

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200711

Grade 11-52-0 MAP

### Statistical Summary

# Methods: 115

# Labs Reporting: 67

Issue Date : 08/31/2020

Method Code	Analyte & Method Sample # 200711	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal N, Magnesium Oxide Method (%)	6	6	10.79	0.3692	10.79		0.4186	0.2136	3.88%		0.3282	2.80%
001.99	Ammoniacal N, Other (%)	14	13	10.85	0.2787	10.85		0.3161	0.1096	2.91%		0.1212	2.79%
002.99	Nitrate N, Other (%)	1		0.0095									
010.11	Total N, Modified Comprehensive (11%)	1		10.79									
010.60	Total N, Combustion (11%)	52	51	11.14	0.2567	11.13	0.5970	0.2167	0.0379	1.95%	0.85	0.0785	2.78%
010.99	Total N, Other (11%)	5	5	10.86	0.4845	10.86	0.5929	0.4845	0.2709	4.46%	1.90	0.0576	2.79%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	3	3	54.03	0.4322	54.03		0.4322	0.3119	0.80%		0.5833	2.19%
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	12	11	53.30	0.6548	53.33		0.6718	0.2532	1.26%		0.3053	2.20%
020.40	Total P2O5, Automated (%)	2	2	53.54	0.4031								
020.50	Total P2O5, ICP (%)	19	19	52.67	3.889	52.36		2.708	0.7765	5.17%		1.400	2.20%
020.99	Total P2O5, Other (%)	4	4	53.57	1.976	53.57		1.976	1.235	3.69%		0.6855	2.20%
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	3	3	0.1633	0.0852	0.1633		0.0852	0.0615	52.16%		0.0133	5.25%
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	1		0.0300									
040.20	Indirect Available P2O5, Spectrophotometric (%)	3	3	53.22	0.7908	53.22	1.1183	0.7908	0.5707	1.49%	1.65	0.3133	2.20%
040.40	Indirect Available P2O5, Automated (%)	1		53.80									
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	6	6	53.33	0.4564	53.33	1.1199	0.5176	0.2641	0.97%	1.08	0.2333	2.20%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	8	8	53.16	0.6727	53.23	1.1185	0.5867	0.2593	1.10%	1.22	0.3829	2.20%
041.20	Direct Available P2O5, Spectrophotometric (52%)	1		52.01									
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	8	8	52.51	0.4822	52.51	1.1076	0.5468	0.2417	1.04%	1.15	0.2686	2.20%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	2	2	51.62	1.135								
041.50	Direct Available P2O5, ICP (52%)	2	2	52.87	0.7354								
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	12	12	52.59	0.9509	52.60	1.1091	1.048	0.3782	1.99%	2.20	0.8213	2.20%
041.99	Direct Available P2O5, Other (52%)	1		53.26									
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	1		48.38									
048.20	Water Soluble P2O5, Spectrophotometric (%)	7	7	47.86	0.9910	48.04		0.6479	0.3061	1.35%		0.1879	2.23%
048.40	Water Soluble P2O5, Automated (%)	1		48.36									
048.50	Water Soluble P2O5, ICP (%)	2	2	49.06	0.8294								
048.99	Water Soluble P2O5, Other (%)	2	2	47.15	1.181								
050.50	Soluble K2O, ICP (Oxalate) (%)	1		0.0950									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	2	2	0.1178	0.0286								
050.99	Soluble K2O, Other (%)	8	8	0.1606	0.1551	0.1129	0.4100	0.0177	0.0078	15.67%	0.10	0.0035	5.55%
060.00	Water (Free), Vacuum Oven (%)	2	2	2.118	1.163								
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	1		0.0560									

