

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 104

Sample # 150412

Statistical Summary

Labs Reporting: 83

SPM

Issue Date : 05/31/2015

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust	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
010.60	Total Nitrogen, Combustion (%)	8	6	0.0671	0.0506	0.0569		0.0346	0.0100	60.82%		0.0155	6.16%
020.10	Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)	1		0.0000									
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	1		0.0000									
020.40	Total Phosphorus as P2O5, Automated (%)	1		0.0750									
020.50	Total Phosphorus as P2O5, ICP (%)	2	1	0.0700									
030.40	Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)	1		0.0200									
040.40	Indirect Available Phosphorus as P2O5, Automated (%)	1		0.0550									
041.50	Direct Available Phosphorus as P2O5, ICP (%)	1		39.60									
041.51	Direct Available Phosphorus as P2O5, ICP, Citrate-... (%)	1		0.0000									
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (%)	2	1	0.3470									
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	1		0.0300									
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	13	12	22.07	0.3754	22.13	1.1569	0.2250	0.0459	1.02%	2.61%	0.1360	2.51%
050.10	Soluble Potassium as K2O, STPB Citrate (22%)	1		21.77									
050.30	Soluble Potassium as K2O, AA (22%)	7	7	22.21	0.5563	22.33	1.1569	0.3741	0.1000	1.68%	2.59%	0.3773	2.51%
050.31	Soluble Potassium as K2O, AA (22%)	1		20.70									
050.50	Soluble Potassium as K2O, ICP (22%)	8	8	22.84	0.9255	22.71	1.1569	0.5205	0.1301	2.29%	2.55%	0.6863	2.50%
050.51	Soluble Potassium as K2O, ICP (22%)	8	7	22.11	1.282	22.12	1.1569	1.022	0.2732	4.62%	2.61%	0.1186	2.51%
050.52	Soluble Potassium as K2O, ICP (22%)	8	8	22.37	0.4895	22.40	1.1569	0.4702	0.1176	2.10%	2.58%	0.1663	2.51%
050.60	Soluble Potassium as K2O, Flame Photometric (22%)	5	5	21.73	1.075	21.73	1.1569	1.075	0.3399	4.95%	2.66%	0.5446	2.52%
050.61	Soluble Potassium as K2O, Flame Photometric (22%)	5	5	22.25	0.0927	22.25	1.1569	0.0927	0.0293	0.42%	2.60%	0.4289	2.51%
050.62	Soluble Potassium as K2O, Flame Photometric (22%)	2	2	21.93	0.3005								
050.99	Soluble Potassium as K2O, Other (22%)	23	21	22.40	1.280	22.26	1.1569	0.8591	0.1326	3.86%	2.60%	0.2030	2.51%
060.00	Water (%)	3	3	0.0818	0.0106	0.0818		0.0106	0.0043	12.94%		0.0170	5.83%
060.99	Water (%)	1		0.1600									
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... (%)	1		0.1333									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	7	6	0.1591	0.0489	0.1714		0.0257	0.0074	14.97%		0.0100	5.22%
101.32	Acid Soluble Calcium, ICP, test portion 2006.03A-C (%)	1		0.1580									
101.33	Acid Soluble Calcium, ICP, test portion 2006.03A-C... (%)	2	2	0.1728	0.0102								
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (10.8%)	11	11	11.81	1.953	11.38	0.7673	0.4107	0.0876	3.61%	3.37%	0.1900	2.77%
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (10.8%)	1		11.55									
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	27	26	11.38	0.8032	11.37	0.7673	0.5586	0.0775	4.91%	3.37%	0.2432	2.77%

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust	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
121.32	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	1		11.38									
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	7	7	11.38	0.6792	11.46	0.7673	0.5884	0.1572	5.14%	3.35%	0.1545	2.77%
121.70	Acid Soluble Magnesium, Titrimetric (10.8%)	2	2	11.04	0.4419								
121.99	Acid Soluble Magnesium, Other (10.8%)	6	6	11.15	1.023	11.15	0.7673	1.160	0.3349	10.40%	3.44%	0.2567	2.78%
131.00	Water Soluble Magnesium, AA (%)	4	4	10.65	0.9526	10.65		0.9526	0.3368	8.94%		0.0375	2.80%
131.30	Water Soluble Magnesium, ICP (%)	7	7	10.94	0.8826	10.94		1.001	0.2675	9.15%		0.1920	2.79%
131.70	Water Soluble Magnesium, Titrimetric (%)	1		10.99									
131.99	Water Soluble Magnesium, Other (%)	1		9.410									
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon disu... (%)	3	3	23.15	0.0879	23.15		0.0879	0.0359	0.38%		0.2367	2.49%
143.99	Elemental Sulfur, Other (%)	3	3	22.67	0.9896	22.67		0.9896	0.4040	4.37%		0.9933	2.50%
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)	4	4	22.76	0.9578	22.76		0.9578	0.3386	4.21%		0.0550	2.50%
145.99	Sulfate Sulfur, HCl soluble, Other (%)	1		22.64									
146.00	Total Sulfur in Liquid, Gravimetric - sulfate, sul... (%)	1		20.85									
147.00	Total Sulfur in Urea/Formulations, Gravimetric (%)	1		23.50									
148.00	Total Sulfur, Combustion (22%)	5	5	22.64	0.8411	22.63	1.0000	0.8411	0.2660	3.72%	2.21%	0.0806	2.50%
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	13	12	23.01	0.2728	23.01	1.0000	0.3094	0.0632	1.34%	2.17%	0.1358	2.50%
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	10	10	22.79	1.187	22.72	1.0000	1.200	0.2682	5.28%	2.20%	0.5122	2.50%
148.99	Total Sulfur, Other (22%)	10	10	22.15	0.8008	22.12	1.0000	0.8548	0.1911	3.86%	2.26%	0.4222	2.51%
149.04	Sulfur - HNO3 soluble, ICP (%)	2	2	22.74	0.4769								
151.00	Acid Soluble Arsenic , AA, test portion as in 200... (ppm)	2	2	0.1773	0.0534								
151.30	Acid Soluble Arsenic , ICP (ppm)	5	4	0.5241	0.4041	0.5241		0.4041	0.1429	77.10%		0.0440	17.63%
151.99	Acid Soluble Arsenic , Other (ppm)	2	2	0.1875	0.0318								
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	3	3	0.0060	0.0017	0.0060		0.0017	0.0007	28.87%		0.0007	8.64%
165.99	Acid Soluble Boron , Other (%)	4	4	0.0074	0.0031	0.0074		0.0031	0.0011	41.69%		0.0003	8.38%
181.30	Acid Soluble Cadmium , ICP (ppm)	6	2	0.1175	0.1379	0.1175		0.1379	0.0689	117.35%		0.0150	22.08%
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified w/9:... (ppm)	1		0.0901									
181.99	Acid Soluble Cadmium , Other (ppm)	2	2	0.0275	0.0035								
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	13	12	0.8915	0.2629	0.8190	0.0854	0.0600	0.0122	7.32%	5.21%	0.0129	4.12%
190.99	Water Soluble Chlorine, Other (2.5%)	3	3	0.6958	0.1309	0.6958	0.0854	0.1309	0.0534	18.81%	6.13%	0.0043	4.22%
191.00	Acid Soluble Chromium , AA, test portion as in 20... (ppm)	1		150.0									
191.30	Acid Soluble Chromium , ICP (ppm)	10	9	120.9	19.00	122.9		17.69	4.170	14.39%		4.299	7.75%
191.33	Acid Soluble Chromium , ICP, 2006.03 modified w/9... (ppm)	3	3	93.20	80.73	93.20		80.73	32.96	86.62%		1.631	8.08%
191.99	Acid Soluble Chromium , Other (ppm)	4	4	61.34	47.80	61.34		47.80	16.90	77.93%		4.993	8.61%
202.30	Acid Soluble Cobalt , ICP (ppm)	7	7	2.299	0.3913	2.264		0.3654	0.0977	16.14%		0.1129	14.15%
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	1		1.475									
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3... (ppm)	2	2	2.729	0.2347								
202.99	Acid Soluble Cobalt , Other (ppm)	3	3	2.813	2.729	2.813		2.729	1.114	97.00%		1.813	13.69%
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	1		0.0008									
221.30	Acid Soluble Copper , ICP, test portion inorganic... (%)	14	12	0.6650	1.548	0.0021		0.0021	0.0004	101.10%		0.0045	10.14%
221.33	Acid Soluble Copper , ICP, test portion 2006.03A--- (%)	1		0.0000									
221.99	Acid Soluble Copper , Other (%)	3	2	1.040	1.470	1.040		1.470	0.7352	141.33%		0.0502	3.98%
241.03	Acid Soluble Iron , AA, 965.09, test portion 2006.... (%)	1		0.0573									

