

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 170811

Grade 21-0-5

Statistical Summary

Methods: 127

Labs Reporting: 97

Issue Date : 09/30/2017

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 (%)	8	8	2.977	0.3693	2.993		0.3804	0.1681	12.71%		0.0587	3.39%
001.99	Ammoniacal Nitrogen, Other (%)	25	24	3.025	0.2659	3.000		0.1963	0.0501	6.54%		0.0489	3.39%
003.10	Water Insoluble Nitrogen, Method 1 (%)	6	6	10.80	4.618	12.40		0.9222	0.4706	7.44%		0.2600	2.74%
003.99	Water Insoluble Nitrogen, Other (%)	2	2	12.55	0.9157								
005.00	Urea Nitrogen, Urease (as N) (%)	4	4	2.579	2.949	2.579		2.949	1.843	114.35%		0.0575	3.47%
005.99	Urea Nitrogen, Other (%)	4	4	5.843	8.277	5.843		8.277	5.173	141.66%		0.1783	3.07%
007.99	Urea, Other (%)	4	4	1.351	1.111	1.351		1.111	0.6946	82.25%		0.0275	3.82%
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	1		4.140									
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	1		10.05									
010.11	Total Nitrogen, Modified Comprehensive (21%)	10	9	20.96	0.2526	20.96	0.7405	0.2865	0.1194	1.37%	1.77%	0.0996	2.53%
010.12	Total Nitrogen, Salicylic (21%)	5	5	20.73	0.4266	20.73	0.7405	0.4266	0.2385	2.06%	1.79%	0.3145	2.53%
010.60	Total Nitrogen, Combustion (21%)	58	56	21.04	0.6502	21.10	0.7405	0.2994	0.0500	1.42%	1.75%	0.1673	2.53%
010.99	Total Nitrogen, Other (21%)	12	12	20.91	0.2720	20.88	0.7405	0.2447	0.0883	1.17%	1.77%	0.1250	2.53%
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	1		0.8450									
020.40	Total Phosphorus as P2O5, Automated (%)	1		0.1600									
020.50	Total Phosphorus as P2O5, ICP (%)	7	6	0.0381	0.0124	0.0381		0.0140	0.0072	36.85%		0.0151	6.54%
020.99	Total Phosphorus as P2O5, Other (%)	1		0.0133									
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.1050									
040.40	Indirect Available Phosphorus as P2O5, Automated (5%)	1		0.0400									
041.11	Direct Available Phosphorus as P2O5, Gravimetric Q... (5%)	1		0.0200									
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	3	2	0.0568	0.0612	0.0568	0.6700	0.0612	0.0541	107.78%	590.31%	0.0025	6.16%
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (5%)	1		0.2250									
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (5%)	2	1	0.0270									
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		0.0650									
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	10	10	5.363	0.5594	5.201		0.1989	0.0786	3.83%		0.1058	3.12%
050.30	Soluble Potassium as K2O, AA (Oxalate) (%)	5	5	4.954	0.2041	4.954		0.2041	0.1141	4.12%		0.0680	3.14%
050.31	Soluble Potassium as K2O, AA (Citrate) (%)	1		4.720									
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (%)	1		5.385									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	9	9	5.229	0.3294	5.219		0.3511	0.1463	6.73%		0.1649	3.12%
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	6	6	5.108	0.1572	5.122		0.1432	0.0731	2.79%		0.0983	3.13%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	11	11	5.163	0.2528	5.133		0.1855	0.0699	3.61%		0.1189	3.13%

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala... (%)	6	6	5.064	0.2388	5.058		0.2560	0.1306	5.06%		0.1214	3.13%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra... (%)	3	3	5.332	0.7201	5.332		0.7201	0.5197	13.51%		0.1100	3.11%
050.62	Soluble Potassium as K2O, Flame Photometric (Citra... (%)	4	4	5.027	0.0108	5.027		0.0108	0.0068	0.22%		0.0404	3.14%
050.99	Soluble Potassium as K2O, Other (%)	38	35	5.053	0.2803	5.077		0.1885	0.0398	3.71%		0.1171	3.13%
060.00	Water (Free), Vacuum Oven (%)	3	3	1.610	0.3365	1.610		0.3365	0.2428	20.90%		0.0068	3.72%
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,... (%)	1		2.650									
060.99	Water (Free), Other (%)	4	4	1.486	0.1387	1.486		0.1387	0.0867	9.34%		0.0133	3.77%
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	1		6.934									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	7	7	6.783	0.4987	6.783		0.5655	0.2672	8.34%		0.1166	3.00%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C (%)	2	2	6.800	0.4520								
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	6	6	6.701	0.4192	6.701		0.4753	0.2426	7.09%		0.3139	3.00%
101.99	Acid Soluble Calcium, Other (%)	1		6.185									
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	1		2.576									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (	7	7	2.643	0.1786	2.643		0.2025	0.0957	7.66%		0.0633	3.46%
121.32	Acid Soluble Magnesium, ICP, test portion 2006.03A... 2	2	2	2.739	0.1614								
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A... 8	8	8	2.560	0.1462	2.541		0.1169	0.0517	4.60%		0.0583	3.48%
121.99	Acid Soluble Magnesium, Other (%)	3	3	2.648	0.3179	2.648		0.3179	0.2294	12.01%		0.0547	3.45%
143.99	Elemental Sulfur, Other (%)	3	3	5.392	0.1831	5.392		0.1831	0.1322	3.40%		0.0593	3.10%
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	9	9	5.381	0.1774	5.378		0.1930	0.0804	3.59%		0.0768	3.11%
145.99	Sulfate Sulfur, HCl soluble, Other (%)	2	2	6.933	2.217								
146.99	Total Sulfur in Liquid, Other (%)	1		5.505									
148.00	Total Sulfur, Combustion (8.6%)	7	7	5.083	0.3402	5.083	0.4671	0.3858	0.1823	7.59%	4.59%	0.0731	3.13%
148.01	Total Sulfur, Gravimetric - sulfate and elemental... (8.6	13	11	5.879	1.228	5.395	0.4671	0.1947	0.0734	3.61%	4.33%	0.0913	3.10%
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (8.6	13	12	5.500	0.4465	5.409	0.4671	0.2556	0.0922	4.72%	4.32%	0.1136	3.10%
148.99	Total Sulfur, Other (8.6%)	13	13	5.515	0.7677	5.349	0.4671	0.2992	0.1037	5.59%	4.37%	0.1359	3.11%
149.04	Sulfur - HNO3 soluble, ICP (%)	3	3	5.314	0.2530	5.314		0.2530	0.1826	4.76%		0.0670	3.11%
151.00	Acid Soluble Arsenic , AA, test portion as in 2006... (pp	1		1.000									
151.30	Acid Soluble Arsenic , ICP (ppm)	5	5	2.012	2.500	2.012		2.500	1.398	124.26%		0.4285	14.40%
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3... (	5	4	6.129	9.230	6.129		9.230	5.769	150.59%		3.525	12.18%
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	1		1.609									
151.99	Acid Soluble Arsenic , Other (ppm)	3	3	1.996	1.611	1.996		1.611	1.163	80.74%		0.2473	14.42%
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	3	3	27.40	47.44	27.40		47.44	34.23	173.13%		2.119	2.43%
165.99	Acid Soluble Boron , Other (%)	6	5	0.0029	0.0031	0.0029		0.0031	0.0017	105.89%		0.0010	9.62%
181.00	Acid Soluble Cadmium , AA, test portion as in 2006... (	1		0.2000									
181.30	Acid Soluble Cadmium , ICP (ppm)	8	6	0.2755	0.1284	0.2755		0.1456	0.0743	52.87%		0.0234	19.42%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3.. 4	4	2	0.3078	0.0726	0.3078		0.0725	0.0641	23.57%		0.0223	19.10%
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	1		0.0000									
181.99	Acid Soluble Cadmium , Other (ppm)	4	4	0.1933	0.0456	0.1933		0.0456	0.0285	23.57%		0.0435	20.49%
190.00	Water Soluble Chlorine, Titrimetric (%)	1		0.0550									
191.30	Acid Soluble Chromium , ICP (ppm)	9	9	90.96	16.00	90.96		18.14	7.559	19.95%		3.766	8.11%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:... 8	8	8	110.2	5.088	110.6		4.696	2.075	4.25%		3.174	7.88%
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppn	2	2	107.6	1.331								

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191.99	Acid Soluble Chromium , Other (ppm)	4	4	85.06	33.77	85.06		33.77	21.11	39.70%		4.995	8.20%
202.30	Acid Soluble Cobalt , ICP (ppm)	6	6	9.305	3.520	9.305		3.991	2.037	42.89%		1.034	11.43%
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	1		12.34									
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ... (t	8	8	15.36	1.126	15.42		1.145	0.5059	7.43%		1.199	10.60%
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	2	2	13.37	3.629								
202.99	Acid Soluble Cobalt , Other (ppm)	5	5	11.65	3.174	11.65		3.174	1.775	27.24%		1.044	11.05%
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	5	5	0.0082	0.0008	0.0082		0.0008	0.0004	9.49%		0.0006	8.24%
221.30	Acid Soluble Copper , ICP, test portion inorganic ... (%)	11	11	0.0086	0.0012	0.0086		0.0012	0.0004	13.60%		0.0005	8.19%
221.32	Acid Soluble Copper , ICP, test portion 2006.03A-C (%)	2	2	0.0084	0.0009								
221.33	Acid Soluble Copper , ICP, test portion 2006.03A-C... (	8	7	10.97	29.00	0.0086		0.0014	0.0006	15.76%		0.4653	8.18%
221.99	Acid Soluble Copper , Other (%)	9	8	0.0079	0.0015	0.0079		0.0017	0.0008	22.13%		0.0005	8.29%
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	12	12	1.112	0.0892	1.110	0.1147	0.0960	0.0347	8.66%	5.17%	0.0455	3.94%
241.20	Acid Soluble Iron , Colormetric (1%)	1		0.1150									
241.30	Acid Soluble Iron, ICP, test portion inorganic 965... (1%	23	23	1.067	0.1942	1.095	0.1147	0.1454	0.0379	13.28%	5.24%	0.0278	3.95%
241.32	Acid Soluble Iron, ICP, test portion 2006.03A-C (1%)	3	3	1.076	0.0274	1.076	0.1147	0.0274	0.0198	2.54%	5.33%	0.0067	3.96%
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w... (1	15	14	1.155	0.0820	1.160	0.1147	0.0821	0.0274	7.08%	4.94%	0.0475	3.91%
241.99	Acid Soluble Iron, Other (1%)	10	10	0.9336	0.2690	0.9757	0.1147	0.1898	0.0750	19.45%	5.88%	0.0683	4.01%
251.00	Acid Soluble Lead , AA, test portion as in 2006.03... (p	1		3.500									
251.30	Acid Soluble Lead , ICP (ppm)	9	8	2.549	0.9807	2.549		1.112	0.4915	43.63%		0.2445	13.90%
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN...	7	7	3.879	0.5742	3.876		0.6443	0.3044	16.62%		0.7395	13.05%
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	2	2	3.738	0.6541								
251.99	Acid Soluble Lead , Other (ppm)	4	4	2.735	1.955	2.735		1.955	1.222	71.49%		0.2600	13.75%
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	3	3	0.0400	0.0014	0.0400		0.0014	0.0010	3.54%		0.0015	6.49%
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	5	5	0.0367	0.0040	0.0367		0.0040	0.0023	11.03%		0.0023	6.58%
261.31	Acid Soluble Manganese , ICP, test portion 972.02b (%)	1		0.0400									
261.32	Acid Soluble Manganese , ICP, test portion inorgan... (	2	2	0.0381	0.0027								
261.33	Acid Soluble Manganese , ICP, test portion organic... (	1		358.6									
261.34	Acid Soluble Manganese , ICP, test portion 2006.03...	2	2	0.0343	0.0011								
261.35	Acid Soluble Manganese , ICP, test portion 2006.03...	5	5	0.0354	0.0084	0.0354		0.0084	0.0047	23.68%		0.0057	6.61%
261.99	Acid Soluble Manganese , Other (%)	2	2	0.0330	0.0071								
281.30	Acid Soluble Mercury , ICP (ppm)	3	1	0.0041		0.0330		0.0071	0.0088	21.46%		0.0004	26.74%
289.30	Acid Soluble Molybdenum , ICP (ppm)	8	8	8.543	3.778	8.080		1.751	0.7738	21.67%		0.4940	11.68%
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	1		8.920									
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/..	9	9	10.32	1.807	10.45		1.737	0.7236	16.61%		1.286	11.24%
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (p	2	2	10.78	0.9521								
289.99	Acid Soluble Molybdenum , Other (ppm)	4	4	10.33	3.312	10.33		3.312	2.070	32.08%		0.6825	11.26%
291.00	Acid Soluble Nickel , AA, test portion as in 2006.... (pp	1		65.50									
291.30	Acid Soluble Nickel , ICP (ppm)	10	10	44.97	12.71	45.93		12.07	4.772	26.28%		1.604	8.99%
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (t	8	7	61.56	4.080	61.56		4.627	2.186	7.52%		3.054	8.60%
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	2	2	60.51	4.295								
291.99	Acid Soluble Nickel , Other (ppm)	6	6	49.93	14.68	49.93		16.65	8.495	33.34%		3.260	8.88%
301.30	Acid Soluble Selenium , ICP (ppm)	4	2	0.0555	0.0629	0.0555		0.0629	0.0556	113.39%		0.0020	24.72%