Method Code	Analyte & Method Sample # 200711	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	4	4	1.171	1.573	1.171	0.2586	1.573	0.9830	134.32%	14.17	0.0285	3.91%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	1		0.3545									
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	3	3	0.3475	0.0568	0.3475	0.2174	0.0568	0.0410	16.35%	0.61	0.0117	4.69%
101.99	Acid Soluble Ca, Other (%)	1		0.3250									
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.9590									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	5	5	0.7952	0.0547	0.7952	0.2398	0.0547	0.0306	6.88%	0.53	0.0156	4.14%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.7885									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	4	4	0.7742	0.0529	0.7742	0.2387	0.0529	0.0331	6.84%	0.52	0.0852	4.16%
121.99	Acid Soluble Mg, Other (%)	4	4	0.7463	0.0381	0.7463	0.2373	0.0381	0.0238	5.11%	0.37	0.0514	4.18%
143.99	Elemental S, Other (%)	2	2	0.8950	0.0424								
148.07	Total S, ICP, test portion as in 2017.02 (%)	3	3	0.8044	0.0875	0.8044	0.2402	0.0874	0.0631	10.87%	0.85	0.0957	4.13%
148.99	Total S, Other (%)	4	4	0.9511	0.0822	0.9511	0.2476	0.0822	0.0514	8.64%	0.77	0.0533	4.03%
149.04	S - HNO3 soluble, ICP (%)	2	2	0.9453	0.0080								
151.30	Acid Soluble As, ICP (ppm)	5	5	20.89	2.697	20.89		2.697	1.508	12.91%		1.473	10.12%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	2	28.05	2.977								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	5	5	26.01	2.647	26.01		2.647	1.480	10.17%		2.654	9.80%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		20.56									
151.99	Acid Soluble As, Other (ppm)	1		21.00									
165.00	Acid Soluble B, Spectrophotometric (%)	1		0.0045									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	2	0.0081	0.0098								
165.99	Acid Soluble B, Other (%)	6	5	0.0037	0.0022	0.0037	0.0036	0.0022	0.0012	58.26%	1.42	0.0003	9.28%
181.30	Acid Soluble Cd, ICP (ppm)	7	7	146.8	16.45	146.8		18.65	8.811	12.70%		2.248	7.55%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	1		176.3									
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	6	6	176.2	11.95	176.2		13.55	6.914	7.69%		3.023	7.35%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		150.2									
181.99	Acid Soluble Cd, Other (ppm)	2	2	148.0	12.73								
190.99	Water Soluble Cl, Other (%)	1		0.0450									
191.30	Acid Soluble Cr, ICP (ppm)	7	6	579.4	60.61	579.4		68.73	35.07	11.86%		9.870	6.14%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	1		485.1									
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	5	5	654.9	47.51	654.9		47.51	26.56	7.25%		33.45	6.03%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		612.4									
191.99	Acid Soluble Cr, Other (ppm)	2	2	607.0	24.75								
202.30	Acid Soluble Co, ICP (ppm)	3	3	4.408	0.9684	4.408	2.3224	0.9684	0.6989	21.97%	0.97	0.0945	12.80%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	2	3.203	1.121								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	6	5	4.247	0.3882	4.247	2.2742	0.3882	0.2170	9.14%	0.40	0.1869	12.87%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	1		0.0000									
202.99	Acid Soluble Co, Other (ppm)	3	3	3.855	0.6690	3.855	2.1566	0.6690	0.4828	17.35%	0.72	0.0443	13.06%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		0.0050									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	8	7	0.0069	0.0023	0.0069	0.0057	0.0026	0.0012	37.68%	1.07	0.0003	8.46%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	3	3	0.0055	0.0005	0.0055	0.0056	0.0005	0.0004	9.08%	0.21	0.0001	8.75%
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	8	7	0.0063	0.0007	0.0062	0.0056	0.0007	0.0003	11.29%	0.29	0.0004	8.59%
221.99	Acid Soluble Cu, Other (%)	5	5	0.0055	0.0015	0.0055	0.0056	0.0015	0.0008	27.22%	0.63	0.0015	8.75%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	1		0.7675									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	5	5	0.7940	0.0290	0.7940	0.0844	0.0290	0.0162	3.65%	0.80	0.0180	4.14%

Method Code	Analyte & Method Sample # 200711	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	1		0.7775									
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	5	5	0.8593	0.1545	0.8593	0.0909	0.1545	0.0864	17.98%	3.96	0.0126	4.09%
241.99	Acid Soluble Fe, Other (%)	4	4	0.7878	0.0255	0.7878	0.0838	0.0255	0.0159	3.23%	0.71	0.0271	4.15%
251.30	Acid Soluble Pb, ICP (ppm)	7	7	4.010	2.541	3.984		2.822	1.333	70.83%		0.3336	12.99%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	1		1.555									
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	4	4	5.257	3.311	5.257		3.311	2.069	62.99%		1.258	12.46%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		4.080									
251.99	Acid Soluble Pb, Other (ppm)	2	2	3.525	0.8839								
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	1		0.0200									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	5	5	0.0175	0.0042	0.0175	0.0068	0.0042	0.0024	24.16%	1.46	0.0005	7.35%
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		198.8									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	5	5	0.0240	0.0108	0.0240	0.0074	0.0108	0.0061	45.07%	3.41	0.0133	7.01%
261.99	Acid Soluble Mn, Other (%)	4	4	0.0187	0.0007	0.0187	0.0069	0.0007	0.0005	4.00%	0.25	0.0034	7.28%
281.30	Acid Soluble Hg, ICP (ppm)	4	2	0.0144	0.0151	0.0144		0.0151	0.0133	104.96%		0.0052	30.30%
281.99	Acid Soluble Hg, Other (ppm)	2	0	0.0100									
289.30	Acid Soluble Mo, ICP (ppm)	7	6	17.11	2.085	17.11	6.1320	2.364	1.207	13.82%	0.90	0.8973	10.43%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	1		15.00									
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	7	6	19.39	1.923	19.39	6.8182	2.181	1.113	11.24%	0.75	0.5700	10.24%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		20.23									
289.99	Acid Soluble Mo, Other (ppm)	2	2	18.42	0.8238								
291.30	Acid Soluble Ni, ICP (ppm)	7	7	217.5	22.73	217.5		25.78	12.18	11.85%		6.716	7.12%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	1		225.7									
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	6	5	237.0	31.25	237.0		31.25	17.47	13.18%		2.480	7.02%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	1		226.0									
291.99	Acid Soluble Ni, Other (ppm)	3	3	220.8	30.18	220.8		30.18	21.78	13.67%		1.008	7.10%
301.30	Acid Soluble Se, ICP (ppm)	1		0.2250									
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	1		5.905									
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	3	2	4.196	2.630	4.196		2.630	2.324	62.67%		0.4232	12.89%
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		6.176									
301.99	Acid Soluble Se, Other (ppm)	3	3	4.219	5.662	4.219		5.662	4.086	134.21%		0.0210	12.88%
311.00	Sodium, AA (%)	1		0.0395									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	5	5	0.0536	0.0159	0.0536	0.0104	0.0159	0.0089	29.66%	3.57	0.0037	6.21%
311.99	Sodium, Other (%)	2	2	0.0825	0.0248								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	1		0.1890									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	10	9	214.7	643.4	0.1953	0.0245	0.0257	0.0107	13.15%	2.44	5.227	5.11%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	3	3	0.1850	0.0139	0.1850	0.0235	0.0139	0.0100	7.52%	1.38	0.0073	5.16%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	8	0.1956	0.0148	0.1945	0.0244	0.0140	0.0062	7.21%	1.34	0.0072	5.12%
321.99	Acid Soluble Zn, Other (%)	6	6	0.2051	0.0590	0.1845	0.0235	0.0112	0.0057	6.08%	1.11	0.0032	5.16%

The Method IA Ratio = 2.33 \* Robust SD / IA at the Method Assigned Value. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting.