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust	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
241.30	Acid Soluble Iron , ICP, test portion inorganic 965.09 (%)	7	7	0.0589	0.0117	0.0589		0.0133	0.0036	22.59%		0.0018	6.13%
241.32	Acid Soluble Iron , ICP, test portion 2006.03A-C (%)	1		0.0390									
241.33	Acid Soluble Iron , ICP, test portion 2006.03A-C, ... (%)	2	2	335.6	474.5								
241.99	Acid Soluble Iron , Other (%)	1		0.0580									
251.30	Acid Soluble Lead , ICP (ppm)	6	4	0.5175	0.4836	0.5175		0.4836	0.1710	93.45%		0.0260	17.66%
251.99	Acid Soluble Lead , Other (ppm)	3	3	12.76	21.99	12.76		21.99	8.976	172.29%		10.30	10.90%
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	6	5	0.0018	0.0003	0.0018		0.0003	0.0001	17.38%		0.0000	10.37%
261.34	Acid Soluble Manganese , ICP, test portion 2006.03A-C (%)	1		0.0014									
261.35	Acid Soluble Manganese , ICP, test portion 2006.0... (%)	2	1	0.0024									
261.99	Acid Soluble Manganese , Other (%)	1		0.0017									
281.00	Acid Soluble Mercury , AA (ppm)	1		0.0024									
281.30	Acid Soluble Mercury , ICP (ppm)	2	2	0.0129	0.0100								
281.99	Acid Soluble Mercury , Other (ppm)	2	2	0.2750	0.2263								
289.30	Acid Soluble Molybdenum , ICP (ppm)	10	8	12.63	1.610	12.67		1.586	0.3966	12.52%		0.3438	10.92%
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modified w... (ppm)	3	3	12.04	3.553	12.04		3.552	1.450	29.51%		0.3579	11.00%
289.99	Acid Soluble Molybdenum , Other (ppm)	2	2	6.453	6.566								
291.00	Acid Soluble Nickel , AA, test portion as in 2006... (ppm)	2	2	37.05	8.061								
291.30	Acid Soluble Nickel , ICP (ppm)	12	11	68.14	11.07	69.83		9.114	1.943	13.05%		2.165	8.44%
291.32	Acid Soluble Nickel , ICP, 2006.03 (ppm)	1		73.24									
291.33	Acid Soluble Nickel , ICP, 2006.03 modified w/9:3... (ppm)	3	3	52.43	45.39	52.43		45.39	18.53	86.57%		0.9712	8.82%
291.99	Acid Soluble Nickel , Other (ppm)	4	4	24.97	20.43	24.97		20.43	7.222	81.82%		2.505	9.86%
301.30	Acid Soluble Selenium , ICP (ppm)	2	2	1.923	0.9440								
301.99	Acid Soluble Selenium , Other (ppm)	2	2	0.7850	0.9829								
311.30	Sodium, Flame Photometric (%)	1		0.5000									
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test ... (%)	4	4	0.4536	0.0332	0.4536		0.0332	0.0117	7.31%		0.0089	4.51%
311.99	Sodium, Other (%)	5	5	0.4952	0.0773	0.4952		0.0773	0.0244	15.61%		0.0188	4.45%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	2	2	0.0009	0.0007								
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006... (%)	1		0.0033									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09 (%)	13	10	1.113	2.850	0.0021		0.0021	0.0005	98.27%		0.0035	10.11%
321.33	Acid Soluble Zinc , ICP, test portion 2006.03A-C,... (%)	1		0.0450									
321.99	Acid Soluble Zinc , Other (%)	4	3	0.2379	0.4089	0.2379		0.4089	0.1669	171.90%		0.0134	4.96%

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Method Proficiency For All Labs (Lab Values)

Sample # 150412

Method Precision Report

SPM

Issue Date : 05/31/2015

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
010.60	Total Nitrogen, Combustion	8	6	0.0671	0.0506	0.0494	0.0153	0.0517	73.65%	22.87%	77.12%	3.372
050.00	Soluble Potassium as K ₂ O, STPB Oxalate	13	10	22.10	0.2251	0.2197	0.0694	0.2304	0.99%	0.31%	1.04%	3.318
050.30	Soluble Potassium as K ₂ O, AA	7	7	22.21	0.5563	0.5089	0.3179	0.6000	2.29%	1.43%	2.70%	1.887
050.50	Soluble Potassium as K ₂ O, ICP	8	7	22.55	0.5063	0.3738	0.4829	0.6107	1.66%	2.14%	2.71%	1.265
050.51	Soluble Potassium as K ₂ O, ICP	8	7	22.11	1.282	1.281	0.0953	1.284	5.79%	0.43%	5.81%	13.48
050.52	Soluble Potassium as K ₂ O, ICP	8	8	22.36	0.4895	0.4799	0.1365	0.4989	2.15%	0.61%	2.23%	3.656
050.99	Soluble Potassium as K ₂ O, Other	23	20	22.23	1.031	1.019	0.2171	1.042	4.59%	0.98%	4.69%	4.801
101.30	Acid Soluble Calcium, ICP, test portion inorganic 965.09	7	5	0.1779	0.0182	0.0173	0.0079	0.0190	9.72%	4.45%	10.69%	2.401
121.00	Acid Soluble Magnesium, AA, inorganic 965.09	11	9	11.28	0.5479	0.5421	0.1127	0.5537	4.80%	1.00%	4.91%	4.912
121.30	Acid Soluble Magnesium, ICP, test portion inorganic 965.09	27	26	11.38	0.8032	0.7876	0.2229	0.8185	6.92%	1.96%	7.19%	3.673
121.33	Acid Soluble Magnesium, ICP, test portion 2006.03A-C, w/dual aci	7	7	11.38	0.6792	0.6720	0.1398	0.6863	5.91%	1.23%	6.03%	4.911
121.99	Acid Soluble Magnesium, Other	6	6	11.15	1.023	1.010	0.2288	1.036	9.06%	2.05%	9.29%	4.528
131.30	Water Soluble Magnesium, ICP	7	7	10.94	0.8826	0.8761	0.1508	0.8890	8.01%	1.38%	8.13%	5.896
148.01	Total Sulfur, Gravimetric - sulfate and elemental	13	12	23.01	0.2728	0.2601	0.1163	0.2849	1.13%	0.51%	1.24%	2.450
148.07	Total Sulfur, ICP, test portion as in 2006.03 modified w/9:3 HNO ₃ :	10	10	22.79	1.187	1.137	0.4835	1.236	4.99%	2.12%	5.42%	2.555
148.99	Total Sulfur, Other	10	10	22.14	0.8008	0.7521	0.3889	0.8467	3.40%	1.76%	3.82%	2.177
181.30	Acid Soluble Cadmium , ICP	6	0									
190.00	Water Soluble Chlorine, Titrimetric	13	11	0.8357	0.1869	0.1868	0.0113	0.1871	22.35%	1.36%	22.39%	16.51
191.30	Acid Soluble Chromium , ICP	10	8	122.7	19.46	19.39	2.198	19.52	15.80%	1.79%	15.90%	8.880
202.30	Acid Soluble Cobalt , ICP	7	7	2.299	0.3913	0.3822	0.1186	0.4002	16.62%	5.16%	17.41%	3.375
221.30	Acid Soluble Copper , ICP, test portion inorganic 965.09	14	10	0.0035	0.0071	0.0071	0.0006	0.0072	201.92%	15.56%	202.52%	13.02
241.30	Acid Soluble Iron , ICP, test portion inorganic 965.09	7	7	0.0589	0.0117	0.0116	0.0020	0.0118	19.78%	3.35%	20.06%	5.988
251.30	Acid Soluble Lead , ICP	6	4	0.5175	0.4836	0.4833	0.0263	0.4840	93.38%	5.08%	93.52%	18.40
261.30	Acid Soluble Manganese , ICP, test portion 972.02a	6	5	0.0018	0.0003	0.0003	0.0000	0.0003	17.29%	2.51%	17.47%	6.955
289.30	Acid Soluble Molybdenum , ICP	10	8	12.63	1.610	1.594	0.3232	1.626	12.62%	2.56%	12.88%	5.031
291.30	Acid Soluble Nickel , ICP	12	11	68.14	11.07	10.96	2.187	11.18	16.09%	3.21%	16.41%	5.113
321.30	Acid Soluble Zinc , ICP, test portion inorganic 965.09	13	8	0.0014	0.0013	0.0012	0.0007	0.0014	84.37%	46.97%	96.57%	2.056