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301.33	Acid Soluble Selenium , ICP, 2006.03 modified w/9:...	3	1	0.0690		0.0555		0.0629	0.0787	113.39%		0.0400	24.72%
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm	1		0.0000									
301.99	Acid Soluble Selenium , Other (ppm)	2	2	0.1945	0.1054								
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.0355									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test .	6	5	0.0621	0.0539	0.0621		0.0539	0.0301	86.77%		0.0017	6.08%
311.99	Sodium, Other (%)	3	3	0.0618	0.0336	0.0618		0.0336	0.0242	54.31%		0.0090	6.08%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	8	7	0.0335	0.0020	0.0335		0.0022	0.0010	6.60%		0.0022	6.67%
321.30	Acid Soluble Zinc , ICP, test portion inorganic 96... (%)	10	10	0.0368	0.0066	0.0362		0.0061	0.0024	16.95%		0.0029	6.59%
321.32	Acid Soluble Zinc , ICP, test portion 2006.03A-C (%)	3	3	0.0322	0.0029	0.0322		0.0029	0.0021	8.92%		0.0009	6.71%
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (%)	8	7	0.0330	0.0017	0.0330		0.0019	0.0009	5.78%		0.0023	6.68%
321.99	Acid Soluble Zinc , Other (%)	8	7	0.0316	0.0048	0.0315		0.0053	0.0025	16.73%		0.0010	6.73%
325.30	Water Soluble Zinc , ICP (%)	1		0.0350									

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 170811

Grade 21-0-5

Method Precision Report

Issue Date : 09/30/2017

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 (%)	8	8	2.977	0.3693	0.3663	0.0661	0.3722	12.31%	2.22%	12.50%	5.633
001.99	Ammoniacal Nitrogen, Other (%)	25	23	3.027	0.2718	0.2703	0.0403	0.2733	8.93%	1.33%	9.03%	6.778
010.11	Total Nitrogen, Modified Comprehensive (21%)	10	9	20.96	0.2526	0.2445	0.0900	0.2605	1.17%	0.43%	1.24%	2.896
010.60	Total Nitrogen, Combustion (21%)	58	54	21.12	0.3060	0.2895	0.1403	0.3217	1.37%	0.66%	1.52%	2.293
010.99	Total Nitrogen, Other (21%)	12	10	20.86	0.2003	0.1940	0.0706	0.2064	0.93%	0.34%	0.99%	2.926
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	10	9	5.201	0.2392	0.2269	0.1070	0.2509	4.36%	2.06%	4.82%	2.345
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	9	9	5.229	0.3294	0.3094	0.1599	0.3482	5.92%	3.06%	6.66%	2.178
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	11	10	5.101	0.1519	0.1272	0.1174	0.1731	2.49%	2.30%	3.39%	1.474
050.99	Soluble Potassium as K2O, Other (%)	38	34	5.080	0.2344	0.2211	0.1100	0.2470	4.35%	2.17%	4.86%	2.245
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - sulfate form (%)	9	9	5.381	0.1774	0.1703	0.0702	0.1842	3.16%	1.30%	3.42%	2.626
148.01	Total Sulfur, Gravimetric - sulfate and elemental (8.6%)	13	10	5.941	1.276	1.275	0.0629	1.276	21.46%	1.06%	21.48%	20.29
148.07	Total Sulfur, ICP, test portion as in 2006.03 modified w/9:3 HNO3:HCl (8.6%)	13	11	5.389	0.2372	0.2181	0.1321	0.2549	4.05%	2.45%	4.73%	1.930
148.99	Total Sulfur, Other (8.6%)	13	12	5.312	0.2369	0.2172	0.1335	0.2550	4.09%	2.51%	4.80%	1.909
191.30	Acid Soluble Chromium , ICP (ppm)	9	9	90.96	16.00	15.78	3.742	16.22	17.35%	4.11%	17.83%	4.334
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9:3 HNO3:HCl (ppm)	8	8	110.2	5.088	4.721	2.680	5.429	4.29%	2.43%	4.93%	2.026
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 HNO3:HCl (ppm)	8	8	15.36	1.126	0.8240	1.085	1.362	5.36%	7.06%	8.87%	1.256
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09 (%)	11	10	0.0087	0.0012	0.0012	0.0004	0.0012	13.37%	4.53%	14.11%	3.116
221.99	Acid Soluble Copper , Other (%)	9	8	0.0079	0.0015	0.0015	0.0004	0.0016	19.10%	5.67%	19.92%	3.516
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	12	12	1.112	0.0892	0.0841	0.0419	0.0940	7.56%	3.77%	8.45%	2.242
241.30	Acid Soluble Iron, ICP, test portion inorganic 965.09 (1%)	23	22	1.095	0.1435	0.1425	0.0247	0.1446	13.01%	2.26%	13.21%	5.845
241.33	Acid Soluble Iron, ICP, test portion 2006.03A-C, w/dual acid (1%)	15	13	1.151	0.0842	0.0818	0.0281	0.0865	7.11%	2.44%	7.52%	3.080
241.99	Acid Soluble Iron, Other (1%)	10	8	0.9942	0.1462	0.1418	0.0505	0.1505	14.26%	5.08%	15.14%	2.981
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w/9:3 HNO3:HCl (ppm)	9	9	10.32	1.807	1.607	1.171	1.988	15.56%	11.34%	19.26%	1.698
291.30	Acid Soluble Nickel , ICP (ppm)	10	10	44.97	12.71	12.66	1.594	12.76	28.16%	3.55%	28.38%	8.005
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (%)	10	10	0.0368	0.0066	0.0062	0.0033	0.0070	16.84%	9.01%	19.10%	2.121

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

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 127

Sample # 170811

Lab Values

Labs Reporting: 97

Grade 21-0-5

Issue Date : 09/30/2017

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 (%)	0309	2.290	0.0000	2.993	0.3804	0.0587	8	-1.69	12%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0526	2.805	0.0100	2.993	0.3804	0.0587	8	-0.45	3%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0230	2.830	0.2000	2.993	0.3804	0.0587	8	-0.39	3%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0535	2.905	0.0100	2.993	0.3804	0.0587	8	-0.21	1%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0177	2.971	0.0163	2.993	0.3804	0.0587	8	-0.05	0%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0486	3.235	0.1500	2.993	0.3804	0.0587	8	0.58	4%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0444	3.290	0.0000	2.993	0.3804	0.0587	8	0.71	5%	0
001.10	Ammoniacal Nitrogen, Magnesium Oxide Method (%)	0405	3.489	0.0830	2.993	0.3804	0.0587	8	1.19	8%	0
001.99	Ammoniacal Nitrogen, Other (%)	0231	2.475	0.0300	3.000	0.1963	0.0489	24	-2.67	9%	0
001.99	Ammoniacal Nitrogen, Other (%)	0368	2.795	0.0900	3.000	0.1963	0.0489	24	-1.04	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0532	2.800	0.0400	3.000	0.1963	0.0489	24	-1.02	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0415	2.818	0.0001	3.000	0.1963	0.0489	24	-0.93	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0394	2.820	0.0240	3.000	0.1963	0.0489	24	-0.92	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0027	2.830	0.1200	3.000	0.1963	0.0489	24	-0.87	3%	0
001.99	Ammoniacal Nitrogen, Other (%)	0533	2.870	0.0200	3.000	0.1963	0.0489	24	-0.66	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0535	2.900	0.0000	3.000	0.1963	0.0489	24	-0.51	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0540	2.915	0.0100	3.000	0.1963	0.0489	24	-0.43	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0538	2.920	0.0800	3.000	0.1963	0.0489	24	-0.41	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0539	2.935	0.0300	3.000	0.1963	0.0489	24	-0.33	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0529	2.990	0.1800	3.000	0.1963	0.0489	24	-0.05	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0537	2.995	0.0700	3.000	0.1963	0.0489	24	-0.03	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0397	3.030	0.0600	3.000	0.1963	0.0489	24	0.15	0%	0
001.99	Ammoniacal Nitrogen, Other (%)	0200	3.055	0.1100	3.000	0.1963	0.0489	24	0.28	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0524	3.070	0.1200	3.000	0.1963	0.0489	24	0.36	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0096	3.080	0.0200	3.000	0.1963	0.0489	24	0.41	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0510	3.088	0.0274	3.000	0.1963	0.0489	24	0.45	1%	0
001.99	Ammoniacal Nitrogen, Other (%)	0501	3.096	0.0120	3.000	0.1963	0.0489	24	0.49	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0255	3.145	0.0300	3.000	0.1963	0.0489	24	0.74	2%	0
001.99	Ammoniacal Nitrogen, Other (%)	0522	3.260	0.0400	3.000	0.1963	0.0489	24	1.32	4%	0
001.99	Ammoniacal Nitrogen, Other (%)	0506	3.415	0.0500	3.000	0.1963	0.0489	24	2.11	7%	0
001.99	Ammoniacal Nitrogen, Other (%)	0220	3.645	0.0100	3.000	0.1963	0.0489	24	3.29	11%	0
001.99	Ammoniacal Nitrogen, Other (%)	0371	3.660	0.0000	3.000	0.1963	0.0489	24	3.36	11%	0
001.99	Ammoniacal Nitrogen, Other (%)	0536	2.795	0.2300	3.000	0.1963	0.0489	24	-1.04	3%	1

