

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 147

Sample # 151011

Statistical Summary

Labs Reporting: 78

15-5-10

Issue Date : 11/30/2015

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	13.39	0.9927	13.67		0.2415	0.0540	1.77%		0.0878	2.70%
001.99	Ammoniacal Nitrogen, Other (%)	11	11	13.57	0.6462	13.67		0.4572	0.0975	3.35%		0.1564	2.70%
002.20	Nitrate Nitrogen, Jones Modified (%)	2	2	1.630	1.117								
002.99	Nitrate Nitrogen, Other (%)	10	10	0.9144	0.5807	0.7470		0.0634	0.0142	8.48%		0.0381	4.18%
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	5	5	14.58	0.2739	14.58		0.2739	0.0866	1.88%		0.1180	2.67%
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	1		15.09									
010.11	Total Nitrogen, Modified Comprehensive (15%)	7	6	12.65	3.796	14.04	0.6391	0.6741	0.1946	4.80%	2.28%	0.0550	2.69%
010.12	Total Nitrogen, Salicylic (15%)	5	5	14.26	0.6195	14.26	0.6391	0.6195	0.1959	4.34%	2.24%	0.0600	2.68%
010.60	Total Nitrogen, Combustion (15%)	49	48	14.52	0.8498	14.46	0.6391	0.1833	0.0187	1.27%	2.21%	0.1009	2.68%
010.99	Total Nitrogen, Other (15%)	3	3	14.58	1.882	14.58	0.6391	1.882	0.7682	12.90%	2.19%	0.7000	2.67%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	6	5	5.057	0.0913	5.057		0.0913	0.0289	1.81%		0.0564	3.13%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	19	17	4.991	0.0718	4.989		0.0748	0.0128	1.50%		0.0695	3.14%
020.40	Total Phosphorus as P2O5, Automated (%)	4	4	4.894	0.1230	4.894		0.1230	0.0435	2.51%		0.1225	3.15%
020.50	Total Phosphorus as P2O5, ICP (%)	12	11	4.986	0.3205	4.961		0.2509	0.0535	5.06%		0.0987	3.14%
020.99	Total Phosphorus as P2O5, Other (%)	3	3	4.959	0.0553	4.959		0.0553	0.0226	1.12%		0.1573	3.14%
030.20	Citrate Insoluble Phosphorus as P2O5, Spectrophot... (%)	1		0.0100									
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.0600									
040.20	Indirect Available Phosphorus as P2O5, Spectrophot... (5%)	1		52.29									
040.40	Indirect Available Phosphorus as P2O5, Automated (5%)	2	2	5.058	0.2015								
040.99	Indirect Available Phosphorus as P2O5, Other (5%)	1		4.980									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q... (5%)	5	5	4.980	0.0919	4.980	0.6700	0.0919	0.0291	1.85%	6.73%	0.1320	3.14%
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q... (5%)	4	4	4.960	0.1119	4.960	0.6700	0.1119	0.0396	2.26%	6.75%	0.0550	3.14%
041.20	Direct Available Phosphorus as P2O5, Spectrophotom... (5%)	1		4.915									
041.21	Direct Available Phosphorus as P2O5, Spectrophotom... (5%)	1		4.900									
041.40	Direct Available Phosphorus as P2O5, Automated (5%)	1		4.880									
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	6	6	4.837	0.1111	4.798	0.6700	0.0496	0.0143	1.03%	6.98%	0.1523	3.16%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (5%)	6	6	5.044	0.1169	5.025	0.6700	0.0892	0.0258	1.78%	6.67%	0.0322	3.14%
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (5%)	12	12	4.956	0.1828	4.961	0.6700	0.1172	0.0239	2.36%	6.75%	0.0685	3.14%
041.99	Direct Available Phosphorus as P2O5, Other (5%)	3	3	4.888	0.1686	4.888	0.6700	0.1685	0.0688	3.45%	6.85%	0.0567	3.15%
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)	4	4	15.49	21.62	15.49		21.62	7.645	139.58%		0.0875	2.65%
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		4.585									

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
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	1		4.700									
048.99	Water Soluble Phosphorus as P2O5, Other (%)	1		3.775									
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	8	7	10.99	1.598	10.43	0.7115	0.1931	0.0516	1.85%	3.41%	0.0400	2.81%
050.10	Soluble Potassium as K2O, STPB Citrate (10%)	1		10.16									
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	7	7	10.21	0.4040	10.20	0.7115	0.2466	0.0659	2.42%	3.49%	0.2225	2.82%
050.31	Soluble Potassium as K2O, AA (Citrate) (10%)	1		9.765									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	9	9	10.25	0.5264	10.24	0.7115	0.5372	0.1266	5.25%	3.48%	0.1989	2.82%
050.51	Soluble Potassium as K2O, ICP (Citrate) (10%)	3	3	10.25	0.0700	10.25	0.7115	0.0700	0.0286	0.68%	3.47%	0.1667	2.82%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	10	9	10.18	0.4825	10.23	0.7115	0.4242	0.1000	4.14%	3.48%	0.0791	2.82%
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala... (10%)	5	5	10.01	0.6042	10.01	0.7115	0.6042	0.1911	6.04%	3.55%	0.0620	2.83%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra... (10%)	2	2	10.04	0.1025								
050.62	Soluble Potassium as K2O, Flame Photometric (Citra... (10%)	5	5	10.24	0.1370	10.24	0.7115	0.1370	0.0433	1.34%	3.47%	0.0650	2.82%
050.99	Soluble Potassium as K2O, Other (10%)	21	20	10.38	0.5033	10.29	0.7115	0.3250	0.0514	3.16%	3.46%	0.2245	2.82%
060.00	Water (Free), Vacuum Oven (%)	4	4	0.4256	0.1804	0.4256		0.1804	0.0638	42.39%		0.0712	4.55%
060.99	Water (Free), Other (%)	2	2	0.7025	0.5551								
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	1		0.9590									
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... (%)	1		0.9552									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	10	10	0.8994	0.0561	0.9008		0.0465	0.0104	5.16%		0.0279	4.06%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C (%)	2	2	0.7881	0.2559								
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	1		0.8950									
101.99	Acid Soluble Calcium, Other (%)	2	2	0.7946	0.2198								
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	11	11	1.322	0.3233	1.198	0.2583	0.0547	0.0117	4.56%	10.78%	0.0335	3.89%
121.02	Acid Soluble Magnesium, AA, 965.09, test portion 2... (1%)	1		0.1356									
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2... (1%)	1		1.216									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (1%)	22	22	1.221	0.2073	1.170	0.2583	0.0631	0.0095	5.40%	11.04%	0.0423	3.91%
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A... (1%)	2	2	1.112	0.0658								
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A... (1%)	7	7	1.131	0.0736	1.163	0.2583	0.0348	0.0093	3.00%	11.11%	0.0117	3.91%
121.99	Acid Soluble Magnesium, Other (1%)	6	5	1.133	0.0778	1.133	0.2583	0.0778	0.0246	6.86%	11.40%	0.0103	3.93%
131.00	Water Soluble Magnesium, AA (%)	2	2	1.146	0.0198								
131.30	Water Soluble Magnesium, ICP (%)	5	5	1.193	0.2306	1.193		0.2306	0.0729	19.34%		0.0507	3.90%
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	1		0.9600									
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon disu... (%)	2	2	17.67	0.4313								
143.99	Elemental Sulfur, Other (%)	1		16.22									
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	6	6	17.10	0.4318	17.09		0.4710	0.1360	2.76%		0.2000	2.61%
145.99	Sulfate Sulfur, HCl soluble, Other (%)	1		14.96									
148.00	Total Sulfur, Combustion (15%)	4	4	16.52	0.1755	16.52	1.0000	0.1755	0.0621	1.06%	3.03%	0.2275	2.62%
148.01	Total Sulfur, Gravimetric - sulfate and elemental... (15%)	9	9	16.82	0.3080	16.85	1.0000	0.2157	0.0508	1.28%	2.97%	0.2022	2.61%
148.04	Total Sulfur, ICP, w/Br digestion (15%)	1		16.80									
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (15%)	8	8	15.75	1.269	15.75	1.0000	1.439	0.3597	9.13%	3.17%	0.2247	2.64%
148.99	Total Sulfur, Other (15%)	6	5	16.57	1.061	16.57	1.0000	1.061	0.3354	6.40%	3.02%	0.1894	2.62%
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	16.18	0.4603								
151.00	Acid Soluble Arsenic , AA, test portion as in 200... (ppm)	1		4.300									

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151.30	Acid Soluble Arsenic , ICP (ppm)	5	4	4.026	0.4997	4.026		0.4997	0.1767	12.41%		0.2498	12.97%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:... (ppm)	1		3.194									
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	1		2.874									
151.99	Acid Soluble Arsenic , Other (ppm)	2	2	3.620	0.2546								
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	6	6	0.1418	0.0196	0.1476	0.0255	0.0078	0.0022	5.28%	8.65%	0.0053	5.33%
165.30	Acid Soluble Boron , ICP, test portion in 982.01 ... (0.1%)	10	9	0.1595	0.0212	0.1556	0.0255	0.0136	0.0032	8.72%	8.20%	0.0030	5.29%
165.99	Acid Soluble Boron , Other (0.1%)	13	13	0.1541	0.0294	0.1471	0.0255	0.0097	0.0019	6.57%	8.67%	0.0037	5.34%
171.99	Water Soluble Boron , Other (%)	2	2	0.1453	0.0074								
181.00	Acid Soluble Cadmium , AA, test portion as in 200... (ppm)	1		4.650									
181.30	Acid Soluble Cadmium , ICP (ppm)	8	8	4.464	0.4326	4.487		0.4353	0.1088	9.70%		0.1684	12.76%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:... (ppm)	2	2	3.945	1.450								
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	1		3.424									
181.99	Acid Soluble Cadmium , Other (ppm)	2	2	7.375	3.217								
190.00	Water Soluble Chlorine, Titrimetric (8%)	12	12	6.377	0.4153	6.323	0.6310	0.1313	0.0268	2.08%	4.99%	0.0791	3.03%
190.99	Water Soluble Chlorine, Other (8%)	2	2	5.120	1.174								
191.30	Acid Soluble Chromium , ICP (ppm)	8	8	81.23	9.086	81.23		10.30	2.576	12.68%		2.814	8.25%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9... (ppm)	2	2	96.44	2.495								
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	1		89.18									
191.99	Acid Soluble Chromium , Other (ppm)	3	3	83.67	35.31	83.67		35.31	14.41	42.20%		4.161	8.22%
202.30	Acid Soluble Cobalt , ICP (ppm)	7	7	6.915	2.158	6.868		2.341	0.6257	34.08%		0.3414	11.97%
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	1		7.640									
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3... (ppm)	2	2	9.134	1.402								
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	1		6.497									
202.99	Acid Soluble Cobalt , Other (ppm)	2	2	15.02	6.899								
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	3	3	0.0032	0.0002	0.0032		0.0002	0.0001	5.08%		0.0003	9.51%
221.03	Acid Soluble Copper , AA, 965.09, test portion 20... (%)	1		0.0033									
221.30	Acid Soluble Copper , ICP, test portion inorganic... (%)	11	10	0.0038	0.0011	0.0035		0.0006	0.0001	16.41%		0.0004	9.37%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-... (%)	2	2	15.24	21.55								
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-... (%)	2	1	0.0033									
221.99	Acid Soluble Copper , Other (%)	3	3	0.0026	0.0005	0.0026		0.0005	0.0002	19.61%		0.0001	9.82%
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	7	7	1.342	0.2905	1.465	0.1466	0.0938	0.0251	6.40%	5.00%	0.0663	3.78%
241.03	Acid Soluble Iron , AA, 965.09, test portion 2006.... (1%)	1		1.511									
241.30	Acid Soluble Iron , ICP, test portion inorganic 96... (1%)	26	25	1.384	0.2802	1.427	0.1466	0.1771	0.0251	12.41%	5.14%	0.0452	3.79%
241.32	Acid Soluble Iron , ICP, test portion 2006.03A-C (1%)	2	2	1.388	0.0743								
241.33	Acid Soluble Iron , ICP, test portion 2006.03A-C, ... (1%)	7	7	1.450	0.1345	1.475	0.1466	0.0960	0.0257	6.51%	4.97%	0.0362	3.77%
241.99	Acid Soluble Iron , Other (1%)	5	5	1.026	0.5057	1.026	0.1466	0.5057	0.1599	49.28%	7.14%	0.1029	3.98%
251.00	Acid Soluble Lead , AA, test portion as in 2006.0... (ppm)	1		6.500									
251.30	Acid Soluble Lead , ICP (ppm)	8	8	7.974	1.478	7.944		1.613	0.4032	20.30%		1.231	11.71%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 H... (ppm)	2	2	7.459	1.706								
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	1		7.307									
251.99	Acid Soluble Lead , Other (ppm)	3	3	27.78	42.83	27.78		42.83	17.48	154.17%		0.5533	9.70%
261.00	Acid Soluble Manganese , AA, Mn2+ only (%)	1		0.0165									