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 104

Sample # 150412

Lab Values

Labs Reporting: 83

SPM

Issue Date : 05/31/2015

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				
010.60	Total Nitrogen, Combustion (%)	0325	0.0250	0.0100	0.0569	0.0346	0.0155	6	-0.92	28%	0
010.60	Total Nitrogen, Combustion (%)	0292	0.0300	0.0000	0.0569	0.0346	0.0155	6	-0.78	24%	0
010.60	Total Nitrogen, Combustion (%)	0482	0.0450	0.0100	0.0569	0.0346	0.0155	6	-0.34	10%	0
010.60	Total Nitrogen, Combustion (%)	0354	0.0535	0.0010	0.0569	0.0346	0.0155	6	-0.10	3%	0
010.60	Total Nitrogen, Combustion (%)	0096	0.0900	0.0400	0.0569	0.0346	0.0155	6	0.96	29%	0
010.60	Total Nitrogen, Combustion (%)	0472	0.1590	0.0320	0.0569	0.0346	0.0155	6	2.95	90%	0
010.60	Total Nitrogen, Combustion (%)	0421	0.0000	0.0000	0.0569	0.0346	0.0155	6	-1.64	50%	4
010.60	Total Nitrogen, Combustion (%)	0389	0.0050	0.0100	0.0569	0.0346	0.0155	6	-1.50	46%	4
020.10	Total Phosphorus as P2O5, Gravimetric Quinoli... (%)	0322	0.0000	0.0000			0.0000	0			
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	0.0000	0.0000			0.0000	0			
020.40	Total Phosphorus as P2O5, Automated (%)	0096	0.0750	0.0500			0.0500	1			
020.50	Total Phosphorus as P2O5, ICP (%)	0389	0.0700	0.0000	0.0569	0.0346	0.0000	1	0.38	12%	0
020.50	Total Phosphorus as P2O5, ICP (%)	0472	0.0000	0.0000	0.0569	0.0346	0.0000	1	-1.64	50%	4
030.40	Citrate Insoluble Phosphorus as P2O5, Automat... (%)	0096	0.0200	0.0000			0.0000	1			
040.40	Indirect Available Phosphorus as P2O5, Automa... (%)	0096	0.0550	0.0500			0.0500	1			
041.50	Direct Available Phosphorus as P2O5, ICP (%)	0325	39.60	4.200			4.200	1			
041.51	Direct Available Phosphorus as P2O5, ICP, Cit... (%)	0421	0.0000	0.0000			0.0000	0			
041.60	Direct Available Phosphorus as P2O5, Citrate-... (%)	0354	0.3470	0.0740	0.0569	0.0346	0.0740	1	8.39	255%	0
041.60	Direct Available Phosphorus as P2O5, Citrate-... (%)	0472	0.0000	0.0000	0.0569	0.0346	0.0740	1	-1.64	50%	4
048.40	Water Soluble Phosphorus as P2O5, Automated (%)	0096	0.0300	0.0200			0.0200	1			
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0072	21.21	0.4300	22.13	0.2250	0.1360	12	-4.09	2%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0090	21.68	0.0500	22.13	0.2250	0.1360	12	-2.00	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0494	21.78	0.2600	22.13	0.2250	0.1360	12	-1.54	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0489	22.05	0.0700	22.13	0.2250	0.1360	12	-0.36	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0416	22.10	0.0525	22.13	0.2250	0.1360	12	-0.10	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0258	22.12	0.1100	22.13	0.2250	0.1360	12	-0.05	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0231	22.15	0.0000	22.13	0.2250	0.1360	12	0.11	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0405	22.20	0.0200	22.13	0.2250	0.1360	12	0.33	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0049	22.23	0.0500	22.13	0.2250	0.1360	12	0.44	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0114	22.29	0.0600	22.13	0.2250	0.1360	12	0.73	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0211	22.43	0.0100	22.13	0.2250	0.1360	12	1.33	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0055	22.65	0.5200	22.13	0.2250	0.1360	12	2.33	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (22%)	0230	24.00	1.800	22.13	0.2250	0.1360	12	8.33	4%	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				
050.10	Soluble Potassium as K2O, STPB Citrate (22%)	0322	21.77	0.0880			0.0880	1			
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0428	21.14	0.3811	22.33	0.3741	0.3773	7	-3.18	3%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0500	21.84	0.8900	22.33	0.3741	0.3773	7	-1.32	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0157	22.20	0.4000	22.33	0.3741	0.3773	7	-0.35	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0356	22.48	0.3700	22.33	0.3741	0.3773	7	0.39	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0136	22.49	0.1200	22.33	0.3741	0.3773	7	0.43	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0040	22.60	0.4000	22.33	0.3741	0.3773	7	0.72	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (22%)	0185	22.73	0.0800	22.33	0.3741	0.3773	7	1.07	1%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (22%)	0472	20.70*	0.0500			0.0500	1			
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0292	21.57	0.0200	22.71	0.5205	0.6863	8	-2.18	3%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0055	22.35	0.0900	22.71	0.5205	0.6863	8	-0.69	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0420	22.54	0.4800	22.71	0.5205	0.6863	8	-0.33	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0157	22.55	1.700	22.71	0.5205	0.6863	8	-0.30	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0324	22.80	0.2400	22.71	0.5205	0.6863	8	0.18	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0390	23.00	0.0000	22.71	0.5205	0.6863	8	0.56	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0444	23.07	0.2800	22.71	0.5205	0.6863	8	0.70	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (22%)	0406	24.81	2.680	22.71	0.5205	0.6863	8	4.04	5%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0025	20.00*	0.2000	22.12	1.022	0.1186	7	-2.08	5%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0452	21.31	0.0900	22.12	1.022	0.1186	7	-0.80	2%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0070	21.90	0.2000	22.12	1.022	0.1186	7	-0.22	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0291	22.14	0.0100	22.12	1.022	0.1186	7	0.01	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0486	22.52	0.0700	22.12	1.022	0.1186	7	0.38	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0043	22.74	0.1400	22.12	1.022	0.1186	7	0.60	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0483	24.15	0.1200	22.12	1.022	0.1186	7	1.98	5%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (22%)	0072	22.30	0.6900	22.12	1.022	0.1186	7	0.17	0%	1
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0485	21.41	0.3200	22.40	0.4702	0.1663	8	-2.11	2%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0377	22.05	0.0600	22.40	0.4702	0.1663	8	-0.75	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0421	22.25	0.1000	22.40	0.4702	0.1663	8	-0.32	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0423	22.30	0.1000	22.40	0.4702	0.1663	8	-0.21	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0354	22.42	0.2600	22.40	0.4702	0.1663	8	0.05	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0360	22.81	0.1700	22.40	0.4702	0.1663	8	0.86	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0233	22.84	0.0500	22.40	0.4702	0.1663	8	0.92	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (22%)	0023	22.85	0.2700	22.40	0.4702	0.1663	8	0.95	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0351	20.39*	2.523	21.73	1.075	0.5446	5	-1.24	3%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0510	20.80*	0.0100	21.73	1.075	0.5446	5	-0.87	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0105	22.13	0.1400	21.73	1.075	0.5446	5	0.37	1%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0415	22.50	0.0000	21.73	1.075	0.5446	5	0.72	2%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (22%)	0169	22.83	0.0500	21.73	1.075	0.5446	5	1.02	3%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0034	22.14	0.0545	22.25	0.0927	0.4289	5	-1.20	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0513	22.20	0.0000	22.25	0.0927	0.4289	5	-0.58	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0037	22.25	0.0700	22.25	0.0927	0.4289	5	-0.09	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0494	22.30	0.4300	22.25	0.0927	0.4289	5	0.45	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (22%)	0035	22.39	1.590	22.25	0.0927	0.4289	5	1.42	0%	0