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
003.10	Water Insoluble Nitrogen, Method I (%)	0230	1.420	0.0800	12.40	0.9222	0.2600	6	-10.61	44%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0029	12.15	0.6100	12.40	0.9222	0.2600	6	-0.25	1%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0356	12.24	0.6100	12.40	0.9222	0.2600	6	-0.16	1%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0220	12.77	0.0500	12.40	0.9222	0.2600	6	0.35	1%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0027	12.87	0.0800	12.40	0.9222	0.2600	6	0.45	2%	0
003.10	Water Insoluble Nitrogen, Method I (%)	0494	13.38	0.1300	12.40	0.9222	0.2600	6	0.94	4%	0
003.99	Water Insoluble Nitrogen, Other (%)	0486	11.91	0.6100				2			0
003.99	Water Insoluble Nitrogen, Other (%)	0500	13.20	0.0000				2			0
005.00	Urea Nitrogen, Urease (as N) (%)	0444	0.5300	0.0400	2.579	2.949	0.0575	4	-0.69	40%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0368	1.295	0.0500	2.579	2.949	0.0575	4	-0.44	25%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0230	1.535	0.0700	2.579	2.949	0.0575	4	-0.35	20%	0
005.00	Urea Nitrogen, Urease (as N) (%)	0027	6.955	0.0700	2.579	2.949	0.0575	4	1.48	85%	0
005.99	Urea Nitrogen, Other (%)	0524	0.7071	0.0232	5.843	8.277	0.1783	4	-0.62	44%	0
005.99	Urea Nitrogen, Other (%)	0029	1.260	0.0400	5.843	8.277	0.1783	4	-0.55	39%	0
005.99	Urea Nitrogen, Other (%)	0309	3.255	0.3500	5.843	8.277	0.1783	4	-0.31	22%	0
005.99	Urea Nitrogen, Other (%)	0506	18.15	0.3000	5.843	8.277	0.1783	4	1.49	105%	0
007.99	Urea, Other (%)	0220	0.4950	0.0100	1.351	1.111	0.0275	4	-0.77	32%	0
007.99	Urea, Other (%)	0486	0.7500	0.0000	1.351	1.111	0.0275	4	-0.54	22%	0
007.99	Urea, Other (%)	0394	1.200	0.0000	1.351	1.111	0.0275	4	-0.14	6%	0
007.99	Urea, Other (%)	0117	2.960	0.1000	1.351	1.111	0.0275	4	1.45	60%	0
009.10	Ammoniacal Plus Nitrate Nitrogen, Devarda (%)	0444	4.140	0.0400				1			0
009.99	Ammoniacal Plus Nitrate Nitrogen, Other (%)	0518	10.05	0.5000				1			0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0114	20.61	0.0500	20.96	0.2865	0.0996	9	-1.15	1%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0220	20.64	0.2800	20.96	0.2865	0.0996	9	-1.04	1%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0510	20.79	0.0362	20.96	0.2865	0.0996	9	-0.57	0%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0500	20.81	0.0200	20.96	0.2865	0.0996	9	-0.49	0%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0535	21.05	0.1000	20.96	0.2865	0.0996	9	0.28	0%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0536	21.12	0.1600	20.96	0.2865	0.0996	9	0.51	0%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0538	21.20	0.0500	20.96	0.2865	0.0996	9	0.75	1%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0539	21.23	0.0500	20.96	0.2865	0.0996	9	0.85	1%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0540	21.23	0.1500	20.96	0.2865	0.0996	9	0.85	1%	0
010.11	Total Nitrogen, Modified Comprehensive (21%)	0309	19.35*	0.9500	20.96	0.2865	0.0996	9	-5.21	4%	1
010.12	Total Nitrogen, Salicylic (21%)	0117	20.05*	1.500	20.73	0.4266	0.3145	5	-1.59	2%	0
010.12	Total Nitrogen, Salicylic (21%)	0397	20.56	0.0200	20.73	0.4266	0.3145	5	-0.39	0%	0
010.12	Total Nitrogen, Salicylic (21%)	0534	20.97	0.0300	20.73	0.4266	0.3145	5	0.56	1%	0
010.12	Total Nitrogen, Salicylic (21%)	0415	21.02	0.0125	20.73	0.4266	0.3145	5	0.68	1%	0
010.12	Total Nitrogen, Salicylic (21%)	0416	21.05	0.0100	20.73	0.4266	0.3145	5	0.74	1%	0
010.60	Total Nitrogen, Combustion (21%)	0444	16.82*	0.0800	21.10	0.2994	0.1673	56	-14.29	10%	0
010.60	Total Nitrogen, Combustion (21%)	0230	20.40	0.2000	21.10	0.2994	0.1673	56	-2.33	2%	0
010.60	Total Nitrogen, Combustion (21%)	0102	20.54	0.4000	21.10	0.2994	0.1673	56	-1.86	1%	0
010.60	Total Nitrogen, Combustion (21%)	0451	20.64	0.3500	21.10	0.2994	0.1673	56	-1.55	1%	0
010.60	Total Nitrogen, Combustion (21%)	0472	20.64	0.0200	21.10	0.2994	0.1673	56	-1.53	1%	0
010.60	Total Nitrogen, Combustion (21%)	0423	20.65	0.1000	21.10	0.2994	0.1673	56	-1.50	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (21%)	0043	20.69	0.0600	21.10	0.2994	0.1673	56	-1.36	1%	0
010.60	Total Nitrogen, Combustion (21%)	0255	20.71	0.6180	21.10	0.2994	0.1673	56	-1.31	1%	0
010.60	Total Nitrogen, Combustion (21%)	0368	20.71	0.3480	21.10	0.2994	0.1673	56	-1.30	1%	0
010.60	Total Nitrogen, Combustion (21%)	0482	20.80	0.2000	21.10	0.2994	0.1673	56	-0.99	1%	0
010.60	Total Nitrogen, Combustion (21%)	0389	20.83	0.2200	21.10	0.2994	0.1673	56	-0.89	1%	0
010.60	Total Nitrogen, Combustion (21%)	0325	20.90	0.2000	21.10	0.2994	0.1673	56	-0.66	0%	0
010.60	Total Nitrogen, Combustion (21%)	0177	20.93	0.1600	21.10	0.2994	0.1673	56	-0.56	0%	0
010.60	Total Nitrogen, Combustion (21%)	0231	20.94	0.0400	21.10	0.2994	0.1673	56	-0.53	0%	0
010.60	Total Nitrogen, Combustion (21%)	0157	20.95	0.1000	21.10	0.2994	0.1673	56	-0.49	0%	0
010.60	Total Nitrogen, Combustion (21%)	0136	20.99	0.0600	21.10	0.2994	0.1673	56	-0.36	0%	0
010.60	Total Nitrogen, Combustion (21%)	0523	21.00	0.0000	21.10	0.2994	0.1673	56	-0.33	0%	0
010.60	Total Nitrogen, Combustion (21%)	0041	21.01	0.3300	21.10	0.2994	0.1673	56	-0.31	0%	0
010.60	Total Nitrogen, Combustion (21%)	0131	21.01	0.0960	21.10	0.2994	0.1673	56	-0.30	0%	0
010.60	Total Nitrogen, Combustion (21%)	0501	21.01	0.0960	21.10	0.2994	0.1673	56	-0.29	0%	0
010.60	Total Nitrogen, Combustion (21%)	0137	21.04	0.0340	21.10	0.2994	0.1673	56	-0.20	0%	0
010.60	Total Nitrogen, Combustion (21%)	0095	21.06	0.1300	21.10	0.2994	0.1673	56	-0.14	0%	0
010.60	Total Nitrogen, Combustion (21%)	0377	21.06	0.1900	21.10	0.2994	0.1673	56	-0.14	0%	0
010.60	Total Nitrogen, Combustion (21%)	0486	21.06	0.1100	21.10	0.2994	0.1673	56	-0.14	0%	0
010.60	Total Nitrogen, Combustion (21%)	0483	21.06	0.0400	21.10	0.2994	0.1673	56	-0.13	0%	0
010.60	Total Nitrogen, Combustion (21%)	0360	21.06	0.2400	21.10	0.2994	0.1673	56	-0.13	0%	0
010.60	Total Nitrogen, Combustion (21%)	0234	21.08	0.0100	21.10	0.2994	0.1673	56	-0.08	0%	0
010.60	Total Nitrogen, Combustion (21%)	0291	21.10	0.0100	21.10	0.2994	0.1673	56	-0.01	0%	0
010.60	Total Nitrogen, Combustion (21%)	0055	21.10	0.3600	21.10	0.2994	0.1673	56	0.01	0%	0
010.60	Total Nitrogen, Combustion (21%)	0452	21.13	0.0700	21.10	0.2994	0.1673	56	0.09	0%	0
010.60	Total Nitrogen, Combustion (21%)	0027	21.15	0.1000	21.10	0.2994	0.1673	56	0.17	0%	0
010.60	Total Nitrogen, Combustion (21%)	0354	21.16	0.1810	21.10	0.2994	0.1673	56	0.22	0%	0
010.60	Total Nitrogen, Combustion (21%)	0035	21.18	0.0500	21.10	0.2994	0.1673	56	0.26	0%	0
010.60	Total Nitrogen, Combustion (21%)	0402	21.18	0.1700	21.10	0.2994	0.1673	56	0.26	0%	0
010.60	Total Nitrogen, Combustion (21%)	0406	21.19	0.0900	21.10	0.2994	0.1673	56	0.29	0%	0
010.60	Total Nitrogen, Combustion (21%)	0049	21.19	0.1200	21.10	0.2994	0.1673	56	0.31	0%	0
010.60	Total Nitrogen, Combustion (21%)	0086	21.19	0.1550	21.10	0.2994	0.1673	56	0.32	0%	0
010.60	Total Nitrogen, Combustion (21%)	0527	21.20	0.1780	21.10	0.2994	0.1673	56	0.34	0%	0
010.60	Total Nitrogen, Combustion (21%)	0023	21.20	0.0810	21.10	0.2994	0.1673	56	0.34	0%	0
010.60	Total Nitrogen, Combustion (21%)	0037	21.23	0.2910	21.10	0.2994	0.1673	56	0.43	0%	0
010.60	Total Nitrogen, Combustion (21%)	0042	21.23	0.1200	21.10	0.2994	0.1673	56	0.44	0%	0
010.60	Total Nitrogen, Combustion (21%)	0070	21.27	0.2300	21.10	0.2994	0.1673	56	0.56	0%	0
010.60	Total Nitrogen, Combustion (21%)	0356	21.27	0.2500	21.10	0.2994	0.1673	56	0.56	0%	0
010.60	Total Nitrogen, Combustion (21%)	0029	21.30	0.2500	21.10	0.2994	0.1673	56	0.66	0%	0
010.60	Total Nitrogen, Combustion (21%)	0307	21.34	0.1200	21.10	0.2994	0.1673	56	0.81	1%	0
010.60	Total Nitrogen, Combustion (21%)	0034	21.35	0.1400	21.10	0.2994	0.1673	56	0.84	1%	0
010.60	Total Nitrogen, Combustion (21%)	0040	21.35	0.3000	21.10	0.2994	0.1673	56	0.84	1%	0
010.60	Total Nitrogen, Combustion (21%)	0521	21.37	0.0000	21.10	0.2994	0.1673	56	0.89	1%	0
010.60	Total Nitrogen, Combustion (21%)	0324	21.45	0.3000	21.10	0.2994	0.1673	56	1.18	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total Nitrogen, Combustion (21%)	0025	21.46	0.4800	21.10	0.2994	0.1673	56	1.21	1%	0
010.60	Total Nitrogen, Combustion (21%)	0292	21.48	0.0400	21.10	0.2994	0.1673	56	1.28	1%	0
010.60	Total Nitrogen, Combustion (21%)	0007	21.50	0.4000	21.10	0.2994	0.1673	56	1.34	1%	0
010.60	Total Nitrogen, Combustion (21%)	0485	21.54	0.0710	21.10	0.2994	0.1673	56	1.49	1%	0
010.60	Total Nitrogen, Combustion (21%)	0494	21.72	0.0300	21.10	0.2994	0.1673	56	2.06	1%	0
010.60	Total Nitrogen, Combustion (21%)	0405	21.85	0.1410	21.10	0.2994	0.1673	56	2.50	2%	0
010.60	Total Nitrogen, Combustion (21%)	0073	21.98	0.2100	21.10	0.2994	0.1673	56	2.93	2%	0
010.60	Total Nitrogen, Combustion (21%)	0543	21.48	0.7980	21.10	0.2994	0.1673	56	1.26	1%	1
010.60	Total Nitrogen, Combustion (21%)	0541	6.280*	0.0000	21.10	0.2994	0.1673	56	-49.49	35%	2
010.99	Total Nitrogen, Other (21%)	0529	20.55	0.2300	20.88	0.2447	0.1250	12	-1.38	1%	0
010.99	Total Nitrogen, Other (21%)	0493	20.65	0.1000	20.88	0.2447	0.1250	12	-0.95	1%	0
010.99	Total Nitrogen, Other (21%)	0394	20.68	0.0000	20.88	0.2447	0.1250	12	-0.83	0%	0
010.99	Total Nitrogen, Other (21%)	0513	20.72	0.0900	20.88	0.2447	0.1250	12	-0.69	0%	0
010.99	Total Nitrogen, Other (21%)	0476	20.79	0.4363	20.88	0.2447	0.1250	12	-0.39	0%	0
010.99	Total Nitrogen, Other (21%)	0524	20.86	0.1314	20.88	0.2447	0.1250	12	-0.11	0%	0
010.99	Total Nitrogen, Other (21%)	0522	20.88	0.0300	20.88	0.2447	0.1250	12	-0.04	0%	0
010.99	Total Nitrogen, Other (21%)	0533	21.02	0.0200	20.88	0.2447	0.1250	12	0.56	0%	0
010.99	Total Nitrogen, Other (21%)	0508	21.06	0.0520	20.88	0.2447	0.1250	12	0.72	0%	0