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
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	1		0.0157									
261.15	Acid Soluble Manganese , AA, 965.09, test portion... (%)	1		0.0156									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	8	8	0.0116	0.0046	0.0121		0.0043	0.0011	35.27%		0.0008	7.77%
261.31	Acid Soluble Manganese , ICP, test portion 972.02b (%)	1		0.0150									
261.34	Acid Soluble Manganese , ICP, test portion 2006.0... (%)	1		153.5									
261.35	Acid Soluble Manganese , ICP, test portion 2006.0... (%)	1		0.0145									
261.99	Acid Soluble Manganese , Other (%)	1		0.0098									
281.00	Acid Soluble Mercury , AA (ppm)	1		0.0145									
281.30	Acid Soluble Mercury , ICP (ppm)	2	1	0.0100									
289.30	Acid Soluble Molybdenum , ICP (ppm)	7	5	7.231	0.3877	7.231		0.3877	0.1226	5.36%		0.1964	11.88%
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w... (ppm)	3	3	6.929	1.210	6.929		1.210	0.4939	17.46%		0.0475	11.95%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (ppm)	1		5.833									
289.99	Acid Soluble Molybdenum , Other (ppm)	1		14.25									
291.00	Acid Soluble Nickel , AA, test portion as in 2006... (ppm)	1		40.00									
291.30	Acid Soluble Nickel , ICP (ppm)	10	10	34.26	4.186	34.31		4.643	1.038	13.53%		0.9967	9.40%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3... (ppm)	2	2	37.86	2.379								
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	1		38.08									
291.99	Acid Soluble Nickel , Other (ppm)	3	3	30.78	16.10	30.78		16.10	6.572	52.30%		3.977	9.55%
301.30	Acid Soluble Selenium , ICP (ppm)	3	2	0.3683	0.2309	0.3683		0.2309	0.1154	62.69%		0.2145	18.59%
301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9... (ppm)	1		0.0000									
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	1		0.3620									
311.30	Sodium, Flame Photometric (%)	1		0.2300									
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.2030									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test ... (%)	3	3	0.2028	0.0029	0.2028		0.0029	0.0012	1.44%		0.0043	5.09%
311.99	Sodium, Other (%)	3	3	0.2265	0.0158	0.2265		0.0158	0.0064	6.97%		0.0137	5.00%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	10	10	0.1469	0.0151	0.1481	0.0201	0.0142	0.0032	9.61%	6.78%	0.0050	5.33%
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006... (0.1%)	1		0.1610									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 9... (0.1%)	25	24	0.1525	0.0107	0.1521	0.0201	0.0106	0.0015	6.96%	6.60%	0.0036	5.31%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C ... (0.1%)	2	2	0.1548	0.0103								
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C,... (0.1%)	7	7	0.3409	0.5154	0.1489	0.0201	0.0103	0.0028	6.92%	6.74%	0.0097	5.33%
321.99	Acid Soluble Zinc , Other (0.1%)	5	5	0.1498	0.0020	0.1498	0.0201	0.0020	0.0006	1.36%	6.70%	0.0084	5.32%
325.30	Water Soluble Zinc , ICP (%)	1		0.0850									

magruder fertilizer

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 151011
15-5-10

Method Precision Report

Issue Date : 11/30/2015

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	13.63	0.6503	0.6480	0.0769	0.6526	4.75%	0.56%	4.79%	8.481
001.99	Ammoniacal Nitrogen, Other (%)	11	10	13.74	0.3509	0.3378	0.1345	0.3636	2.46%	0.98%	2.65%	2.704
002.99	Nitrate Nitrogen, Other (%)	10	9	0.7321	0.0740	0.0700	0.0339	0.0778	9.56%	4.64%	10.62%	2.290
010.11	Total Nitrogen, Modified Comprehensive (15%)	7	5	14.19	0.5175	0.5161	0.0543	0.5189	3.64%	0.38%	3.66%	9.554
010.60	Total Nitrogen, Combustion (15%)	49	43	14.51	0.2784	0.2732	0.0757	0.2835	1.88%	0.52%	1.95%	3.744
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium MolybdoP (%)	6	4	5.018	0.0225		0.0517			1.03%		
020.20	Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)	19	17	4.991	0.0718	0.0494	0.0737	0.0887	0.99%	1.48%	1.78%	1.204
020.50	Total Phosphorus as P2O5, ICP (%)	12	9	4.903	0.2288	0.2237	0.0679	0.2337	4.56%	1.38%	4.77%	3.443
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	6	6	4.837	0.1111	0.0604	0.1319	0.1451	1.25%	2.73%	3.00%	1.100
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (5%)	6	6	5.044	0.1169	0.1154	0.0263	0.1184	2.29%	0.52%	2.35%	4.495
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (5%)	12	12	4.956	0.1828	0.1780	0.0588	0.1875	3.59%	1.19%	3.78%	3.190
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	8	5	10.40	0.1695	0.1687	0.0237	0.1703	1.62%	0.23%	1.64%	7.197
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	7	7	10.21	0.4040	0.3809	0.1905	0.4259	3.73%	1.87%	4.17%	2.236
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	9	8	10.23	0.5571	0.5477	0.1440	0.5663	5.36%	1.41%	5.54%	3.932
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	10	9	10.18	0.4825	0.4799	0.0710	0.4851	4.71%	0.70%	4.76%	6.834
050.99	Soluble Potassium as K2O, Other (10%)	21	19	10.31	0.3914	0.3701	0.1801	0.4116	3.59%	1.75%	3.99%	2.285
101.30	Acid Soluble Calcium, ICP, test portion inorganic 965.09 (%)	10	10	0.8994	0.0561	0.0524	0.0282	0.0595	5.83%	3.13%	6.62%	2.112
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	11	10	1.246	0.2163	0.2151	0.0323	0.2175	17.26%	2.59%	17.45%	6.728
121.30	Acid Soluble Magnesium, ICP, test portion inorganic 965.09 (1%)	22	21	1.185	0.1239	0.1208	0.0390	0.1269	10.19%	3.29%	10.71%	3.254
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A-C, w/dual acid (1%)	7	7	1.131	0.0736	0.0733	0.0102	0.0740	6.48%	0.90%	6.54%	7.238
121.99	Acid Soluble Magnesium, Other (1%)	6	5	1.133	0.0778	0.0775	0.0093	0.0780	6.84%	0.82%	6.89%	8.420
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - sulfate form (%)	6	6	17.10	0.4318	0.4117	0.1844	0.4511	2.41%	1.08%	2.64%	2.446
148.01	Total Sulfur, Gravimetric - sulfate and elemental (15%)	9	8	16.91	0.1882	0.1440	0.1714	0.2238	0.85%	1.01%	1.32%	1.306
148.07	Total Sulfur, ICP, test portion as in 2006.03 modified w/9:3 HNO3:HCl (15%)	8	7	16.00	1.138	1.134	0.1288	1.141	7.09%	0.80%	7.13%	8.860
148.99	Total Sulfur, Other (15%)	6	5	16.57	1.061	1.054	0.1668	1.067	6.36%	1.01%	6.44%	6.397
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	6	5	0.1496	0.0053	0.0039	0.0050	0.0063	2.62%	3.33%	4.24%	1.273
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (0.1%)	10	7	0.1515	0.0097	0.0096	0.0021	0.0098	6.34%	1.38%	6.49%	4.704
165.99	Acid Soluble Boron , Other (0.1%)	13	12	0.1466	0.0113	0.0110	0.0036	0.0116	7.50%	2.48%	7.90%	3.186
181.30	Acid Soluble Cadmium , ICP (ppm)	8	8	4.464	0.4326	0.4216	0.1369	0.4433	9.45%	3.07%	9.93%	3.238
190.00	Water Soluble Chlorine, Titrimetric (8%)	12	11	6.266	0.1627	0.1561	0.0650	0.1691	2.49%	1.04%	2.70%	2.601

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
191.30	Acid Soluble Chromium , ICP (ppm)	8	8	81.23	9.086	8.963	2.106	9.207	11.03%	2.59%	11.33%	4.372
202.30	Acid Soluble Cobalt , ICP (ppm)	7	6	7.234	2.176	2.171	0.1884	2.180	30.02%	2.60%	30.13%	11.57
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09 (%)	11	9	0.0036	0.0008	0.0008	0.0003	0.0008	22.29%	7.12%	23.40%	3.287
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	7	7	1.342	0.2904	0.2869	0.0641	0.2940	21.37%	4.78%	21.90%	4.586
241.30	Acid Soluble Iron , ICP, test portion inorganic 965.09 (1%)	26	23	1.425	0.1808	0.1792	0.0340	0.1824	12.58%	2.39%	12.80%	5.361
241.33	Acid Soluble Iron , ICP, test portion 2006.03A-C, w/dual acid (1%)	7	7	1.450	0.1345	0.1328	0.0302	0.1362	9.16%	2.08%	9.39%	4.510
251.30	Acid Soluble Lead , ICP (ppm)	8	8	7.974	1.478	1.230	1.158	1.689	15.42%	14.52%	21.18%	1.459
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	8	7	0.0115	0.0050	0.0049	0.0006	0.0050	43.07%	4.86%	43.34%	8.909
289.30	Acid Soluble Molybdenum , ICP (ppm)	7	5	7.231	0.3877	0.3732	0.1489	0.4018	5.16%	2.06%	5.56%	2.699
291.30	Acid Soluble Nickel , ICP (ppm)	10	10	34.26	4.186	4.141	0.8621	4.230	12.09%	2.52%	12.35%	4.907
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	10	10	0.1469	0.0151	0.0147	0.0049	0.0155	9.98%	3.33%	10.52%	3.161
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (0.1%)	25	23	0.1513	0.0091	0.0088	0.0035	0.0095	5.80%	2.32%	6.25%	2.696
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, w/dual acid (0.1%)	7	6	0.1462	0.0100	0.0086	0.0073	0.0113	5.89%	4.99%	7.72%	1.548