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050.62	Soluble Potassium as K2O, Flame Photometric (... (22%)	0095	21.72	0.6300	21.93	0.3005	0.3950	2	-0.71	0%	0
050.62	Soluble Potassium as K2O, Flame Photometric (... (22%)	0029	22.14	0.1600	21.93	0.3005	0.3950	2	0.71	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0506	19.90*	0.4000	22.26	0.8591	0.2030	21	-2.74	5%	0
050.99	Soluble Potassium as K2O, Other (22%)	0307	20.99*	0.6820	22.26	0.8591	0.2030	21	-1.47	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0482	21.00*	0.0000	22.26	0.8591	0.2030	21	-1.46	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0389	21.42	0.4000	22.26	0.8591	0.2030	21	-0.98	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0474	21.71	0.2200	22.26	0.8591	0.2030	21	-0.64	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0481	21.75	0.6000	22.26	0.8591	0.2030	21	-0.59	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0027	21.76	0.0110	22.26	0.8591	0.2030	21	-0.58	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0096	22.08	0.1100	22.26	0.8591	0.2030	21	-0.21	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0498	22.10	0.0000	22.26	0.8591	0.2030	21	-0.18	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0177	22.17	0.0754	22.26	0.8591	0.2030	21	-0.10	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0394	22.20	0.0000	22.26	0.8591	0.2030	21	-0.07	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0043	22.29	0.0200	22.26	0.8591	0.2030	21	0.04	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0493	22.30	0.1000	22.26	0.8591	0.2030	21	0.05	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0368	22.31	0.0350	22.26	0.8591	0.2030	21	0.06	0%	0
050.99	Soluble Potassium as K2O, Other (22%)	0444	22.55	0.8100	22.26	0.8591	0.2030	21	0.33	1%	0
050.99	Soluble Potassium as K2O, Other (22%)	0450	23.03	0.0000	22.26	0.8591	0.2030	21	0.90	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0234	23.26	0.0200	22.26	0.8591	0.2030	21	1.17	2%	0
050.99	Soluble Potassium as K2O, Other (22%)	0451	23.78	0.0700	22.26	0.8591	0.2030	21	1.77	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0487	23.80	0.0000	22.26	0.8591	0.2030	21	1.79	3%	0
050.99	Soluble Potassium as K2O, Other (22%)	0402	24.14	0.0300	22.26	0.8591	0.2030	21	2.18	4%	0
050.99	Soluble Potassium as K2O, Other (22%)	0275	25.86	0.6800	22.26	0.8591	0.2030	21	4.19	8%	0
050.99	Soluble Potassium as K2O, Other (22%)	0042	21.07*	1.530	22.26	0.8591	0.2030	21	-1.39	3%	1
050.99	Soluble Potassium as K2O, Other (22%)	0325	0.2000*	0.2000	22.26	0.8591	0.2030	21	-25.68	50%	2
060.00	Water (Free), Vacuum Oven (%)	0096	0.0700	0.0200	0.0818	0.0106	0.0170	3	-1.12	7%	0
060.00	Water (Free), Vacuum Oven (%)	0489	0.0850	0.0100	0.0818	0.0106	0.0170	3	0.30	2%	0
060.00	Water (Free), Vacuum Oven (%)	0416	0.0905	0.0211	0.0818	0.0106	0.0170	3	0.82	5%	0
060.99	Water (Free), Other (%)	0510	0.1600	0.0000			0.0000	1			
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0086	0.1333	0.0002			0.0002	1			
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0472	0.0650	0.0100	0.1714	0.0257	0.0100	6	-4.15	31%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	0.1550	0.0100	0.1714	0.0257	0.0100	6	-0.64	5%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0420	0.1704	0.0019	0.1714	0.0257	0.0100	6	-0.04	0%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0096	0.1750	0.0100	0.1714	0.0257	0.0100	6	0.14	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0474	0.1850	0.0100	0.1714	0.0257	0.0100	6	0.53	4%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.2040	0.0180	0.1714	0.0257	0.0100	6	1.27	9%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0035	0.1800	0.0760	0.1714	0.0257	0.0100	6	0.33	2%	1
101.32	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0423	0.1580	0.0040			0.0040	1			
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0494	0.1657	0.0021	0.1728	0.0101	0.0011	2	-0.71	2%	0
101.33	Acid Soluble Calcium, ICP, test portion 2006.... (%)	0421	0.1800	0.0000	0.1728	0.0101	0.0011	2	0.71	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0513	9.950*	0.0600	11.38	0.4107	0.1900	11	-3.48	6%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0029	10.88	0.6400	11.38	0.4107	0.1900	11	-1.22	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0258	11.10	0.0200	11.38	0.4107	0.1900	11	-0.68	1%	0

