

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 160211

Grade 24-25-4

Statistical Summary

Methods: 137

Labs Reporting: 83

Issue Date : 03/31/2016

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	5.541	0.5515	5.519		0.5736	0.1814	10.39%		0.2051	3.09%
001.99	Ammoniacal Nitrogen, Other (%)	15	14	5.494	0.7480	5.515		0.5624	0.1503	10.20%		0.0592	3.09%
002.99	Nitrate Nitrogen, Other (%)	2	2	0.7780	1.092								
003.10	Water Insoluble Nitrogen, Method I (%)	5	5	0.6624	0.0554	0.6624		0.0554	0.0248	8.36%		0.0417	4.26%
003.99	Water Insoluble Nitrogen, Other (%)	3	3	0.5855	0.0315	0.5855		0.0315	0.0182	5.38%		0.1170	4.34%
005.00	Urea Nitrogen, Urease (as N) (%)	4	4	10.37	1.457	10.37		1.457	0.7285	14.05%		0.1204	2.81%
005.99	Urea Nitrogen, Other (%)	4	4	11.94	3.093	11.94		3.093	1.546	25.91%		0.0825	2.75%
007.99	Urea, Other (%)	1		10.35									
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	1		5.835									
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	1		7.610									
010.11	Total Nitrogen, Modified Comprehensive (24%)	9	9	23.85	0.7327	23.98	0.7884	0.4803	0.1601	2.00%	1.64%	0.1656	2.48%
010.12	Total Nitrogen, Salicylic (24%)	4	4	24.81	0.6994	24.81	0.7884	0.6994	0.3497	2.82%	1.59%	0.1528	2.47%
010.16	Total Nitrogen, Raney (24%)	1		25.04									
010.60	Total Nitrogen, Combustion (24%)	55	54	24.68	0.3733	24.68	0.7884	0.3303	0.0449	1.34%	1.60%	0.1474	2.47%
010.99	Total Nitrogen, Other (24%)	9	9	24.10	0.6333	24.24	0.7884	0.2958	0.0986	1.22%	1.63%	0.1978	2.48%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	5	5	25.26	0.3096	25.26		0.3096	0.1385	1.23%		0.1620	2.46%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	16	16	25.13	0.3870	25.14		0.3927	0.0982	1.56%		0.1937	2.46%
020.40	Total Phosphorus as P2O5, Automated (%)	4	4	25.19	0.4189	25.19		0.4189	0.2094	1.66%		0.1900	2.46%
020.50	Total Phosphorus as P2O5, ICP (%)	16	15	24.85	0.9860	24.81		1.030	0.2659	4.15%		0.2384	2.47%
020.99	Total Phosphorus as P2O5, Other (%)	3	3	24.61	0.9144	24.61		0.9144	0.5280	3.72%		0.4410	2.47%
030.20	Citrate Insoluble Phosphorus as P2O5, Spectrophoto... (%)	1		0.0350									
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.0900									
040.20	Indirect Available Phosphorus as P2O5, Spectrophot... (25%)	1		25.20									
040.40	Indirect Available Phosphorus as P2O5, Automated (25%)	1		24.94									
040.99	Indirect Available Phosphorus as P2O5, Other (25%)	1		25.04									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q... (25%)	6	6	24.71	0.2327	24.73	0.7300	0.2334	0.0953	0.94%	1.48%	0.2252	2.47%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q... (25%)	7	7	25.01	0.4648	25.01	0.7300	0.5257	0.1987	2.10%	1.46%	0.3629	2.46%
041.20	Direct Available Phosphorus as P2O5, Spectrophotom... (25%)	1		25.63									
041.21	Direct Available Phosphorus as P2O5, Spectrophotom... (25%)	2	2	23.46	1.962								
041.40	Direct Available Phosphorus as P2O5, Automated (25%)	2	2	24.30	0.2015								
041.50	Direct Available Phosphorus as P2O5, ICP (25%)	4	4	24.36	0.9994	24.36	0.7300	0.9994	0.4997	4.10%	1.50%	0.8489	2.47%

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041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (25%)	6	6	24.91	0.3143	24.91	0.7300	0.3564	0.1455	1.43%	1.47%	0.2783	2.47%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (25%)	13	13	24.78	0.6055	24.80	0.7300	0.6494	0.1801	2.62%	1.47%	0.1978	2.47%
041.99	Direct Available Phosphorus as P2O5, Other (25%)	2	2	25.12	0.0955								
042.99	Water Soluble Orthophosphate as P2O5, Other (%)	1		23.38									
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)	4	4	22.91	0.8160	22.91		0.8160	0.4080	3.56%		0.2264	2.50%
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		22.85									
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	1		22.12									
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	11	11	4.125	0.3463	4.186	0.4126	0.2161	0.0651	5.16%	4.93%	0.0718	3.22%
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	7	6	3.698	0.3404	3.703	0.4126	0.3728	0.1522	10.07%	5.57%	0.0283	3.28%
050.31	Soluble Potassium as K2O, AA (Citrate) (4%)	1		4.060									
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (4%)	1		4.435									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	10	10	4.217	0.3466	4.196	0.4126	0.3438	0.1087	8.19%	4.92%	0.0982	3.22%
050.51	Soluble Potassium as K2O, ICP (Citrate) (4%)	5	5	4.272	0.1395	4.272	0.4126	0.1395	0.0624	3.27%	4.83%	0.0720	3.21%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	8	8	4.251	0.2131	4.251	0.4126	0.2417	0.0854	5.69%	4.85%	0.0955	3.22%
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala... (4%)	4	4	4.044	0.2116	4.044	0.4126	0.2116	0.1058	5.23%	5.10%	0.0235	3.24%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra... (4%)	4	4	4.164	0.2191	4.164	0.4126	0.2191	0.1095	5.26%	4.95%	0.0875	3.23%
050.62	Soluble Potassium as K2O, Flame Photometric (Citra... (4%)	4	4	4.046	0.2108	4.046	0.4126	0.2108	0.1054	5.21%	5.10%	0.1615	3.24%
050.99	Soluble Potassium as K2O, Other (4%)	27	25	4.155	0.4617	4.100	0.4126	0.2687	0.0537	6.55%	5.03%	0.0728	3.23%
060.00	Water (Free), Vacuum Oven (%)	3	3	1.078	0.2910	1.078		0.2910	0.1680	26.98%		0.0233	3.95%
060.20	Water (Free), Karl Fischer (%)	1		1.855									
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,... (%)	2	2	4.063	0.6187								
060.99	Water (Free), Other (%)	2	2	2.010	0.3041								
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... (%)	1		0.3828									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	10	10	0.3837	0.0828	0.3614		0.0237	0.0075	6.57%		0.0127	4.66%
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	4	4	0.3495	0.0102	0.3495		0.0102	0.0051	2.91%		0.0168	4.69%
101.99	Acid Soluble Calcium, Other (%)	2	2	0.3493	0.0506								
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	1		0.3366									
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2... (%)	1		0.3360									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (%)	10	9	0.3817	0.0383	0.3806		0.0409	0.0136	10.74%		0.0050	4.63%
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A... (%)	4	4	0.3716	0.0122	0.3716		0.0122	0.0061	3.28%		0.0101	4.64%
121.99	Acid Soluble Magnesium, Other (%)	2	2	0.3900	0.0071								
143.99	Elemental Sulfur, Other (%)	1		0.8800									
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	1		0.7700									
148.00	Total Sulfur, Combustion (%)	1		0.8985									
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (%)	6	6	0.8912	0.0723	0.9041		0.0496	0.0203	5.49%		0.0195	4.06%
148.99	Total Sulfur, Other (%)	7	6	0.8275	0.0838	0.8275		0.0951	0.0388	11.49%		0.0153	4.12%
151.00	Acid Soluble Arsenic , AA, test portion as in 2006... (ppm)	1		7.050									
151.30	Acid Soluble Arsenic , ICP (ppm)	8	7	6.763	0.8492	6.631		0.6290	0.2377	9.49%		0.1661	12.03%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3... (ppm)	3	3	6.715	0.8671	6.715		0.8671	0.5006	12.91%		0.4818	12.01%
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	3	3	4.349	1.021	4.349		1.021	0.5892	23.47%		0.5757	12.82%
151.99	Acid Soluble Arsenic , Other (ppm)	2	2	5.255	2.100								
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	1		0.0295									