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 147

Sample # 151011

Lab Values

Labs Reporting: 78

15-5-10

Issue Date : 11/30/2015

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 (%)	0405	11.17	0.0300	13.67	0.2415	0.0878	10	-10.35	9%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0230	12.05	0.1000	13.67	0.2415	0.0878	10	-6.69	6%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0169	13.63	0.0500	13.67	0.2415	0.0878	10	-0.17	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0177	13.64	0.0383	13.67	0.2415	0.0878	10	-0.11	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0481	13.64	0.0600	13.67	0.2415	0.0878	10	-0.11	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0500	13.64	0.0200	13.67	0.2415	0.0878	10	-0.11	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	13.74	0.1600	13.67	0.2415	0.0878	10	0.31	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0456	13.82	0.1300	13.67	0.2415	0.0878	10	0.62	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0498	14.25	0.1000	13.67	0.2415	0.0878	10	2.42	2%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0486	14.31	0.1900	13.67	0.2415	0.0878	10	2.65	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	11.90	0.2800	13.67	0.4572	0.1564	11	-3.87	6%	0
001.99	Ammoniacal Nitrogen, Other (%)	0397	13.02	0.2400	13.67	0.4572	0.1564	11	-1.42	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	13.51	0.0700	13.67	0.4572	0.1564	11	-0.36	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0394	13.59	0.1600	13.67	0.4572	0.1564	11	-0.17	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	13.61	0.1100	13.67	0.4572	0.1564	11	-0.14	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0371	13.62	0.0100	13.67	0.4572	0.1564	11	-0.12	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	13.84	0.0300	13.67	0.4572	0.1564	11	0.36	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0420	13.95	0.1000	13.67	0.4572	0.1564	11	0.62	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0487	13.95	0.3000	13.67	0.4572	0.1564	11	0.62	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	14.00	0.4000	13.67	0.4572	0.1564	11	0.73	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0513	14.30	0.0200	13.67	0.4572	0.1564	11	1.38	2%	0
002.20	Nitrate Nitrogen, Jones Modified (%)	0029	0.8400	0.0800	1.630	1.117	0.0400	2	-0.71	24%	0
002.20	Nitrate Nitrogen, Jones Modified (%)	0230	2.420	0.0000	1.630	1.117	0.0400	2	0.71	24%	0
002.99	Nitrate Nitrogen, Other (%)	0394	0.6000	0.0000	0.7470	0.0634	0.0381	10	-2.32	10%	0
002.99	Nitrate Nitrogen, Other (%)	0368	0.6485	0.0870	0.7470	0.0634	0.0381	10	-1.55	7%	0
002.99	Nitrate Nitrogen, Other (%)	0027	0.7200	0.0240	0.7470	0.0634	0.0381	10	-0.43	2%	0
002.99	Nitrate Nitrogen, Other (%)	0029	0.7250	0.0100	0.7470	0.0634	0.0381	10	-0.35	1%	0
002.99	Nitrate Nitrogen, Other (%)	0371	0.7300	0.0000	0.7470	0.0634	0.0381	10	-0.27	1%	0
002.99	Nitrate Nitrogen, Other (%)	0486	0.7600	0.0000	0.7470	0.0634	0.0381	10	0.21	1%	0
002.99	Nitrate Nitrogen, Other (%)	0420	0.7650	0.0300	0.7470	0.0634	0.0381	10	0.28	1%	0
002.99	Nitrate Nitrogen, Other (%)	0513	0.7900	0.0400	0.7470	0.0634	0.0381	10	0.68	3%	0
002.99	Nitrate Nitrogen, Other (%)	0498	0.8500	0.1000	0.7470	0.0634	0.0381	10	1.63	7%	0
002.99	Nitrate Nitrogen, Other (%)	0506	2.555	0.0900	0.7470	0.0634	0.0381	10	28.53	121%	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				
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0169	14.30	0.0600	14.58	0.2739	0.1180	5	-1.01	1%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0397	14.33	0.1900	14.58	0.2739	0.1180	5	-0.92	1%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0090	14.57	0.1400	14.58	0.2739	0.1180	5	-0.03	0%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0420	14.76	0.1500	14.58	0.2739	0.1180	5	0.65	1%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0444	14.94	0.0500	14.58	0.2739	0.1180	5	1.31	1%	0
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	0513	15.09	0.0200			0.0200	1			0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0371	4.960*	0.0000	14.04	0.6741	0.0550	6	-13.47	32%	0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0114	13.38*	0.0700	14.04	0.6741	0.0550	6	-0.98	2%	0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0456	14.10	0.0400	14.04	0.6741	0.0550	6	0.09	0%	0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0211	14.28	0.0300	14.04	0.6741	0.0550	6	0.35	1%	0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0105	14.43	0.0500	14.04	0.6741	0.0550	6	0.58	1%	0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0510	14.77	0.1400	14.04	0.6741	0.0550	6	1.09	3%	0
010.11	Total Nitrogen, Modified Comprehensive (15%)	0309	14.40	0.4400	14.04	0.6741	0.0550	6	0.54	1%	1
010.12	Total Nitrogen, Salicylic (15%)	0397	13.45*	0.1700	14.26	0.6195	0.0600	5	-1.32	3%	0
010.12	Total Nitrogen, Salicylic (15%)	0185	14.00	0.0300	14.26	0.6195	0.0600	5	-0.43	1%	0
010.12	Total Nitrogen, Salicylic (15%)	0416	14.22	0.0100	14.26	0.6195	0.0600	5	-0.08	0%	0
010.12	Total Nitrogen, Salicylic (15%)	0481	14.57	0.0900	14.26	0.6195	0.0600	5	0.49	1%	0
010.12	Total Nitrogen, Salicylic (15%)	0498	15.10	0.0000	14.26	0.6195	0.0600	5	1.35	3%	0
010.60	Total Nitrogen, Combustion (15%)	0405	11.21*	0.0100	14.46	0.1833	0.1009	48	-17.77	11%	0
010.60	Total Nitrogen, Combustion (15%)	0472	13.55*	0.4400	14.46	0.1833	0.1009	48	-4.98	3%	0
010.60	Total Nitrogen, Combustion (15%)	0377	14.06	0.0300	14.46	0.1833	0.1009	48	-2.23	1%	0
010.60	Total Nitrogen, Combustion (15%)	0131	14.15	0.0900	14.46	0.1833	0.1009	48	-1.72	1%	0
010.60	Total Nitrogen, Combustion (15%)	0275	14.17	0.0920	14.46	0.1833	0.1009	48	-1.58	1%	0
010.60	Total Nitrogen, Combustion (15%)	0037	14.20	0.1600	14.46	0.1833	0.1009	48	-1.44	1%	0
010.60	Total Nitrogen, Combustion (15%)	0041	14.27	0.0300	14.46	0.1833	0.1009	48	-1.08	1%	0
010.60	Total Nitrogen, Combustion (15%)	0356	14.29	0.0900	14.46	0.1833	0.1009	48	-0.97	1%	0
010.60	Total Nitrogen, Combustion (15%)	0230	14.30	0.0000	14.46	0.1833	0.1009	48	-0.89	1%	0
010.60	Total Nitrogen, Combustion (15%)	0234	14.33	0.0300	14.46	0.1833	0.1009	48	-0.75	0%	0
010.60	Total Nitrogen, Combustion (15%)	0368	14.35	0.0460	14.46	0.1833	0.1009	48	-0.63	0%	0
010.60	Total Nitrogen, Combustion (15%)	0102	14.35	0.1000	14.46	0.1833	0.1009	48	-0.62	0%	0
010.60	Total Nitrogen, Combustion (15%)	0157	14.35	0.1000	14.46	0.1833	0.1009	48	-0.62	0%	0
010.60	Total Nitrogen, Combustion (15%)	0043	14.37	0.0500	14.46	0.1833	0.1009	48	-0.54	0%	0
010.60	Total Nitrogen, Combustion (15%)	0096	14.38	0.0400	14.46	0.1833	0.1009	48	-0.45	0%	0
010.60	Total Nitrogen, Combustion (15%)	0007	14.40	0.0000	14.46	0.1833	0.1009	48	-0.34	0%	0
010.60	Total Nitrogen, Combustion (15%)	0035	14.40	0.1600	14.46	0.1833	0.1009	48	-0.34	0%	0
010.60	Total Nitrogen, Combustion (15%)	0394	14.40	0.0000	14.46	0.1833	0.1009	48	-0.34	0%	0
010.60	Total Nitrogen, Combustion (15%)	0291	14.43	0.0100	14.46	0.1833	0.1009	48	-0.21	0%	0
010.60	Total Nitrogen, Combustion (15%)	0136	14.43	0.0200	14.46	0.1833	0.1009	48	-0.18	0%	0
010.60	Total Nitrogen, Combustion (15%)	0231	14.44	0.0100	14.46	0.1833	0.1009	48	-0.15	0%	0
010.60	Total Nitrogen, Combustion (15%)	0233	14.44	0.1400	14.46	0.1833	0.1009	48	-0.13	0%	0
010.60	Total Nitrogen, Combustion (15%)	0292	14.44	0.0200	14.46	0.1833	0.1009	48	-0.13	0%	0
010.60	Total Nitrogen, Combustion (15%)	0095	14.45	0.2700	14.46	0.1833	0.1009	48	-0.10	0%	0
010.60	Total Nitrogen, Combustion (15%)	0354	14.45	0.1250	14.46	0.1833	0.1009	48	-0.07	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 (15%)	0482	14.45	0.1000	14.46	0.1833	0.1009	48	-0.07	0%	0
010.60	Total Nitrogen, Combustion (15%)	0421	14.46	0.0700	14.46	0.1833	0.1009	48	-0.04	0%	0
010.60	Total Nitrogen, Combustion (15%)	0360	14.49	0.3700	14.46	0.1833	0.1009	48	0.12	0%	0
010.60	Total Nitrogen, Combustion (15%)	0324	14.50	0.0000	14.46	0.1833	0.1009	48	0.20	0%	0
010.60	Total Nitrogen, Combustion (15%)	0451	14.50	0.1000	14.46	0.1833	0.1009	48	0.20	0%	0
010.60	Total Nitrogen, Combustion (15%)	0025	14.51	0.0300	14.46	0.1833	0.1009	48	0.23	0%	0
010.60	Total Nitrogen, Combustion (15%)	0034	14.53	0.2300	14.46	0.1833	0.1009	48	0.34	0%	0
010.60	Total Nitrogen, Combustion (15%)	0162	14.54	0.0800	14.46	0.1833	0.1009	48	0.41	0%	0
010.60	Total Nitrogen, Combustion (15%)	0105	14.55	0.1730	14.46	0.1833	0.1009	48	0.50	0%	0
010.60	Total Nitrogen, Combustion (15%)	0029	14.57	0.1100	14.46	0.1833	0.1009	48	0.56	0%	0
010.60	Total Nitrogen, Combustion (15%)	0325	14.60	0.4000	14.46	0.1833	0.1009	48	0.75	0%	0
010.60	Total Nitrogen, Combustion (15%)	0485	14.62	0.1300	14.46	0.1833	0.1009	48	0.83	1%	0
010.60	Total Nitrogen, Combustion (15%)	0055	14.62	0.2350	14.46	0.1833	0.1009	48	0.87	1%	0
010.60	Total Nitrogen, Combustion (15%)	0177	14.66	0.0200	14.46	0.1833	0.1009	48	1.07	1%	0
010.60	Total Nitrogen, Combustion (15%)	0406	14.67	0.0400	14.46	0.1833	0.1009	48	1.13	1%	0
010.60	Total Nitrogen, Combustion (15%)	0073	14.69	0.0100	14.46	0.1833	0.1009	48	1.21	1%	0
010.60	Total Nitrogen, Combustion (15%)	0423	14.71	0.0300	14.46	0.1833	0.1009	48	1.32	1%	0
010.60	Total Nitrogen, Combustion (15%)	0042	14.90	0.2000	14.46	0.1833	0.1009	48	2.38	2%	0
010.60	Total Nitrogen, Combustion (15%)	0260	15.19	0.0300	14.46	0.1833	0.1009	48	3.94	2%	0
010.60	Total Nitrogen, Combustion (15%)	0444	15.21	0.1400	14.46	0.1833	0.1009	48	4.07	3%	0
010.60	Total Nitrogen, Combustion (15%)	0389	15.24	0.0800	14.46	0.1833	0.1009	48	4.24	3%	0
010.60	Total Nitrogen, Combustion (15%)	0117	15.25	0.1000	14.46	0.1833	0.1009	48	4.29	3%	0
010.60	Total Nitrogen, Combustion (15%)	0516	18.85	0.1000	14.46	0.1833	0.1009	48	23.93	15%	0
010.60	Total Nitrogen, Combustion (15%)	0040	14.75	0.5000	14.46	0.1833	0.1009	48	1.56	1%	1
010.99	Total Nitrogen, Other (15%)	0394	12.80*	1.700	14.58	1.882	0.7000	3	-0.95	6%	0
010.99	Total Nitrogen, Other (15%)	0493	14.40	0.1000	14.58	1.882	0.7000	3	-0.10	1%	0
010.99	Total Nitrogen, Other (15%)	0506	16.55	0.3000	14.58	1.882	0.7000	3	1.05	7%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0157	5.000	0.1000	5.057	0.0913	0.0564	5	-0.63	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0105	5.005	0.0500	5.057	0.0913	0.0564	5	-0.57	1%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0211	5.015	0.0500	5.057	0.0913	0.0564	5	-0.46	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0090	5.050	0.0800	5.057	0.0913	0.0564	5	-0.08	0%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0322	5.217	0.0020	5.057	0.0913	0.0564	5	1.75	2%	0
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0444	4.905	0.3700	5.057	0.0913	0.0564	5	-1.67	2%	1
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0500	4.870	0.0000	4.989	0.0748	0.0695	17	-1.60	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0309	4.900	0.0600	4.989	0.0748	0.0695	17	-1.19	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0169	4.910	0.0400	4.989	0.0748	0.0695	17	-1.06	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0416	4.925	0.0300	4.989	0.0748	0.0695	17	-0.86	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0177	4.944	0.0017	4.989	0.0748	0.0695	17	-0.60	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0428	4.950	0.1188	4.989	0.0748	0.0695	17	-0.52	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0027	4.957	0.2110	4.989	0.0748	0.0695	17	-0.44	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0420	4.990	0.0800	4.989	0.0748	0.0695	17	0.01	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0356	4.995	0.2300	4.989	0.0748	0.0695	17	0.07	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0394	5.000	0.0000	4.989	0.0748	0.0695	17	0.14	0%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0506	5.010	0.2200	4.989	0.0748	0.0695	17	0.28	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0510	5.010	0.0200	4.989	0.0748	0.0695	17	0.28	0%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0324	5.040	0.0000	4.989	0.0748	0.0695	17	0.68	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	5.060	0.0200	4.989	0.0748	0.0695	17	0.94	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0481	5.065	0.0300	4.989	0.0748	0.0695	17	1.01	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0231	5.080	0.1000	4.989	0.0748	0.0695	17	1.21	1%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0406	5.140	0.0200	4.989	0.0748	0.0695	17	2.01	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0516	10.27	9.900	4.989	0.0748	0.0695	17	70.56	53%	1
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0405	52.30	0.0800	4.989	0.0748	0.0695	17	632.19	474%	2
020.40	Total Phosphorus as P2O5, Automated (%)	0035	4.770	0.1800	4.894	0.1230	0.1225	4	-1.01	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0456	4.810	0.1000	4.894	0.1230	0.1225	4	-0.68	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	4.970	0.0400	4.894	0.1230	0.1225	4	0.62	1%	0
020.40	Total Phosphorus as P2O5, Automated (%)	0105	5.025	0.1700	4.894	0.1230	0.1225	4	1.07	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	4.580	0.0600	4.961	0.2509	0.0987	11	-1.52	4%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0157	4.630	0.1600	4.961	0.2509	0.0987	11	-1.32	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	4.693	0.0320	4.961	0.2509	0.0987	11	-1.07	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0402	4.850	0.0200	4.961	0.2509	0.0987	11	-0.44	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0368	4.920	0.0540	4.961	0.2509	0.0987	11	-0.16	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0482	4.995	0.3700	4.961	0.2509	0.0987	11	0.14	0%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	5.020	0.2000	4.961	0.2509	0.0987	11	0.24	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0423	5.095	0.0300	4.961	0.2509	0.0987	11	0.53	1%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0451	5.135	0.0900	4.961	0.2509	0.0987	11	0.69	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0444	5.200	0.0200	4.961	0.2509	0.0987	11	0.95	2%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0260	5.725	0.0500	4.961	0.2509	0.0987	11	3.05	8%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0234	4.960	0.6000	4.961	0.2509	0.0987	11	0.00	0%	1
020.99	Total Phosphorus as P2O5, Other (%)	0515	4.896	0.4520	4.959	0.0553	0.1573	3	-1.14	1%	0
020.99	Total Phosphorus as P2O5, Other (%)	0513	4.980	0.0200	4.959	0.0553	0.1573	3	0.39	0%	0
020.99	Total Phosphorus as P2O5, Other (%)	0487	5.000	0.0000	4.959	0.0553	0.1573	3	0.75	0%	0
030.20	Citrate Insoluble Phosphorus as P2O5, Spectro... (%)	0405	0.0100	0.0000			0.0000	1			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.0600	0.0400			0.0400	1			0