010.99	Total Nitrogen, Other (21%)	0537	21.08	0.0800	20.88	0.2447	0.1250	12	0.80	0%	0
010.99	Total Nitrogen, Other (21%)	0532	21.09	0.0300	20.88	0.2447	0.1250	12	0.82	0%	0
010.99	Total Nitrogen, Other (21%)	0506	21.55	0.3000	20.88	0.2447	0.1250	12	2.72	2%	0
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0541	0.8450	0.0900				1			0
020.40	Total Phosphorus as P2O5, Automated (%)	0096	0.1600	0.0600				1			0
020.50	Total Phosphorus as P2O5, ICP (%)	0524	0.0246	0.0008	0.0381	0.0140	0.0151	6	-0.86	18%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0521	0.0288	0.0000	0.0381	0.0140	0.0151	6	-0.59	12%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0307	0.0300	0.0200	0.0381	0.0140	0.0151	6	-0.51	11%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0527	0.0400	0.0000	0.0381	0.0140	0.0151	6	0.12	3%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0389	0.0500	0.0000	0.0381	0.0140	0.0151	6	0.76	16%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0483	0.0550	0.0700	0.0381	0.0140	0.0151	6	1.08	22%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0255	0.0825	0.1650	0.0381	0.0140	0.0151	6			4
020.99	Total Phosphorus as P2O5, Other (%)	0515	0.0133	0.0017				1			0
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.1050	0.0100				1			0
040.40	Indirect Available Phosphorus as P2O5, Automa... (5%)	0096	0.0400	0.0000				1			0
041.11	Direct Available Phosphorus as P2O5, Gravimet... (5%)	0185	0.0200	0.0200				1			0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0137	0.0135	0.0050				2			0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0325	0.1000	0.0000				2			0
041.50	Direct Available Phosphorus as P2O5, ICP (5%)	0043	0.0000	0.0000				2			4
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (5%)	0494	0.2250	0.4500				0			4
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0354	0.0270	0.0040				1			0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (5%)	0043	0.0000	0.0000				1			4
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	0.0650	0.0300				1			0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0073	4.965	0.3300	5.201	0.1989	0.1058	10	-1.10	2%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0220	5.030	0.1800	5.201	0.1989	0.1058	10	-0.80	2%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0416	5.116	0.1880	5.201	0.1989	0.1058	10	-0.40	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0055	5.130	0.1400	5.201	0.1989	0.1058	10	-0.33	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0231	5.175	0.0500	5.201	0.1989	0.1058	10	-0.12	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0522	5.175	0.0300	5.201	0.1989	0.1058	10	-0.12	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0114	5.200	0.0000	5.201	0.1989	0.1058	10	0.00	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0405	5.220	0.0800	5.201	0.1989	0.1058	10	0.09	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0102	5.800	0.0000	5.201	0.1989	0.1058	10	2.80	6%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (%)	0494	6.820	0.0600	5.201	0.1989	0.1058	10	7.57	16%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (%)	0309	4.605	0.0300	4.954	0.2041	0.0680	5	-1.71	4%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (%)	0040	4.950	0.1000	4.954	0.2041	0.0680	5	-0.02	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (%)	0356	5.035	0.0500	4.954	0.2041	0.0680	5	0.40	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (%)	0157	5.065	0.1500	4.954	0.2041	0.0680	5	0.54	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (%)	0136	5.115	0.0100	4.954	0.2041	0.0680	5	0.79	2%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (%)	0472	4.720	0.0800				1			0
050.32	Soluble Potassium as K2O, AA (Citrate-EDTA) (%)	0185	5.385	0.1100				1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0397	4.921	0.0960	5.219	0.3511	0.1649	9	-0.78	3%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0324	4.970	0.2400	5.219	0.3511	0.1649	9	-0.66	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0055	5.015	0.0100	5.219	0.3511	0.1649	9	-0.54	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0292	5.015	0.0500	5.219	0.3511	0.1649	9	-0.54	2%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0406	5.105	0.4900	5.219	0.3511	0.1649	9	-0.30	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0086	5.201	0.3485	5.219	0.3511	0.1649	9	-0.05	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0157	5.295	0.1300	5.219	0.3511	0.1649	9	0.20	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0444	5.705	0.1100	5.219	0.3511	0.1649	9	1.28	5%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (%)	0230	5.835	0.0100	5.219	0.3511	0.1649	9	1.62	6%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0483	4.820	0.3400	5.122	0.1432	0.0983	6	-1.88	3%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0007	5.050	0.1000	5.122	0.1432	0.0983	6	-0.45	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0043	5.130	0.0800	5.122	0.1432	0.0983	6	0.05	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0070	5.175	0.0100	5.122	0.1432	0.0983	6	0.33	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0452	5.235	0.0500	5.122	0.1432	0.0983	6	0.70	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (%)	0291	5.235	0.0100	5.122	0.1432	0.0983	6	0.70	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0117	4.809	0.3750	5.133	0.1855	0.1189	11	-1.64	3%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0494	5.000	0.2400	5.133	0.1855	0.1189	11	-0.67	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0025	5.004	0.2340	5.133	0.1855	0.1189	11	-0.65	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0377	5.010	0.0800	5.133	0.1855	0.1189	11	-0.62	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0486	5.110	0.0800	5.133	0.1855	0.1189	11	-0.12	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0354	5.134	0.0280	5.133	0.1855	0.1189	11	0.01	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0023	5.145	0.0500	5.133	0.1855	0.1189	11	0.06	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0360	5.220	0.0200	5.133	0.1855	0.1189	11	0.44	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0423	5.225	0.0500	5.133	0.1855	0.1189	11	0.46	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0137	5.349	0.0600	5.133	0.1855	0.1189	11	1.09	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (%)	0543	5.790	0.0910	5.133	0.1855	0.1189	11	3.31	6%	0
050.60	Soluble Potassium as K2O, Flame Photometric (... (%))	0200	4.760	0.3200	5.058	0.2560	0.1214	6	-1.04	3%	0
050.60	Soluble Potassium as K2O, Flame Photometric (... (%))	0041	4.980	0.1400	5.058	0.2560	0.1214	6	-0.27	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.60	Soluble Potassium as K2O, Flame Photometric (... (%))	0169	4.995	0.0700	5.058	0.2560	0.1214	6	-0.22	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric (... (%))	0105	5.025	0.0700	5.058	0.2560	0.1214	6	-0.11	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric (... (%))	0529	5.145	0.1100	5.058	0.2560	0.1214	6	0.30	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric (... (%))	0510	5.480	0.0186	5.058	0.2560	0.1214	6	1.47	4%	0
050.61	Soluble Potassium as K2O, Flame Photometric (... (%))	0035	4.795	0.2100	5.332	0.7201	0.1100	3	-0.75	5%	0
050.61	Soluble Potassium as K2O, Flame Photometric (... (%))	0535	5.050	0.1000	5.332	0.7201	0.1100	3	-0.39	3%	0
050.61	Soluble Potassium as K2O, Flame Photometric (... (%))	0131	6.150	0.0200	5.332	0.7201	0.1100	3	1.14	8%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (%))	0029	5.015	0.0500	5.027	0.0108	0.0404	4	-1.08	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (%))	0034	5.022	0.0317	5.027	0.0108	0.0404	4	-0.47	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (%))	0105	5.030	0.0200	5.027	0.0108	0.0404	4	0.31	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (%))	0513	5.040	0.0600	5.027	0.0108	0.0404	4	1.24	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0096	4.140	0.1600	5.077	0.1885	0.1171	35	-4.97	9%	0
050.99	Soluble Potassium as K2O, Other (%)	0541	4.395	0.2700	5.077	0.1885	0.1171	35	-3.62	7%	0
050.99	Soluble Potassium as K2O, Other (%)	0501	4.566	0.3440	5.077	0.1885	0.1171	35	-2.71	5%	0
050.99	Soluble Potassium as K2O, Other (%)	0482	4.860	0.2400	5.077	0.1885	0.1171	35	-1.15	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0524	4.881	0.0617	5.077	0.1885	0.1171	35	-1.04	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0518	4.885	0.3500	5.077	0.1885	0.1171	35	-1.02	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0234	4.900	0.0400	5.077	0.1885	0.1171	35	-0.94	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0521	4.910	0.0000	5.077	0.1885	0.1171	35	-0.89	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0500	4.915	0.0300	5.077	0.1885	0.1171	35	-0.86	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0506	4.950	0.1000	5.077	0.1885	0.1171	35	-0.67	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0433	4.965	0.1300	5.077	0.1885	0.1171	35	-0.59	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0394	4.986	0.0660	5.077	0.1885	0.1171	35	-0.48	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0533	5.030	0.0400	5.077	0.1885	0.1171	35	-0.25	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0027	5.035	0.2500	5.077	0.1885	0.1171	35	-0.22	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0535	5.050	0.1000	5.077	0.1885	0.1171	35	-0.14	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0177	5.056	0.0747	5.077	0.1885	0.1171	35	-0.11	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0536	5.075	0.0500	5.077	0.1885	0.1171	35	-0.01	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0540	5.075	0.0500	5.077	0.1885	0.1171	35	-0.01	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0532	5.085	0.0300	5.077	0.1885	0.1171	35	0.04	0%	0