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165.99	Acid Soluble Boron , Other (%)	4	4	0.0145	0.0103	0.0145		0.0103	0.0052	71.24%		0.0021	7.56%
181.00	Acid Soluble Cadmium , AA, test portion as in 2006...	2	2	2.548	0.4914								
181.30	Acid Soluble Cadmium , ICP (ppm)	11	11	1.865	0.2671	1.860		0.2928	0.0883	15.74%		0.1060	14.57%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3...	4	4	1.985	0.0901	1.985		0.0901	0.0450	4.54%		0.0562	14.43%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	1		1.390									
181.99	Acid Soluble Cadmium , Other (ppm)	3	3	1.570	0.5941	1.570		0.5941	0.3430	37.84%		0.0333	14.95%
190.99	Water Soluble Chlorine, Other (%)	1		2.970									
191.00	Acid Soluble Chromium , AA, test portion as in 200...	1		49.77									
191.30	Acid Soluble Chromium , ICP (ppm)	11	10	41.19	2.736	41.19		3.102	0.9810	7.53%		0.7771	9.14%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:...	4	4	42.96	1.834	42.96		1.834	0.9172	4.27%		1.273	9.08%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	2	2	48.38	19.06								
191.99	Acid Soluble Chromium , Other (ppm)	4	4	33.62	10.57	33.62		10.57	5.284	31.43%		1.330	9.42%
202.30	Acid Soluble Cobalt , ICP (ppm)	8	7	1.760	0.2233	1.760		0.2532	0.0957	14.38%		0.0383	14.69%
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ...	3	2	1.638	0.1819	1.638		0.1819	0.1286	11.11%		0.0498	14.85%
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	1		1.225									
202.99	Acid Soluble Cobalt , Other (ppm)	2	2	1.118	0.4702								
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	1		0.0008									
221.03	Acid Soluble Copper , AA, 965.09, test portion 200...	1		7.700									
221.30	Acid Soluble Copper , ICP, test portion inorganic ...	7	6	0.0043	0.0058	0.0034		0.0046	0.0019	132.27%		0.0010	9.39%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-C ...	1		0.0004									
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-C...	1		0.0009									
221.99	Acid Soluble Copper , Other (%)	3	2	10.86	15.05	10.86		15.05	10.64	138.62%		0.2050	2.79%
241.03	Acid Soluble Iron, AA, 965.09, test portion 2006.0...	1		0.5776									
241.30	Acid Soluble Iron, ICP, test portion inorganic 965...	10	9	0.5719	0.0693	0.5556		0.0309	0.0103	5.57%		0.0071	4.37%
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w...	4	4	0.5493	0.0104	0.5493		0.0104	0.0052	1.90%		0.0231	4.38%
241.99	Acid Soluble Iron, Other (%)	2	2	0.5135	0.0233								
251.00	Acid Soluble Lead , AA, test portion as in 2006.03...	1		0.0000									
251.30	Acid Soluble Lead , ICP (ppm)	9	7	1.546	0.8339	1.546		0.9456	0.3574	61.17%		0.1799	14.98%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN...	2	2	2.573	1.449								
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	1		1.150									
251.99	Acid Soluble Lead , Other (ppm)	3	3	2.112	2.113	2.112		2.113	1.220	100.08%		0.1033	14.29%
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	1		0.0224									
261.15	Acid Soluble Manganese , AA, 965.09, test portion ...	2	2	0.0180	0.0001								
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	7	6	0.0183	0.0009	0.0181		0.0006	0.0002	3.37%		0.0002	7.32%
261.31	Acid Soluble Manganese , ICP, test portion 972.02b (%)	1		0.0200									
261.32	Acid Soluble Manganese , ICP, test portion inorgan...	1		0.0466									
261.35	Acid Soluble Manganese , ICP, test portion 2006.03...	2	2	0.0181	0.0031								
261.99	Acid Soluble Manganese , Other (%)	2	2	0.0173	0.0011								
281.00	Acid Soluble Mercury , AA (ppm)	1		154.0									
281.30	Acid Soluble Mercury , ICP (ppm)	3	2	0.0660	0.0693	0.0660		0.0693	0.0490	104.99%		0.0050	24.08%
281.99	Acid Soluble Mercury , Other (ppm)	1		0.0230									
289.30	Acid Soluble Molybdenum , ICP (ppm)	7	5	6.105	0.6821	6.105		0.6821	0.3050	11.17%		0.1039	12.18%

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289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	1		5.305									
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/... (ppm)	4	4	6.437	0.9783	6.437		0.9783	0.4891	15.20%		0.6057	12.09%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (ppm)	3	3	4.100	1.497	4.100		1.497	0.8641	36.50%		0.8260	12.94%
289.99	Acid Soluble Molybdenum , Other (ppm)	3	3	5.712	0.7794	5.712		0.7794	0.4500	13.65%		0.5167	12.31%
291.00	Acid Soluble Nickel , AA, test portion as in 2006.... (ppm)	2	2	7.573	0.8096								
291.30	Acid Soluble Nickel , ICP (ppm)	10	10	8.472	1.265	8.306		0.9973	0.3154	12.01%		0.2823	11.63%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (ppm)	4	4	8.278	0.6824	8.278		0.6824	0.3412	8.24%		0.7597	11.64%
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	3	3	7.857	3.294	7.857		3.294	1.902	41.93%		0.5687	11.73%
291.99	Acid Soluble Nickel , Other (ppm)	2	2	6.685	3.627								
301.30	Acid Soluble Selenium , ICP (ppm)	3	3	0.7000	1.001	0.7000		1.001	0.5782	143.06%		0.2000	16.88%
301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9:3 ... (ppm)	1		0.3786									
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	1		0.0440									
301.99	Acid Soluble Selenium , Other (ppm)	1		3.605									
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.1189									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test ... (%)	5	5	0.1169	0.0088	0.1169		0.0088	0.0039	7.51%		0.0041	5.53%
311.99	Sodium, Other (%)	4	4	0.1498	0.0699	0.1498		0.0699	0.0349	46.65%		0.0275	5.32%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	2	2	0.0063	0.0005								
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006.... (%)	1		0.0054									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 96... (%)	15	14	0.0092	0.0083	0.0074		0.0030	0.0008	41.00%		0.0010	8.37%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (%)	1		0.0066									
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (%)	4	4	14.52	29.02	14.52		29.02	14.51	199.90%		0.0271	2.67%
321.99	Acid Soluble Zinc , Other (%)	5	5	13.84	20.52	13.84		20.52	9.177	148.28%		0.6464	2.69%

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Method Proficiency For All Labs (Lab Values)

Sample # 160211

Grade 24-25-4

Method Precision Report

Issue Date : 03/31/2016

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	9	5.571	0.5764	0.5670	0.1467	0.5857	10.18%	2.63%	10.51%	3.993
001.99	Ammoniacal Nitrogen, Other (%)	15	13	5.633	0.5577	0.5561	0.0588	0.5592	9.87%	1.04%	9.93%	9.511
010.11	Total Nitrogen, Modified Comprehensive (24%)	9	7	24.08	0.3751	0.3694	0.0922	0.3808	1.53%	0.38%	1.58%	4.128
010.60	Total Nitrogen, Combustion (24%)	55	51	24.69	0.3204	0.3082	0.1239	0.3321	1.25%	0.50%	1.35%	2.681
010.99	Total Nitrogen, Other (24%)	9	8	24.30	0.2148	0.1626	0.1985	0.2566	0.67%	0.82%	1.06%	1.293
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	16	15	25.14	0.3970	0.3827	0.1496	0.4109	1.52%	0.59%	1.63%	2.747
020.50	Total Phosphorus as P2O5, ICP (%)	16	14	24.70	0.8314	0.8182	0.2084	0.8444	3.31%	0.84%	3.42%	4.052
041.10	Direct Available Phosphorus as P2O5, Gravimetric Quinolinium (25%)	6	6	24.71	0.2327	0.1722	0.2213	0.2804	0.70%	0.90%	1.13%	1.267
041.11	Direct Available Phosphorus as P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.	7	6	25.14	0.3358	0.2972	0.2213	0.3705	1.18%	0.88%	1.47%	1.674
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (25%)	6	6	24.91	0.3143	0.2628	0.2438	0.3584	1.05%	0.98%	1.44%	1.470
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (25%)	13	13	24.78	0.6055	0.5896	0.1950	0.6210	2.38%	0.79%	2.51%	3.185
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	11	9	4.214	0.1755	0.1723	0.0473	0.1786	4.09%	1.12%	4.24%	3.780
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	7	6	3.698	0.3404	0.3398	0.0275	0.3409	9.19%	0.74%	9.22%	12.38
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	10	10	4.217	0.3466	0.3402	0.0941	0.3530	8.07%	2.23%	8.37%	3.750
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	8	8	4.251	0.2131	0.2046	0.0841	0.2212	4.81%	1.98%	5.20%	2.631
050.99	Soluble Potassium as K2O, Other (4%)	27	23	4.087	0.2400	0.2361	0.0614	0.2439	5.78%	1.50%	5.97%	3.973
101.30	Acid Soluble Calcium, ICP, test portion inorganic 965.09 (%)	10	8	0.3525	0.0105	0.0093	0.0069	0.0116	2.65%	1.94%	3.28%	1.690
121.30	Acid Soluble Magnesium, ICP, test portion inorganic 965.09 (%)	10	9	0.3817	0.0383	0.0381	0.0045	0.0384	9.99%	1.18%	10.06%	8.543
148.07	Total Sulfur, ICP, test portion as in 2006.03 modified w/9:3 HNO3:HCl (%)	6	5	0.9190	0.0270	0.0246	0.0158	0.0293	2.68%	1.72%	3.18%	1.848
148.99	Total Sulfur, Other (%)	7	6	0.8275	0.0838	0.0834	0.0123	0.0843	10.08%	1.49%	10.18%	6.854
151.30	Acid Soluble Arsenic , ICP (ppm)	8	6	6.474	0.4018	0.3876	0.1499	0.4156	5.99%	2.32%	6.42%	2.772
181.30	Acid Soluble Cadmium , ICP (ppm)	11	11	1.865	0.2671	0.2574	0.1011	0.2765	13.80%	5.42%	14.83%	2.736
191.30	Acid Soluble Chromium , ICP (ppm)	11	9	41.05	2.866	2.843	0.5168	2.889	6.92%	1.26%	7.04%	5.591
202.30	Acid Soluble Cobalt , ICP (ppm)	8	6	1.746	0.2412	0.2408	0.0175	0.2415	13.79%	1.00%	13.83%	13.78
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09 (%)	7	5	0.0021	0.0025	0.0024	0.0006	0.0025	117.57%	30.48%	121.45%	3.984
241.30	Acid Soluble Iron, ICP, test portion inorganic 965.09 (%)	10	7	0.5535	0.0215	0.0213	0.0039	0.0216	3.85%	0.70%	3.91%	5.604
251.30	Acid Soluble Lead , ICP (ppm)	9	6	1.374	0.7663	0.7651	0.0620	0.7676	55.67%	4.51%	55.85%	12.39
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	7	4	0.0180	0.0003	0.0003	0.0001	0.0003	1.47%	0.48%	1.55%	3.223
289.30	Acid Soluble Molybdenum , ICP (ppm)	7	5	6.105	0.6821	0.6795	0.0847	0.6847	11.13%	1.39%	11.22%	8.079
291.30	Acid Soluble Nickel , ICP (ppm)	10	8	8.020	0.7007	0.6946	0.1304	0.7068	8.66%	1.63%	8.81%	5.420

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
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (%)	15	13	0.0071	0.0025	0.0024	0.0010	0.0026	34.04%	14.74%	37.09%	2.517