Horwitz %RSD	
Average Range (R-bar)	
Method IA Ratio	
Robust % RSD	
Robust Uncertainty (U)	
Robust sd	
IA at Method Value	
Assigned Value Robust Mean	
Raw SD	
Raw Mean	
# Tests in Robust Calculations	
# Tests Submitted	
Analyte & Method Sample # 200711	
Method Code	

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 200711

### Method Precision Report

Grade 11-52-0 MAP

Issue Date : 08/31/2020

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
001.99	Ammoniacal N, Other (%)	14	13	10.85	0.2787	0.2658	0.1186	0.2911	2.45%	1.09%	2.68%	2.455
010.60	Total N, Combustion (11%)	52	48	11.12	0.2260	0.2205	0.0699	0.2313	1.98%	0.63%	2.08%	3.309
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	12	10	53.33	0.6821	0.6678	0.1962	0.6961	1.25%	0.37%	1.31%	3.548
020.50	Total P2O5, ICP (%)	19	16	52.41	2.144	2.069	0.7950	2.216	3.95%	1.52%	4.23%	2.788
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext. (52%)	8	8	53.16	0.6727	0.5922	0.4511	0.7445	1.11%	0.85%	1.40%	1.650
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	8	8	52.51	0.4822	0.4541	0.2293	0.5087	0.86%	0.44%	0.97%	2.219
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	12	11	52.72	0.8785	0.7637	0.6140	0.9799	1.45%	1.16%	1.86%	1.596
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	10	8	0.1887	0.0229	0.0226	0.0053	0.0232	11.99%	2.80%	12.32%	4.391
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	8	8	0.1956	0.0148	0.0141	0.0062	0.0154	7.21%	3.19%	7.88%	2.469

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)