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121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0157	11.30	0.2000	11.38	0.4107	0.1900	11	-0.19	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0043	11.33	0.0400	11.38	0.4107	0.1900	11	-0.12	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0028	11.35	0.1000	11.38	0.4107	0.1900	11	-0.07	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0485	11.47	0.1300	11.38	0.4107	0.1900	11	0.21	0%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0040	11.53	0.2700	11.38	0.4107	0.1900	11	0.35	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0169	11.64	0.0700	11.38	0.4107	0.1900	11	0.62	1%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0481	11.89	0.2800	11.38	0.4107	0.1900	11	1.24	2%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 ... (10.8%)	0500	17.50	0.2800	11.38	0.4107	0.1900	11	14.90	27%	0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (10.8%)	0136	11.55	0.1000			0.1000	1			
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0354	9.532*	0.3630	11.37	0.5586	0.2432	26	-3.29	8%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0307	10.29*	0.1190	11.37	0.5586	0.2432	26	-1.94	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0482	10.30*	0.4000	11.37	0.5586	0.2432	26	-1.92	5%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0474	10.37*	0.1800	11.37	0.5586	0.2432	26	-1.79	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0090	10.66	0.0300	11.37	0.5586	0.2432	26	-1.28	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0095	10.92	0.3000	11.37	0.5586	0.2432	26	-0.81	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0157	11.05	0.7000	11.37	0.5586	0.2432	26	-0.58	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0231	11.07	0.2600	11.37	0.5586	0.2432	26	-0.54	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0394	11.20	0.4000	11.37	0.5586	0.2432	26	-0.31	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0035	11.25	0.3000	11.37	0.5586	0.2432	26	-0.22	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0324	11.30	0.6600	11.37	0.5586	0.2432	26	-0.13	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0096	11.34	0.2100	11.37	0.5586	0.2432	26	-0.07	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0390	11.35	0.5000	11.37	0.5586	0.2432	26	-0.04	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0055	11.42	0.1500	11.37	0.5586	0.2432	26	0.08	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0073	11.44	0.4200	11.37	0.5586	0.2432	26	0.12	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0230	11.45	0.1000	11.37	0.5586	0.2432	26	0.14	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0360	11.46	0.0600	11.37	0.5586	0.2432	26	0.16	0%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0114	11.58	0.0400	11.37	0.5586	0.2432	26	0.37	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0452	11.61	0.0200	11.37	0.5586	0.2432	26	0.43	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0433	11.71	0.0300	11.37	0.5586	0.2432	26	0.60	1%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0420	11.75	0.1600	11.37	0.5586	0.2432	26	0.68	2%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0291	12.07	0.0100	11.37	0.5586	0.2432	26	1.24	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0234	12.30	0.1800	11.37	0.5586	0.2432	26	1.66	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0483	12.30	0.0000	11.37	0.5586	0.2432	26	1.66	4%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0049	12.82	0.1700	11.37	0.5586	0.2432	26	2.58	6%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0472	13.32	0.5600	11.37	0.5586	0.2432	26	3.49	9%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (10.8%)	0233	10.37*	1.385	11.37	0.5586	0.2432	26	-1.80	4%	1
121.32	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0423	11.38	0.0500			0.0500	1			
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0486	10.11*	0.0700	11.46	0.5884	0.1545	7	-2.30	6%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0494	11.12	0.4194	11.46	0.5884	0.1545	7	-0.58	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0025	11.26	0.0200	11.46	0.5884	0.1545	7	-0.34	1%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0177	11.49	0.1520	11.46	0.5884	0.1545	7	0.05	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0421	11.50	0.0600	11.46	0.5884	0.1545	7	0.07	0%	0
121.33	Acid Soluble Magnesium, ICP, test portion 200... (10.8%)	0037	11.98	0.1600	11.46	0.5884	0.1545	7	0.89	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... (10.8%)	0117	12.20	0.2000	11.46	0.5884	0.1545	7	1.26	3%	0
121.70	Acid Soluble Magnesium, Titrimetric (EDTA) (10.8%)	0510	10.73	0.0100	11.04	0.4419	0.0450	2	-0.71	1%	0
121.70	Acid Soluble Magnesium, Titrimetric (EDTA) (10.8%)	0489	11.35	0.0800	11.04	0.4419	0.0450	2	0.71	1%	0
121.99	Acid Soluble Magnesium, Other (10.8%)	0506	10.08*	0.2500	11.15	1.160	0.2567	6	-0.93	5%	0
121.99	Acid Soluble Magnesium, Other (10.8%)	0389	10.23*	0.2500	11.15	1.160	0.2567	6	-0.80	4%	0
121.99	Acid Soluble Magnesium, Other (10.8%)	0512	10.51*	0.3100	11.15	1.160	0.2567	6	-0.56	3%	0
121.99	Acid Soluble Magnesium, Other (10.8%)	0487	11.55	0.1000	11.15	1.160	0.2567	6	0.34	2%	0
121.99	Acid Soluble Magnesium, Other (10.8%)	0450	12.05	0.0000	11.15	1.160	0.2567	6	0.77	4%	0
121.99	Acid Soluble Magnesium, Other (10.8%)	0042	12.51	0.6300	11.15	1.160	0.2567	6	1.17	6%	0
131.00	Water Soluble Magnesium, AA (%)	0513	9.450	0.0000	10.65	0.9526	0.0375	4	-1.26	6%	0
131.00	Water Soluble Magnesium, AA (%)	0029	10.33	0.0200	10.65	0.9526	0.0375	4	-0.34	2%	0
131.00	Water Soluble Magnesium, AA (%)	0485	11.39	0.0300	10.65	0.9526	0.0375	4	0.77	3%	0
131.00	Water Soluble Magnesium, AA (%)	0498	11.45	0.1000	10.65	0.9526	0.0375	4	0.84	4%	0
131.30	Water Soluble Magnesium, ICP (%)	0025	9.750	0.3200	10.94	1.001	0.1920	7	-1.19	5%	0
131.30	Water Soluble Magnesium, ICP (%)	0275	10.17	0.3000	10.94	1.001	0.1920	7	-0.77	4%	0
131.30	Water Soluble Magnesium, ICP (%)	0368	10.54	0.0590	10.94	1.001	0.1920	7	-0.39	2%	0
131.30	Water Soluble Magnesium, ICP (%)	0394	10.85	0.1000	10.94	1.001	0.1920	7	-0.09	0%	0
131.30	Water Soluble Magnesium, ICP (%)	0027	11.17	0.1290	10.94	1.001	0.1920	7	0.24	1%	0
131.30	Water Soluble Magnesium, ICP (%)	0023	11.93	0.2360	10.94	1.001	0.1920	7	0.99	5%	0
131.30	Water Soluble Magnesium, ICP (%)	0444	12.15	0.2000	10.94	1.001	0.1920	7	1.21	6%	0
131.70	Water Soluble Magnesium, Titrimetric (EDTA) (%)	0510	10.99	0.0200			0.0200	1			
131.99	Water Soluble Magnesium, Other (%)	0506	9.410	0.3600			0.3600	1			
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0055	23.05	0.3500	23.15	0.0879	0.2367	3	-1.14	0%	0
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0105	23.18	0.2600	23.15	0.0879	0.2367	3	0.40	0%	0
143.00	Elemental Sulfur, Gravimetric Sulfur - carbon... (%)	0114	23.21	0.1000	23.15	0.0879	0.2367	3	0.74	0%	0
143.99	Elemental Sulfur, Other (%)	0472	21.88	1.020	22.67	0.9896	0.9933	3	-0.80	2%	0
143.99	Elemental Sulfur, Other (%)	0390	22.35	1.100	22.67	0.9896	0.9933	3	-0.32	1%	0
143.99	Elemental Sulfur, Other (%)	0389	23.78	0.8600	22.67	0.9896	0.9933	3	1.12	2%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0027	22.07	0.0100	22.76	0.9578	0.0550	4	-0.72	2%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0025	22.18	0.1200	22.76	0.9578	0.0550	4	-0.60	1%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0405	22.64	0.0400	22.76	0.9578	0.0550	4	-0.12	0%	0
145.00	Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)	0043	24.15	0.0500	22.76	0.9578	0.0550	4	1.45	3%	0
145.99	Sulfate Sulfur, HCl soluble, Other (%)	0444	22.64	0.0600			0.0600	1			
146.00	Total Sulfur in Liquid, Gravimetric - sulfate... (%)	0292	20.85	0.1000			0.1000	1			
147.00	Total Sulfur in Urea/Formulations, Gravimetric (%)	0291	23.50	0.0200			0.0200	1			
148.00	Total Sulfur, Combustion (22%)	0451	21.35*	0.0600	22.63	0.8411	0.0806	5	-1.53	3%	0
148.00	Total Sulfur, Combustion (22%)	0351	22.51	0.0630	22.63	0.8411	0.0806	5	-0.15	0%	0
148.00	Total Sulfur, Combustion (22%)	0029	22.73	0.0200	22.63	0.8411	0.0806	5	0.11	0%	0
148.00	Total Sulfur, Combustion (22%)	0360	22.91	0.2500	22.63	0.8411	0.0806	5	0.32	1%	0
148.00	Total Sulfur, Combustion (22%)	0049	23.68	0.0100	22.63	0.8411	0.0806	5	1.24	2%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0481	22.57	0.0200	23.01	0.3094	0.1358	12	-1.41	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0405	22.66	0.0400	23.01	0.3094	0.1358	12	-1.12	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0513	22.79	0.0800	23.01	0.3094	0.1358	12	-0.70	0%	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0040	22.85	0.1000	23.01	0.3094	0.1358	12	-0.50	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0095	22.89	0.1500	23.01	0.3094	0.1358	12	-0.39	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0371	22.94	0.1100	23.01	0.3094	0.1358	12	-0.23	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0029	22.99	0.0700	23.01	0.3094	0.1358	12	-0.07	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0028	23.09	0.3800	23.01	0.3094	0.1358	12	0.27	0%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0324	23.29	0.2000	23.01	0.3094	0.1358	12	0.92	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0157	23.30	0.2000	23.01	0.3094	0.1358	12	0.95	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0498	23.35	0.1000	23.01	0.3094	0.1358	12	1.11	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0485	23.36	0.1800	23.01	0.3094	0.1358	12	1.15	1%	0
148.01	Total Sulfur, Gravimetric - sulfate and elem... (22%)	0230	21.55*	0.7000	23.01	0.3094	0.1358	12	-4.70	3%	1
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0406	21.41*	0.7200	22.72	1.200	0.5122	10	-1.09	3%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0486	21.44*	0.3300	22.72	1.200	0.5122	10	-1.07	3%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0421	21.75	0.3000	22.72	1.200	0.5122	10	-0.81	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0483	22.00	0.2000	22.72	1.200	0.5122	10	-0.60	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0037	22.67	0.1300	22.72	1.200	0.5122	10	-0.05	0%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0394	23.00	0.6000	22.72	1.200	0.5122	10	0.23	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0177	23.23	0.0356	22.72	1.200	0.5122	10	0.42	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0023	23.40	0.1920	22.72	1.200	0.5122	10	0.56	1%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0494	23.82	1.515	22.72	1.200	0.5122	10	0.91	2%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (22%)	0117	25.15	1.100	22.72	1.200	0.5122	10	2.02	5%	0
148.99	Total Sulfur, Other (22%)	0506	21.20*	0.6000	22.12	0.8548	0.4222	10	-1.08	2%	0
148.99	Total Sulfur, Other (22%)	0354	21.24*	0.5420	22.12	0.8548	0.4222	10	-1.04	2%	0
148.99	Total Sulfur, Other (22%)	0275	21.46*	0.5600	22.12	0.8548	0.4222	10	-0.77	1%	0
148.99	Total Sulfur, Other (22%)	0482	21.50*	1.200	22.12	0.8548	0.4222	10	-0.73	1%	0
148.99	Total Sulfur, Other (22%)	0513	22.12	0.1700	22.12	0.8548	0.4222	10	-0.01	0%	0
148.99	Total Sulfur, Other (22%)	0452	22.34	0.1000	22.12	0.8548	0.4222	10	0.26	0%	0
148.99	Total Sulfur, Other (22%)	0450	22.44	0.0000	22.12	0.8548	0.4222	10	0.37	1%	0
148.99	Total Sulfur, Other (22%)	0096	22.59	0.0200	22.12	0.8548	0.4222	10	0.55	1%	0
148.99	Total Sulfur, Other (22%)	0307	22.93	0.6700	22.12	0.8548	0.4222	10	0.94	2%	0
148.99	Total Sulfur, Other (22%)	0474	23.64	0.3600	22.12	0.8548	0.4222	10	1.78	3%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0423	22.40	0.4000	22.74	0.4769	1.778	2	-0.71	1%	0
149.04	Sulfur - HNO3 soluble, ICP (%)	0368	23.07	3.155	22.74	0.4769	1.778	2	0.71	1%	0
151.00	Acid Soluble Arsenic , AA, test portion as i... (ppm)	0025	0.1395	0.0110	0.1773	0.0534	0.0105	2	-0.71	11%	0
151.00	Acid Soluble Arsenic , AA, test portion as i... (ppm)	0498	0.2150	0.0100	0.1773	0.0534	0.0105	2	0.71	11%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0394	0.1773	0.0219	0.5241	0.4041	0.0440	4	-0.86	33%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0450	0.2000	0.0000	0.5241	0.4041	0.0440	4	-0.80	31%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0230	0.7190	0.1540	0.5241	0.4041	0.0440	4	0.48	19%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0474	1.000	0.0000	0.5241	0.4041	0.0440	4	1.18	45%	0
151.30	Acid Soluble Arsenic , ICP (ppm)	0368	0.0000	0.0000	0.5241	0.4041	0.0440	4	-1.30	50%	4
151.99	Acid Soluble Arsenic , Other (ppm)	0501	0.1650	0.0100	0.1875	0.0318	0.0150	2	-0.71	6%	0
151.99	Acid Soluble Arsenic , Other (ppm)	0042	0.2100	0.0200	0.1875	0.0318	0.0150	2	0.71	6%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0086	0.0050	0.0000	0.0060	0.0017	0.0007	3	-0.58	8%	0
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0389	0.0050	0.0000	0.0060	0.0017	0.0007	3	-0.58	8%	0