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 137

Sample # 160211

Lab Values

Labs Reporting: 83

Grade 24-25-4

Issue Date : 03/31/2016

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 (%)	0486	4.805	0.0300	5.519	0.5736	0.2051	10	-1.19	6%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0456	5.150	0.1000	5.519	0.5736	0.2051	10	-0.61	3%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0230	5.275	0.8100	5.519	0.5736	0.2051	10	-0.41	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0177	5.289	0.0007	5.519	0.5736	0.2051	10	-0.38	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0309	5.295	0.4900	5.519	0.5736	0.2051	10	-0.37	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	5.400	0.2800	5.519	0.5736	0.2051	10	-0.20	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0500	5.450	0.0200	5.519	0.5736	0.2051	10	-0.11	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0519	5.825	0.2300	5.519	0.5736	0.2051	10	0.51	3%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0481	6.320	0.0600	5.519	0.5736	0.2051	10	1.33	7%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0405	6.605	0.0300	5.519	0.5736	0.2051	10	1.81	10%	0
001.99	Ammoniacal Nitrogen, Other (%)	0511	3.680	0.0000	5.515	0.5624	0.0592	14	-3.26	17%	0
001.99	Ammoniacal Nitrogen, Other (%)	0501	4.910	0.0200	5.515	0.5624	0.0592	14	-1.08	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0487	5.000	0.0000	5.515	0.5624	0.0592	14	-0.92	5%	0
001.99	Ammoniacal Nitrogen, Other (%)	0394	5.111	0.0100	5.515	0.5624	0.0592	14	-0.72	4%	0
001.99	Ammoniacal Nitrogen, Other (%)	0513	5.375	0.0300	5.515	0.5624	0.0592	14	-0.25	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	5.415	0.1500	5.515	0.5624	0.0592	14	-0.18	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	5.470	0.1000	5.515	0.5624	0.0592	14	-0.08	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0420	5.535	0.1100	5.515	0.5624	0.0592	14	0.04	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	5.660	0.1000	5.515	0.5624	0.0592	14	0.26	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	5.750	0.1400	5.515	0.5624	0.0592	14	0.42	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0200	5.760	0.0000	5.515	0.5624	0.0592	14	0.44	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0397	5.832	0.0910	5.515	0.5624	0.0592	14	0.56	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	6.630	0.0000	5.515	0.5624	0.0592	14	1.98	10%	0
001.99	Ammoniacal Nitrogen, Other (%)	0415	6.783	0.0775	5.515	0.5624	0.0592	14	2.26	11%	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	5.215	0.3100	5.515	0.5624	0.0592	14	-0.53	3%	1
002.99	Nitrate Nitrogen, Other (%)	0394	0.0060	0.0000				2			0
002.99	Nitrate Nitrogen, Other (%)	0368	1.550	1.040				2			0
003.10	Water Insoluble Nitrogen, Method I (%)	0494	0.5699	0.0623	0.6624	0.0554	0.0417	5	-1.67	7%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0117	0.6520	0.0260	0.6624	0.0554	0.0417	5	-0.19	1%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0220	0.6900	0.0400	0.6624	0.0554	0.0417	5	0.50	2%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0230	0.7000	0.0800	0.6624	0.0554	0.0417	5	0.68	3%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0511	0.7000	0.0000	0.6624	0.0554	0.0417	5	0.68	3%	0
003.99	Water Insoluble Nitrogen, Other (%)	0519	0.5500	0.2200	0.5855	0.0315	0.1170	3	-1.13	3%	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				
003.99	Water Insoluble Nitrogen, Other (%)	0397	0.5965	0.0110	0.5855	0.0315	0.1170	3	0.35	1%	0
003.99	Water Insoluble Nitrogen, Other (%)	0486	0.6100	0.1200	0.5855	0.0315	0.1170	3	0.78	2%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0230	8.850	0.1000	10.37	1.457	0.1204	4	-1.04	7%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0444	10.11	0.0200	10.37	1.457	0.1204	4	-0.18	1%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0220	10.15	0.1000	10.37	1.457	0.1204	4	-0.15	1%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0368	12.36	0.2614	10.37	1.457	0.1204	4	1.37	10%	0
005.99	Urea Nitrogen, Other (%)	0356	10.09	0.0600	11.94	3.093	0.0825	4	-0.60	8%	0
005.99	Urea Nitrogen, Other (%)	0394	10.35	0.1000	11.94	3.093	0.0825	4	-0.51	7%	0
005.99	Urea Nitrogen, Other (%)	0519	10.76	0.1100	11.94	3.093	0.0825	4	-0.38	5%	0
005.99	Urea Nitrogen, Other (%)	0200	16.56	0.0600	11.94	3.093	0.0825	4	1.49	19%	0
007.99	Urea, Other (%)	0486	10.35	0.0100				1			0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0444	5.835	0.1100				1			0
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	0519	7.610	0.3200				1			0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0456	22.10*	0.2000	23.98	0.4803	0.1656	9	-3.71	4%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0211	23.42*	0.1900	23.98	0.4803	0.1656	9	-1.11	1%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0090	23.89	0.0600	23.98	0.4803	0.1656	9	-0.17	0%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0309	23.92	0.0700	23.98	0.4803	0.1656	9	-0.12	0%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0220	23.99	0.5600	23.98	0.4803	0.1656	9	0.02	0%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0114	24.10	0.2500	23.98	0.4803	0.1656	9	0.23	0%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0105	24.37	0.0200	23.98	0.4803	0.1656	9	0.77	1%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0510	24.40	0.0400	23.98	0.4803	0.1656	9	0.83	1%	0
010.11	Total Nitrogen, Modified Comprehensive (24%)	0474	24.47	0.1000	23.98	0.4803	0.1656	9	0.97	1%	0
010.12	Total Nitrogen, Salicylic (24%)	0481	24.40	0.2100	24.81	0.6994	0.1528	4	-0.59	1%	0
010.12	Total Nitrogen, Salicylic (24%)	0117	24.40	0.2000	24.81	0.6994	0.1528	4	-0.58	1%	0
010.12	Total Nitrogen, Salicylic (24%)	0185	24.59	0.1700	24.81	0.6994	0.1528	4	-0.32	0%	0
010.12	Total Nitrogen, Salicylic (24%)	0397	25.85	0.0310	24.81	0.6994	0.1528	4	1.49	2%	0
010.16	Total Nitrogen, Raney (24%)	0300	25.04	0.2600				1			0
010.60	Total Nitrogen, Combustion (24%)	0422	23.65*	0.5000	24.68	0.3303	0.1474	54	-3.11	2%	0
010.60	Total Nitrogen, Combustion (24%)	0486	23.93	0.1100	24.68	0.3303	0.1474	54	-2.27	2%	0
010.60	Total Nitrogen, Combustion (24%)	0377	24.05	0.0700	24.68	0.3303	0.1474	54	-1.91	1%	0
010.60	Total Nitrogen, Combustion (24%)	0023	24.23	1.247	24.68	0.3303	0.1474	54	-1.36	1%	0
010.60	Total Nitrogen, Combustion (24%)	0472	24.23	0.0600	24.68	0.3303	0.1474	54	-1.35	1%	0
010.60	Total Nitrogen, Combustion (24%)	0234	24.26	0.0600	24.68	0.3303	0.1474	54	-1.26	1%	0
010.60	Total Nitrogen, Combustion (24%)	0043	24.28	0.1600	24.68	0.3303	0.1474	54	-1.20	1%	0
010.60	Total Nitrogen, Combustion (24%)	0157	24.30	0.0000	24.68	0.3303	0.1474	54	-1.14	1%	0
010.60	Total Nitrogen, Combustion (24%)	0029	24.31	0.2500	24.68	0.3303	0.1474	54	-1.12	1%	0
010.60	Total Nitrogen, Combustion (24%)	0037	24.42	0.3600	24.68	0.3303	0.1474	54	-0.77	1%	0
010.60	Total Nitrogen, Combustion (24%)	0291	24.44	0.0100	24.68	0.3303	0.1474	54	-0.73	0%	0
010.60	Total Nitrogen, Combustion (24%)	0007	24.45	0.1000	24.68	0.3303	0.1474	54	-0.68	0%	0
010.60	Total Nitrogen, Combustion (24%)	0307	24.47	0.3330	24.68	0.3303	0.1474	54	-0.63	0%	0
010.60	Total Nitrogen, Combustion (24%)	0136	24.51	0.0500	24.68	0.3303	0.1474	54	-0.52	0%	0
010.60	Total Nitrogen, Combustion (24%)	0177	24.53	0.0500	24.68	0.3303	0.1474	54	-0.46	0%	0
010.60	Total Nitrogen, Combustion (24%)	0405	24.53	0.0700	24.68	0.3303	0.1474	54	-0.46	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				
010.60	Total Nitrogen, Combustion (24%)	0354	24.54	0.0370	24.68	0.3303	0.1474	54	-0.42	0%	0
010.60	Total Nitrogen, Combustion (24%)	0049	24.55	0.0300	24.68	0.3303	0.1474	54	-0.40	0%	0
010.60	Total Nitrogen, Combustion (24%)	0356	24.57	0.0200	24.68	0.3303	0.1474	54	-0.32	0%	0
010.60	Total Nitrogen, Combustion (24%)	0292	24.59	0.0200	24.68	0.3303	0.1474	54	-0.26	0%	0
010.60	Total Nitrogen, Combustion (24%)	0102	24.60	0.0000	24.68	0.3303	0.1474	54	-0.23	0%	0
010.60	Total Nitrogen, Combustion (24%)	0482	24.60	0.2000	24.68	0.3303	0.1474	54	-0.23	0%	0
010.60	Total Nitrogen, Combustion (24%)	0516	24.60	0.0000	24.68	0.3303	0.1474	54	-0.23	0%	0
010.60	Total Nitrogen, Combustion (24%)	0131	24.62	0.0060	24.68	0.3303	0.1474	54	-0.18	0%	0
010.60	Total Nitrogen, Combustion (24%)	0105	24.62	0.1100	24.68	0.3303	0.1474	54	-0.17	0%	0
010.60	Total Nitrogen, Combustion (24%)	0042	24.64	0.0700	24.68	0.3303	0.1474	54	-0.12	0%	0
010.60	Total Nitrogen, Combustion (24%)	0494	24.65	0.0500	24.68	0.3303	0.1474	54	-0.09	0%	0
010.60	Total Nitrogen, Combustion (24%)	0501	24.65	0.1000	24.68	0.3303	0.1474	54	-0.08	0%	0
010.60	Total Nitrogen, Combustion (24%)	0451	24.66	0.0900	24.68	0.3303	0.1474	54	-0.06	0%	0
010.60	Total Nitrogen, Combustion (24%)	0421	24.66	0.0000	24.68	0.3303	0.1474	54	-0.05	0%	0
010.60	Total Nitrogen, Combustion (24%)	0035	24.67	0.0300	24.68	0.3303	0.1474	54	-0.03	0%	0
010.60	Total Nitrogen, Combustion (24%)	0360	24.68	0.1800	24.68	0.3303	0.1474	54	0.01	0%	0
010.60	Total Nitrogen, Combustion (24%)	0485	24.69	0.5200	24.68	0.3303	0.1474	54	0.04	0%	0
010.60	Total Nitrogen, Combustion (24%)	0394	24.70	0.0000	24.68	0.3303	0.1474	54	0.07	0%	0
010.60	Total Nitrogen, Combustion (24%)	0086	24.74	0.1710	24.68	0.3303	0.1474	54	0.21	0%	0
010.60	Total Nitrogen, Combustion (24%)	0452	24.79	0.0200	24.68	0.3303	0.1474	54	0.35	0%	0
010.60	Total Nitrogen, Combustion (24%)	0231	24.80	0.0700	24.68	0.3303	0.1474	54	0.36	0%	0
010.60	Total Nitrogen, Combustion (24%)	0481	24.80	0.1400	24.68	0.3303	0.1474	54	0.38	0%	0
010.60	Total Nitrogen, Combustion (24%)	0406	24.81	0.3000	24.68	0.3303	0.1474	54	0.41	0%	0
010.60	Total Nitrogen, Combustion (24%)	0368	24.88	0.2830	24.68	0.3303	0.1474	54	0.61	0%	0
010.60	Total Nitrogen, Combustion (24%)	0511	24.88	0.0000	24.68	0.3303	0.1474	54	0.62	0%	0
010.60	Total Nitrogen, Combustion (24%)	0034	24.95	0.2400	24.68	0.3303	0.1474	54	0.83	1%	0
010.60	Total Nitrogen, Combustion (24%)	0325	24.95	0.5000	24.68	0.3303	0.1474	54	0.83	1%	0
010.60	Total Nitrogen, Combustion (24%)	0444	25.00	0.1800	24.68	0.3303	0.1474	54	0.98	1%	0
010.60	Total Nitrogen, Combustion (24%)	0095	25.02	0.0600	24.68	0.3303	0.1474	54	1.04	1%	0
010.60	Total Nitrogen, Combustion (24%)	0233	25.03	0.0400	24.68	0.3303	0.1474	54	1.07	1%	0
010.60	Total Nitrogen, Combustion (24%)	0055	25.05	0.0200	24.68	0.3303	0.1474	54	1.13	1%	0
010.60	Total Nitrogen, Combustion (24%)	0040	25.10	0.0000	24.68	0.3303	0.1474	54	1.29	1%	0
010.60	Total Nitrogen, Combustion (24%)	0324	25.10	0.2000	24.68	0.3303	0.1474	54	1.29	1%	0
010.60	Total Nitrogen, Combustion (24%)	0025	25.17	0.1200	24.68	0.3303	0.1474	54	1.50	1%	0
010.60	Total Nitrogen, Combustion (24%)	0230	25.20	0.4000	24.68	0.3303	0.1474	54	1.59	1%	0
010.60	Total Nitrogen, Combustion (24%)	0260	25.45	0.1100	24.68	0.3303	0.1474	54	2.33	2%	0
010.60	Total Nitrogen, Combustion (24%)	0073	25.54	0.1100	24.68	0.3303	0.1474	54	2.60	2%	0
010.60	Total Nitrogen, Combustion (24%)	0457	25.67	0.1000	24.68	0.3303	0.1474	54	3.01	2%	0
010.60	Total Nitrogen, Combustion (24%)	0483	1,245	2,443	24.68	0.3303	0.1474	54	3696.23	2474%	2
010.99	Total Nitrogen, Other (24%)	0200	22.50*	0.0900	24.24	0.2958	0.1978	9	-5.60	4%	0
010.99	Total Nitrogen, Other (24%)	0519	23.92	0.5200	24.24	0.2958	0.1978	9	-1.03	1%	0
010.99	Total Nitrogen, Other (24%)	0420	24.06	0.4500	24.24	0.2958	0.1978	9	-0.60	0%	0
010.99	Total Nitrogen, Other (24%)	0415	24.21	0.1606	24.24	0.2958	0.1978	9	-0.10	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				
010.99	Total Nitrogen, Other (24%)	0506	24.35	0.3000	24.24	0.2958	0.1978	9	0.35	0%	0
010.99	Total Nitrogen, Other (24%)	0487	24.40	0.0000	24.24	0.2958	0.1978	9	0.51	0%	0
010.99	Total Nitrogen, Other (24%)	0508	24.47	0.0300	24.24	0.2958	0.1978	9	0.72	0%	0
010.99	Total Nitrogen, Other (24%)	0513	24.48	0.0300	24.24	0.2958	0.1978	9	0.75	0%	0
010.99	Total Nitrogen, Other (24%)	0493	24.50	0.2000	24.24	0.2958	0.1978	9	0.83	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0500	24.88	0.0100	25.26	0.3096	0.1620	5	-1.23	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0090	25.10	0.2000	25.26	0.3096	0.1620	5	-0.51	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0211	25.16	0.1000	25.26	0.3096	0.1620	5	-0.31	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	25.55	0.3000	25.26	0.3096	0.1620	5	0.95	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0157	25.60	0.2000	25.26	0.3096	0.1620	5	1.11	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	24.27	0.4900	25.14	0.3927	0.1937	16	-2.24	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0420	24.79	0.2400	25.14	0.3927	0.1937	16	-0.90	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	24.83	0.1400	25.14	0.3927	0.1937	16	-0.80	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	24.85	0.3000	25.14	0.3927	0.1937	16	-0.75	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0516	24.89	0.0200	25.14	0.3927	0.1937	16	-0.65	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0474	24.91	0.1200	25.14	0.3927	0.1937	16	-0.60	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0371	24.94	0.6500	25.14	0.3927	0.1937	16	-0.53	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	25.11	0.0050	25.14	0.3927	0.1937	16	-0.08	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0457	25.21	0.2500	25.14	0.3927	0.1937	16	0.16	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	25.24	0.0041	25.14	0.3927	0.1937	16	0.24	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	25.25	0.1000	25.14	0.3927	0.1937	16	0.27	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	25.29	0.0300	25.14	0.3927	0.1937	16	0.36	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0406	25.43	0.1400	25.14	0.3927	0.1937	16	0.73	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	25.61	0.1800	25.14	0.3927	0.1937	16	1.19	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	25.68	0.3400	25.14	0.3927	0.1937	16	1.37	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0481	25.76	0.0900	25.14	0.3927	0.1937	16	1.56	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0456	24.90	0.2000	25.19	0.4189	0.1900	4	-0.69	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0042	25.02	0.4900	25.19	0.4189	0.1900	4	-0.41	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	25.03	0.0500	25.19	0.4189	0.1900	4	-0.39	0%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0035	25.81	0.0200	25.19	0.4189	0.1900	4	1.49	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0157	23.60	0.2000	24.81	1.030	0.2384	15	-1.17	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	23.64	0.0600	24.81	1.030	0.2384	15	-1.14	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	23.82	0.0264	24.81	1.030	0.2384	15	-0.96	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	23.83	0.1400	24.81	1.030	0.2384	15	-0.95	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0260	24.01	0.0100	24.81	1.030	0.2384	15	-0.78	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0511	24.43	0.0000	24.81	1.030	0.2384	15	-0.37	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0421	24.61	0.1100	24.81	1.030	0.2384	15	-0.20	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	25.10	0.4300	24.81	1.030	0.2384	15	0.28	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	25.11	0.8800	24.81	1.030	0.2384	15	0.29	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	25.15	0.1000	24.81	1.030	0.2384	15	0.33	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0501	25.30	0.0000	24.81	1.030	0.2384	15	0.48	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0291	25.36	0.0100	24.81	1.030	0.2384	15	0.53	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0508	25.56	0.0500	24.81	1.030	0.2384	15	0.72	2%	0