040.20	Indirect Available Phosphorus as P2O5, Spectr... (5%)	0405	52.29	0.0800			0.0800	1			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (5%)	0096	4.915*	0.0700	5.058	0.2015	0.1350	2	-0.71	1%	0
040.40	Indirect Available Phosphorus as P2O5, Automa... (5%)	0498	5.200*	0.2000	5.058	0.2015	0.1350	2	0.71	1%	0
040.99	Indirect Available Phosphorus as P2O5, Other (5%)	0513	4.980*	0.0200			0.0200	1			0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0041	4.820	0.4200	4.980	0.0919	0.1320	5	-1.74	2%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0040	5.000	0.0000	4.980	0.0919	0.1320	5	0.22	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0102	5.000	0.0000	4.980	0.0919	0.1320	5	0.22	0%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0105	5.030	0.1400	4.980	0.0919	0.1320	5	0.54	1%	0
041.10	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0493	5.050	0.1000	4.980	0.0919	0.1320	5	0.76	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0185	4.795	0.1500	4.960	0.1119	0.0550	4	-1.47	2%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0485	4.990	0.0200	4.960	0.1119	0.0550	4	0.27	0%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0105	5.015	0.0500	4.960	0.1119	0.0550	4	0.49	1%	0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0055	5.040	0.0000	4.960	0.1119	0.0550	4	0.72	1%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
041.20	Direct Available Phosphorus as P2O5, Spectrop... (5%)	0027	4.915	0.0100			0.0100	1			0
041.21	Direct Available Phosphorus as P2O5, Spectrop... (5%)	0055	4.900	0.0000			0.0000	1			0
041.40	Direct Available Phosphorus as P2O5, Automate... (5%)	0095	4.880	0.0200			0.0200	1			0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0043	4.745	0.0100	4.798	0.0496	0.1523	6	-1.06	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0368	4.770	0.1898	4.798	0.0496	0.1523	6	-0.56	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0233	4.772	0.3040	4.798	0.0496	0.1523	6	-0.52	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0325	4.800	0.2000	4.798	0.0496	0.1523	6	0.05	0%	0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0007	4.900	0.2000	4.798	0.0496	0.1523	6	2.06	1%	0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0291	5.035	0.0100	4.798	0.0496	0.1523	6	4.78	2%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0377	4.925	0.0300	5.025	0.0892	0.0322	6	-1.12	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0025	4.970	0.0200	5.025	0.0892	0.0322	6	-0.62	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0421	4.990	0.0200	5.025	0.0892	0.0322	6	-0.39	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0423	5.046	0.0730	5.025	0.0892	0.0322	6	0.23	0%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0360	5.080	0.0200	5.025	0.0892	0.0322	6	0.62	1%	0
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0131	5.255	0.0300	5.025	0.0892	0.0322	6	2.58	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0472	4.625	0.0500	4.961	0.1172	0.0685	12	-2.87	3%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0231	4.760	0.0400	4.961	0.1172	0.0685	12	-1.72	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0037	4.805	0.0300	4.961	0.1172	0.0685	12	-1.33	2%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0034	4.891	0.0347	4.961	0.1172	0.0685	12	-0.60	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0043	4.935	0.0900	4.961	0.1172	0.0685	12	-0.22	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0105	4.965	0.1300	4.961	0.1172	0.0685	12	0.03	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0513	4.985	0.0300	4.961	0.1172	0.0685	12	0.20	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0029	5.005	0.0300	4.961	0.1172	0.0685	12	0.37	0%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0397	5.020	0.0800	4.961	0.1172	0.0685	12	0.50	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0136	5.025	0.0700	4.961	0.1172	0.0685	12	0.54	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0073	5.106	0.1910	4.961	0.1172	0.0685	12	1.23	1%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0354	5.353	0.0460	4.961	0.1172	0.0685	12	3.34	4%	0
041.99	Direct Available Phosphorus as P2O5, Other (5%)	0230	4.710	0.0200	4.888	0.1685	0.0567	3	-1.06	2%	0
041.99	Direct Available Phosphorus as P2O5, Other (5%)	0506	4.910	0.1200	4.888	0.1685	0.0567	3	0.13	0%	0
041.99	Direct Available Phosphorus as P2O5, Other (5%)	0105	5.045	0.0300	4.888	0.1685	0.0567	3	0.93	2%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0394	4.545	0.0100	15.49	21.62	0.0875	4	-0.51	35%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0309	4.605	0.2500	15.49	21.62	0.0875	4	-0.50	35%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0420	4.890	0.0800	15.49	21.62	0.0875	4	-0.49	34%	0
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0405	47.93	0.0100	15.49	21.62	0.0875	4	1.50	105%	0
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	4.585	0.0100			0.0100	1			0
048.50	Water Soluble Phosphorus as P2O5, ICP (%)	0444	4.700	0.3800			0.3800	1			0
048.99	Water Soluble Phosphorus as P2O5, Other (%)	0513	3.775	0.0300			0.0300	1			0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0114	10.22	0.0600	10.43	0.1931	0.0400	7	-1.06	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0211	10.29	0.0200	10.43	0.1931	0.0400	7	-0.70	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0090	10.32	0.1600	10.43	0.1931	0.0400	7	-0.55	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0231	10.35	0.0000	10.43	0.1931	0.0400	7	-0.39	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0416	10.54	0.0000	10.43	0.1931	0.0400	7	0.59	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0055	10.62	0.0400	10.43	0.1931	0.0400	7	1.01	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
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050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0102	14.60	0.0000	10.43	0.1931	0.0400	7	21.61	20%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (10%)	0230	11.40	0.4000	10.43	0.1931	0.0400	7	5.05	5%	1
050.10	Soluble Potassium as K2O, STPB Citrate (10%)	0322	10.16	0.0060			0.0060	1			0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0428	9.612	0.4873	10.20	0.2466	0.2225	7	-2.39	3%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0516	9.975	0.1500	10.20	0.2466	0.2225	7	-0.92	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0040	10.10	0.4000	10.20	0.2466	0.2225	7	-0.41	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0136	10.24	0.0400	10.20	0.2466	0.2225	7	0.15	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0157	10.30	0.2000	10.20	0.2466	0.2225	7	0.40	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0073	10.32	0.0800	10.20	0.2466	0.2225	7	0.48	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (10%)	0356	10.94	0.2000	10.20	0.2466	0.2225	7	2.99	4%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (10%)	0472	9.765	0.1300			0.1300	1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0157	9.515*	0.3100	10.24	0.5372	0.1989	9	-1.34	4%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0402	9.635	0.0700	10.24	0.5372	0.1989	9	-1.12	3%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0444	9.970	0.4600	10.24	0.5372	0.1989	9	-0.50	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0055	10.02	0.0200	10.24	0.5372	0.1989	9	-0.40	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0292	10.29	0.1200	10.24	0.5372	0.1989	9	0.10	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0324	10.45	0.7000	10.24	0.5372	0.1989	9	0.40	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0420	10.57	0.0530	10.24	0.5372	0.1989	9	0.62	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0397	10.61	0.0270	10.24	0.5372	0.1989	9	0.69	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (10%)	0406	11.20	0.0300	10.24	0.5372	0.1989	9	1.78	5%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (10%)	0007	10.20	0.4000	10.25	0.0700	0.1667	3	-0.71	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (10%)	0291	10.22	0.0400	10.25	0.0700	0.1667	3	-0.43	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (10%)	0043	10.33	0.0600	10.25	0.0700	0.1667	3	1.14	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0486	9.180*	0.0600	10.23	0.4242	0.0791	9	-2.49	5%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0485	9.690	0.0200	10.23	0.4242	0.0791	9	-1.28	3%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0423	10.14	0.1020	10.23	0.4242	0.0791	9	-0.23	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0025	10.20	0.0000	10.23	0.4242	0.0791	9	-0.08	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0354	10.22	0.2300	10.23	0.4242	0.0791	9	-0.05	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0377	10.44	0.0900	10.23	0.4242	0.0791	9	0.47	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0131	10.47	0.0600	10.23	0.4242	0.0791	9	0.56	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0360	10.58	0.0900	10.23	0.4242	0.0791	9	0.80	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0421	10.74	0.0600	10.23	0.4242	0.0791	9	1.19	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (10%)	0233	10.20	1.421	10.23	0.4242	0.0791	9	-0.08	0%	1
050.60	Soluble Potassium as K2O, Flame Photometric ... (10%)	0510	9.100*	0.0000	10.01	0.6042	0.0620	5	-1.50	5%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (10%)	0309	9.695	0.1700	10.01	0.6042	0.0620	5	-0.52	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (10%)	0041	10.29	0.0200	10.01	0.6042	0.0620	5	0.47	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (10%)	0105	10.40	0.0800	10.01	0.6042	0.0620	5	0.65	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (10%)	0169	10.56	0.0400	10.01	0.6042	0.0620	5	0.91	3%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (10%)	0456	9.970	0.1800	10.04	0.1025	0.1050	2	-0.71	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (10%)	0035	10.12	0.0300	10.04	0.1025	0.1050	2	0.71	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (10%)	0037	10.13	0.1100	10.24	0.1370	0.0650	5	-0.82	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (10%)	0034	10.14	0.0151	10.24	0.1370	0.0650	5	-0.68	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (10%)	0105	10.15	0.1500	10.24	0.1370	0.0650	5	-0.68	0%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
050.62	Soluble Potassium as K2O, Flame Photometric (... (10%)	0029	10.38	0.0200	10.24	0.1370	0.0650	5	1.04	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (10%)	0095	10.40	0.0300	10.24	0.1370	0.0650	5	1.15	1%	0
050.99	Soluble Potassium as K2O, Other (10%)	0487	9.750	0.1000	10.29	0.3250	0.2245	20	-1.66	3%	0
050.99	Soluble Potassium as K2O, Other (10%)	0500	9.825	0.0300	10.29	0.3250	0.2245	20	-1.43	2%	0
050.99	Soluble Potassium as K2O, Other (10%)	0325	9.950	0.3000	10.29	0.3250	0.2245	20	-1.04	2%	0
050.99	Soluble Potassium as K2O, Other (10%)	0177	9.951	0.1117	10.29	0.3250	0.2245	20	-1.04	2%	0
050.99	Soluble Potassium as K2O, Other (10%)	0481	10.10	0.3600	10.29	0.3250	0.2245	20	-0.58	1%	0
050.99	Soluble Potassium as K2O, Other (10%)	0482	10.10	0.6000	10.29	0.3250	0.2245	20	-0.58	1%	0
050.99	Soluble Potassium as K2O, Other (10%)	0096	10.19	0.3300	10.29	0.3250	0.2245	20	-0.32	1%	0
050.99	Soluble Potassium as K2O, Other (10%)	0498	10.20	0.4000	10.29	0.3250	0.2245	20	-0.27	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0105	10.21	0.0300	10.29	0.3250	0.2245	20	-0.26	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0506	10.25	0.1000	10.29	0.3250	0.2245	20	-0.12	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0234	10.28	0.2400	10.29	0.3250	0.2245	20	-0.03	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0368	10.31	0.0530	10.29	0.3250	0.2245	20	0.05	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0394	10.32	0.0300	10.29	0.3250	0.2245	20	0.08	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0027	10.33	0.1600	10.29	0.3250	0.2245	20	0.12	0%	0
050.99	Soluble Potassium as K2O, Other (10%)	0444	10.48	0.4000	10.29	0.3250	0.2245	20	0.59	1%	0
050.99	Soluble Potassium as K2O, Other (10%)	0389	10.70	0.1200	10.29	0.3250	0.2245	20	1.27	2%	0
050.99	Soluble Potassium as K2O, Other (10%)	0307	10.75	0.2660	10.29	0.3250	0.2245	20	1.41	2%	0
050.99	Soluble Potassium as K2O, Other (10%)	0043	10.79	0.1300	10.29	0.3250	0.2245	20	1.53	2%	0
050.99	Soluble Potassium as K2O, Other (10%)	0451	11.42	0.0300	10.29	0.3250	0.2245	20	3.47	5%	0
050.99	Soluble Potassium as K2O, Other (10%)	0260	11.78	0.7000	10.29	0.3250	0.2245	20	4.59	7%	0
050.99	Soluble Potassium as K2O, Other (10%)	0515	8.249*	1.274	10.29	0.3250	0.2245	20	-6.27	10%	1
060.00	Water (Free), Vacuum Oven (%)	0007	0.1850	0.0300	0.4256	0.1804	0.0712	4	-1.33	28%	0
060.00	Water (Free), Vacuum Oven (%)	0416	0.4274	0.0349	0.4256	0.1804	0.0712	4	0.01	0%	0
060.00	Water (Free), Vacuum Oven (%)	0456	0.4700	0.0600	0.4256	0.1804	0.0712	4	0.25	5%	0
060.00	Water (Free), Vacuum Oven (%)	0096	0.6200	0.1600	0.4256	0.1804	0.0712	4	1.08	23%	0
060.99	Water (Free), Other (%)	0510	0.3100	0.0400	0.7025	0.5551	0.0450	2	-0.71	28%	0
060.99	Water (Free), Other (%)	0513	1.095	0.0500	0.7025	0.5551	0.0450	2	0.71	28%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	0.9590	0.0220			0.0220	1			0
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0105	0.9552	0.0554			0.0554	1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0035	0.7900	0.0060	0.9008	0.0465	0.0279	10	-2.38	6%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	0.8600	0.0000	0.9008	0.0465	0.0279	10	-0.88	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0307	0.8710	0.0280	0.9008	0.0465	0.0279	10	-0.64	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0102	0.8755	0.0030	0.9008	0.0465	0.0279	10	-0.54	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0131	0.8870	0.0656	0.9008	0.0465	0.0279	10	-0.30	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	0.9100	0.0400	0.9008	0.0465	0.0279	10	0.20	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.9235	0.0110	0.9008	0.0465	0.0279	10	0.49	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0041	0.9250	0.0900	0.9008	0.0465	0.0279	10	0.52	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	0.9650	0.0300	0.9008	0.0465	0.0279	10	1.38	4%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0420	0.9865	0.0050	0.9008	0.0465	0.0279	10	1.84	5%	0
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0025	0.6072	0.0197	0.7881	0.2559	0.0269	2	-0.71	11%	0
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0423	0.9690	0.0340	0.7881	0.2559	0.0269	2	0.71	11%	0

