	0.1000	0.0000	0.1318	0.0328	0.0003	3	-0.97	12%	0
311.99	Sodium, Other (%)	0096	0.1300	0.0000	0.1318	0.0328	0.0003	3	-0.06	1%	0
311.99	Sodium, Other (%)	0354	0.1655	0.0010	0.1318	0.0328	0.0003	3	1.03	13%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0105	0.0067	0.0003				1			0
321.03	Acid Soluble Zinc , AA, 965.09, test portion ... (%)	0105	0.0061	0.0016				1			0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0307	0.0055	0.0010	0.0075	0.0018	0.0003	10	-1.01	13%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0420	0.0059	0.0000	0.0075	0.0018	0.0003	10	-0.81	11%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0230	0.0061	0.0000	0.0075	0.0018	0.0003	10	-0.70	9%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0233	0.0070	0.0001	0.0075	0.0018	0.0003	10	-0.27	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0035	0.0071	0.0003	0.0075	0.0018	0.0003	10	-0.22	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0433	0.0072	0.0003	0.0075	0.0018	0.0003	10	-0.17	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0102	0.0072	0.0002	0.0075	0.0018	0.0003	10	-0.14	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0096	0.0095	0.0001	0.0075	0.0018	0.0003	10	1.00	13%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0354	0.0095	0.0010	0.0075	0.0018	0.0003	10	1.03	14%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0482	0.0100	0.0000	0.0075	0.0018	0.0003	10	1.28	17%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0394	0.0062	0.0000				1			0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0521	0.0000	0.0000				1			4
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0105	0.0053	0.0001	0.0067	0.0019	0.0002	5	-0.78	11%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0494	0.0060	0.0003	0.0067	0.0019	0.0002	5	-0.41	6%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0515	0.0060	0.0002	0.0067	0.0019	0.0002	5	-0.38	5%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	117	0.0064	0.0002	0.0067	0.0019	0.0002	5	-0.17	0.02380952	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	421	0.0100	0.0000	0.0067	0.0019	0.0002	5	1.74	0.24404762	0
321.99	Acid Soluble Zinc , Other (%)	27	0.0032	0.0002	0.0064	0.0012	0.0002	8	-2.40	0.2509738	0
321.99	Acid Soluble Zinc , Other (%)	9	0.0055	0.0005	0.0064	0.0012	0.0002	8	-0.73	0.07587725	0
321.99	Acid Soluble Zinc , Other (%)	389	0.0061	0.0005	0.0064	0.0012	0.0002	8	-0.28	0.02918483	0
321.99	Acid Soluble Zinc , Other (%)	515	0.0063	0.0000	0.0064	0.0012	0.0002	8	-0.09	0.00972966	0
321.99	Acid Soluble Zinc , Other (%)	524	0.0068	0.0003	0.0064	0.0012	0.0002	8	0.24	0.02528965	0
321.99	Acid Soluble Zinc , Other (%)	42	0.0070	0.0004	0.0064	0.0012	0.0002	8	0.43	0.04474482	0
321.99	Acid Soluble Zinc , Other (%)	523	0.0070	0.0000	0.0064	0.0012	0.0002	8	0.43	0.04474482	0
321.99	Acid Soluble Zinc , Other (%)	506	0.0100	0.0000	0.0064	0.0012	0.0002	8	2.66	0.27820689	0

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 and a 4 flag indicates rejected due to 0 value submitted. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an asterisk indicates that the value is lower than the Analyte value less the IA. Method or Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.