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020.50	Total Phosphorus as P2O5, ICP (%)	0402	26.29	0.4100	24.81	1.030	0.2384	15	1.43	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	26.93	1.150	24.81	1.030	0.2384	15	2.06	4%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0422	24.30	2.600	24.81	1.030	0.2384	15	-0.49	1%	1
020.99	Total Phosphorus as P2O5, Other (%)	0307	23.75	1.223	24.61	0.9144	0.4410	3	-0.94	2%	0
020.99	Total Phosphorus as P2O5, Other (%)	0487	24.50	0.0000	24.61	0.9144	0.4410	3	-0.12	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0513	25.57	0.1000	24.61	0.9144	0.4410	3	1.05	2%	0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0405	0.0350	0.0100				1			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.0900	0.1200				1			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (25%)	0405	25.20	0.0059				1			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (25%)	0096	24.94	0.0700				1			0
040.99	Indirect Available Phosphorus as P2O5, Other (25%)	0394	25.04	0.0000				1			0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0102	24.30	0.0000	24.73	0.2334	0.2252	6	-1.69	1%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0494	24.66	0.6600	24.73	0.2334	0.2252	6	-0.27	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0177	24.67	0.0949	24.73	0.2334	0.2252	6	-0.23	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0086	24.85	0.2163	24.73	0.2334	0.2252	6	0.47	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0049	24.86	0.0800	24.73	0.2334	0.2252	6	0.53	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0040	24.95	0.3000	24.73	0.2334	0.2252	6	0.88	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0185	24.22	1.250	25.01	0.5257	0.3629	7	-1.41	2%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0055	24.82	0.6400	25.01	0.5257	0.3629	7	-0.33	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0220	24.83	0.1000	25.01	0.5257	0.3629	7	-0.32	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0493	24.98	0.0500	25.01	0.5257	0.3629	7	-0.06	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0485	25.12	0.0300	25.01	0.5257	0.3629	7	0.19	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0105	25.50	0.0700	25.01	0.5257	0.3629	7	0.87	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (25%)	0117	25.60	0.4000	25.01	0.5257	0.3629	7	1.05	1%	0
041.20	Direct Available Phosphorus as P2O5, Spectrop... (25%)	0519	25.63	0.1100				1			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (25%)	0055	22.08*	0.0300				2			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (25%)	0200	24.85	0.0800				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (25%)	0095	24.16	0.2500				2			0
041.40	Direct Available Phosphorus as P2O5, Automate... (25%)	0131	24.44	0.0400				2			0
041.50	Direct Available Phosphorus as P2O5, ICP (25%)	0368	23.80*	0.1056	24.36	0.9994	0.8489	4	-0.57	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (25%)	0325	23.80*	2.200	24.36	0.9994	0.8489	4	-0.56	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (25%)	0007	24.00*	1.000	24.36	0.9994	0.8489	4	-0.36	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (25%)	0452	25.86	0.0900	24.36	0.9994	0.8489	4	1.49	3%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (25%)	0511	24.43	0.0000	24.91	0.3564	0.2783	6	-1.25	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (25%)	0360	24.77	0.5000	24.91	0.3564	0.2783	6	-0.37	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (25%)	0023	24.83	0.2900	24.91	0.3564	0.2783	6	-0.22	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (25%)	0494	24.97	0.2100	24.91	0.3564	0.2783	6	0.14	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (25%)	0377	25.14	0.1000	24.91	0.3564	0.2783	6	0.60	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (25%)	0025	25.34	0.5700	24.91	0.3564	0.2783	6	1.10	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0472	23.62*	0.5100	24.80	0.6494	0.1978	13	-1.82	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0354	24.22	0.0400	24.80	0.6494	0.1978	13	-0.90	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0397	24.28	0.0120	24.80	0.6494	0.1978	13	-0.79	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0230	24.35	0.5000	24.80	0.6494	0.1978	13	-0.69	1%	0