050.99	Soluble Potassium as K2O, Other (%)	0537	5.148	0.2954	5.077	0.1885	0.1171	35	0.38	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0493	5.150	0.1000	5.077	0.1885	0.1171	35	0.39	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0307	5.160	0.2600	5.077	0.1885	0.1171	35	0.44	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0539	5.170	0.0400	5.077	0.1885	0.1171	35	0.49	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0538	5.180	0.0800	5.077	0.1885	0.1171	35	0.55	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0527	5.190	0.1000	5.077	0.1885	0.1171	35	0.60	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0389	5.195	0.0500	5.077	0.1885	0.1171	35	0.63	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0526	5.195	0.0100	5.077	0.1885	0.1171	35	0.63	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0368	5.197	0.0843	5.077	0.1885	0.1171	35	0.64	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0451	5.200	0.0200	5.077	0.1885	0.1171	35	0.65	1%	0
050.99	Soluble Potassium as K2O, Other (%)	0043	5.245	0.1900	5.077	0.1885	0.1171	35	0.89	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0476	5.252	0.0718	5.077	0.1885	0.1171	35	0.93	2%	0
050.99	Soluble Potassium as K2O, Other (%)	0402	5.300	0.0200	5.077	0.1885	0.1171	35	1.18	2%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.99	Soluble Potassium as K2O, Other (%)	0523	5.350	0.3000	5.077	0.1885	0.1171	35	1.45	3%	0
050.99	Soluble Potassium as K2O, Other (%)	0444	5.425	0.0500	5.077	0.1885	0.1171	35	1.85	3%	0
050.99	Soluble Potassium as K2O, Other (%)	0042	5.730	0.0400	5.077	0.1885	0.1171	35	3.46	6%	0
050.99	Soluble Potassium as K2O, Other (%)	0325	4.750	0.7000	5.077	0.1885	0.1171	35	-1.73	3%	1
050.99	Soluble Potassium as K2O, Other (%)	0255	5.028	0.6900	5.077	0.1885	0.1171	35	-0.26	0%	1
050.99	Soluble Potassium as K2O, Other (%)	0371	39.70	0.0000	5.077	0.1885	0.1171	35	183.65	341%	2
060.00	Water (Free), Vacuum Oven (%)	0007	1.350	0.0200	1.610	0.3365	0.0068	3	-0.77	8%	0
060.00	Water (Free), Vacuum Oven (%)	0416	1.490	0.0005	1.610	0.3365	0.0068	3	-0.36	4%	0
060.00	Water (Free), Vacuum Oven (%)	0096	1.990	0.0000	1.610	0.3365	0.0068	3	1.13	12%	0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0055	2.650	0.1000				1			0
060.99	Water (Free), Other (%)	0513	1.300	0.0200	1.486	0.1387	0.0133	4	-1.34	6%	0
060.99	Water (Free), Other (%)	0518	1.465	0.0100	1.486	0.1387	0.0133	4	-0.15	1%	0
060.99	Water (Free), Other (%)	0055	1.560	0.0200	1.486	0.1387	0.0133	4	0.54	3%	0
060.99	Water (Free), Other (%)	0510	1.617	0.0033	1.486	0.1387	0.0133	4	0.95	4%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	6.934	0.2650				1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0035	6.055	0.0900	6.783	0.5655	0.1166	7	-1.16	5%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0041	6.480	0.1200	6.783	0.5655	0.1166	7	-0.48	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	6.575	0.0300	6.783	0.5655	0.1166	7	-0.33	2%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	6.710	0.2800	6.783	0.5655	0.1166	7	-0.12	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	6.816	0.0300	6.783	0.5655	0.1166	7	0.05	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0483	7.395	0.0300	6.783	0.5655	0.1166	7	0.98	5%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	7.451	0.2360	6.783	0.5655	0.1166	7	1.07	5%	0
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0521	6.481	0.0000				2			0
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0423	7.120	0.0600				2			0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0009	6.250	0.7000	6.701	0.4753	0.3139	6	-0.85	3%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0086	6.337	0.6950	6.701	0.4753	0.3139	6	-0.68	3%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0494	6.532	0.3973	6.701	0.4753	0.3139	6	-0.32	1%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0117	6.759	0.0550	6.701	0.4753	0.3139	6	0.11	0%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0034	6.965	0.0100	6.701	0.4753	0.3139	6	0.49	2%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0527	7.365	0.0260	6.701	0.4753	0.3139	6	1.24	5%	0
101.99	Acid Soluble Calcium, Other (%)	0389	6.185	0.0900				1			0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	2.576	0.0900				1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0035	2.410	0.0400	2.643	0.2025	0.0633	7	-1.04	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0041	2.475	0.0700	2.643	0.2025	0.0633	7	-0.75	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0482	2.605	0.1300	2.643	0.2025	0.0633	7	-0.17	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0096	2.620	0.0800	2.643	0.2025	0.0633	7	-0.10	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	2.646	0.0530	2.643	0.2025	0.0633	7	0.01	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0483	2.845	0.0700	2.643	0.2025	0.0633	7	0.90	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0472	2.900	0.0000	2.643	0.2025	0.0633	7	1.15	5%	0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0423	2.625	0.0100				2			0
121.32	Acid Soluble Magnesium, ICP, test portion 200... (%)	0521	2.853	0.0000				2			0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0009	2.400	0.2000	2.541	0.1169	0.0583	8	-1.10	3%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0515	2.455	0.0006	2.541	0.1169	0.0583	8	-0.67	2%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0086	2.463	0.0444	2.541	0.1169	0.0583	8	-0.61	2%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0025	2.523	0.0290	2.541	0.1169	0.0583	8	-0.14	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0034	2.558	0.0090	2.541	0.1169	0.0583	8	0.13	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0117	2.583	0.0160	2.541	0.1169	0.0583	8	0.33	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0494	2.630	0.1594	2.541	0.1169	0.0583	8	0.70	2%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (%)	0527	2.871	0.0080	2.541	0.1169	0.0583	8	2.58	6%	0
121.99	Acid Soluble Magnesium, Other (%)	0524	2.402	0.0005	2.648	0.3179	0.0547	3	-0.77	5%	0
121.99	Acid Soluble Magnesium, Other (%)	0515	2.535	0.0916	2.648	0.3179	0.0547	3	-0.36	2%	0
121.99	Acid Soluble Magnesium, Other (%)	0307	3.007	0.0720	2.648	0.3179	0.0547	3	1.13	7%	0
143.99	Elemental Sulfur, Other (%)	0472	5.185	0.0500	5.392	0.1831	0.0593	3	-1.13	2%	0
143.99	Elemental Sulfur, Other (%)	0291	5.460	0.0200	5.392	0.1831	0.0593	3	0.37	1%	0
143.99	Elemental Sulfur, Other (%)	0255	5.532	0.1080	5.392	0.1831	0.0593	3	0.76	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0200	5.130	0.0600	5.378	0.1930	0.0768	9	-1.18	2%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0444	5.265	0.2100	5.378	0.1930	0.0768	9	-0.54	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0522	5.270	0.0200	5.378	0.1930	0.0768	9	-0.51	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0405	5.284	0.0157	5.378	0.1930	0.0768	9	-0.45	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0220	5.325	0.0100	5.378	0.1930	0.0768	9	-0.25	0%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0485	5.397	0.1354	5.378	0.1930	0.0768	9	0.09	0%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0397	5.485	0.0700	5.378	0.1930	0.0768	9	0.51	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0043	5.575	0.0500	5.378	0.1930	0.0768	9	0.94	2%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0027	5.700	0.1200	5.378	0.1930	0.0768	9	1.54	3%	0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0444	5.365	0.4100				2			0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0518	8.500	0.2000				2			0
146.99	Total Sulfur in Liquid, Other (%)	0131	5.505	0.0500				1			0
148.00	Total Sulfur, Combustion (8.6%)	0136	4.565*	0.1900	5.083	0.3858	0.0731	7	-1.22	5%	0
148.00	Total Sulfur, Combustion (8.6%)	0360	4.645*	0.0100	5.083	0.3858	0.0731	7	-1.03	4%	0
148.00	Total Sulfur, Combustion (8.6%)	0025	5.152	0.0200	5.083	0.3858	0.0731	7	0.16	1%	0
148.00	Total Sulfur, Combustion (8.6%)	0231	5.190	0.0400	5.083	0.3858	0.0731	7	0.25	1%	0
148.00	Total Sulfur, Combustion (8.6%)	0157	5.250	0.1800	5.083	0.3858	0.0731	7	0.39	2%	0
148.00	Total Sulfur, Combustion (8.6%)	0029	5.378	0.0390	5.083	0.3858	0.0731	7	0.69	3%	0
148.00	Total Sulfur, Combustion (8.6%)	0451	5.405	0.0330	5.083	0.3858	0.0731	7	0.75	3%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0230	5.180	0.1800	5.395	0.1947	0.0913	11	-1.11	2%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0105	5.250	0.0200	5.395	0.1947	0.0913	11	-0.75	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0444	5.250	0.3000	5.395	0.1947	0.0913	11	-0.75	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0040	5.300	0.0000	5.395	0.1947	0.0913	11	-0.49	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0029	5.310	0.1000	5.395	0.1947	0.0913	11	-0.44	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0500	5.340	0.0800	5.395	0.1947	0.0913	11	-0.28	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0055	5.385	0.0100	5.395	0.1947	0.0913	11	-0.05	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0102	5.449	0.1143	5.395	0.1947	0.0913	11	0.28	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0157	5.510	0.0800	5.395	0.1947	0.0913	11	0.59	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0073	8.100	0.0200	5.395	0.1947	0.0913	11	13.90	25%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0534	8.590	0.1000	5.395	0.1947	0.0913	11	16.41	30%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0324	5.190	0.5200	5.395	0.1947	0.0913	11	-1.05	2%	1