Sample # 200711

Grade 11-52-0 MAP

Lab Values

# Methods: 115

# Labs Reporting: 67

Issue Date : 08/31/2020

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0136	10.35	0.7000	10.79	0.4186	0.3282	6	-0.93	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0117	10.50	1.000	10.79	0.4186	0.3282	6	-0.61	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0451	10.67	0.1600	10.79	0.4186	0.3282	6	-0.25	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	10.79	0.0000	10.79	0.4186	0.3282	6	0.00	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0027	11.08	0.0300	10.79	0.4186	0.3282	6	0.62	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0563	11.34	0.0790	10.79	0.4186	0.3282	6	1.18	NA	0
001.99	Ammoniacal N, Other (%)	0513	10.40	0.0800	10.85	0.3161	0.1212	13	-1.44	NA	0
001.99	Ammoniacal N, Other (%)	0524	10.43	0.0230	10.85	0.3161	0.1212	13	-1.35	NA	0
001.99	Ammoniacal N, Other (%)	0394	10.52	0.1600	10.85	0.3161	0.1212	13	-1.07	NA	0
001.99	Ammoniacal N, Other (%)	0027	10.65	0.1980	10.85	0.3161	0.1212	13	-0.65	NA	0
001.99	Ammoniacal N, Other (%)	0220	10.77	0.3700	10.85	0.3161	0.1212	13	-0.28	NA	0
001.99	Ammoniacal N, Other (%)	0255	10.91	0.0900	10.85	0.3161	0.1212	13	0.16	NA	0
001.99	Ammoniacal N, Other (%)	0029	10.93	0.3600	10.85	0.3161	0.1212	13	0.24	NA	0
001.99	Ammoniacal N, Other (%)	0423	10.96	0.0470	10.85	0.3161	0.1212	13	0.33	NA	0
001.99	Ammoniacal N, Other (%)	0529	10.99	0.0000	10.85	0.3161	0.1212	13	0.43	NA	0
001.99	Ammoniacal N, Other (%)	0546	11.07	0.0500	10.85	0.3161	0.1212	13	0.67	NA	0
001.99	Ammoniacal N, Other (%)	0405	11.11	0.0900	10.85	0.3161	0.1212	13	0.80	NA	0
001.99	Ammoniacal N, Other (%)	0096	11.18	0.0700	10.85	0.3161	0.1212	13	1.02	NA	0
001.99	Ammoniacal N, Other (%)	0300	11.22	0.0380	10.85	0.3161	0.1212	13	1.14	NA	0
001.99	Ammoniacal N, Other (%)	0553	10.50	0.8000	10.85	0.3161	0.1212	13	-1.12	NA	1
002.99	Nitrate N, Other (%)	0553	0.0095	0.0010				1			0
010.11	Total N, Modified Comprehensive (11%)	0309	10.79	0.1300				1			0
010.60	Total N, Combustion (11%)	0169	10.62	0.0300	11.13	0.2167	0.0785	51	-2.38	OK	0
010.60	Total N, Combustion (11%)	0527	10.68	0.0210	11.13	0.2167	0.0785	51	-2.08	OK	0
010.60	Total N, Combustion (11%)	0072	10.75	0.0900	11.13	0.2167	0.0785	51	-1.78	OK	0
010.60	Total N, Combustion (11%)	0073	10.77	0.0500	11.13	0.2167	0.0785	51	-1.69	OK	0
010.60	Total N, Combustion (11%)	0371	10.77	0.0800	11.13	0.2167	0.0785	51	-1.67	OK	0
010.60	Total N, Combustion (11%)	0035	10.79	0.0700	11.13	0.2167	0.0785	51	-1.60	OK	0
010.60	Total N, Combustion (11%)	0450	10.80	0.2000	11.13	0.2167	0.0785	51	-1.53	OK	0
010.60	Total N, Combustion (11%)	0389	10.86	0.0900	11.13	0.2167	0.0785	51	-1.27	OK	0
010.60	Total N, Combustion (11%)	0255	10.90	0.2260	11.13	0.2167	0.0785	51	-1.07	OK	0
010.60	Total N, Combustion (11%)	0234	10.96	0.0500	11.13	0.2167	0.0785	51	-0.81	OK	0
010.60	Total N, Combustion (11%)	0095	10.97	0.1200	11.13	0.2167	0.0785	51	-0.74	OK	0
010.60	Total N, Combustion (11%)	0422	11.01	0.1300	11.13	0.2167	0.0785	51	-0.58	OK	0
010.60	Total N, Combustion (11%)	0360	11.03	0.0200	11.13	0.2167	0.0785	51	-0.47	OK	0
010.60	Total N, Combustion (11%)	0472	11.05	0.0300	11.13	0.2167	0.0785	51	-0.40	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (11%)	0325	11.05	0.3000	11.13	0.2167	0.0785	51	-0.37	OK	0
010.60	Total N, Combustion (11%)	0291	11.07	0.0100	11.13	0.2167	0.0785	51	-0.30	OK	0
010.60	Total N, Combustion (11%)	0547	11.07	0.0600	11.13	0.2167	0.0785	51	-0.28	OK	0
010.60	Total N, Combustion (11%)	0231	11.08	0.0000	11.13	0.2167	0.0785	51	-0.24	OK	0
010.60	Total N, Combustion (11%)	0037	11.09	0.0710	11.13	0.2167	0.0785	51	-0.18	OK	0
010.60	Total N, Combustion (11%)	0157	11.10	0.0000	11.13	0.2167	0.0785	51	-0.14	OK	0
010.60	Total N, Combustion (11%)	0451	11.10	0.3400	11.13	0.2167	0.0785	51	-0.14	OK	0
010.60	Total N, Combustion (11%)	0377	11.10	0.2200	11.13	0.2167	0.0785	51	-0.14	OK	0
010.60	Total N, Combustion (11%)	0423	11.12	0.0100	11.13	0.2167	0.0785	51	-0.07	OK	0
010.60	Total N, Combustion (11%)	0055	11.14	0.0100	11.13	0.2167	0.0785	51	0.02	OK	0
010.60	Total N, Combustion (11%)	0086	11.14	0.0250	11.13	0.2167	0.0785	51	0.04	OK	0
010.60	Total N, Combustion (11%)	0405	11.14	0.0400	11.13	0.2167	0.0785	51	0.04	OK	0
010.60	Total N, Combustion (11%)	0096	11.17	0.0000	11.13	0.2167	0.0785	51	0.18	OK	0
010.60	Total N, Combustion (11%)	0292	11.17	0.0400	11.13	0.2167	0.0785	51	0.18	OK	0
010.60	Total N, Combustion (11%)	0233	11.19	0.0300	11.13	0.2167	0.0785	51	0.25	OK	0
010.60	Total N, Combustion (11%)	0494	11.19	0.0500	11.13	0.2167	0.0785	51	0.25	OK	0
010.60	Total N, Combustion (11%)	0043	11.19	0.0200	11.13	0.2167	0.0785	51	0.27	OK	0
010.60	Total N, Combustion (11%)	0027	11.20	0.2000	11.13	0.2167	0.0785	51	0.32	OK	0
010.60	Total N, Combustion (11%)	0049	11.20	0.0000	11.13	0.2167	0.0785	51	0.32	OK	0
010.60	Total N, Combustion (11%)	0136	11.20	0.2000	11.13	0.2167	0.0785	51	0.32	OK	0
010.60	Total N, Combustion (11%)	0354	11.20	0.0000	11.13	0.2167	0.0785	51	0.32	OK	0
010.60	Total N, Combustion (11%)	0444	11.22	0.0400	11.13	0.2167	0.0785	51	0.41	OK	0
010.60	Total N, Combustion (11%)	0114	11.22	0.1800	11.13	0.2167	0.0785	51	0.41	OK	0
010.60	Total N, Combustion (11%)	0561	11.23	0.0100	11.13	0.2167	0.0785	51	0.43	OK	0
010.60	Total N, Combustion (11%)	0177	11.25	0.0200	11.13	0.2167	0.0785	51	0.55	OK	0
010.60	Total N, Combustion (11%)	0402	11.26	0.0320	11.13	0.2167	0.0785	51	0.58	OK	0
010.60	Total N, Combustion (11%)	0040	11.30	0.0000	11.13	0.2167	0.0785	51	0.78	OK	0
010.60	Total N, Combustion (11%)	0230	11.30	0.2000	11.13	0.2167	0.0785	51	0.78	OK	0
010.60	Total N, Combustion (11%)	0452	11.30	0.1000	11.13	0.2167	0.0785	51	0.78	OK	0