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041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0029	24.51	0.2500	24.80	0.6494	0.1978	13	-0.45	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0231	24.71	0.1800	24.80	0.6494	0.1978	13	-0.13	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0073	24.77	0.2300	24.80	0.6494	0.1978	13	-0.05	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0177	24.89	0.0450	24.80	0.6494	0.1978	13	0.14	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0043	25.06	0.0100	24.80	0.6494	0.1978	13	0.40	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0136	25.13	0.1600	24.80	0.6494	0.1978	13	0.51	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0105	25.17	0.0500	24.80	0.6494	0.1978	13	0.57	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0034	25.70	0.5450	24.80	0.6494	0.1978	13	1.40	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (25%)	0486	25.78	0.0400	24.80	0.6494	0.1978	13	1.51	2%	0
041.99	Direct Available Phosphorus as P2O5, Other (25%)	0506	25.05	0.1000				2			0
041.99	Direct Available Phosphorus as P2O5, Other (25%)	0105	25.19	0.3700				2			0
042.99	Water Soluble Orthophosphate as P2O5, Other (%)	0513	23.38	0.0600				1			0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0394	22.37	0.1330	22.91	0.8160	0.2264	4	-0.66	1%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0309	22.45	0.3900	22.91	0.8160	0.2264	4	-0.57	1%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0405	22.70	0.1124	22.91	0.8160	0.2264	4	-0.25	0%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0420	24.12	0.2700	22.91	0.8160	0.2264	4	1.48	3%	0
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	22.85	0.1500				1			0
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0444	22.12	0.2800				1			0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0220	3.195*	0.0700	4.186	0.2161	0.0718	11	-4.39	12%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0405	3.990	0.0400	4.186	0.2161	0.0718	11	-0.87	2%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0114	4.060	0.0600	4.186	0.2161	0.0718	11	-0.56	2%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0102	4.100	0.0000	4.186	0.2161	0.0718	11	-0.38	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0211	4.130	0.0600	4.186	0.2161	0.0718	11	-0.25	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0485	4.180	0.0200	4.186	0.2161	0.0718	11	-0.02	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0494	4.220	0.1200	4.186	0.2161	0.0718	11	0.15	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0090	4.250	0.2200	4.186	0.2161	0.0718	11	0.29	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0231	4.280	0.0600	4.186	0.2161	0.0718	11	0.42	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0049	4.485	0.1100	4.186	0.2161	0.0718	11	1.33	4%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (4%)	0055	4.485	0.0300	4.186	0.2161	0.0718	11	1.33	4%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0309	3.110*	0.0800	3.703	0.3728	0.0283	6	-1.47	8%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0516	3.505*	0.0300	3.703	0.3728	0.0283	6	-0.49	3%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0356	3.775	0.0100	3.703	0.3728	0.0283	6	0.18	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0040	3.800	0.0000	3.703	0.3728	0.0283	6	0.24	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0136	3.980	0.0400	3.703	0.3728	0.0283	6	0.69	4%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0157	4.015	0.0100	3.703	0.3728	0.0283	6	0.77	4%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (4%)	0073	4.350	0.2600	3.703	0.3728	0.0283	6	1.61	9%	1
050.31	Soluble Potassium as K2O, AA (Citrate) (4%)	0472	4.060	0.0600				1			0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (4%)	0185	4.435	0.3300				1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0055	3.765	0.0100	4.196	0.3438	0.0982	10	-1.19	5%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0324	3.960	0.2400	4.196	0.3438	0.0982	10	-0.65	3%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0444	4.020	0.0600	4.196	0.3438	0.0982	10	-0.49	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0406	4.050	0.1800	4.196	0.3438	0.0982	10	-0.40	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0157	4.065	0.0300	4.196	0.3438	0.0982	10	-0.36	2%	0