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
148.01	Total Sulfur, Gravimetric - sulfate and elem... (8.6%)	0485	0.00000*	0.0000	5.395	0.1947	0.0913	11			4
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0394	5.090	0.0200	5.409	0.2556	0.1136	12	-1.25	3%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0444	5.150	0.4200	5.409	0.2556	0.1136	12	-1.01	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0037	5.223	0.0310	5.409	0.2556	0.1136	12	-0.73	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0117	5.245	0.0410	5.409	0.2556	0.1136	12	-0.64	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0494	5.357	0.0146	5.409	0.2556	0.1136	12	-0.20	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0023	5.365	0.0650	5.409	0.2556	0.1136	12	-0.17	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0486	5.425	0.0900	5.409	0.2556	0.1136	12	0.06	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0483	5.430	0.4200	5.409	0.2556	0.1136	12	0.08	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0177	5.468	0.0641	5.409	0.2556	0.1136	12	0.23	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0102	5.569	0.0849	5.409	0.2556	0.1136	12	0.63	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0527	5.959	0.0650	5.409	0.2556	0.1136	12	2.15	5%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0515	6.723	0.0480	5.409	0.2556	0.1136	12	5.14	12%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (8.6%)	0406	5.700	1.420	5.409	0.2556	0.1136	12	1.14	3%	1
148.99	Total Sulfur, Other (8.6%)	0523	5.000	0.4000	5.349	0.2992	0.1359	13	-1.17	3%	0
148.99	Total Sulfur, Other (8.6%)	0096	5.051	0.0130	5.349	0.2992	0.1359	13	-1.00	3%	0
148.99	Total Sulfur, Other (8.6%)	0506	5.090	0.1400	5.349	0.2992	0.1359	13	-0.87	2%	0
148.99	Total Sulfur, Other (8.6%)	0501	5.093	0.0060	5.349	0.2992	0.1359	13	-0.86	2%	0
148.99	Total Sulfur, Other (8.6%)	0137	5.103	0.1640	5.349	0.2992	0.1359	13	-0.82	2%	0
148.99	Total Sulfur, Other (8.6%)	0368	5.352	0.3977	5.349	0.2992	0.1359	13	0.01	0%	0
148.99	Total Sulfur, Other (8.6%)	0476	5.399	0.0091	5.349	0.2992	0.1359	13	0.16	0%	0
148.99	Total Sulfur, Other (8.6%)	0354	5.418	0.1740	5.349	0.2992	0.1359	13	0.23	1%	0
148.99	Total Sulfur, Other (8.6%)	0040	5.450	0.0800	5.349	0.2992	0.1359	13	0.34	1%	0
148.99	Total Sulfur, Other (8.6%)	0377	5.460	0.1600	5.349	0.2992	0.1359	13	0.37	1%	0
148.99	Total Sulfur, Other (8.6%)	0482	5.660	0.0200	5.349	0.2992	0.1359	13	1.04	3%	0
148.99	Total Sulfur, Other (8.6%)	0220	5.670	0.0200	5.349	0.2992	0.1359	13	1.07	3%	0
148.99	Total Sulfur, Other (8.6%)	0307	7.957	0.1830	5.349	0.2992	0.1359	13	8.71	24%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0524	5.064	0.1210	5.314	0.2530	0.0670	3	-0.99	2%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0423	5.310	0.0800	5.314	0.2530	0.0670	3	-0.02	0%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0521	5.569	0.0000	5.314	0.2530	0.0670	3	1.01	2%	0
151.00	Acid Soluble Arsenic , AA, test portion as in... (ppm)	0136	1.000	0.0000				1			0
151.30	Acid Soluble Arsenic , ICP (ppm)	0541	0.4650	0.7900	2.012	2.500	0.4285	5	-0.62	38%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0255	0.7951	0.1352	2.012	2.500	0.4285	5	-0.49	30%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	1.045	0.1075	2.012	2.500	0.4285	5	-0.39	24%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0529	1.305	0.0100	2.012	2.500	0.4285	5	-0.28	18%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0368	6.450	1.100	2.012	2.500	0.4285	5	1.78	110%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0527	1.080	0.0630	6.129	9.230	3.525	4	-0.55	41%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0494	1.627	0.2871	6.129	9.230	3.525	4	-0.49	37%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0515	1.844	0.0380	6.129	9.230	3.525	4	-0.46	35%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0105	19.97	13.71	6.129	9.230	3.525	4	1.50	113%	0
151.33	Acid Soluble Arsenic , ICP, 2006.03 modified ... (ppm)	0009	0.0000	0.0000	6.129	9.230	3.525	4			4
151.34	Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)	0515	1.609	0.9230				1			0
151.99	Acid Soluble Arsenic , Other (ppm)	0476	0.9370	0.0420	1.996	1.611	0.2473	3	-0.66	27%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
151.99	Acid Soluble Arsenic , Other (ppm)	0009	1.200	0.2000	1.996	1.611	0.2473	3	-0.49	20%	0
151.99	Acid Soluble Arsenic , Other (ppm)	0220	3.850	0.5000	1.996	1.611	0.2473	3	1.15	46%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0521	0.0021	0.0000	27.40	47.44	2.119	3	-0.58	50%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0354	0.0220	0.0020	27.40	47.44	2.119	3	-0.58	50%	0
165.30	Acid Soluble Boron , ICP, test portion in 982... (%)	0086	82.17	6.356	27.40	47.44	2.119	3	1.15	100%	0
165.99	Acid Soluble Boron , Other (%)	0483	0.0013	0.0020	0.0029	0.0031	0.0010	5	-0.46	28%	0
165.99	Acid Soluble Boron , Other (%)	0009	0.0016	0.0001	0.0029	0.0031	0.0010	5	-0.39	24%	0
165.99	Acid Soluble Boron , Other (%)	0423	0.0016	0.0001	0.0029	0.0031	0.0010	5	-0.39	24%	0
165.99	Acid Soluble Boron , Other (%)	0524	0.0018	0.0000	0.0029	0.0031	0.0010	5	-0.32	19%	0
165.99	Acid Soluble Boron , Other (%)	0527	0.0085	0.0030	0.0029	0.0031	0.0010	5	1.56	95%	0
165.99	Acid Soluble Boron , Other (%)	0515	0.0000	0.0000	0.0029	0.0031	0.0010	5			4
181.00	Acid Soluble Cadmium , AA, test portion as in... (ppm)	0136	0.2000	0.0000				1			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0255	0.1422	0.0296	0.2755	0.1456	0.0234	6	-0.82	24%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0523	0.1450	0.0100	0.2755	0.1456	0.0234	6	-0.80	24%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	0.2785	0.0550	0.2755	0.1456	0.0234	6	0.02	1%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0524	0.2957	0.0088	0.2755	0.1456	0.0234	6	0.12	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0529	0.3000	0.0000	0.2755	0.1456	0.0234	6	0.15	4%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0035	0.4915	0.0370	0.2755	0.1456	0.0234	6	1.32	39%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0541	1.670	0.8200	0.2755	0.1456	0.0234	6	8.53	253%	1
181.30	Acid Soluble Cadmium , ICP (ppm)	0368	0.0000	0.0000	0.2755	0.1456	0.0234	6			4
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0527	0.2565	0.0110				2			0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0494	0.3591	0.0336				2			0
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0009	0.0000	0.0000				2			4
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm)	0515	0.0000	0.0000				2			4
181.34	Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
181.99	Acid Soluble Cadmium , Other (ppm)	0476	0.1530	0.0140	0.1933	0.0456	0.0435	4	-0.88	10%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0506	0.1600	0.0400	0.1933	0.0456	0.0435	4	-0.73	9%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0009	0.2100	0.0200	0.1933	0.0456	0.0435	4	0.37	4%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0220	0.2500	0.1000	0.1933	0.0456	0.0435	4	1.25	15%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0105	0.0550	0.0100				1			0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	70.27	1.440	90.96	18.14	3.766	9	-1.05	11%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0529	72.80	0.3200	90.96	18.14	3.766	9	-0.92	10%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	75.40	2.600	90.96	18.14	3.766	9	-0.79	9%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0482	83.10	8.600	90.96	18.14	3.766	9	-0.40	4%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0394	92.40	0.0000	90.96	18.14	3.766	9	0.07	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0541	100.0	10.00	90.96	18.14	3.766	9	0.46	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0027	107.0	0.8350	90.96	18.14	3.766	9	0.82	9%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0368	107.0	8.000	90.96	18.14	3.766	9	0.82	9%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	110.7	2.100	90.96	18.14	3.766	9	1.00	11%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0009	100.0	0.0000	110.6	4.696	3.174	8	-2.06	5%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0494	107.0	4.445	110.6	4.696	3.174	8	-0.70	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0515	108.9	2.892	110.6	4.696	3.174	8	-0.33	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0086	109.9	2.480	110.6	4.696	3.174	8	-0.14	0%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0117	111.5	2.700	110.6	4.696	3.174	8	0.17	0%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0527	113.4	0.8610	110.6	4.696	3.174	8	0.54	1%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0037	114.8	5.511	110.6	4.696	3.174	8	0.82	2%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modified... (ppm)	0105	115.9	6.500	110.6	4.696	3.174	8	1.02	2%	0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0515	106.6	0.6340				2			0
191.34	Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)	0230	108.5	1.000				2			0
191.99	Acid Soluble Chromium , Other (ppm)	0506	51.35	2.100	85.06	33.77	4.995	4	-1.00	20%	0
191.99	Acid Soluble Chromium , Other (ppm)	0476	61.39	16.88	85.06	33.77	4.995	4	-0.70	14%	0
191.99	Acid Soluble Chromium , Other (ppm)	0220	107.5	1.000	85.06	33.77	4.995	4	0.66	13%	0
191.99	Acid Soluble Chromium , Other (ppm)	0009	120.0	0.0000	85.06	33.77	4.995	4	1.03	21%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0524	4.203	0.0265	9.305	3.991	1.034	6	-1.14	27%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	5.655	1.610	9.305	3.991	1.034	6	-0.81	20%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0529	10.48	0.7700	9.305	3.991	1.034	6	0.26	6%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0368	11.20	0.6000	9.305	3.991	1.034	6	0.42	10%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	11.30	2.200	9.305	3.991	1.034	6	0.45	11%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	13.00	1.000	9.305	3.991	1.034	6	0.82	20%	0
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	0423	12.34	0.0700				1			0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0105	13.25	3.290	15.42	1.145	1.199	8	-1.73	7%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0037	14.47	0.9600	15.42	1.145	1.199	8	-0.76	3%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0009	15.00	0.0000	15.42	1.145	1.199	8	-0.33	1%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0515	15.16	1.483	15.42	1.145	1.199	8	-0.20	1%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0494	15.83	0.7915	15.42	1.145	1.199	8	0.33	1%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0086	16.26	1.879	15.42	1.145	1.199	8	0.68	3%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0117	16.39	0.6800	15.42	1.145	1.199	8	0.78	3%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)	0527	16.52	0.5090	15.42	1.145	1.199	8	0.88	4%	0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0230	10.80	0.0000				2			0
202.34	Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)	0515	15.93	0.1370				2			0
202.99	Acid Soluble Cobalt , Other (ppm)	0506	9.075	0.8900	11.65	3.174	1.044	5	-0.81	11%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0476	9.885	2.430	11.65	3.174	1.044	5	-0.56	8%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0255	10.30	1.901	11.65	3.174	1.044	5	-0.43	6%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0220	12.00	0.0000	11.65	3.174	1.044	5	0.11	1%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0009	17.00	0.0000	11.65	3.174	1.044	5	1.68	23%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0105	0.0070	0.0000	0.0082	0.0008	0.0006	5	-1.53	7%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0043	0.0081	0.0002	0.0082	0.0008	0.0006	5	-0.12	1%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0535	0.0083	0.0005	0.0082	0.0008	0.0006	5	0.08	0%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0540	0.0085	0.0007	0.0082	0.0008	0.0006	5	0.33	2%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0200	0.0092	0.0017	0.0082	0.0008	0.0006	5	1.23	6%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0433	0.0075	0.0010	0.0086	0.0012	0.0005	11	-0.87	6%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0035	0.0076	0.0001	0.0086	0.0012	0.0005	11	-0.83	6%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0041	0.0080	0.0000	0.0086	0.0012	0.0005	11	-0.47	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0255	0.0080	0.0020	0.0086	0.0012	0.0005	11	-0.47	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0483	0.0081	0.0003	0.0086	0.0012	0.0005	11	-0.43	3%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0096	0.0081	0.0002	0.0086	0.0012	0.0005	11	-0.38	3%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0541	0.0083	0.0014	0.0086	0.0012	0.0005	11	-0.22	2%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0230	0.0086	0.0001	0.0086	0.0012	0.0005	11	-0.02	0%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0472	0.0100	0.0000	0.0086	0.0012	0.0005	11	1.14	8%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0482	0.0100	0.0000	0.0086	0.0012	0.0005	11	1.14	8%	0