010.60	Total N, Combustion (11%)	0220	11.31	0.0600	11.13	0.2167	0.0785	51	0.83	OK	0
010.60	Total N, Combustion (11%)	0029	11.33	0.1200	11.13	0.2167	0.0785	51	0.92	OK	0
010.60	Total N, Combustion (11%)	0025	11.40	0.0400	11.13	0.2167	0.0785	51	1.24	OK	0
010.60	Total N, Combustion (11%)	0516	11.46	0.2300	11.13	0.2167	0.0785	51	1.50	OK	0
010.60	Total N, Combustion (11%)	0542	11.47	0.0700	11.13	0.2167	0.0785	51	1.54	OK	0
010.60	Total N, Combustion (11%)	0443	11.59	0.0600	11.13	0.2167	0.0785	51	2.12	OK	0
010.60	Total N, Combustion (11%)	0102	11.69	0.0000	11.13	0.2167	0.0785	51	2.58	OK	0
010.60	Total N, Combustion (11%)	0041	12.08	0.0100	11.13	0.2167	0.0785	51	4.36	High	0
010.60	Total N, Combustion (11%)	0356	10.64	0.4840	11.13	0.2167	0.0785	51	-2.29	OK	1
010.99	Total N, Other (11%)	0394	10.09	0.0130	10.86	0.4845	0.0576	5	-1.60		0
010.99	Total N, Other (11%)	0524	10.71	0.0060	10.86	0.4845	0.0576	5	-0.32		0
010.99	Total N, Other (11%)	0529	11.06	0.0900	10.86	0.4845	0.0576	5	0.40		0
010.99	Total N, Other (11%)	0563	11.16	0.1380	10.86	0.4845	0.0576	5	0.61		0
010.99	Total N, Other (11%)	0300	11.30	0.0410	10.86	0.4845	0.0576	5	0.91		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0157	53.55	0.9000	54.03	0.4322	0.5833	3	-1.10		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0114	54.13	0.3200	54.03	0.4322	0.5833	3	0.24		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	54.40	0.5300	54.03	0.4322	0.5833	3	0.86		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0309	51.99	0.0000	53.33	0.6718	0.3053	11	-2.00	NA	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0394	52.74	0.0990	53.33	0.6718	0.3053	11	-0.88	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0027	52.80	0.7080	53.33	0.6718	0.3053	11	-0.79	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0450	53.00	1.400	53.33	0.6718	0.3053	11	-0.50	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	53.30	0.0300	53.33	0.6718	0.3053	11	-0.06	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	53.37	0.2400	53.33	0.6718	0.3053	11	0.05	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	53.48	0.0100	53.33	0.6718	0.3053	11	0.21	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	53.56	0.1600	53.33	0.6718	0.3053	11	0.34	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	53.66	0.2110	53.33	0.6718	0.3053	11	0.49	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0220	54.13	0.3000	53.33	0.6718	0.3053	11	1.19	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	54.30	0.2000	53.33	0.6718	0.3053	11	1.44	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0553	52.50	3.200	53.33	0.6718	0.3053	11	-1.24	NA	1
020.40	Total P2O5, Automated (%)	0035	53.25	0.7000				2			0
020.40	Total P2O5, Automated (%)	0096	53.82	0.0000				2			0
020.50	Total P2O5, ICP (%)	0516	45.57	7.039	52.36	2.708	1.400	19	-2.51	NA	0
020.50	Total P2O5, ICP (%)	0157	48.30	3.000	52.36	2.708	1.400	19	-1.50	NA	0
020.50	Total P2O5, ICP (%)	0389	48.47	0.3600	52.36	2.708	1.400	19	-1.44	NA	0
020.50	Total P2O5, ICP (%)	0472	49.85	0.1000	52.36	2.708	1.400	19	-0.93	NA	0
020.50	Total P2O5, ICP (%)	0042	51.55	7.300	52.36	2.708	1.400	19	-0.30	NA	0
020.50	Total P2O5, ICP (%)	0444	51.75	0.0600	52.36	2.708	1.400	19	-0.23	NA	0
020.50	Total P2O5, ICP (%)	0423	52.01	0.2100	52.36	2.708	1.400	19	-0.13	NA	0
020.50	Total P2O5, ICP (%)	0433	52.19	0.2000	52.36	2.708	1.400	19	-0.06	NA	0
020.50	Total P2O5, ICP (%)	0234	52.45	0.3800	52.36	2.708	1.400	19	0.03	NA	0
020.50	Total P2O5, ICP (%)	0169	52.77	0.2000	52.36	2.708	1.400	19	0.15	NA	0
020.50	Total P2O5, ICP (%)	0291	52.79	0.0500	52.36	2.708	1.400	19	0.16	NA	0
020.50	Total P2O5, ICP (%)	0524	52.82	0.7100	52.36	2.708	1.400	19	0.17	NA	0
020.50	Total P2O5, ICP (%)	0255	52.83	0.7790	52.36	2.708	1.400	19	0.17	NA	0
020.50	Total P2O5, ICP (%)	0527	52.94	0.0686	52.36	2.708	1.400	19	0.21	NA	0
020.50	Total P2O5, ICP (%)	0546	53.47	0.2780	52.36	2.708	1.400	19	0.41	NA	0
020.50	Total P2O5, ICP (%)	0422	54.70	1.200	52.36	2.708	1.400	19	0.86	NA	0
020.50	Total P2O5, ICP (%)	0307	54.92	2.110	52.36	2.708	1.400	19	0.94	NA	0
020.50	Total P2O5, ICP (%)	0542	56.39	1.930	52.36	2.708	1.400	19	1.49	NA	0
020.50	Total P2O5, ICP (%)	0402	64.95	0.6323	52.36	2.708	1.400	19	4.65	NA	0
020.99	Total P2O5, Other (%)	0443	50.91	0.4000	53.57	1.976	0.6855	4	-1.34		0
020.99	Total P2O5, Other (%)	0529	53.70	0.3900	53.57	1.976	0.6855	4	0.07		0
020.99	Total P2O5, Other (%)	0513	53.98	0.1500	53.57	1.976	0.6855	4	0.21		0
020.99	Total P2O5, Other (%)	0515	55.68	1.802	53.57	1.976	0.6855	4	1.07		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0220	0.0650	0.0100	0.1633	0.0852	0.0133	3	-1.15		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0561	0.2100	0.0200	0.1633	0.0852	0.0133	3	0.55		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (%)	0405	0.2150	0.0100	0.1633	0.0852	0.0133	3	0.61		0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	0.0300	0.0200				1			0
040.20	Indirect Available P2O5, Spectrophotometric (%)	0547	52.50	0.6000	53.22	0.7908	0.3133	3	-0.91		0
040.20	Indirect Available P2O5, Spectrophotometric (%)	0561	53.09	0.0500	53.22	0.7908	0.3133	3	-0.17		0
040.20	Indirect Available P2O5, Spectrophotometric (%)	0220	54.07	0.2900	53.22	0.7908	0.3133	3	1.07		0
040.40	Indirect Available P2O5, Automated (%)	0096	53.80	0.0100				1			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0041	52.82	0.0700	53.33	0.5176	0.2333	6	-0.88	OK	0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0102	52.90	0.0000	53.33	0.5176	0.2333	6	-0.74	OK	0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0049	53.33	0.4600	53.33	0.5176	0.2333	6	0.00	OK	0