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050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0420	4.097	0.0650	4.196	0.3438	0.0982	10	-0.28	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0397	4.230	0.0040	4.196	0.3438	0.0982	10	0.09	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0086	4.441	0.1730	4.196	0.3438	0.0982	10	0.68	3%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0292	4.620	0.0000	4.196	0.3438	0.0982	10	1.18	5%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (4%)	0230	4.920	0.2200	4.196	0.3438	0.0982	10	2.01	9%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (4%)	0007	4.050	0.3000	4.272	0.1395	0.0720	5	-1.59	3%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (4%)	0511	4.240	0.0000	4.272	0.1395	0.0720	5	-0.23	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (4%)	0483	4.295	0.0100	4.272	0.1395	0.0720	5	0.16	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (4%)	0291	4.375	0.0100	4.272	0.1395	0.0720	5	0.74	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (4%)	0452	4.400	0.0400	4.272	0.1395	0.0720	5	0.92	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0485	3.950	0.0600	4.251	0.2417	0.0955	8	-1.17	4%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0360	4.080	0.0400	4.251	0.2417	0.0955	8	-0.67	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0025	4.120	0.0000	4.251	0.2417	0.0955	8	-0.51	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0023	4.135	0.2300	4.251	0.2417	0.0955	8	-0.45	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0377	4.270	0.0800	4.251	0.2417	0.0955	8	0.08	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0494	4.425	0.1100	4.251	0.2417	0.0955	8	0.68	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0486	4.510	0.1800	4.251	0.2417	0.0955	8	1.01	3%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (4%)	0354	4.515	0.0640	4.251	0.2417	0.0955	8	1.03	3%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (4%)	0200	3.855	0.0500	4.044	0.2116	0.0235	4	-0.89	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (4%)	0117	3.880	0.0240	4.044	0.2116	0.0235	4	-0.77	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (4%)	0105	4.150	0.0200	4.044	0.2116	0.0235	4	0.50	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (4%)	0510	4.290	0.0000	4.044	0.2116	0.0235	4	1.16	3%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (4%)	0035	3.990	0.0000	4.164	0.2191	0.0875	4	-0.79	2%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (4%)	0456	4.050	0.1000	4.164	0.2191	0.0875	4	-0.52	1%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (4%)	0131	4.135	0.0900	4.164	0.2191	0.0875	4	-0.13	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (4%)	0519	4.480	0.1600	4.164	0.2191	0.0875	4	1.44	4%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (4%)	0029	3.835	0.3500	4.046	0.2108	0.1615	4	-1.00	3%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (4%)	0034	3.912	0.0660	4.046	0.2108	0.1615	4	-0.63	2%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (4%)	0105	4.140	0.0000	4.046	0.2108	0.1615	4	0.45	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (4%)	0095	4.295	0.2300	4.046	0.2108	0.1615	4	1.18	3%	0
050.99	Soluble Potassium as K2O, Other (4%)	0043	3.575*	0.0700	4.100	0.2687	0.0728	25	-1.95	6%	0
050.99	Soluble Potassium as K2O, Other (4%)	0457	3.640*	0.1000	4.100	0.2687	0.0728	25	-1.71	6%	0
050.99	Soluble Potassium as K2O, Other (4%)	0481	3.715*	0.0100	4.100	0.2687	0.0728	25	-1.43	5%	0
050.99	Soluble Potassium as K2O, Other (4%)	0444	3.820	0.2400	4.100	0.2687	0.0728	25	-1.04	3%	0
050.99	Soluble Potassium as K2O, Other (4%)	0474	3.875	0.0700	4.100	0.2687	0.0728	25	-0.84	3%	0
050.99	Soluble Potassium as K2O, Other (4%)	0500	3.875	0.0300	4.100	0.2687	0.0728	25	-0.84	3%	0
050.99	Soluble Potassium as K2O, Other (4%)	0513	3.915	0.0500	4.100	0.2687	0.0728	25	-0.69	2%	0
050.99	Soluble Potassium as K2O, Other (4%)	0096	3.990	0.0200	4.100	0.2687	0.0728	25	-0.41	1%	0
050.99	Soluble Potassium as K2O, Other (4%)	0394	4.038	0.0050	4.100	0.2687	0.0728	25	-0.23	1%	0
050.99	Soluble Potassium as K2O, Other (4%)	0508	4.050	0.1000	4.100	0.2687	0.0728	25	-0.18	1%	0
050.99	Soluble Potassium as K2O, Other (4%)	0027	4.070	0.0600	4.100	0.2687	0.0728	25	-0.11	0%	0
050.99	Soluble Potassium as K2O, Other (4%)	0402	4.085	0.0100	4.100	0.2687	0.0728	25	-0.05	0%	0
050.99	Soluble Potassium as K2O, Other (4%)	0482	4.130	0.0400	4.100	0.2687	0.0728	25	0.11	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				
050.99	Soluble Potassium as K2O, Other (4%)	0506	4.135	0.1900	4.100	0.2687	0.0728	25	0.13	0%	0
050.99	Soluble Potassium as K2O, Other (4%)	0421	4.170	0.0800	4.100	0.2687	0.0728	25	0.26	1%	0
050.99	Soluble Potassium as K2O, Other (4%)	0501	4.180	0.0600	4.100	0.2687	0.0728	25	0.30	1%	0
050.99	Soluble Potassium as K2O, Other (4%)	0105	4.185	0.1300	4.100	0.2687	0.0728	25	0.32	1%	0
050.99	Soluble Potassium as K2O, Other (4%)	0177	4.223	0.0115	4.100	0.2687	0.0728	25	0.46	2%	0
050.99	Soluble Potassium as K2O, Other (4%)	0325	4.250	0.1000	4.100	0.2687	0.0728	25	0.56	2%	0
050.99	Soluble Potassium as K2O, Other (4%)	0487	4.300	0.0000	4.100	0.2687	0.0728	25	0.75	2%	0
050.99	Soluble Potassium as K2O, Other (4%)	0493	4.300	0.2000	4.100	0.2687	0.0728	25	0.75	2%	0
050.99	Soluble Potassium as K2O, Other (4%)	0234	4.335	0.0500	4.100	0.2687	0.0728	25	0.88	3%	0
050.99	Soluble Potassium as K2O, Other (4%)	0451	4.450	0.1000	4.100	0.2687	0.0728	25	1.30	4%	0
050.99	Soluble Potassium as K2O, Other (4%)	0368	4.506	0.0934	4.100	0.2687	0.0728	25	1.51	5%	0
050.99	Soluble Potassium as K2O, Other (4%)	0260	6.060	0.0000	4.100	0.2687	0.0728	25	7.30	24%	0
050.99	Soluble Potassium as K2O, Other (4%)	0307	4.060	0.5070	4.100	0.2687	0.0728	25	-0.15	0%	1
050.99	Soluble Potassium as K2O, Other (4%)	0042	4.335	0.6100	4.100	0.2687	0.0728	25	0.88	3%	1
060.00	Water (Free), Vacuum Oven (%)	0456	0.7650	0.0300	1.078	0.2910	0.0233	3	-1.08	15%	0
060.00	Water (Free), Vacuum Oven (%)	0096	1.130	0.0400	1.078	0.2910	0.0233	3	0.18	2%	0
060.00	Water (Free), Vacuum Oven (%)	0007	1.340	0.0000	1.078	0.2910	0.0233	3	0.90	12%	0
060.20	Water (Free), Karl Fischer (%)	0394	1.855	0.0500				1			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0513	3.625	0.1700				2			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0394	4.500	0.0000				2			0
060.99	Water (Free), Other (%)	0510	1.795	0.0100				2			0
060.99	Water (Free), Other (%)	0513	2.225	0.0300				2			0
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0105	0.3828	0.0355				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0035	0.3395	0.0230	0.3614	0.0237	0.0127	10	-0.88	3%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0420	0.3448	0.0024	0.3614	0.0237	0.0127	10	-0.67	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	0.3450	0.0100	0.3614	0.0237	0.0127	10	-0.66	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0474	0.3500	0.0000	0.3614	0.0237	0.0127	10	-0.46	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0102	0.3530	0.0000	0.3614	0.0237	0.0127	10	-0.34	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	0.3550	0.0100	0.3614	0.0237	0.0127	10	-0.26	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0511	0.3600	0.0000	0.3614	0.0237	0.0127	10	-0.06	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	0.3730	0.0040	0.3614	0.0237	0.0127	10	0.46	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.4035	0.0510	0.3614	0.0237	0.0127	10	1.69	6%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0483	0.6135	0.0270	0.3614	0.0237	0.0127	10	10.13	35%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0494	0.3399	0.0063	0.3495	0.0102	0.0168	4	-0.95	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0086	0.3459	0.0058	0.3495	0.0102	0.0168	4	-0.35	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0421	0.3485	0.0470	0.3495	0.0102	0.0168	4	-0.10	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0025	0.3638	0.0079	0.3495	0.0102	0.0168	4	1.40	2%	0
101.99	Acid Soluble Calcium, Other (%)	0307	0.3135	0.0070				2			0
101.99	Acid Soluble Calcium, Other (%)	0501	0.3850	0.0100				2			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.3366	0.0202				1			0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (%)	0105	0.3360	0.0170				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0420	0.3310	0.0059	0.3806	0.0409	0.0050	9	-1.15	7%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0474	0.3350	0.0100	0.3806	0.0409	0.0050	9	-1.06	6%	0

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121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0035	0.3650	0.0040	0.3806	0.0409	0.0050	9	-0.36	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0096	0.3700	0.0000	0.3806	0.0409	0.0050	9	-0.25	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0482	0.3750	0.0100	0.3806	0.0409	0.0050	9	-0.13	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0102	0.3925	0.0030	0.3806	0.0409	0.0050	9	0.28	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0511	0.4000	0.0000	0.3806	0.0409	0.0050	9	0.45	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0472	0.4150	0.0100	0.3806	0.0409	0.0050	9	0.80	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0483	0.4520	0.0020	0.3806	0.0409	0.0050	9	1.66	9%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.3775	0.0310	0.3806	0.0409	0.0050	9	-0.07	0%	1
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0494	0.3637	0.0031	0.3716	0.0122	0.0101	4	-0.65	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0086	0.3637	0.0014	0.3716	0.0122	0.0101	4	-0.64	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0421	0.3695	0.0150	0.3716	0.0122	0.0101	4	-0.17	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0025	0.3894	0.0207	0.3716	0.0122	0.0101	4	1.46	2%	0
121.99	Acid Soluble Magnesium, Other (%)	0501	0.3850	0.0100				2			0
121.99	Acid Soluble Magnesium, Other (%)	0307	0.3950	0.0480				2			0
143.99	Elemental Sulfur, Other (%)	0472	0.8800	0.0200				1			0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0511	0.7700	0.0000				1			0
148.00	Total Sulfur, Combustion (%)	0474	0.8985	0.0030				1			0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0421	0.7520	0.0460	0.9041	0.0496	0.0195	6	-2.84	8%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0494	0.8930	0.0011	0.9041	0.0496	0.0195	6	-0.21	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0292	0.9000	0.0000	0.9041	0.0496	0.0195	6	-0.08	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0102	0.9070	0.0020	0.9041	0.0496	0.0195	6	0.05	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0086	0.9401	0.0238	0.9041	0.0496	0.0195	6	0.67	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0483	0.9550	0.0440	0.9041	0.0496	0.0195	6	0.95	3%	0
148.99	Total Sulfur, Other (%)	0307	0.6885	0.0250	0.8275	0.0951	0.0153	6	-1.35	8%	0
148.99	Total Sulfur, Other (%)	0501	0.7900	0.0200	0.8275	0.0951	0.0153	6	-0.37	2%	0
148.99	Total Sulfur, Other (%)	0096	0.8150	0.0100	0.8275	0.0951	0.0153	6	-0.12	1%	0
148.99	Total Sulfur, Other (%)	0474	0.8700	0.0200	0.8275	0.0951	0.0153	6	0.41	3%	0
148.99	Total Sulfur, Other (%)	0354	0.8715	0.0170	0.8275	0.0951	0.0153	6	0.43	3%	0
148.99	Total Sulfur, Other (%)	0482	0.9300	0.0000	0.8275	0.0951	0.0153	6	1.00	6%	0
148.99	Total Sulfur, Other (%)	0422	4.135	0.3100	0.8275	0.0951	0.0153	6	32.21	200%	1
151.00	Acid Soluble Arsenic , AA, test portion as in... (ppm)	0136	7.050	0.3000				1			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0511	5.940	0.0000	6.631	0.6290	0.1661	7	-1.03	5%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	6.050	0.1000	6.631	0.6290	0.1661	7	-0.86	4%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0300	6.582	0.3300	6.631	0.6290	0.1661	7	-0.07	0%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	6.600	0.0000	6.631	0.6290	0.1661	7	-0.05	0%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0102	6.670	0.3330	6.631	0.6290	0.1661	7	0.06	0%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0368	7.000	0.2000	6.631	0.6290	0.1661	7	0.55	3%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0474	8.500	0.2000	6.631	0.6290	0.1661	7	2.78	14%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0519	7.950	1.340	6.631	0.6290	0.1661	7	1.96	10%	1
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0515	5.763	1.230	6.715	0.8671	0.4818	3	-1.10	7%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0494	6.921	0.0554	6.715	0.8671	0.4818	3	0.24	2%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0037	7.460	0.1600	6.715	0.8671	0.4818	3	0.86	6%	0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	3.282	1.477	4.349	1.021	0.5757	3	-1.05	12%	0