221.30	Acid Soluble Copper , ICP, test portion inorg... (%)	0354	0.0110	0.0000	0.0086	0.0012	0.0005	11	1.94	14%	0
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0521	0.0077	0.0000				2			0
221.32	Acid Soluble Copper , ICP, test portion 2006.... (%)	0423	0.0090	0.0000				2			0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0009	0.0069	0.0008	0.0086	0.0014	0.4653	7	-1.16	10%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0117	0.0080	0.0002	0.0086	0.0014	0.4653	7	-0.43	4%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0105	0.0081	0.0015	0.0086	0.0014	0.4653	7	-0.39	3%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0527	0.0085	0.0010	0.0086	0.0014	0.4653	7	-0.09	1%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0494	0.0090	0.0003	0.0086	0.0014	0.4653	7	0.21	2%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0515	0.0094	0.0026	0.0086	0.0014	0.4653	7	0.50	4%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0086	76.74	3.251	0.0086	0.0014	0.4653	7	50960.01	444058%	0
221.33	Acid Soluble Copper , ICP, test portion 2006.... (%)	0037	85.23	7.750	0.0086	0.0014	0.4653	7	56591.87	493133%	1
221.99	Acid Soluble Copper , Other (%)	0476	0.0054	0.0001	0.0079	0.0017	0.0005	8	-1.33	16%	0
221.99	Acid Soluble Copper , Other (%)	0524	0.0059	0.0001	0.0079	0.0017	0.0005	8	-1.07	13%	0
221.99	Acid Soluble Copper , Other (%)	0009	0.0079	0.0001	0.0079	0.0017	0.0005	8	-0.02	0%	0
221.99	Acid Soluble Copper , Other (%)	0027	0.0085	0.0010	0.0079	0.0017	0.0005	8	0.32	4%	0
221.99	Acid Soluble Copper , Other (%)	0220	0.0085	0.0010	0.0079	0.0017	0.0005	8	0.32	4%	0
221.99	Acid Soluble Copper , Other (%)	0515	0.0085	0.0004	0.0079	0.0017	0.0005	8	0.32	4%	0
221.99	Acid Soluble Copper , Other (%)	0523	0.0085	0.0010	0.0079	0.0017	0.0005	8	0.32	4%	0
221.99	Acid Soluble Copper , Other (%)	0506	0.0100	0.0000	0.0079	0.0017	0.0005	8	1.11	13%	0
221.99	Acid Soluble Copper , Other (%)	0368	0.0114	0.0050	0.0079	0.0017	0.0005	8	1.85	22%	1
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0513	0.9700*	0.0400	1.110	0.0960	0.0455	12	-1.45	6%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0043	0.9850	0.0500	1.110	0.0960	0.0455	12	-1.30	6%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0500	1.040	0.0000	1.110	0.0960	0.0455	12	-0.72	3%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0534	1.080	0.0200	1.110	0.0960	0.0455	12	-0.31	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0532	1.090	0.0200	1.110	0.0960	0.0455	12	-0.20	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0540	1.105	0.0100	1.110	0.0960	0.0455	12	-0.05	0%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0535	1.110	0.0200	1.110	0.0960	0.0455	12	0.00	0%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0200	1.130	0.1200	1.110	0.0960	0.0455	12	0.21	1%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0105	1.174	0.0100	1.110	0.0960	0.0455	12	0.67	3%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0485	1.187	0.1020	1.110	0.0960	0.0455	12	0.81	3%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0040	1.190	0.0800	1.110	0.0960	0.0455	12	0.84	4%	0
241.00	Acid Soluble Iron, AA, inorganic 965.09 (1%)	0029	1.281	0.0740	1.110	0.0960	0.0455	12	1.79	8%	0
241.20	Acid Soluble Iron , Colormetric (1%)	0518	0.1150*	0.0300				1			0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0402	0.4500*	0.0800	1.095	0.1454	0.0278	23	-4.43	29%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0472	0.7450*	0.0100	1.095	0.1454	0.0278	23	-2.40	16%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0543	0.7920*	0.0180	1.095	0.1454	0.0278	23	-2.08	14%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0231	0.8950*	0.0100	1.095	0.1454	0.0278	23	-1.37	9%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0035	0.9410*	0.0020	1.095	0.1454	0.0278	23	-1.06	7%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0291	1.020	0.0200	1.095	0.1454	0.0278	23	-0.51	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				
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0377	1.036	0.0020	1.095	0.1454	0.0278	23	-0.40	3%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0234	1.050	0.0600	1.095	0.1454	0.0278	23	-0.31	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0433	1.095	0.0100	1.095	0.1454	0.0278	23	0.00	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0041	1.100	0.0000	1.095	0.1454	0.0278	23	0.04	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0255	1.101	0.0718	1.095	0.1454	0.0278	23	0.04	0%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0114	1.115	0.0865	1.095	0.1454	0.0278	23	0.14	1%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0230	1.135	0.0300	1.095	0.1454	0.0278	23	0.28	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0102	1.138	0.0350	1.095	0.1454	0.0278	23	0.30	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0096	1.145	0.0100	1.095	0.1454	0.0278	23	0.35	2%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0324	1.170	0.0200	1.095	0.1454	0.0278	23	0.52	3%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0444	1.185	0.0100	1.095	0.1454	0.0278	23	0.62	4%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0157	1.205	0.0300	1.095	0.1454	0.0278	23	0.76	5%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0354	1.224	0.0151	1.095	0.1454	0.0278	23	0.89	6%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0483	1.225	0.0700	1.095	0.1454	0.0278	23	0.90	6%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0360	1.230	0.0200	1.095	0.1454	0.0278	23	0.93	6%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0371	1.265	0.0100	1.095	0.1454	0.0278	23	1.17	8%	0
241.30	Acid Soluble Iron, ICP, test portion inorgani... (1%)	0482	1.270	0.0200	1.095	0.1454	0.0278	23	1.21	8%	0
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0394	1.045	0.0100	1.076	0.0274	0.0067	3	-1.15	1%	0
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0521	1.089	0.0000	1.076	0.0274	0.0067	3	0.47	1%	0
241.32	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0423	1.095	0.0100	1.076	0.0274	0.0067	3	0.68	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0486	0.9950	0.0500	1.160	0.0821	0.0475	14	-2.01	7%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0397	1.009	0.0100	1.160	0.0821	0.0475	14	-1.84	6%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0136	1.075	0.0300	1.160	0.0821	0.0475	14	-1.03	4%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0086	1.077	0.0373	1.160	0.0821	0.0475	14	-1.01	4%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0037	1.138	0.0660	1.160	0.0821	0.0475	14	-0.26	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0055	1.190	0.0600	1.160	0.0821	0.0475	14	0.37	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0117	1.190	0.0200	1.160	0.0821	0.0475	14	0.37	1%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0009	1.200	0.2000	1.160	0.0821	0.0475	14	0.49	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0515	1.203	0.0206	1.160	0.0821	0.0475	14	0.53	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0025	1.205	0.0520	1.160	0.0821	0.0475	14	0.55	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0527	1.208	0.0450	1.160	0.0821	0.0475	14	0.58	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0494	1.210	0.0244	1.160	0.0821	0.0475	14	0.62	2%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0034	1.229	0.0120	1.160	0.0821	0.0475	14	0.84	3%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0177	1.238	0.0372	1.160	0.0821	0.0475	14	0.96	3%	0
241.33	Acid Soluble Iron, ICP, test portion 2006.03A... (1%)	0023	0.9775*	0.5690	1.160	0.0821	0.0475	14	-2.22	8%	1
241.99	Acid Soluble Iron, Other (1%)	0476	0.2700*	0.0160	0.9757	0.1898	0.0683	10	-3.46	36%	0
241.99	Acid Soluble Iron, Other (1%)	0524	0.7813*	0.0084	0.9757	0.1898	0.0683	10	-0.95	10%	0
241.99	Acid Soluble Iron, Other (1%)	0042	0.8550*	0.0300	0.9757	0.1898	0.0683	10	-0.59	6%	0
241.99	Acid Soluble Iron, Other (1%)	0523	0.8950*	0.0300	0.9757	0.1898	0.0683	10	-0.40	4%	0
241.99	Acid Soluble Iron, Other (1%)	0137	0.9505*	0.0090	0.9757	0.1898	0.0683	10	-0.12	1%	0
241.99	Acid Soluble Iron, Other (1%)	0508	1.059	0.0600	0.9757	0.1898	0.0683	10	0.41	4%	0
241.99	Acid Soluble Iron, Other (1%)	0515	1.069	0.0341	0.9757	0.1898	0.0683	10	0.46	5%	0
241.99	Acid Soluble Iron, Other (1%)	0027	1.113	0.2490	0.9757	0.1898	0.0683	10	0.67	7%	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				
241.99	Acid Soluble Iron, Other (1%)	0506	1.160	0.0800	0.9757	0.1898	0.0683	10	0.90	9%	0
241.99	Acid Soluble Iron, Other (1%)	0368	1.184	0.1664	0.9757	0.1898	0.0683	10	1.02	11%	0
251.00	Acid Soluble Lead , AA, test portion as in 20...	0136	3.500	1.000				1			0
251.30	Acid Soluble Lead , ICP (ppm)	0368	1.150	0.1000	2.549	1.112	0.2445	8	-1.15	27%	0
251.30	Acid Soluble Lead , ICP (ppm)	0255	1.475	0.1223	2.549	1.112	0.2445	8	-0.88	21%	0
251.30	Acid Soluble Lead , ICP (ppm)	0523	2.135	0.1500	2.549	1.112	0.2445	8	-0.34	8%	0
251.30	Acid Soluble Lead , ICP (ppm)	0444	2.475	0.1500	2.549	1.112	0.2445	8	-0.06	1%	0
251.30	Acid Soluble Lead , ICP (ppm)	0096	2.700	1.000	2.549	1.112	0.2445	8	0.12	3%	0
251.30	Acid Soluble Lead , ICP (ppm)	0524	3.010	0.0436	2.549	1.112	0.2445	8	0.38	9%	0
251.30	Acid Soluble Lead , ICP (ppm)	0529	3.245	0.0100	2.549	1.112	0.2445	8	0.57	14%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	4.200	0.3800	2.549	1.112	0.2445	8	1.36	32%	0
251.30	Acid Soluble Lead , ICP (ppm)	0541	17.30	3.200	2.549	1.112	0.2445	8	12.13	289%	1
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0086	3.226	0.2810	3.876	0.6443	0.7395	7	-0.91	8%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0009	3.300	0.4000	3.876	0.6443	0.7395	7	-0.81	7%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0515	3.630	1.401	3.876	0.6443	0.7395	7	-0.35	3%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0037	3.790	0.1800	3.876	0.6443	0.7395	7	-0.12	1%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0494	4.137	0.1797	3.876	0.6443	0.7395	7	0.37	3%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0105	4.210	2.425	3.876	0.6443	0.7395	7	0.47	4%	0
251.33	Acid Soluble Lead , ICP, 2006.03 modified w/9...	0527	4.864	0.3100	3.876	0.6443	0.7395	7	1.39	13%	0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0230	3.275	0.1700				2			0
251.34	Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)	0515	4.200	0.2320				2			0
251.99	Acid Soluble Lead , Other (ppm)	0200	0.0100	0.0000	2.735	1.955	0.2600	4	-1.39	50%	0
251.99	Acid Soluble Lead , Other (ppm)	0476	2.780	0.1400	2.735	1.955	0.2600	4	0.02	1%	0
251.99	Acid Soluble Lead , Other (ppm)	0009	3.600	0.6000	2.735	1.955	0.2600	4	0.44	16%	0
251.99	Acid Soluble Lead , Other (ppm)	0220	4.550	0.3000	2.735	1.955	0.2600	4	0.93	33%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0105	0.0384	0.0036	0.0400	0.0014	0.0015	3	-1.15	2%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0535	0.0408	0.0005	0.0400	0.0014	0.0015	3	0.51	1%	0
261.12	Acid Soluble Manganese , AA, inorganic 965.09 (%)	0540	0.0410	0.0003	0.0400	0.0014	0.0015	3	0.65	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97...	0472	0.0300	0.0000	0.0367	0.0040	0.0023	5	-1.65	9%	0
261.30	Acid Soluble Manganese , ICP, test portion 97...	0354	0.0370	0.0020	0.0367	0.0040	0.0023	5	0.08	0%	0
261.30	Acid Soluble Manganese , ICP, test portion 97...	0096	0.0375	0.0025	0.0367	0.0040	0.0023	5	0.19	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 97...	0035	0.0379	0.0010	0.0367	0.0040	0.0023	5	0.30	2%	0
261.30	Acid Soluble Manganese , ICP, test portion 97...	0041	0.0410	0.0060	0.0367	0.0040	0.0023	5	1.07	6%	0