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165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0354	0.0080	0.0020	0.0060	0.0017	0.0007	3	1.15	17%	0
165.99	Acid Soluble Boron , Other (%)	0421	0.0045	0.0010	0.0074	0.0031	0.0003	4	-0.93	19%	0
165.99	Acid Soluble Boron , Other (%)	0423	0.0049	0.0002	0.0074	0.0031	0.0003	4	-0.80	17%	0
165.99	Acid Soluble Boron , Other (%)	0472	0.0100	0.0000	0.0074	0.0031	0.0003	4	0.86	18%	0
165.99	Acid Soluble Boron , Other (%)	0482	0.0100	0.0000	0.0074	0.0031	0.0003	4	0.86	18%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0450	0.0200	0.0000	0.1175	0.1379	0.0150	2	-0.71	41%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0452	0.2150	0.0300	0.1175	0.1379	0.0150	2	0.71	41%	0
181.30	Acid Soluble Cadmium , ICP (ppm)	0474	3.100	0.4000	0.1175	0.1379	0.0150	2	21.63	1269%	1
181.30	Acid Soluble Cadmium , ICP (ppm)	0230	0.0000	0.0000	0.1175	0.1379	0.0150	2	-0.85	50%	4
181.30	Acid Soluble Cadmium , ICP (ppm)	0368	0.0000	0.0000	0.1175	0.1379	0.0150	2	-0.85	50%	4
181.30	Acid Soluble Cadmium , ICP (ppm)	0394	0.0000	0.0000	0.1175	0.1379	0.0150	2	-0.85	50%	4
181.33	Acid Soluble Cadmium , ICP, 2006.03 modified... (ppm)	0494	0.0901	0.0287			0.0287	1			
181.99	Acid Soluble Cadmium , Other (ppm)	0501	0.0250	0.0100	0.0275	0.0035	0.0050	2	-0.71	5%	0
181.99	Acid Soluble Cadmium , Other (ppm)	0042	0.0300	0.0000	0.0275	0.0035	0.0050	2	0.71	5%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0055	0.4950*	0.0100	0.8190	0.0600	0.0129	12	-5.40	20%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0481	0.7500	0.0200	0.8190	0.0600	0.0129	12	-1.15	4%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0394	0.7800	0.0200	0.8190	0.0600	0.0129	12	-0.65	2%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0494	0.7950	0.0300	0.8190	0.0600	0.0129	12	-0.40	1%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0029	0.8000	0.0000	0.8190	0.0600	0.0129	12	-0.32	1%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0043	0.8000	0.0200	0.8190	0.0600	0.0129	12	-0.32	1%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0117	0.8225	0.0050	0.8190	0.0600	0.0129	12	0.06	0%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0258	0.8300	0.0200	0.8190	0.0600	0.0129	12	0.18	1%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0105	0.8500	0.0000	0.8190	0.0600	0.0129	12	0.52	2%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0444	0.9950	0.0100	0.8190	0.0600	0.0129	12	2.94	11%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0498	1.275	0.0100	0.8190	0.0600	0.0129	12	7.61	28%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0513	1.505	0.0100	0.8190	0.0600	0.0129	12	11.44	42%	0
190.00	Water Soluble Chlorine, Titrimetric (2.5%)	0230	0.4850*	0.0700	0.8190	0.0600	0.0129	12	-5.57	20%	1
190.99	Water Soluble Chlorine, Other (2.5%)	0368	0.5450*	0.0100	0.6958	0.1309	0.0043	3	-1.15	11%	0
190.99	Water Soluble Chlorine, Other (2.5%)	0023	0.7625	0.0030	0.6958	0.1309	0.0043	3	0.51	5%	0
190.99	Water Soluble Chlorine, Other (2.5%)	0029	0.7800	0.0000	0.6958	0.1309	0.0043	3	0.64	6%	0
191.00	Acid Soluble Chromium , AA, test portion as ... (ppm)	0481	150.0	0.0000			0.0000	1			
191.30	Acid Soluble Chromium , ICP (ppm)	0482	87.75	2.300	122.9	17.69	4.299	9	-1.99	14%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0444	97.70	4.600	122.9	17.69	4.299	9	-1.43	10%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0035	106.4	17.30	122.9	17.69	4.299	9	-0.94	7%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0452	123.5	0.7000	122.9	17.69	4.299	9	0.03	0%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0450	126.0	0.0000	122.9	17.69	4.299	9	0.17	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0230	136.0	2.000	122.9	17.69	4.299	9	0.74	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0096	136.1	4.000	122.9	17.69	4.299	9	0.74	5%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0368	136.9	3.790	122.9	17.69	4.299	9	0.79	6%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0474	138.0	4.000	122.9	17.69	4.299	9	0.85	6%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0027	155.5	51.00	122.9	17.69	4.299	9	1.84	13%	1
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0023	0.0620	0.0680	93.20	80.73	1.631	3	-1.15	50%	0
191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0494	136.4	4.596	93.20	80.73	1.631	3	0.53	23%	0