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151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0220	4.450	0.1000	4.349	1.021	0.5757	3	0.10	1%	0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0230	5.315	0.1500	4.349	1.021	0.5757	3	0.95	11%	0
151.99	Acid Soluble Arsenic , Other (ppm)	0042	3.770	0.0800				2			0
151.99	Acid Soluble Arsenic , Other (ppm)	0481	6.740	0.4200				2			0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0354	0.0295	0.0090				1			0
165.99	Acid Soluble Boron , Other (%)	0421	0.0024	0.0006	0.0145	0.0103	0.0021	4	-1.17	42%	0
165.99	Acid Soluble Boron , Other (%)	0472	0.0100	0.0000	0.0145	0.0103	0.0021	4	-0.44	16%	0
165.99	Acid Soluble Boron , Other (%)	0482	0.0200	0.0000	0.0145	0.0103	0.0021	4	0.53	19%	0
165.99	Acid Soluble Boron , Other (%)	0483	0.0256	0.0078	0.0145	0.0103	0.0021	4	1.07	38%	0
181.00	Acid Soluble Cadmium , AA, test portion as in...	0136	2.200	0.0000				2			0
181.00	Acid Soluble Cadmium , AA, test portion as in...	0200	2.895	0.1900				2			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0368	1.450	0.1000	1.860	0.2928	0.1060	11	-1.34	11%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0474	1.575	0.0700	1.860	0.2928	0.1060	11	-0.93	8%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	1.645	0.0900	1.860	0.2928	0.1060	11	-0.70	6%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	1.650	0.1000	1.860	0.2928	0.1060	11	-0.69	6%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0511	1.800	0.0000	1.860	0.2928	0.1060	11	-0.20	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	1.920	0.0600	1.860	0.2928	0.1060	11	0.20	2%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0300	1.979	0.0280	1.860	0.2928	0.1060	11	0.39	3%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	1.990	0.0280	1.860	0.2928	0.1060	11	0.42	3%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0519	2.055	0.3300	1.860	0.2928	0.1060	11	0.64	5%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	2.100	0.2600	1.860	0.2928	0.1060	11	0.78	6%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	2.350	0.1000	1.860	0.2928	0.1060	11	1.60	13%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0494	1.868	0.1029	1.985	0.0901	0.0562	4	-1.29	3%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0037	1.980	0.0400	1.985	0.0901	0.0562	4	-0.05	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0086	2.004	0.0243	1.985	0.0901	0.0562	4	0.22	0%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0515	2.086	0.0577	1.985	0.0901	0.0562	4	1.13	3%	0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0230	1.390	0.0000				1			0
181.99	Acid Soluble Cadmium , Other (ppm)	0481	1.020	0.0200	1.570	0.5941	0.0333	3	-0.93	18%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0042	1.490	0.0800	1.570	0.5941	0.0333	3	-0.13	3%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0220	2.200	0.0000	1.570	0.5941	0.0333	3	1.06	20%	0
190.99	Water Soluble Chlorine, Other (%)	0511	2.970	0.0000				1			0
191.00	Acid Soluble Chromium , AA, test portion as i...	0200	49.77	0.2100				1			0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	37.37	1.190	41.19	3.102	0.7771	10	-1.18	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	37.85	0.3000	41.19	3.102	0.7771	10	-1.03	4%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0511	39.00	0.0000	41.19	3.102	0.7771	10	-0.67	3%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	39.95	1.300	41.19	3.102	0.7771	10	-0.38	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0474	40.00	0.0000	41.19	3.102	0.7771	10	-0.37	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	42.40	3.000	41.19	3.102	0.7771	10	0.37	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	42.60	0.6000	41.19	3.102	0.7771	10	0.43	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0368	43.05	1.100	41.19	3.102	0.7771	10	0.57	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0300	44.46	0.1100	41.19	3.102	0.7771	10	1.00	4%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	45.22	0.1710	41.19	3.102	0.7771	10	1.24	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0519	49.25	5.890	41.19	3.102	0.7771	10	2.48	10%	1

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	41.34	1.078	42.96	1.834	1.273	4	-0.88	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0494	41.46	2.889	42.96	1.834	1.273	4	-0.82	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0037	44.10	1.070	42.96	1.834	1.273	4	0.62	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0086	44.94	0.0538	42.96	1.834	1.273	4	1.08	2%	0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0230	34.90	0.0000				2			0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0515	61.85	6.998				2			0
191.99	Acid Soluble Chromium , Other (ppm)	0042	22.63	1.220	33.62	10.57	1.330	4	-1.04	16%	0
191.99	Acid Soluble Chromium , Other (ppm)	0506	26.75	1.100	33.62	10.57	1.330	4	-0.65	10%	0
191.99	Acid Soluble Chromium , Other (ppm)	0220	40.60	0.0000	33.62	10.57	1.330	4	0.66	10%	0
191.99	Acid Soluble Chromium , Other (ppm)	0481	44.50	3.000	33.62	10.57	1.330	4	1.03	16%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	1.430	0.0200	1.760	0.2532	0.0383	7	-1.22	9%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0511	1.470	0.0000	1.760	0.2532	0.0383	7	-1.07	8%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	1.771	0.0500	1.760	0.2532	0.0383	7	0.04	0%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	1.845	0.1700	1.760	0.2532	0.0383	7	0.31	2%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0368	1.900	0.0000	1.760	0.2532	0.0383	7	0.52	4%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0300	1.907	0.0280	1.760	0.2532	0.0383	7	0.54	4%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0474	2.000	0.0000	1.760	0.2532	0.0383	7	0.89	7%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	2.110	0.3200	1.760	0.2532	0.0383	7	1.29	10%	1
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0086	1.509	0.0408				2			0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0494	1.766	0.0588				2			0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0515	0.1868	0.3735				2			4
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0230	1.225	0.0100				1			0
202.99	Acid Soluble Cobalt , Other (ppm)	0042	0.7850	0.0100				2			0
202.99	Acid Soluble Cobalt , Other (ppm)	0220	1.450	0.1000				2			0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0043	0.0008	0.0001				1			0
221.03	Acid Soluble Copper , AA, 965.09, test portio... (%)	0200	7.700	0.4000				1			0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0230	0.0001	0.0000	0.0034	0.0046	0.0010	6	-0.68	49%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0433	0.0002	0.0001	0.0034	0.0046	0.0010	6	-0.67	48%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0368	0.0012	0.0001	0.0034	0.0046	0.0010	6	-0.47	33%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0354	0.0030	0.0020	0.0034	0.0046	0.0010	6	-0.09	6%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0402	0.0060	0.0000	0.0034	0.0046	0.0010	6	0.52	37%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0483	0.0151	0.0036	0.0034	0.0046	0.0010	6	2.37	169%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0474	0.0000	0.0000	0.0034	0.0046	0.0010	6	-0.70	50%	4
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0394	0.0004	0.0001				1			0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0515	0.0009	0.0004				1			0
221.99	Acid Soluble Copper , Other (%)	0042	0.2150	0.0100				2			0
221.99	Acid Soluble Copper , Other (%)	0519	21.50	0.4000				2			0
221.99	Acid Soluble Copper , Other (%)	0515	0.0003	0.0006				2			4
241.03	Acid Soluble Iron , AA, 965.09, test portion 2... (%)	0105	0.5776	0.0050				1			0
241.30	Acid Soluble Iron , ICP, test portion inorgani... (%)	0354	0.5240	0.0320	0.5556	0.0309	0.0071	9	-0.97	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgani... (%)	0420	0.5327	0.0022	0.5556	0.0309	0.0071	9	-0.70	2%	0
241.30	Acid Soluble Iron , ICP, test portion inorgani... (%)	0096	0.5350	0.0100	0.5556	0.0309	0.0071	9	-0.63	2%	0
241.30	Acid Soluble Iron , ICP, test portion inorgani... (%)	0474	0.5350	0.0100	0.5556	0.0309	0.0071	9	-0.63	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				
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0102	0.5520	0.0020	0.5556	0.0309	0.0071	9	-0.11	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0472	0.5600	0.0000	0.5556	0.0309	0.0071	9	0.13	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0511	0.5700	0.0000	0.5556	0.0309	0.0071	9	0.44	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0482	0.5900	0.0000	0.5556	0.0309	0.0071	9	1.05	3%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0483	0.7480	0.0080	0.5556	0.0309	0.0071	9	5.90	17%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (%)	0035	0.5700	0.0980	0.5556	0.0309	0.0071	9	0.44	1%	1
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0494	0.5356	0.0167	0.5493	0.0104	0.0231	4	-1.32	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0421	0.5470	0.0420	0.5493	0.0104	0.0231	4	-0.22	0%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0086	0.5565	0.0095	0.5493	0.0104	0.0231	4	0.69	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (%)	0025	0.5583	0.0241	0.5493	0.0104	0.0231	4	0.86	1%	0
241.99	Acid Soluble Iron, Other (%)	0307	0.4970	0.0360				2			0
241.99	Acid Soluble Iron, Other (%)	0501	0.5300	0.0000				2			0
251.00	Acid Soluble Lead , AA, test portion as in 20... (ppm)	0200	0.0000	0.0000				0			4
251.30	Acid Soluble Lead , ICP (ppm)	0102	0.5405	0.1190	1.546	0.9456	0.1799	7	-0.99	33%	0
251.30	Acid Soluble Lead , ICP (ppm)	0474	1.100	0.0000	1.546	0.9456	0.1799	7	-0.44	14%	0
251.30	Acid Soluble Lead , ICP (ppm)	0519	1.145	0.1300	1.546	0.9456	0.1799	7	-0.40	13%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	1.285	0.0500	1.546	0.9456	0.1799	7	-0.26	8%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	1.350	0.1000	1.546	0.9456	0.1799	7	-0.19	6%	0
251.30	Acid Soluble Lead , ICP (ppm)	0035	2.575	0.8100	1.546	0.9456	0.1799	7	1.02	33%	0
251.30	Acid Soluble Lead , ICP (ppm)	0482	2.825	0.0500	1.546	0.9456	0.1799	7	1.27	41%	0
251.30	Acid Soluble Lead , ICP (ppm)	0095	11.50	3.000	1.546	0.9456	0.1799	7	9.85	322%	1
251.30	Acid Soluble Lead , ICP (ppm)	0368	0.0000	0.0000	1.546	0.9456	0.1799	7	-1.53	50%	4
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0494	1.548	0.2680				2			0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)	0515	3.598	2.450				2			0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0230	1.150	0.1600				1			0
251.99	Acid Soluble Lead , Other (ppm)	0481	0.8100	0.0000	2.112	2.113	0.1033	3	-0.62	31%	0
251.99	Acid Soluble Lead , Other (ppm)	0042	0.9750	0.2100	2.112	2.113	0.1033	3	-0.54	27%	0
251.99	Acid Soluble Lead , Other (ppm)	0220	4.550	0.1000	2.112	2.113	0.1033	3	1.15	58%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0105	0.0224	0.0017				1			0
261.15	Acid Soluble Manganese , AA, 965.09, test por... (%)	0105	0.0180	0.0001				2			0
261.15	Acid Soluble Manganese , AA, 965.09, test por... (%)	0086	0.0181	0.0001				2			0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0354	0.0175	0.0010	0.0181	0.0006	0.0002	6	-0.92	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0420	0.0178	0.0001	0.0181	0.0006	0.0002	6	-0.54	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0096	0.0180	0.0001	0.0181	0.0006	0.0002	6	-0.23	0%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0102	0.0180	0.0000	0.0181	0.0006	0.0002	6	-0.16	0%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0474	0.0184	0.0002	0.0181	0.0006	0.0002	6	0.45	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0472	0.0200	0.0000	0.0181	0.0006	0.0002	6	2.88	5%	0
261.30	Acid Soluble Manganese , ICP, test portion 97... (%)	0035	0.0241	0.0125	0.0181	0.0006	0.0002	6	9.03	16%	1
261.31	Acid Soluble Manganese , ICP, test portion 97... (%)	0482	0.0200	0.0000				1			0
261.32	Acid Soluble Manganese , ICP, test portion in... (%)	0483	0.0466	0.0033				1			0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0421	0.0159	0.0029				2			0
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0494	0.0203	0.0029				2			0
261.99	Acid Soluble Manganese , Other (%)	0307	0.0165	0.0010				2			0