261.31	Acid Soluble Manganese , ICP, test portion 97...	0482	0.0400	0.0000				1			0
261.32	Acid Soluble Manganese , ICP, test portion in...	0483	0.0362	0.0011				2			0
261.32	Acid Soluble Manganese , ICP, test portion in...	0402	0.0400	0.0000				2			0
261.33	Acid Soluble Manganese , ICP, test portion or...	0086	358.6	15.21				1			0
261.34	Acid Soluble Manganese , ICP, test portion 20...	0423	0.0335	0.0010				2			0
261.34	Acid Soluble Manganese , ICP, test portion 20...	0521	0.0351	0.0000				2			0
261.35	Acid Soluble Manganese , ICP, test portion 20...	0515	0.0208	0.0189	0.0354	0.0084	0.0057	5	-1.75	21%	0
261.35	Acid Soluble Manganese , ICP, test portion 20...	0117	0.0372	0.0003	0.0354	0.0084	0.0057	5	0.21	2%	0
261.35	Acid Soluble Manganese , ICP, test portion 20...	0009	0.0375	0.0030	0.0354	0.0084	0.0057	5	0.25	3%	0
261.35	Acid Soluble Manganese , ICP, test portion 20...	0527	0.0405	0.0030	0.0354	0.0084	0.0057	5	0.61	7%	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				
261.35	Acid Soluble Manganese , ICP, test portion 20... (%)	0494	0.0412	0.0031	0.0354	0.0084	0.0057	5	0.68	8%	0
261.99	Acid Soluble Manganese , Other (%)	0524	0.0280	0.0011				2			0
261.99	Acid Soluble Manganese , Other (%)	0515	0.0380	0.0017				2			0
281.30	Acid Soluble Mercury , ICP (ppm)	0394	0.0041	0.0004				1			0
281.30	Acid Soluble Mercury , ICP (ppm)	0515	0.0000	0.0000				1			4
281.30	Acid Soluble Mercury , ICP (ppm)	0541	0.0000	0.0000				1			4
289.30	Acid Soluble Molybdenum , ICP (ppm)	0521	3.161	0.0000	8.080	1.751	0.4940	8	-2.57	30%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	7.090	0.9800	8.080	1.751	0.4940	8	-0.52	6%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0524	7.412	0.0656	8.080	1.751	0.4940	8	-0.35	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	7.702	0.0410	8.080	1.751	0.4940	8	-0.20	2%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0255	8.427	0.7653	8.080	1.751	0.4940	8	0.18	2%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	8.850	0.7000	8.080	1.751	0.4940	8	0.40	5%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0541	9.000	0.4000	8.080	1.751	0.4940	8	0.48	6%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0368	16.70	1.000	8.080	1.751	0.4940	8	4.50	53%	0
289.32	Acid Soluble Molybdenum , ICP, 2006.03 (ppm)	0394	8.920	0.1400				1			0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0423	6.670	0.3000	10.45	1.737	1.286	9	-2.01	18%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0515	8.270	3.043	10.45	1.737	1.286	9	-1.16	10%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0494	10.32	0.6598	10.45	1.737	1.286	9	-0.07	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0117	10.33	1.734	10.45	1.737	1.286	9	-0.06	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0105	10.61	2.704	10.45	1.737	1.286	9	0.08	1%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0086	10.84	0.3580	10.45	1.737	1.286	9	0.21	2%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0037	11.58	0.6630	10.45	1.737	1.286	9	0.60	5%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0009	12.00	2.000	10.45	1.737	1.286	9	0.82	7%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modifi... (ppm)	0527	12.28	0.1140	10.45	1.737	1.286	9	0.97	9%	0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0515	10.10	0.0890				2			0
289.34	Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (ppm)	0230	11.45	0.1000				2			0
289.99	Acid Soluble Molybdenum , Other (ppm)	0476	5.655	1.430	10.33	3.312	0.6825	4	-1.41	23%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0506	10.30	0.2000	10.33	3.312	0.6825	4	-0.01	0%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0009	12.50	1.000	10.33	3.312	0.6825	4	0.66	11%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0220	12.85	0.1000	10.33	3.312	0.6825	4	0.76	12%	0
291.00	Acid Soluble Nickel , AA, test portion as in ... (ppm)	0136	65.50	1.000				1			0
291.30	Acid Soluble Nickel , ICP (ppm)	0521	18.16	0.0000	45.93	12.07	1.604	10	-2.14	30%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	34.66	1.140	45.93	12.07	1.604	10	-0.87	12%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0524	39.06	0.0242	45.93	12.07	1.604	10	-0.53	7%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	43.05	3.700	45.93	12.07	1.604	10	-0.22	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0529	44.49	0.0800	45.93	12.07	1.604	10	-0.11	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	45.35	3.500	45.93	12.07	1.604	10	-0.04	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	50.50	0.2000	45.93	12.07	1.604	10	0.35	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0541	53.65	0.7000	45.93	12.07	1.604	10	0.59	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	58.20	2.800	45.93	12.07	1.604	10	0.94	13%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0368	62.55	3.900	45.93	12.07	1.604	10	1.28	18%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0494	56.46	2.716	61.56	4.627	3.054	7	-1.00	4%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm)	0515	56.82	2.707	61.56	4.627	3.054	7	-0.92	4%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w...	0117	61.04	0.4200	61.56	4.627	3.054	7	-0.10	0%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w...	0037	62.19	3.713	61.56	4.627	3.054	7	0.12	1%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w...	0527	62.53	0.3090	61.56	4.627	3.054	7	0.19	1%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w...	0009	63.50	5.000	61.56	4.627	3.054	7	0.38	2%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w...	0105	68.35	6.510	61.56	4.627	3.054	7	1.33	6%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w...	0086	41.69	29.85	61.56	4.627	3.054	7	-3.88	16%	1
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0515	57.48	0.1960				2			0
291.34	Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)	0230	63.55	0.1000				2			0
291.99	Acid Soluble Nickel , Other (ppm)	0476	29.22	7.010	49.93	16.65	3.260	6	-1.11	21%	0
291.99	Acid Soluble Nickel , Other (ppm)	0255	33.57	6.373	49.93	16.65	3.260	6	-0.88	16%	0
291.99	Acid Soluble Nickel , Other (ppm)	0027	55.04	0.6790	49.93	16.65	3.260	6	0.27	5%	0
291.99	Acid Soluble Nickel , Other (ppm)	0220	57.50	1.000	49.93	16.65	3.260	6	0.41	8%	0
291.99	Acid Soluble Nickel , Other (ppm)	0009	62.00	2.000	49.93	16.65	3.260	6	0.65	12%	0
291.99	Acid Soluble Nickel , Other (ppm)	0506	62.25	2.500	49.93	16.65	3.260	6	0.66	12%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0394	0.0110	0.0040				2			0
301.30	Acid Soluble Selenium , ICP (ppm)	0529	0.1000	0.0000				2			0
301.30	Acid Soluble Selenium , ICP (ppm)	0368	0.0000	0.0000				2			4
301.30	Acid Soluble Selenium , ICP (ppm)	0541	0.0000	0.0000				2			4
301.33	Acid Soluble Selenium , ICP, 2006.03 modified...	0527	0.0690	0.0400				1			0
301.33	Acid Soluble Selenium , ICP, 2006.03 modified...	0009	0.0000	0.0000				1			4
301.33	Acid Soluble Selenium , ICP, 2006.03 modified...	0515	0.0000	0.0000				1			4
301.34	Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
301.99	Acid Soluble Selenium , Other (ppm)	0009	0.1200	0.0200				2			0
301.99	Acid Soluble Selenium , Other (ppm)	0255	0.2690	0.1820				2			0
311.32	Sodium, ICP, 2006.03 test portion (%)	0521	0.0355	0.0000				1			0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0009	0.0325	0.0030	0.0621	0.0539	0.0017	5	-0.48	24%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0494	0.0339	0.0000	0.0621	0.0539	0.0017	5	-0.46	23%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0423	0.0395	0.0010	0.0621	0.0539	0.0017	5	-0.37	18%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0086	0.0467	0.0005	0.0621	0.0539	0.0017	5	-0.25	12%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0035	0.1580	0.0040	0.0621	0.0539	0.0017	5	1.55	77%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0527	0.0530	0.0140	0.0621	0.0539	0.0017	5	-0.15	7%	1
311.99	Sodium, Other (%)	0482	0.0400	0.0000	0.0618	0.0336	0.0090	3	-0.65	18%	0
311.99	Sodium, Other (%)	0096	0.0450	0.0100	0.0618	0.0336	0.0090	3	-0.50	14%	0
311.99	Sodium, Other (%)	0354	0.1005	0.0170	0.0618	0.0336	0.0090	3	1.15	31%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0532	0.0316	0.0005	0.0335	0.0022	0.0022	7	-0.81	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0533	0.0317	0.0001	0.0335	0.0022	0.0022	7	-0.77	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0535	0.0318	0.0006	0.0335	0.0022	0.0022	7	-0.71	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0540	0.0332	0.0007	0.0335	0.0022	0.0022	7	-0.16	1%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0105	0.0354	0.0029	0.0335	0.0022	0.0022	7	0.74	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0200	0.0354	0.0093	0.0335	0.0022	0.0022	7	0.74	3%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0043	0.0359	0.0014	0.0335	0.0022	0.0022	7	0.97	4%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0428	1.178	0.0334	0.0335	0.0022	0.0022	7	467.64	1706%	2
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0433	0.0295	0.0010	0.0362	0.0061	0.0029	10	-1.02	9%	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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321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0472	0.0300	0.0000	0.0362	0.0061	0.0029	10	-0.94	9%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0483	0.0329	0.0003	0.0362	0.0061	0.0029	10	-0.51	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0041	0.0330	0.0020	0.0362	0.0061	0.0029	10	-0.49	4%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0230	0.0340	0.0011	0.0362	0.0061	0.0029	10	-0.34	3%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0096	0.0369	0.0020	0.0362	0.0061	0.0029	10	0.10	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0255	0.0370	0.0100	0.0362	0.0061	0.0029	10	0.12	1%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0482	0.0400	0.0000	0.0362	0.0061	0.0029	10	0.57	5%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0035	0.0435	0.0030	0.0362	0.0061	0.0029	10	1.10	10%	0
321.30	Acid Soluble Zinc , ICP, test portion inorgan... (%)	0354	0.0510	0.0100	0.0362	0.0061	0.0029	10	2.24	20%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0521	0.0290	0.0000	0.0322	0.0029	0.0009	3	-1.12	5%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0394	0.0332	0.0018	0.0322	0.0029	0.0009	3	0.34	1%	0
321.32	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0423	0.0345	0.0010	0.0322	0.0029	0.0009	3	0.79	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0009	0.0305	0.0050	0.0330	0.0019	0.0023	7	-1.16	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0105	0.0316	0.0015	0.0330	0.0019	0.0023	7	-0.66	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0117	0.0323	0.0001	0.0330	0.0019	0.0023	7	-0.33	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0515	0.0330	0.0028	0.0330	0.0019	0.0023	7	0.02	0%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0527	0.0335	0.0030	0.0330	0.0019	0.0023	7	0.26	1%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0220	0.0345	0.0030	0.0330	0.0019	0.0023	7	0.74	2%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0494	0.0354	0.0009	0.0330	0.0019	0.0023	7	1.14	4%	0
321.33	Acid Soluble Zinc , ICP, test portion 2006.03... (%)	0086	328.0	15.79	0.0330	0.0019	0.0023	7	155721.28	497681%	2
321.99	Acid Soluble Zinc , Other (%)	0476	0.0255	0.0010	0.0315	0.0053	0.0010	7	-1.04	10%	0
321.99	Acid Soluble Zinc , Other (%)	0027	0.0280	0.0020	0.0315	0.0053	0.0010	7	-0.61	6%	0
321.99	Acid Soluble Zinc , Other (%)	0524	0.0288	0.0011	0.0315	0.0053	0.0010	7	-0.48	4%	0
321.99	Acid Soluble Zinc , Other (%)	0523	0.0315	0.0010	0.0315	0.0053	0.0010	7	-0.01	0%	0
321.99	Acid Soluble Zinc , Other (%)	0307	0.0335	0.0010	0.0315	0.0053	0.0010	7	0.34	3%	0
321.99	Acid Soluble Zinc , Other (%)	0515	0.0341	0.0012	0.0315	0.0053	0.0010	7	0.44	4%	0
321.99	Acid Soluble Zinc , Other (%)	0506	0.0400	0.0000	0.0315	0.0053	0.0010	7	1.45	13%	0
321.99	Acid Soluble Zinc , Other (%)	0368	0.0380	0.0063	0.0315	0.0053	0.0010	7	1.10	10%	1
325.30	Water Soluble Zinc , ICP (%)	0402	0.0350	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. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an asterix 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.