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101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0421	0.8950	0.0100			0.0100	1			0
101.99	Acid Soluble Calcium, Other (%)	0415	0.6392	0.0002	0.7946	0.2198	0.0001	2	-0.71	10%	0
101.99	Acid Soluble Calcium, Other (%)	0389	0.9500	0.0000	0.7946	0.2198	0.0001	2	0.71	10%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0513	1.100	0.0000	1.198	0.0547	0.0335	11	-1.80	4%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0029	1.132	0.0000	1.198	0.0547	0.0335	11	-1.21	3%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0481	1.145	0.0100	1.198	0.0547	0.0335	11	-0.98	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0043	1.175	0.0050	1.198	0.0547	0.0335	11	-0.44	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0040	1.195	0.0300	1.198	0.0547	0.0335	11	-0.06	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0485	1.200	0.0200	1.198	0.0547	0.0335	11	0.03	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0169	1.210	0.0200	1.198	0.0547	0.0335	11	0.21	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0105	1.228	0.0740	1.198	0.0547	0.0335	11	0.54	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0516	1.230	0.0600	1.198	0.0547	0.0335	11	0.58	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0498	1.850	0.1000	1.198	0.0547	0.0335	11	11.91	27%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (1%)	0309	2.075	0.0500	1.198	0.0547	0.0335	11	16.02	37%	0
121.02	Acid Soluble Magnesium, AA, 965.09, test port... (1%)	0025	0.1356*	0.0054			0.0054	1			0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (1%)	0105	1.216	0.0042			0.0042	1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0230	1.040	0.0400	1.170	0.0631	0.0423	22	-2.05	6%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0035	1.080	0.0400	1.170	0.0631	0.0423	22	-1.42	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0157	1.095	0.0700	1.170	0.0631	0.0423	22	-1.18	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0131	1.100	0.1200	1.170	0.0631	0.0423	22	-1.10	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0102	1.115	0.0100	1.170	0.0631	0.0423	22	-0.87	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0354	1.145	0.0070	1.170	0.0631	0.0423	22	-0.40	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0433	1.146	0.0092	1.170	0.0631	0.0423	22	-0.37	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0482	1.150	0.1000	1.170	0.0631	0.0423	22	-0.31	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0420	1.162	0.0070	1.170	0.0631	0.0423	22	-0.13	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0090	1.165	0.0300	1.170	0.0631	0.0423	22	-0.08	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0095	1.165	0.0300	1.170	0.0631	0.0423	22	-0.08	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0368	1.170	0.0141	1.170	0.0631	0.0423	22	0.00	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0096	1.170	0.0200	1.170	0.0631	0.0423	22	0.00	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0324	1.170	0.0600	1.170	0.0631	0.0423	22	0.00	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0055	1.175	0.0300	1.170	0.0631	0.0423	22	0.08	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0360	1.205	0.0100	1.170	0.0631	0.0423	22	0.56	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0041	1.210	0.1000	1.170	0.0631	0.0423	22	0.64	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0307	1.226	0.0310	1.170	0.0631	0.0423	22	0.88	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0233	1.239	0.0120	1.170	0.0631	0.0423	22	1.10	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0231	1.295	0.0700	1.170	0.0631	0.0423	22	1.98	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0472	1.665	0.0900	1.170	0.0631	0.0423	22	7.84	21%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (1%)	0444	1.975	0.0300	1.170	0.0631	0.0423	22	12.75	34%	0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0394	1.065	0.0300	1.112	0.0658	0.0280	2	-0.71	2%	0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0423	1.158	0.0260	1.112	0.0658	0.0280	2	0.71	2%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0515	1.031	0.0142	1.163	0.0348	0.0117	7	-3.77	6%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0486	1.035	0.0100	1.163	0.0348	0.0117	7	-3.67	5%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0397	1.105	0.0300	1.163	0.0348	0.0117	7	-1.66	2%	0