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191.33	Acid Soluble Chromium , ICP, 2006.03 modifie... (ppm)	0037	143.2	0.2300	93.20	80.73	1.631	3	0.62	27%	0
191.99	Acid Soluble Chromium , Other (ppm)	0501	19.17	0.1100	61.34	47.80	4.993	4	-0.88	34%	0
191.99	Acid Soluble Chromium , Other (ppm)	0512	20.75	7.500	61.34	47.80	4.993	4	-0.85	33%	0
191.99	Acid Soluble Chromium , Other (ppm)	0042	101.5	4.360	61.34	47.80	4.993	4	0.84	33%	0
191.99	Acid Soluble Chromium , Other (ppm)	0506	104.0	8.000	61.34	47.80	4.993	4	0.89	35%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0482	1.850	0.1000	2.264	0.3654	0.1129	7	-1.13	9%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0035	1.975	0.3700	2.264	0.3654	0.1129	7	-0.79	6%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0368	2.105	0.0300	2.264	0.3654	0.1129	7	-0.43	4%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0230	2.195	0.2100	2.264	0.3654	0.1129	7	-0.19	2%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0096	2.445	0.0700	2.264	0.3654	0.1129	7	0.50	4%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0452	2.525	0.0100	2.264	0.3654	0.1129	7	0.71	6%	0
202.30	Acid Soluble Cobalt , ICP (ppm)	0474	3.000	0.0000	2.264	0.3654	0.1129	7	2.01	16%	0
202.32	Acid Soluble Cobalt , ICP, 2006.03 (ppm)	0423	1.475	0.2500			0.2500	1			
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified ... (ppm)	0494	2.563	0.0815	2.729	0.2347	0.0658	2	-0.71	3%	0
202.33	Acid Soluble Cobalt , ICP, 2006.03 modified ... (ppm)	0037	2.895	0.0500	2.729	0.2347	0.0658	2	0.71	3%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0501	0.4500	0.0200	2.813	2.729	1.813	3	-0.87	42%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0042	2.190	0.4200	2.813	2.729	1.813	3	-0.23	11%	0
202.99	Acid Soluble Cobalt , Other (ppm)	0512	5.800	5.000	2.813	2.729	1.813	3	1.09	53%	0
221.00	Acid Soluble Copper , AA, inorganic 965.09 (%)	0043	0.0008	0.0002			0.0002	1			
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0096	0.0003	0.0000	0.0021	0.0021	0.0045	12	-0.85	43%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0230	0.0003	0.0000	0.0021	0.0021	0.0045	12	-0.85	43%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0433	0.0004	0.0001	0.0021	0.0021	0.0045	12	-0.82	42%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0444	0.0004	0.0000	0.0021	0.0021	0.0045	12	-0.80	40%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0474	0.0004	0.0000	0.0021	0.0021	0.0045	12	-0.80	40%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0035	0.0005	0.0002	0.0021	0.0021	0.0045	12	-0.75	38%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0394	0.0026	0.0010	0.0021	0.0021	0.0045	12	0.25	13%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0402	0.0030	0.0000	0.0021	0.0021	0.0045	12	0.44	22%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0354	0.0040	0.0020	0.0021	0.0021	0.0045	12	0.92	47%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0234	0.0235	0.0010	0.0021	0.0021	0.0045	12	10.24	518%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0452	3.745	0.0500	0.0021	0.0021	0.0045	12	1788.38	90402%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0450	4.200	0.0000	0.0021	0.0021	0.0045	12	2005.78	101392%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0368	2.325	0.4100	0.0021	0.0021	0.0045	12	1109.90	56105%	1
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0472	0.0000	0.0000	0.0021	0.0021	0.0045	12	-0.99	50%	4
221.33	Acid Soluble Copper , ICP, test portion 2006... (%)	0421	0.0000	0.0000			0.0000	0			
221.99	Acid Soluble Copper , Other (%)	0512	0.0007	0.0003	1.040	1.470	0.0502	2	-0.71	50%	0
221.99	Acid Soluble Copper , Other (%)	0042	2.080	0.1000	1.040	1.470	0.0502	2	0.71	50%	0
221.99	Acid Soluble Copper , Other (%)	0389	0.0000	0.0000	1.040	1.470	0.0502	2	-0.71	50%	4
241.03	Acid Soluble Iron , AA, 965.09, test portion ... (%)	0086	0.0573	0.0017			0.0017	1			
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0472	0.0400	0.0000	0.0589	0.0133	0.0018	7	-1.42	16%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0482	0.0500	0.0000	0.0589	0.0133	0.0018	7	-0.67	8%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0035	0.0547	0.0057	0.0589	0.0133	0.0018	7	-0.32	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0096	0.0600	0.0000	0.0589	0.0133	0.0018	7	0.09	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0354	0.0635	0.0030	0.0589	0.0133	0.0018	7	0.35	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				
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0474	0.0700	0.0000	0.0589	0.0133	0.0018	7	0.84	9%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0420	0.0739	0.0036	0.0589	0.0133	0.0018	7	1.13	13%	0
241.32	Acid Soluble Iron , ICP, test portion 2006.03... (%)	0423	0.0390	0.0020			0.0020	1			
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (%)	0421	0.0800	0.0000	335.6	474.5	2.910	2	-0.71	50%	0
241.33	Acid Soluble Iron , ICP, test portion 2006.03... (%)	0494	671.1	5.820	335.6	474.5	2.910	2	0.71	50%	0
241.99	Acid Soluble Iron , Other (%)	0389	0.0580	0.0040			0.0040	1			
251.30	Acid Soluble Lead , ICP (ppm)	0450	0.0300	0.0000	0.5175	0.4836	0.0260	4	-1.01	47%	0
251.30	Acid Soluble Lead , ICP (ppm)	0368	0.1800	0.0440	0.5175	0.4836	0.0260	4	-0.70	33%	0
251.30	Acid Soluble Lead , ICP (ppm)	0452	0.8600	0.0600	0.5175	0.4836	0.0260	4	0.71	33%	0
251.30	Acid Soluble Lead , ICP (ppm)	0474	1.000	0.0000	0.5175	0.4836	0.0260	4	1.00	47%	0
251.30	Acid Soluble Lead , ICP (ppm)	0394	0.0000	0.0000	0.5175	0.4836	0.0260	4	-1.07	50%	4
251.30	Acid Soluble Lead , ICP (ppm)	0230	0.8950	1.790	0.5175	0.4836	0.0260	4	0.78	36%	4
251.99	Acid Soluble Lead , Other (ppm)	0042	0.0400	0.0000	12.76	21.99	10.30	3	-0.58	50%	0
251.99	Acid Soluble Lead , Other (ppm)	0501	0.0950	0.0100	12.76	21.99	10.30	3	-0.58	50%	0
251.99	Acid Soluble Lead , Other (ppm)	0512	38.15	30.90	12.76	21.99	10.30	3	1.15	99%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0474	0.0013	0.0000	0.0018	0.0003	0.0000	5	-1.55	13%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0035	0.0018	0.0001	0.0018	0.0003	0.0000	5	-0.10	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0096	0.0018	0.0001	0.0018	0.0003	0.0000	5	-0.10	1%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0354	0.0020	0.0000	0.0018	0.0003	0.0000	5	0.71	6%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0420	0.0021	0.0000	0.0018	0.0003	0.0000	5	1.03	9%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0472	0.0000	0.0000	0.0018	0.0003	0.0000	5	-5.75	50%	4
261.34	Acid Soluble Manganese , ICP, test portion 2... (%)	0423	0.0014	0.0001			0.0001	1			
261.35	Acid Soluble Manganese , ICP, test portion 2... (%)	0494	0.0024	0.0001	0.0018	0.0003	0.0001	1	1.84	16%	0
261.35	Acid Soluble Manganese , ICP, test portion 2... (%)	0421	0.0000	0.0000	0.0018	0.0003	0.0001	1	-5.75	50%	4
261.99	Acid Soluble Manganese , Other (%)	0389	0.0017	0.0002			0.0002	1			
281.00	Acid Soluble Mercury , AA (ppm)	0230	0.0024	0.0001			0.0001	1			
281.30	Acid Soluble Mercury , ICP (ppm)	0394	0.0058	0.0004	0.0129	0.0100	0.0002	2	-0.71	28%	0
281.30	Acid Soluble Mercury , ICP (ppm)	0450	0.0200	0.0000	0.0129	0.0100	0.0002	2	0.71	28%	0
281.99	Acid Soluble Mercury , Other (ppm)	0042	0.1150	0.0300	0.2750	0.2263	0.0200	2	-0.71	29%	0