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041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0086	53.35	0.5300	53.33	0.5176	0.2333	6	0.03	OK	0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0177	53.50	0.0400	53.33	0.5176	0.2333	6	0.29	OK	0
041.10	Direct Available P2O5, Gravimetric Quinolinium (52%)	0494	54.08	0.3000	53.33	0.5176	0.2333	6	1.29	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0073	51.78	1.100	53.23	0.5867	0.3829	8	-2.26	Low	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0185	52.83	1.390	53.23	0.5867	0.3829	8	-0.63	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0220	53.02	0.0400	53.23	0.5867	0.3829	8	-0.33	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0049	53.16	0.3100	53.23	0.5867	0.3829	8	-0.12	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0405	53.20	0.0700	53.23	0.5867	0.3829	8	-0.06	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0055	53.69	0.0400	53.23	0.5867	0.3829	8	0.71	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0513	53.77	0.1000	53.23	0.5867	0.3829	8	0.84	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (52%)	0072	53.85	0.0130	53.23	0.5867	0.3829	8	0.96	OK	0
041.20	Direct Available P2O5, Spectrophotometric (52%)	0027	52.01	0.2890				1			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0230	51.75	0.3000	52.51	0.5468	0.2686	8	-1.26	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0563	52.03	0.1300	52.51	0.5468	0.2686	8	-0.80	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0177	52.24	0.1585	52.51	0.5468	0.2686	8	-0.44	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0472	52.48	0.6300	52.51	0.5468	0.2686	8	-0.05	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0405	52.63	0.0800	52.51	0.5468	0.2686	8	0.21	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0354	52.80	0.2000	52.51	0.5468	0.2686	8	0.49	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0055	52.94	0.4900	52.51	0.5468	0.2686	8	0.72	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (52%)	0231	53.19	0.1600	52.51	0.5468	0.2686	8	1.14	OK	0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	0095	50.82	2.160				2			0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (52%)	0029	52.43	0.0100				2			0
041.50	Direct Available P2O5, ICP (52%)	0325	52.35	0.5000				2			0
041.50	Direct Available P2O5, ICP (52%)	0452	53.39	0.0600				2			0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0423	50.87	0.0900	52.60	1.048	0.8213	12	-1.66	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0233	51.16	3.680	52.60	1.048	0.8213	12	-1.38	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0494	51.66	0.4700	52.60	1.048	0.8213	12	-0.90	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0360	52.45	0.3200	52.60	1.048	0.8213	12	-0.15	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0040	52.50	0.4000	52.60	1.048	0.8213	12	-0.10	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0072	52.61	0.2750	52.60	1.048	0.8213	12	0.01	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0025	52.95	2.300	52.60	1.048	0.8213	12	0.33	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0117	52.96	0.1104	52.60	1.048	0.8213	12	0.34	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0136	53.05	1.500	52.60	1.048	0.8213	12	0.43	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0043	53.37	0.2400	52.60	1.048	0.8213	12	0.73	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0377	53.41	0.1800	52.60	1.048	0.8213	12	0.77	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (52%)	0037	54.09	0.2899	52.60	1.048	0.8213	12	1.42	High	0
041.99	Direct Available P2O5, Other (52%)	0405	53.26	0.0000				1			0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0444	48.38	0.0500				1			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0309	45.78	0.0000	48.04	0.6479	0.1879	7	-3.16	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0394	47.67	0.4850	48.04	0.6479	0.1879	7	-0.52	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	47.75	0.0000	48.04	0.6479	0.1879	7	-0.41	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0561	48.27	0.0800	48.04	0.6479	0.1879	7	0.32	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0405	48.30	0.0700	48.04	0.6479	0.1879	7	0.35	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0220	48.57	0.5800	48.04	0.6479	0.1879	7	0.74	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0231	48.67	0.1000	48.04	0.6479	0.1879	7	0.88	NA	0
048.40	Water Soluble P2O5, Automated (%)	0096	48.36	0.0500				1			0
048.50	Water Soluble P2O5, ICP (%)	0444	48.47	0.1600				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
048.50	Water Soluble P2O5, ICP (%)	0546	49.64	0.1600				2			0
048.99	Water Soluble P2O5, Other (%)	0513	46.32	0.1700				2			0
048.99	Water Soluble P2O5, Other (%)	0529	47.99	0.2700				2			0
050.50	Soluble K2O, ICP (Oxalate) (%)	0422	0.0950	0.0300				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0975	0.0110				2			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0423	0.1380	0.0040				2			0
050.99	Soluble K2O, Other (%)	0563	0.0658	0.0019	0.1129	0.0177	0.0035	8	-2.44	OK	0
050.99	Soluble K2O, Other (%)	0325	0.1000	0.0000	0.1129	0.0177	0.0035	8	-0.67	OK	0
050.99	Soluble K2O, Other (%)	0553	0.1075	0.0010	0.1129	0.0177	0.0035	8	-0.28	OK	0
050.99	Soluble K2O, Other (%)	0527	0.1122	0.0037	0.1129	0.0177	0.0035	8	-0.04	OK	0
050.99	Soluble K2O, Other (%)	0096	0.1150	0.0100	0.1129	0.0177	0.0035	8	0.11	OK	0
050.99	Soluble K2O, Other (%)	0389	0.1200	0.0000	0.1129	0.0177	0.0035	8	0.37	OK	0
050.99	Soluble K2O, Other (%)	0524	0.1225	0.0110	0.1129	0.0177	0.0035	8	0.50	OK	0
050.99	Soluble K2O, Other (%)	0516	0.5420	0.0000	0.1129	0.0177	0.0035	8	22.20	High	0
060.00	Water (Free), Vacuum Oven (%)	0513	1.295	0.0100				2			0
060.00	Water (Free), Vacuum Oven (%)	0096	2.940	0.2400				2			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (%)	0553	0.0560	0.0100				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.3550	0.0100	1.171	1.573	0.0285	4	-0.52		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.3840	0.0340	1.171	1.573	0.0285	4	-0.50		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0472	0.4150	0.0100	1.171	1.573	0.0285	4	-0.48		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	3.530	0.0600	1.171	1.573	0.0285	4	1.50		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	0.3545	0.0050				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0563	0.2884	0.0056	0.3475	0.0568	0.0117	3	-1.04		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0494	0.3523	0.0145	0.3475	0.0568	0.0117	3	0.08		0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	0.4018	0.0149	0.3475	0.0568	0.0117	3	0.96		0
101.99	Acid Soluble Ca, Other (%)	0389	0.3250	0.0100				1			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	0.9590	0.1020				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	0.7450	0.0180	0.7952	0.0547	0.0156	5	-0.92		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.7700	0.0000	0.7952	0.0547	0.0156	5	-0.46		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0444	0.7700	0.0000	0.7952	0.0547	0.0156	5	-0.46		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.8060	0.0500	0.7952	0.0547	0.0156	5	0.20		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0472	0.8850	0.0100	0.7952	0.0547	0.0156	5	1.64		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.7885	0.0030				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0563	0.7197	0.0967	0.7742	0.0529	0.0852	4	-1.03		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.7390	0.0260	0.7742	0.0529	0.0852	4	-0.66		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.8100	0.1997	0.7742	0.0529	0.0852	4	0.68		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.8282	0.0182	0.7742	0.0529	0.0852	4	1.02		0
121.99	Acid Soluble Mg, Other (%)	0516	0.6970	0.0060	0.7463	0.0381	0.0514	4	-1.29		0
121.99	Acid Soluble Mg, Other (%)	0515	0.7477	0.1904	0.7463	0.0381	0.0514	4	0.04		0
121.99	Acid Soluble Mg, Other (%)	0524	0.7505	0.0090	0.7463	0.0381	0.0514	4	0.11		0
121.99	Acid Soluble Mg, Other (%)	0389	0.7900	0.0000	0.7463	0.0381	0.0514	4	1.15		0
143.99	Elemental S, Other (%)	0472	0.8650	0.0100				2			0
143.99	Elemental S, Other (%)	0389	0.9250	0.0100				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	0.7398	0.0181	0.8044	0.0874	0.0957	3	-0.74		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	0.7696	0.1947	0.8044	0.0874	0.0957	3	-0.40		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0563	0.9039	0.0742	0.8044	0.0874	0.0957	3	1.14		0
148.99	Total S, Other (%)	0516	0.8730	0.0400	0.9511	0.0822	0.0533	4	-0.95		0