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121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0421	1.175	0.0100	1.163	0.0348	0.0117	7	0.35	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0034	1.185	0.0000	1.163	0.0348	0.0117	7	0.64	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0177	1.192	0.0078	1.163	0.0348	0.0117	7	0.84	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (1%)	0037	1.195	0.0100	1.163	0.0348	0.0117	7	0.93	1%	0
121.99	Acid Soluble Magnesium, Other (1%)	0415	1.017	0.0003	1.133	0.0778	0.0103	5	-1.49	5%	0
121.99	Acid Soluble Magnesium, Other (1%)	0515	1.102	0.0163	1.133	0.0778	0.0103	5	-0.39	1%	0
121.99	Acid Soluble Magnesium, Other (1%)	0512	1.149	0.0220	1.133	0.0778	0.0103	5	0.21	1%	0
121.99	Acid Soluble Magnesium, Other (1%)	0506	1.175	0.0100	1.133	0.0778	0.0103	5	0.54	2%	0
121.99	Acid Soluble Magnesium, Other (1%)	0389	1.222	0.0030	1.133	0.0778	0.0103	5	1.14	4%	0
121.99	Acid Soluble Magnesium, Other (1%)	0042	1.265	0.1500	1.133	0.0778	0.0103	5	1.70	6%	1
131.00	Water Soluble Magnesium, AA (%)	0029	1.132	0.0320	1.146	0.0198	0.0260	2	-0.71	1%	0
131.00	Water Soluble Magnesium, AA (%)	0485	1.160	0.0200	1.146	0.0198	0.0260	2	0.71	1%	0
131.30	Water Soluble Magnesium, ICP (%)	0230	0.9600	0.0600	1.193	0.2306	0.0507	5	-1.01	10%	0
131.30	Water Soluble Magnesium, ICP (%)	0394	1.040	0.0810	1.193	0.2306	0.0507	5	-0.66	6%	0
131.30	Water Soluble Magnesium, ICP (%)	0027	1.200	0.0380	1.193	0.2306	0.0507	5	0.03	0%	0
131.30	Water Soluble Magnesium, ICP (%)	0368	1.203	0.0344	1.193	0.2306	0.0507	5	0.05	0%	0
131.30	Water Soluble Magnesium, ICP (%)	0444	1.560	0.0400	1.193	0.2306	0.0507	5	1.59	15%	0
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	0510	0.9600	0.0000			0.0000	1			0
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0114	17.36	0.0400	17.67	0.4313	0.0600	2	-0.71	1%	0
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0055	17.97	0.0800	17.67	0.4313	0.0600	2	0.71	1%	0
143.99	Elemental Sulfur, Other (%)	0389	16.22	0.3500			0.3500	1			0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0027	16.53	0.5300	17.09	0.4710	0.2000	6	-1.20	2%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0485	16.82	0.2500	17.09	0.4710	0.2000	6	-0.58	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0095	16.99	0.0500	17.09	0.4710	0.2000	6	-0.22	0%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0233	17.13	0.1100	17.09	0.4710	0.2000	6	0.08	0%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0397	17.39	0.0400	17.09	0.4710	0.2000	6	0.64	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0043	17.75	0.2200	17.09	0.4710	0.2000	6	1.40	2%	0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0444	14.96	0.0600			0.0600	1			0
148.00	Total Sulfur, Combustion (15%)	0451	16.30	0.0000	16.52	0.1755	0.2275	4	-1.26	1%	0
148.00	Total Sulfur, Combustion (15%)	0157	16.50	0.6000	16.52	0.1755	0.2275	4	-0.12	0%	0
148.00	Total Sulfur, Combustion (15%)	0025	16.56	0.1200	16.52	0.1755	0.2275	4	0.22	0%	0
148.00	Total Sulfur, Combustion (15%)	0029	16.73	0.1900	16.52	0.1755	0.2275	4	1.16	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0230	16.15	0.5000	16.85	0.2157	0.2022	9	-3.25	2%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0231	16.67	0.0100	16.85	0.2157	0.2022	9	-0.86	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0102	16.79	0.0300	16.85	0.2157	0.2022	9	-0.28	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0481	16.81	0.1100	16.85	0.2157	0.2022	9	-0.21	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0485	16.82	0.2500	16.85	0.2157	0.2022	9	-0.17	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0029	16.89	0.1200	16.85	0.2157	0.2022	9	0.18	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0040	16.95	0.1000	16.85	0.2157	0.2022	9	0.46	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0324	17.10	0.6000	16.85	0.2157	0.2022	9	1.15	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (15%)	0157	17.25	0.1000	16.85	0.2157	0.2022	9	1.85	1%	0
148.04	Total Sulfur, ICP, w/Br digestion (15%)	0394	16.80	0.0000			0.0000	1			0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0515	14.00*	0.7586	15.75	1.439	0.2247	8	-1.22	6%	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				
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0486	14.46*	0.1300	15.75	1.439	0.2247	8	-0.90	4%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0444	14.84*	0.2600	15.75	1.439	0.2247	8	-0.63	3%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0421	15.29*	0.1500	15.75	1.439	0.2247	8	-0.33	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0037	16.53	0.0900	15.75	1.439	0.2247	8	0.54	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0177	16.54	0.3350	15.75	1.439	0.2247	8	0.55	3%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0292	16.94	0.0700	15.75	1.439	0.2247	8	0.82	4%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (15%)	0102	17.44	0.0040	15.75	1.439	0.2247	8	1.17	5%	0
148.99	Total Sulfur, Other (15%)	0506	15.10*	0.4000	16.57	1.061	0.1894	5	-1.39	4%	0
148.99	Total Sulfur, Other (15%)	0307	16.34	0.0810	16.57	1.061	0.1894	5	-0.22	1%	0
148.99	Total Sulfur, Other (15%)	0354	16.64	0.1660	16.57	1.061	0.1894	5	0.07	0%	0
148.99	Total Sulfur, Other (15%)	0096	16.70	0.2900	16.57	1.061	0.1894	5	0.12	0%	0
148.99	Total Sulfur, Other (15%)	0291	18.08	0.0100	16.57	1.061	0.1894	5	1.42	5%	0
148.99	Total Sulfur, Other (15%)	0482	17.65	1.700	16.57	1.061	0.1894	5	1.02	3%	1
149.04	Sulfur - HNO3 soluble, ICP (%)	0423	15.85	0.1000	16.18	0.4603	0.1790	2	-0.71	1%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0368	16.50	0.2580	16.18	0.4603	0.1790	2	0.71	1%	0
151.00	Acid Soluble Arsenic , AA, test portion as i... (ppm)	0136	4.300	0.2000			0.2000	1			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0102	3.325	0.6390	4.026	0.4997	0.2498	4	-1.40	9%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0096	4.100	0.2000	4.026	0.4997	0.2498	4	0.15	1%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	4.175	0.1100	4.026	0.4997	0.2498	4	0.30	2%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0230	4.505	0.0500	4.026	0.4997	0.2498	4	0.96	6%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0368	0.0000	0.0000	4.026	0.4997	0.2498	4	-8.06	50%	4
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified... (ppm)	0515	3.194	0.8420			0.8420	1			0
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	2.874	0.2660			0.2660	1			0
151.99	Acid Soluble Arsenic , Other (ppm)	0481	3.440	0.3800	3.620	0.2546	0.2900	2	-0.71	2%	0
151.99	Acid Soluble Arsenic , Other (ppm)	0498	3.800	0.2000	3.620	0.2546	0.2900	2	0.71	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	0055	0.1030*	0.0000	0.1476	0.0078	0.0053	6	-5.72	15%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	0037	0.1430	0.0040	0.1476	0.0078	0.0053	6	-0.59	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	0481	0.1450	0.0100	0.1476	0.0078	0.0053	6	-0.33	1%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	0397	0.1520	0.0040	0.1476	0.0078	0.0053	6	0.57	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	0029	0.1530	0.0040	0.1476	0.0078	0.0053	6	0.70	2%	0
165.00	Acid Soluble Boron , Spectrophotometric (0.1%)	0506	0.1550	0.0100	0.1476	0.0078	0.0053	6	0.96	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0397	0.1390	0.0020	0.1556	0.0136	0.0030	9	-1.22	5%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0291	0.1400	0.0000	0.1556	0.0136	0.0030	9	-1.15	5%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0090	0.1475	0.0050	0.1556	0.0136	0.0030	9	-0.60	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0433	0.1537	0.0010	0.1556	0.0136	0.0030	9	-0.14	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0394	0.1559	0.0019	0.1556	0.0136	0.0030	9	0.02	0%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0354	0.1600	0.0040	0.1556	0.0136	0.0030	9	0.33	1%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0025	0.1644	0.0034	0.1556	0.0136	0.0030	9	0.65	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0444	0.1650	0.0100	0.1556	0.0136	0.0030	9	0.69	3%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0402	0.2100	0.0000	0.1556	0.0136	0.0030	9	4.01	17%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (0.1%)	0324	0.1930	0.0960	0.1556	0.0136	0.0030	9	2.76	12%	1
165.99	Acid Soluble Boron , Other (0.1%)	0230	0.1270	0.0020	0.1471	0.0097	0.0037	13	-2.08	7%	0
165.99	Acid Soluble Boron , Other (0.1%)	0515	0.1339	0.0130	0.1471	0.0097	0.0037	13	-1.37	4%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
165.99	Acid Soluble Boron , Other (0.1%)	0486	0.1400	0.0000	0.1471	0.0097	0.0037	13	-0.74	2%	0
165.99	Acid Soluble Boron , Other (0.1%)	0043	0.1410	0.0040	0.1471	0.0097	0.0037	13	-0.63	2%	0
165.99	Acid Soluble Boron , Other (0.1%)	0423	0.1440	0.0020	0.1471	0.0097	0.0037	13	-0.32	1%	0
165.99	Acid Soluble Boron , Other (0.1%)	0482	0.1450	0.0100	0.1471	0.0097	0.0037	13	-0.22	1%	0
165.99	Acid Soluble Boron , Other (0.1%)	0421	0.1465	0.0010	0.1471	0.0097	0.0037	13	-0.06	0%	0
165.99	Acid Soluble Boron , Other (0.1%)	0095	0.1500	0.0000	0.1471	0.0097	0.0037	13	0.30	1%	0
165.99	Acid Soluble Boron , Other (0.1%)	0472	0.1500	0.0000	0.1471	0.0097	0.0037	13	0.30	1%	0
165.99	Acid Soluble Boron , Other (0.1%)	0368	0.1512	0.0026	0.1471	0.0097	0.0037	13	0.42	1%	0
165.99	Acid Soluble Boron , Other (0.1%)	0360	0.1600	0.0040	0.1471	0.0097	0.0037	13	1.33	4%	0
165.99	Acid Soluble Boron , Other (0.1%)	0231	0.1700	0.0000	0.1471	0.0097	0.0037	13	2.37	8%	0
165.99	Acid Soluble Boron , Other (0.1%)	0042	0.2450	0.0100	0.1471	0.0097	0.0037	13	10.13	33%	0
171.99	Water Soluble Boron , Other (%)	0444	0.1400	0.0000	0.1453	0.0074	0.0025	2	-0.71	2%	0
171.99	Water Soluble Boron , Other (%)	0027	0.1505	0.0050	0.1453	0.0074	0.0025	2	0.71	2%	0
181.00	Acid Soluble Cadmium , AA, test portion as i...	0136	4.650	0.1000			0.1000	1			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0444	3.645	0.2100	4.487	0.4353	0.1684	8	-1.93	9%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	4.165	0.1300	4.487	0.4353	0.1684	8	-0.74	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0230	4.370	0.0600	4.487	0.4353	0.1684	8	-0.27	1%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	4.380	0.1600	4.487	0.4353	0.1684	8	-0.25	1%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0096	4.500	0.2000	4.487	0.4353	0.1684	8	0.03	0%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0368	4.850	0.1000	4.487	0.4353	0.1684	8	0.83	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0482	4.850	0.1000	4.487	0.4353	0.1684	8	0.83	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0102	4.949	0.3870	4.487	0.4353	0.1684	8	1.06	5%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified...	0515	2.920	0.4435	3.945	1.450	0.2918	2	-0.71	13%	0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified...	0037	4.970	0.1400	3.945	1.450	0.2918	2	0.71	13%	0
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	3.424	2.722			2.722	1			0
181.99	Acid Soluble Cadmium , Other (ppm)	0481	5.100	0.2000	7.375	3.217	0.6500	2	-0.71	15%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0498	9.650	1.100	7.375	3.217	0.6500	2	0.71	15%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0027	6.000	0.0000	6.323	0.1313	0.0791	12	-2.46	3%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0481	6.010	0.1200	6.323	0.1313	0.0791	12	-2.39	2%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0394	6.100	0.0000	6.323	0.1313	0.0791	12	-1.70	2%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0102	6.198	0.0470	6.323	0.1313	0.0791	12	-0.96	1%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0444	6.280	0.0400	6.323	0.1313	0.0791	12	-0.33	0%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0230	6.340	0.1600	6.323	0.1313	0.0791	12	0.13	0%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0043	6.380	0.0200	6.323	0.1313	0.0791	12	0.43	0%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0397	6.384	0.0027	6.323	0.1313	0.0791	12	0.47	0%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0055	6.390	0.1800	6.323	0.1313	0.0791	12	0.51	1%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0105	6.400	0.1000	6.323	0.1313	0.0791	12	0.58	1%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0029	6.440	0.0800	6.323	0.1313	0.0791	12	0.89	1%	0