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			Value	Range	Rob Mean	Rob SD	R-bar				
261.99	Acid Soluble Manganese , Other (%)	0501	0.0180	0.0000				2			0
281.00	Acid Soluble Mercury , AA (ppm)	0506	154.0	0.0000				1			0
281.30	Acid Soluble Mercury , ICP (ppm)	0394	0.0170	0.0000				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0519	0.1150	0.0100				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000				2			4
281.99	Acid Soluble Mercury , Other (ppm)	0042	0.0230	0.0020				1			0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	5.100	0.2000	6.105	0.6821	0.1039	5	-1.35	8%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	5.775	0.0663	6.105	0.6821	0.1039	5	-0.44	3%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0474	6.250	0.1000	6.105	0.6821	0.1039	5	0.19	1%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	6.625	0.1300	6.105	0.6821	0.1039	5	0.70	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0300	6.777	0.0230	6.105	0.6821	0.1039	5	0.90	5%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0102	7.728	2.091	6.105	0.6821	0.1039	5	2.17	13%	1
289.30	Acid Soluble Molybdenum , ICP (ppm)	0368	0.0000	0.0000	6.105	0.6821	0.1039	5	-8.17	50%	4
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	0394	5.305	0.0300				1			0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0515	5.000	1.673	6.437	0.9783	0.6057	4	-1.47	11%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0494	6.650	0.4368	6.437	0.9783	0.6057	4	0.22	2%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0037	6.980	0.2000	6.437	0.9783	0.6057	4	0.56	4%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0086	7.119	0.1128	6.437	0.9783	0.6057	4	0.70	5%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0515	2.396	2.268	4.100	1.497	0.8260	3	-1.14	21%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0230	4.705	0.0100	4.100	1.497	0.8260	3	0.40	7%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0501	5.200	0.2000	4.100	1.497	0.8260	3	0.73	13%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0042	5.060	0.2200	5.712	0.7794	0.5167	3	-0.84	6%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0220	5.500	0.2000	5.712	0.7794	0.5167	3	-0.27	2%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0506	6.575	1.130	5.712	0.7794	0.5167	3	1.11	8%	0
291.00	Acid Soluble Nickel , AA, test portion as in ... (ppm)	0136	7.000	0.0000				2			0
291.00	Acid Soluble Nickel , AA, test portion as in ... (ppm)	0117	8.145	0.4000				2			0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	6.900	0.0000	8.306	0.9973	0.2823	10	-1.34	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	7.300	0.4000	8.306	0.9973	0.2823	10	-0.96	6%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	7.770	0.2600	8.306	0.9973	0.2823	10	-0.51	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0474	8.000	0.0000	8.306	0.9973	0.2823	10	-0.29	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	8.056	0.0710	8.306	0.9973	0.2823	10	-0.24	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	8.455	0.1700	8.306	0.9973	0.2823	10	0.14	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0368	8.650	0.1000	8.306	0.9973	0.2823	10	0.33	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0300	9.027	0.0220	8.306	0.9973	0.2823	10	0.69	4%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0519	9.100	1.080	8.306	0.9973	0.2823	10	0.76	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	11.46	0.7200	8.306	0.9973	0.2823	10	3.02	19%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0515	7.296	2.011	8.278	0.6824	0.7597	4	-1.44	6%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0086	8.342	0.1862	8.278	0.6824	0.7597	4	0.09	0%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0494	8.674	0.4820	8.278	0.6824	0.7597	4	0.58	2%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0037	8.800	0.3600	8.278	0.6824	0.7597	4	0.76	3%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	5.397	1.676	7.857	3.294	0.5687	3	-0.75	16%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0230	6.575	0.0300	7.857	3.294	0.5687	3	-0.39	8%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0501	11.60	0.0000	7.857	3.294	0.5687	3	1.14	24%	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				
291.99	Acid Soluble Nickel , Other (ppm)	0042	4.120	0.0200				2			0
291.99	Acid Soluble Nickel , Other (ppm)	0220	9.250	0.1000				2			0
301.30	Acid Soluble Selenium , ICP (ppm)	0394	0.0200	0.0200	0.7000	1.001	0.2000	3	-0.68	49%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0519	0.2300	0.0800	0.7000	1.001	0.2000	3	-0.47	34%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0368	1.850	0.5000	0.7000	1.001	0.2000	3	1.15	82%	0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified...	0515	0.3786	0.7572				0			4
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	0230	0.0440	0.0880				0			4
301.99	Acid Soluble Selenium , Other (ppm)	0042	3.605	0.0500				1			0
311.32	Sodium, ICP, 2006.03 test portion (%)	0025	0.1189	0.0011				1			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0474	0.1050	0.0100	0.1169	0.0088	0.0041	5	-1.35	5%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0494	0.1129	0.0015	0.1169	0.0088	0.0041	5	-0.46	2%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0086	0.1155	0.0012	0.1169	0.0088	0.0041	5	-0.16	1%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0035	0.1250	0.0060	0.1169	0.0088	0.0041	5	0.93	3%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0102	0.1260	0.0020	0.1169	0.0088	0.0041	5	1.04	4%	0
311.99	Sodium, Other (%)	0482	0.1100	0.0000	0.1498	0.0699	0.0275	4	-0.57	13%	0
311.99	Sodium, Other (%)	0501	0.1100	0.0000	0.1498	0.0699	0.0275	4	-0.57	13%	0
311.99	Sodium, Other (%)	0096	0.1250	0.0100	0.1498	0.0699	0.0275	4	-0.35	8%	0
311.99	Sodium, Other (%)	0354	0.2540	0.1000	0.1498	0.0699	0.0275	4	1.49	35%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0043	0.0060	0.0005				2			0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0481	0.0066	0.0000				2			0
321.03	Acid Soluble Zinc , AA, 965.09, test portion ... (%)	0105	0.0054	0.0002				1			0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0230	0.0045	0.0001	0.0074	0.0030	0.0010	14	-0.97	20%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0095	0.0049	0.0018	0.0074	0.0030	0.0010	14	-0.82	17%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0102	0.0050	0.0000	0.0074	0.0030	0.0010	14	-0.79	16%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0474	0.0050	0.0000	0.0074	0.0030	0.0010	14	-0.79	16%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0420	0.0053	0.0001	0.0074	0.0030	0.0010	14	-0.71	15%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0300	0.0055	0.0001	0.0074	0.0030	0.0010	14	-0.64	13%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0433	0.0059	0.0001	0.0074	0.0030	0.0010	14	-0.51	10%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0368	0.0078	0.0003	0.0074	0.0030	0.0010	14	0.12	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0096	0.0080	0.0000	0.0074	0.0030	0.0010	14	0.20	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0402	0.0080	0.0000	0.0074	0.0030	0.0010	14	0.20	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0292	0.0100	0.0000	0.0074	0.0030	0.0010	14	0.86	18%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0482	0.0100	0.0000	0.0074	0.0030	0.0010	14	0.86	18%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0354	0.0125	0.0050	0.0074	0.0030	0.0010	14	1.68	35%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0483	0.0370	0.0069	0.0074	0.0030	0.0010	14	9.75	200%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan...	0035	0.1765	0.0370	0.0074	0.0030	0.0010	14	55.77	1143%	2
321.32	Acid Soluble Zinc , ICP, test portion 2006.03...	0394	0.0066	0.0001				1			0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03...	0421	0.0052	0.0003	14.52	29.02	0.0271	4	-0.50	50%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03...	0515	0.0065	0.0004	14.52	29.02	0.0271	4	-0.50	50%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03...	0086	0.0096	0.0075	14.52	29.02	0.0271	4	-0.50	50%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03...	0037	58.04	0.1000	14.52	29.02	0.0271	4	1.50	150%	0
321.99	Acid Soluble Zinc , Other (%)	0027	0.0031	0.0000	13.84	20.52	0.6464	5	-0.67	50%	0
321.99	Acid Soluble Zinc , Other (%)	0515	0.0055	0.0011	13.84	20.52	0.6464	5	-0.67	50%	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				
321.99	Acid Soluble Zinc , Other (%)	0220	0.0067	0.0009	13.84	20.52	0.6464	5	-0.67	50%	0
321.99	Acid Soluble Zinc , Other (%)	0042	23.44	0.5300	13.84	20.52	0.6464	5	0.47	35%	0
321.99	Acid Soluble Zinc , Other (%)	0519	45.75	2.700	13.84	20.52	0.6464	5	1.55	115%	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 astrix 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.