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			Value	Range	Rob Mean	Rob SD	R-bar				
148.99	Total S, Other (%)	0096	0.9165	0.0030	0.9511	0.0822	0.0533	4	-0.42		0
148.99	Total S, Other (%)	0354	0.9500	0.0400	0.9511	0.0822	0.0533	4	-0.01		0
148.99	Total S, Other (%)	0553	1.065	0.1300	0.9511	0.0822	0.0533	4	1.39		0
149.04	S - HNO3 soluble, ICP (%)	0524	0.9397	0.0247				2			0
149.04	S - HNO3 soluble, ICP (%)	0423	0.9510	0.0020				2			0
151.30	Acid Soluble As, ICP (ppm)	0444	17.51	0.8900	20.89	2.697	1.473	5	-1.26		0
151.30	Acid Soluble As, ICP (ppm)	0096	19.50	0.8000	20.89	2.697	1.473	5	-0.52		0
151.30	Acid Soluble As, ICP (ppm)	0255	20.47	0.9360	20.89	2.697	1.473	5	-0.16		0
151.30	Acid Soluble As, ICP (ppm)	0450	22.50	1.600	20.89	2.697	1.473	5	0.60		0
151.30	Acid Soluble As, ICP (ppm)	0524	24.49	3.137	20.89	2.697	1.473	5	1.33		0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0529	25.94	0.0200				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	30.15	0.1000				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	23.24	8.134	26.01	2.647	2.654	5	-1.05		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	24.62	2.955	26.01	2.647	2.654	5	-0.53		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	24.63	0.9500	26.01	2.647	2.654	5	-0.53		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	28.09	0.2528	26.01	2.647	2.654	5	0.78		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	29.50	0.9803	26.01	2.647	2.654	5	1.32		0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	20.56	23.21				1			0
151.99	Acid Soluble As, Other (ppm)	0405	21.00	2.000				1			0
165.00	Acid Soluble B, Spectrophotometric (%)	0553	0.0045	0.0010				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0546	0.0012	0.0001				2			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	0.0150	0.0100				2			0
165.99	Acid Soluble B, Other (%)	0516	0.0010	0.0000	0.0037	0.0022	0.0003	5	-1.10		0
165.99	Acid Soluble B, Other (%)	0563	0.0030	0.0001	0.0037	0.0022	0.0003	5	-0.31		0
165.99	Acid Soluble B, Other (%)	0524	0.0033	0.0000	0.0037	0.0022	0.0003	5	-0.17		0
165.99	Acid Soluble B, Other (%)	0423	0.0045	0.0010	0.0037	0.0022	0.0003	5	0.31		0
165.99	Acid Soluble B, Other (%)	0527	0.0069	0.0002	0.0037	0.0022	0.0003	5	1.27		0
165.99	Acid Soluble B, Other (%)	0515	0.0000	0.0000	0.0037	0.0022	0.0003	5			4
181.30	Acid Soluble Cd, ICP (ppm)	0255	125.6	0.5480	146.8	18.65	2.248	7	-1.03	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0444	131.5	3.000	146.8	18.65	2.248	7	-0.74	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	132.0	6.000	146.8	18.65	2.248	7	-0.72	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0389	153.5	1.000	146.8	18.65	2.248	7	0.32	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0096	161.4	0.6000	146.8	18.65	2.248	7	0.71	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	161.5	1.000	146.8	18.65	2.248	7	0.71	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	162.5	3.587	146.8	18.65	2.248	7	0.76	NA	0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0529	176.3	1.880				1			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	167.5	1.053	176.2	13.55	3.023	6	-0.57	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0233	167.7	2.100	176.2	13.55	3.023	6	-0.56	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	169.7	2.100	176.2	13.55	3.023	6	-0.43	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	169.7	3.467	176.2	13.55	3.023	6	-0.43	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	188.2	3.694	176.2	13.55	3.023	6	0.79	NA	0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	194.5	5.722	176.2	13.55	3.023	6	1.20	NA	0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	150.2	12.61				1			0
181.99	Acid Soluble Cd, Other (ppm)	0405	139.0	6.000				2			0
181.99	Acid Soluble Cd, Other (ppm)	0220	157.0	2.000				2			0
190.99	Water Soluble Cl, Other (%)	0553	0.0450	0.0100				1			0
191.30	Acid Soluble Cr, ICP (ppm)	0035	508.5	35.00	579.4	68.73	9.870	6	-0.92	NA	0