190.00	Water Soluble Chlorine, Titrimetric (8%)	0506	7.600	0.2000	6.323	0.1313	0.0791	12	9.72	10%	0
190.99	Water Soluble Chlorine, Other (8%)	0368	4.290*	0.0600	5.120	1.174	0.0800	2	-0.71	8%	0
190.99	Water Soluble Chlorine, Other (8%)	0029	5.950	0.1000	5.120	1.174	0.0800	2	0.71	8%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	70.25	1.300	81.23	10.30	2.814	8	-1.07	7%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	71.95	3.300	81.23	10.30	2.814	8	-0.90	6%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
191.30	Acid Soluble Chromium , ICP (ppm)	0444	72.46	3.190	81.23	10.30	2.814	8	-0.85	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	78.64	2.819	81.23	10.30	2.814	8	-0.25	2%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0368	85.60	4.400	81.23	10.30	2.814	8	0.42	3%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0230	86.95	3.100	81.23	10.30	2.814	8	0.56	4%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	90.65	3.100	81.23	10.30	2.814	8	0.91	6%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	93.35	1.300	81.23	10.30	2.814	8	1.18	7%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0037	94.68	1.740	96.44	2.495	12.47	2	-0.71	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0515	98.21	23.21	96.44	2.495	12.47	2	0.71	1%	0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm)	0515	89.18	2.643			2.643	1			0
191.99	Acid Soluble Chromium , Other (ppm)	0512	43.00	8.484	83.67	35.31	4.161	3	-1.15	24%	0
191.99	Acid Soluble Chromium , Other (ppm)	0481	101.5	3.000	83.67	35.31	4.161	3	0.51	11%	0
191.99	Acid Soluble Chromium , Other (ppm)	0506	106.5	1.000	83.67	35.31	4.161	3	0.65	14%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0102	4.299	0.5200	6.868	2.341	0.3414	7	-1.10	19%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0368	5.000	1.200	6.868	2.341	0.3414	7	-0.80	14%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	5.620	0.0400	6.868	2.341	0.3414	7	-0.53	9%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0230	7.550	0.0800	6.868	2.341	0.3414	7	0.29	5%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	7.550	0.1000	6.868	2.341	0.3414	7	0.29	5%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	7.680	0.3600	6.868	2.341	0.3414	7	0.35	6%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0233	10.71	0.0900	6.868	2.341	0.3414	7	1.64	28%	0
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	0423	7.640	0.1000			0.1000	1			0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified ... (ppm)	0515	8.142	0.4623	9.134	1.402	0.3262	2	-0.71	5%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified ... (ppm)	0037	10.13	0.1900	9.134	1.402	0.3262	2	0.71	5%	0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	6.497	4.245			4.245	1			0
202.99	Acid Soluble Cobalt , Other (ppm)	0512	10.14	1.094	15.02	6.899	0.5470	2	-0.71	16%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0481	19.90	0.0000	15.02	6.899	0.5470	2	0.71	16%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0481	0.0031	0.0001	0.0032	0.0002	0.0003	3	-0.73	2%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0105	0.0031	0.0006	0.0032	0.0002	0.0003	3	-0.41	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0043	0.0034	0.0001	0.0032	0.0002	0.0003	3	1.14	3%	0
221.03	Acid Soluble Copper , AA, 965.09, test porti... (%)	0105	0.0033	0.0001			0.0001	1			0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0041	0.0030	0.0000	0.0035	0.0006	0.0004	10	-0.85	7%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0102	0.0030	0.0000	0.0035	0.0006	0.0004	10	-0.85	7%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0230	0.0030	0.0002	0.0035	0.0006	0.0004	10	-0.85	7%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0035	0.0031	0.0001	0.0035	0.0006	0.0004	10	-0.76	6%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0096	0.0033	0.0001	0.0035	0.0006	0.0004	10	-0.41	3%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0433	0.0035	0.0000	0.0035	0.0006	0.0004	10	0.02	0%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0233	0.0037	0.0003	0.0035	0.0006	0.0004	10	0.29	2%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0402	0.0040	0.0000	0.0035	0.0006	0.0004	10	0.90	7%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0444	0.0055	0.0010	0.0035	0.0006	0.0004	10	3.52	29%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0354	0.0060	0.0020	0.0035	0.0006	0.0004	10	4.39	36%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0368	32.65	0.9000	0.0035	0.0006	0.0004	10	57051.86	468139%	2
221.32	Acid Soluble Copper , ICP, test portion 2006... (%)	0394	0.0026	0.0002	15.24	21.55	0.1251	2	-0.71	50%	0
221.32	Acid Soluble Copper , ICP, test portion 2006... (%)	0423	30.48	0.2500	15.24	21.55	0.1251	2	0.71	50%	0
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0515	0.0033	0.0003	15.24	21.55	0.0003	1	-0.71	50%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0421	0.0000	0.0000	15.24	21.55	0.0003	1	-0.71	50%	4
221.99	Acid Soluble Copper , Other (%)	0512	0.0021	0.0002	0.0026	0.0005	0.0001	3	-0.93	9%	0
221.99	Acid Soluble Copper , Other (%)	0389	0.0025	0.0000	0.0026	0.0005	0.0001	3	-0.13	1%	0
221.99	Acid Soluble Copper , Other (%)	0515	0.0031	0.0002	0.0026	0.0005	0.0001	3	1.06	10%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0516	0.8300*	0.1000	1.465	0.0938	0.0663	7	-6.77	22%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0513	1.030*	0.0600	1.465	0.0938	0.0663	7	-4.64	15%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0481	1.430	0.0200	1.465	0.0938	0.0663	7	-0.38	1%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0105	1.487	0.1940	1.465	0.0938	0.0663	7	0.23	1%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0029	1.524	0.0760	1.465	0.0938	0.0663	7	0.63	2%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0485	1.535	0.0100	1.465	0.0938	0.0663	7	0.74	2%	0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (1%)	0043	1.560	0.0040	1.465	0.0938	0.0663	7	1.01	3%	0
241.03	Acid Soluble Iron , AA, 965.09, test portion ... (1%)	0105	1.511	0.0190			0.0190	1			0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0420	0.3275*	0.0250	1.427	0.1771	0.0452	25	-6.21	39%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0472	0.9750*	0.0100	1.427	0.1771	0.0452	25	-2.55	16%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0131	1.150*	0.1400	1.427	0.1771	0.0452	25	-1.56	10%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0090	1.215*	0.0700	1.427	0.1771	0.0452	25	-1.20	7%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0291	1.235*	0.0100	1.427	0.1771	0.0452	25	-1.09	7%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0073	1.265*	0.0300	1.427	0.1771	0.0452	25	-0.92	6%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0035	1.280	0.0600	1.427	0.1771	0.0452	25	-0.83	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0230	1.280	0.0600	1.427	0.1771	0.0452	25	-0.83	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0354	1.347	0.0390	1.427	0.1771	0.0452	25	-0.46	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0482	1.390	0.0400	1.427	0.1771	0.0452	25	-0.21	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0402	1.445	0.0300	1.427	0.1771	0.0452	25	0.10	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0433	1.457	0.0156	1.427	0.1771	0.0452	25	0.17	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0157	1.460	0.0200	1.427	0.1771	0.0452	25	0.19	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0444	1.480	0.2000	1.427	0.1771	0.0452	25	0.30	2%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0368	1.484	0.0241	1.427	0.1771	0.0452	25	0.32	2%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0231	1.505	0.0300	1.427	0.1771	0.0452	25	0.44	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0095	1.515	0.0100	1.427	0.1771	0.0452	25	0.50	3%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0041	1.540	0.0600	1.427	0.1771	0.0452	25	0.64	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0233	1.542	0.0270	1.427	0.1771	0.0452	25	0.65	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0096	1.545	0.0300	1.427	0.1771	0.0452	25	0.66	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0360	1.580	0.0600	1.427	0.1771	0.0452	25	0.86	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0324	1.605	0.0500	1.427	0.1771	0.0452	25	1.00	6%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0234	1.610	0.0200	1.427	0.1771	0.0452	25	1.03	6%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0027	1.630	0.0270	1.427	0.1771	0.0452	25	1.14	7%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0055	1.728	0.0420	1.427	0.1771	0.0452	25	1.70	11%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (1%)	0102	1.151*	0.2180	1.427	0.1771	0.0452	25	-1.56	10%	1
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0423	1.335	0.0300	1.388	0.0742	0.0720	2	-0.71	2%	0
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0394	1.440	0.1140	1.388	0.0742	0.0720	2	0.71	2%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0486	1.185*	0.0100	1.475	0.0960	0.0362	7	-3.02	10%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0397	1.386	0.0650	1.475	0.0960	0.0362	7	-0.93	3%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0515	1.460	0.0740	1.475	0.0960	0.0362	7	-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 2006.03... (1%)	0037	1.484	0.0170	1.475	0.0960	0.0362	7	0.09	0%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0177	1.497	0.0313	1.475	0.0960	0.0362	7	0.23	1%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0034	1.541	0.0360	1.475	0.0960	0.0362	7	0.69	2%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (1%)	0421	1.600	0.0200	1.475	0.0960	0.0362	7	1.31	4%	0
241.99	Acid Soluble Iron , Other (1%)	0512	0.2053*	0.1240	1.026	0.5057	0.1029	5	-1.62	40%	0
241.99	Acid Soluble Iron , Other (1%)	0389	0.8880*	0.0340	1.026	0.5057	0.1029	5	-0.27	7%	0
241.99	Acid Soluble Iron , Other (1%)	0042	1.230*	0.1600	1.026	0.5057	0.1029	5	0.40	10%	0
241.99	Acid Soluble Iron , Other (1%)	0506	1.365	0.0300	1.026	0.5057	0.1029	5	0.67	17%	0
241.99	Acid Soluble Iron , Other (1%)	0515	1.443	0.1665	1.026	0.5057	0.1029	5	0.82	20%	0
251.00	Acid Soluble Lead , AA, test portion as in 2... (ppm)	0136	6.500	1.000			1.000	1			0
251.30	Acid Soluble Lead , ICP (ppm)	0035	5.825	1.050	7.944	1.613	1.231	8	-1.31	13%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	6.600	0.4000	7.944	1.613	1.231	8	-0.83	8%	0
251.30	Acid Soluble Lead , ICP (ppm)	0444	7.450	0.6600	7.944	1.613	1.231	8	-0.31	3%	0
251.30	Acid Soluble Lead , ICP (ppm)	0230	7.495	0.1700	7.944	1.613	1.231	8	-0.28	3%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	7.950	0.7000	7.944	1.613	1.231	8	0.00	0%	0
251.30	Acid Soluble Lead , ICP (ppm)	0482	8.790	0.8200	7.944	1.613	1.231	8	0.52	5%	0
251.30	Acid Soluble Lead , ICP (ppm)	0102	9.286	2.647	7.944	1.613	1.231	8	0.83	8%	0