281.99	Acid Soluble Mercury , Other (ppm)	0501	0.4350	0.0100	0.2750	0.2263	0.0200	2	0.71	29%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0474	10.00	0.4000	12.67	1.586	0.3438	8	-1.68	11%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0096	10.80	0.6000	12.67	1.586	0.3438	8	-1.18	7%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0095	12.50	1.000	12.67	1.586	0.3438	8	-0.11	1%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0433	12.71	0.0900	12.67	1.586	0.3438	8	0.02	0%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0452	12.71	0.0600	12.67	1.586	0.3438	8	0.02	0%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0230	13.55	0.1000	12.67	1.586	0.3438	8	0.55	3%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0117	13.70	0.2000	12.67	1.586	0.3438	8	0.65	4%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0368	15.05	0.3000	12.67	1.586	0.3438	8	1.50	9%	0
289.30	Acid Soluble Molybdenum , ICP (ppm)	0035	11.30	2.000	12.67	1.586	0.3438	8	-0.87	5%	1
289.30	Acid Soluble Molybdenum , ICP (ppm)	0394	110.0	0.0000	12.67	1.586	0.3438	8	61.35	384%	2
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0423	7.935	0.8700	12.04	3.552	0.3579	3	-1.15	17%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0494	14.04	0.0338	12.04	3.552	0.3579	3	0.56	8%	0
289.33	Acid Soluble Molybdenum , ICP, 2006.03 modif... (ppm)	0037	14.14	0.1700	12.04	3.552	0.3579	3	0.59	9%	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				
289.99	Acid Soluble Molybdenum , Other (ppm)	0501	1.810	0.1400	6.453	6.565	1.165	2	-0.71	36%	0
289.99	Acid Soluble Molybdenum , Other (ppm)	0042	11.10	2.190	6.453	6.565	1.165	2	0.71	36%	0
291.00	Acid Soluble Nickel , AA, test portion as in... (ppm)	0481	31.35	1.100	37.05	8.061	0.7000	2	-0.71	8%	0
291.00	Acid Soluble Nickel , AA, test portion as in... (ppm)	0498	42.75	0.3000	37.05	8.061	0.7000	2	0.71	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0482	45.30	5.200	69.83	9.114	2.165	11	-2.69	18%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0394	54.50	1.000	69.83	9.114	2.165	11	-1.68	11%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0035	59.20	7.200	69.83	9.114	2.165	11	-1.17	8%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0450	66.00	0.0000	69.83	9.114	2.165	11	-0.42	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0452	69.36	0.1000	69.83	9.114	2.165	11	-0.05	0%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0095	71.00	0.0000	69.83	9.114	2.165	11	0.13	1%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0444	72.54	3.430	69.83	9.114	2.165	11	0.30	2%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0368	76.25	2.083	69.83	9.114	2.165	11	0.70	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0230	76.30	0.6000	69.83	9.114	2.165	11	0.71	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0096	77.10	2.200	69.83	9.114	2.165	11	0.80	5%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0474	82.00	2.000	69.83	9.114	2.165	11	1.33	9%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0027	78.34	27.85	69.83	9.114	2.165	11	0.93	6%	1
291.32	Acid Soluble Nickel , ICP, 2006.03 (ppm)	0233	73.24	1.790			1.790	1			
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0023	0.0620	0.0840	52.43	45.39	0.9712	3	-1.15	50%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0494	76.74	2.590	52.43	45.39	0.9712	3	0.54	23%	0
291.33	Acid Soluble Nickel , ICP, 2006.03 modified ... (ppm)	0037	80.48	0.2400	52.43	45.39	0.9712	3	0.62	27%	0
291.99	Acid Soluble Nickel , Other (ppm)	0501	6.945	0.0700	24.97	20.43	2.505	4	-0.88	36%	0
291.99	Acid Soluble Nickel , Other (ppm)	0512	9.300	4.200	24.97	20.43	2.505	4	-0.77	31%	0
291.99	Acid Soluble Nickel , Other (ppm)	0506	34.25	4.500	24.97	20.43	2.505	4	0.45	19%	0
291.99	Acid Soluble Nickel , Other (ppm)	0042	49.37	1.250	24.97	20.43	2.505	4	1.19	49%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0368	1.255	0.3300	1.923	0.9440	0.4150	2	-0.71	17%	0
301.30	Acid Soluble Selenium , ICP (ppm)	0230	2.590	0.5000	1.923	0.9440	0.4150	2	0.71	17%	0
301.99	Acid Soluble Selenium , Other (ppm)	0042	0.0900	0.0000	0.7850	0.9829	0.0300	2	-0.71	44%	0
301.99	Acid Soluble Selenium , Other (ppm)	0501	1.480	0.0600	0.7850	0.9829	0.0300	2	0.71	44%	0
311.30	Sodium, Flame Photometric (%)	0510	0.5000	0.0200			0.0200	1			
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0086	0.4284	0.0080	0.4536	0.0332	0.0089	4	-0.76	3%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0494	0.4342	0.0134	0.4536	0.0332	0.0089	4	-0.59	2%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0423	0.4505	0.0130	0.4536	0.0332	0.0089	4	-0.09	0%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0037	0.5014	0.0011	0.4536	0.0332	0.0089	4	1.44	5%	0
311.99	Sodium, Other (%)	0482	0.4250	0.0100	0.4952	0.0773	0.0188	5	-0.91	7%	0
311.99	Sodium, Other (%)	0035	0.4430	0.0240	0.4952	0.0773	0.0188	5	-0.68	5%	0
311.99	Sodium, Other (%)	0096	0.4600	0.0200	0.4952	0.0773	0.0188	5	-0.46	4%	0
311.99	Sodium, Other (%)	0354	0.5380	0.0200	0.4952	0.0773	0.0188	5	0.55	4%	0
311.99	Sodium, Other (%)	0474	0.6100	0.0200	0.4952	0.0773	0.0188	5	1.49	12%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0428	0.0005	0.0001	0.0009	0.0007	0.0001	2	-0.71	26%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0043	0.0014	0.0000	0.0009	0.0007	0.0001	2	0.71	26%	0
321.03	Acid Soluble Zinc , AA, 965.09, test portion... (%)	0086	0.0033	0.0001			0.0001	1			
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0230	0.0001	0.0000	0.0021	0.0021	0.0035	10	-0.97	48%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0474	0.0001	0.0000	0.0021	0.0021	0.0035	10	-0.97	48%	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				
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0394	0.0003	0.0001	0.0021	0.0021	0.0035	10	-0.90	44%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0096	0.0014	0.0001	0.0021	0.0021	0.0035	10	-0.37	18%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0035	0.0014	0.0014	0.0021	0.0021	0.0035	10	-0.34	17%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0433	0.0018	0.0005	0.0021	0.0021	0.0035	10	-0.17	8%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0354	0.0030	0.0020	0.0021	0.0021	0.0035	10	0.43	21%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0402	0.0035	0.0010	0.0021	0.0021	0.0035	10	0.67	33%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0452	2.115	0.0300	0.0021	0.0021	0.0035	10	1021.33	50185%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0450	9.000	0.0000	0.0021	0.0021	0.0035	10	4349.40	213716%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0368	11.75	0.3000	0.0021	0.0021	0.0035	10	5678.70	279033%	1
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0292	0.0000	0.0000	0.0021	0.0021	0.0035	10	-1.02	50%	4
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0472	0.0000	0.0000	0.0021	0.0021	0.0035	10	-1.02	50%	4
321.33	Acid Soluble Zinc , ICP, test portion 2006.0... (%)	0421	0.0450	0.0100			0.0100	1			
321.99	Acid Soluble Zinc , Other (%)	0512	0.0006	0.0002	0.2379	0.4089	0.0134	3	-0.58	50%	0
321.99	Acid Soluble Zinc , Other (%)	0506	0.0030	0.0000	0.2379	0.4089	0.0134	3	-0.57	49%	0
321.99	Acid Soluble Zinc , Other (%)	0042	0.7100	0.0400	0.2379	0.4089	0.0134	3	1.15	99%	0
321.99	Acid Soluble Zinc , Other (%)	0389	0.0000	0.0000	0.2379	0.4089	0.0134	3	-0.58	50%	4

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. Robust statistics not used if < 6 labs reporting, 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.