251.30	Acid Soluble Lead , ICP (ppm)	0368	10.40	3.400	7.944	1.613	1.231	8	1.52	15%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/... (ppm)	0515	6.253	0.5110	7.459	1.706	0.5905	2	-0.71	8%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/... (ppm)	0037	8.665	0.6700	7.459	1.706	0.5905	2	0.71	8%	0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	7.307	0.9570			0.9570	1			0
251.99	Acid Soluble Lead , Other (ppm)	0498	1.625	0.1500	27.78	42.83	0.5533	3	-0.61	47%	0
251.99	Acid Soluble Lead , Other (ppm)	0481	4.510	0.1600	27.78	42.83	0.5533	3	-0.54	42%	0
251.99	Acid Soluble Lead , Other (ppm)	0512	77.21	1.350	27.78	42.83	0.5533	3	1.15	89%	0
261.00	Acid Soluble Manganese , AA, Mn2+ only (%)	0043	0.0165	0.0010			0.0010	1			0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0105	0.0157	0.0021			0.0021	1			0
261.15	Acid Soluble Manganese , AA, 965.09, test po... (%)	0105	0.0156	0.0007			0.0007	1			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0131	0.0041	0.0018	0.0121	0.0043	0.0008	8	-1.87	33%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0420	0.0057	0.0002	0.0121	0.0043	0.0008	8	-1.50	26%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0472	0.0100	0.0000	0.0121	0.0043	0.0008	8	-0.49	9%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0102	0.0125	0.0030	0.0121	0.0043	0.0008	8	0.09	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0354	0.0140	0.0000	0.0121	0.0043	0.0008	8	0.44	8%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0035	0.0143	0.0002	0.0121	0.0043	0.0008	8	0.51	9%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0096	0.0157	0.0002	0.0121	0.0043	0.0008	8	0.84	15%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0041	0.0165	0.0010	0.0121	0.0043	0.0008	8	1.03	18%	0
261.31	Acid Soluble Manganese , ICP, test portion 9... (%)	0482	0.0150	0.0100			0.0100	1			0
261.34	Acid Soluble Manganese , ICP, test portion 2... (%)	0423	153.5	8.000			8.000	1			0
261.35	Acid Soluble Manganese , ICP, test portion 2... (%)	0421	0.0145	0.0010			0.0010	1			0
261.99	Acid Soluble Manganese , Other (%)	0389	0.0098	0.0005			0.0005	1			0
281.00	Acid Soluble Mercury , AA (ppm)	0230	0.0145	0.0004			0.0004	1			0
281.30	Acid Soluble Mercury , ICP (ppm)	0394	0.0100	0.0000	0.0121	0.0043	0.0000	1	-0.49	9%	0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0217	0.0434	0.0121	0.0043	0.0000	1	2.25	40%	4
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	6.775	0.1500	7.231	0.3877	0.1964	5	-1.18	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				
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	6.992	0.0999	7.231	0.3877	0.1964	5	-0.61	2%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0102	7.131	0.1620	7.231	0.3877	0.1964	5	-0.26	1%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	7.550	0.3000	7.231	0.3877	0.1964	5	0.82	2%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0230	7.705	0.2700	7.231	0.3877	0.1964	5	1.22	3%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0394	6.500	1.000	7.231	0.3877	0.1964	5	-1.88	5%	1
289.30	Acid Soluble Molybdenum , ICP (ppm)	0368	0.0000	0.0000	7.231	0.3877	0.1964	5	-18.65	50%	4
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0423	6.180	0.0200	6.929	1.210	0.0475	3	-0.62	5%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0515	6.283	0.0325	6.929	1.210	0.0475	3	-0.53	5%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0037	8.325	0.0900	6.929	1.210	0.0475	3	1.15	10%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm)	0515	5.833	2.425			2.425	1			0
289.99	Acid Soluble Molybdenum , Other (ppm)	0506	14.25	1.500			1.500	1			0
291.00	Acid Soluble Nickel , AA, test portion as in... (ppm)	0136	40.00	0.0000			0.0000	1			0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	27.55	1.700	34.31	4.643	0.9967	10	-1.46	10%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	29.10	0.4000	34.31	4.643	0.9967	10	-1.12	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	29.70	1.200	34.31	4.643	0.9967	10	-0.99	7%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0368	34.35	2.500	34.31	4.643	0.9967	10	0.01	0%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0233	34.44	0.4300	34.31	4.643	0.9967	10	0.03	0%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0102	35.39	1.227	34.31	4.643	0.9967	10	0.23	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0230	36.05	0.9000	34.31	4.643	0.9967	10	0.38	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	37.98	1.210	34.31	4.643	0.9967	10	0.79	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0095	38.00	0.0000	34.31	4.643	0.9967	10	0.80	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	40.00	0.4000	34.31	4.643	0.9967	10	1.23	8%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0515	36.18	0.0060	37.86	2.379	0.0980	2	-0.71	2%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0037	39.55	0.1900	37.86	2.379	0.0980	2	0.71	2%	0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	38.08	3.441			3.441	1			0
291.99	Acid Soluble Nickel , Other (ppm)	0512	13.79	8.430	30.78	16.10	3.977	3	-1.06	28%	0
291.99	Acid Soluble Nickel , Other (ppm)	0506	32.75	3.500	30.78	16.10	3.977	3	0.12	3%	0
291.99	Acid Soluble Nickel , Other (ppm)	0481	45.80	0.0000	30.78	16.10	3.977	3	0.93	24%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0394	0.2050	0.0100	0.3683	0.2309	0.2145	2	-0.71	22%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0230	0.5315	0.4190	0.3683	0.2309	0.2145	2	0.71	22%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0368	0.0000	0.0000	0.3683	0.2309	0.2145	2	-1.60	50%	4
301.33	Acid Soluble Selenium , ICP, 2006.03 modifie... (ppm)	0515	0.0000	0.0000			0.0000	0			4
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm)	0515	0.3620	0.7239			0.7239	0			4
311.30	Sodium, Flame Photometric (%)	0510	0.2300	0.0200			0.0200	1			0
311.32	Sodium, ICP, 2006.03 test portion (%)	0025	0.2030	0.0071			0.0071	1			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0035	0.1995	0.0070	0.2028	0.0029	0.0043	3	-1.14	1%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0423	0.2040	0.0020	0.2028	0.0029	0.0043	3	0.40	0%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0102	0.2050	0.0040	0.2028	0.0029	0.0043	3	0.74	1%	0
311.99	Sodium, Other (%)	0482	0.2150	0.0300	0.2265	0.0158	0.0137	3	-0.73	3%	0
311.99	Sodium, Other (%)	0096	0.2200	0.0000	0.2265	0.0158	0.0137	3	-0.41	1%	0
311.99	Sodium, Other (%)	0354	0.2445	0.0110	0.2265	0.0158	0.0137	3	1.14	4%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0513	0.1150*	0.0100	0.1481	0.0142	0.0050	10	-2.33	11%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0169	0.1380	0.0020	0.1481	0.0142	0.0050	10	-0.71	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				
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0516	0.1385	0.0010	0.1481	0.0142	0.0050	10	-0.67	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0481	0.1400	0.0000	0.1481	0.0142	0.0050	10	-0.57	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0105	0.1480	0.0011	0.1481	0.0142	0.0050	10	-0.01	0%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0485	0.1510	0.0040	0.1481	0.0142	0.0050	10	0.20	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0029	0.1528	0.0148	0.1481	0.0142	0.0050	10	0.33	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0498	0.1550	0.0100	0.1481	0.0142	0.0050	10	0.48	2%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0040	0.1625	0.0010	0.1481	0.0142	0.0050	10	1.01	5%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (0.1%)	0043	0.1685	0.0060	0.1481	0.0142	0.0050	10	1.43	7%	0
321.03	Acid Soluble Zinc , AA, 965.09, test portion... (0.1%)	0105	0.1610	0.0133			0.0133	1			0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0230	0.1335	0.0010	0.1521	0.0106	0.0036	24	-1.76	6%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0157	0.1385	0.0010	0.1521	0.0106	0.0036	24	-1.29	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0035	0.1389	0.0013	0.1521	0.0106	0.0036	24	-1.25	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0291	0.1400	0.0000	0.1521	0.0106	0.0036	24	-1.15	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0131	0.1425	0.0030	0.1521	0.0106	0.0036	24	-0.91	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0055	0.1430	0.0060	0.1521	0.0106	0.0036	24	-0.86	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0482	0.1450	0.0100	0.1521	0.0106	0.0036	24	-0.67	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0292	0.1500	0.0000	0.1521	0.0106	0.0036	24	-0.20	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0402	0.1500	0.0040	0.1521	0.0106	0.0036	24	-0.20	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0444	0.1500	0.0000	0.1521	0.0106	0.0036	24	-0.20	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0472	0.1500	0.0000	0.1521	0.0106	0.0036	24	-0.20	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0090	0.1525	0.0070	0.1521	0.0106	0.0036	24	0.04	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0354	0.1525	0.0050	0.1521	0.0106	0.0036	24	0.04	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0420	0.1525	0.0010	0.1521	0.0106	0.0036	24	0.04	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0027	0.1535	0.0070	0.1521	0.0106	0.0036	24	0.13	0%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0095	0.1550	0.0100	0.1521	0.0106	0.0036	24	0.27	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0233	0.1557	0.0019	0.1521	0.0106	0.0036	24	0.33	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0433	0.1595	0.0042	0.1521	0.0106	0.0036	24	0.70	2%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0360	0.1610	0.0020	0.1521	0.0106	0.0036	24	0.84	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0368	0.1618	0.0051	0.1521	0.0106	0.0036	24	0.91	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0102	0.1645	0.0050	0.1521	0.0106	0.0036	24	1.17	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0231	0.1650	0.0100	0.1521	0.0106	0.0036	24	1.22	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0324	0.1655	0.0010	0.1521	0.0106	0.0036	24	1.26	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0041	0.1800	0.0000	0.1521	0.0106	0.0036	24	2.63	9%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (0.1%)	0096	3.273	0.0010	0.1521	0.0106	0.0036	24	294.71	1026%	2
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0394	0.1475	0.0070	0.1548	0.0103	0.0045	2	-0.71	2%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0423	0.1620	0.0020	0.1548	0.0103	0.0045	2	0.71	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0486	0.1300*	0.0000	0.1489	0.0103	0.0097	7	-1.83	6%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0034	0.1425	0.0010	0.1489	0.0103	0.0097	7	-0.62	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0397	0.1445	0.0030	0.1489	0.0103	0.0097	7	-0.42	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0515	0.1475	0.0238	0.1489	0.0103	0.0097	7	-0.13	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0037	0.1530	0.0060	0.1489	0.0103	0.0097	7	0.40	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0421	0.1595	0.0050	0.1489	0.0103	0.0097	7	1.03	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (0.1%)	0177	1.510	0.0290	0.1489	0.0103	0.0097	7	132.14	457%	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 (0.1%)	0389	0.1465	0.0010	0.1498	0.0020	0.0084	5	-1.64	1%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0042	0.1500	0.0000	0.1498	0.0020	0.0084	5	0.08	0%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0506	0.1500	0.0000	0.1498	0.0020	0.0084	5	0.08	0%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0512	0.1507	0.0086	0.1498	0.0020	0.0084	5	0.42	0%	0
321.99	Acid Soluble Zinc , Other (0.1%)	0515	0.1520	0.0326	0.1498	0.0020	0.0084	5	1.06	1%	0
325.30	Water Soluble Zinc , ICP (%)	0444	0.0850	0.0100			0.0100	1			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.