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191.30	Acid Soluble Cr, ICP (ppm)	0444	518.5	7.000	579.4	68.73	9.870	6	-0.79	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	558.5	1.000	579.4	68.73	9.870	6	-0.27	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	602.5	7.000	579.4	68.73	9.870	6	0.30	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0096	633.3	1.700	579.4	68.73	9.870	6	0.70	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	655.3	7.519	579.4	68.73	9.870	6	0.98	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0450	562.5	111.0	579.4	68.73	9.870	6	-0.22	NA	1
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0529	485.1	6.540				1			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	587.7	11.83	654.9	47.51	33.45	5	-1.41		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	644.9	5.749	654.9	47.51	33.45	5	-0.21		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	658.5	9.000	654.9	47.51	33.45	5	0.08		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	662.7	118.2	654.9	47.51	33.45	5	0.16		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	720.8	22.45	654.9	47.51	33.45	5	1.39		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	612.4	27.64				1			0
191.99	Acid Soluble Cr, Other (ppm)	0405	589.5	7.000				2			0
191.99	Acid Soluble Cr, Other (ppm)	0220	624.5	1.000				2			0
202.30	Acid Soluble Co, ICP (ppm)	0389	3.785	0.0500	4.408	0.9684	0.0945	3	-0.64		0
202.30	Acid Soluble Co, ICP (ppm)	0035	3.915	0.1900	4.408	0.9684	0.0945	3	-0.51		0
202.30	Acid Soluble Co, ICP (ppm)	0524	5.524	0.0436	4.408	0.9684	0.0945	3	1.15		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0529	2.410	0.2800				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	3.995	0.1700				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	3.601	0.4607	4.247	0.3882	0.1869	5	-1.45		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	4.180	0.0400	4.247	0.3882	0.1869	5	-0.15		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0494	4.407	0.3547	4.247	0.3882	0.1869	5	0.36		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0546	4.500	0.0278	4.247	0.3882	0.1869	5	0.57		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	4.548	0.0511	4.247	0.3882	0.1869	5	0.68		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	16.72	10.31	4.247	0.3882	0.1869	5	28.05		1
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	0.0000	0.0000				0			4
202.99	Acid Soluble Co, Other (ppm)	0255	3.216	0.0330	3.855	0.6690	0.0443	3	-0.96		0
202.99	Acid Soluble Co, Other (ppm)	0405	3.800	0.0000	3.855	0.6690	0.0443	3	-0.08		0
202.99	Acid Soluble Co, Other (ppm)	0220	4.550	0.1000	3.855	0.6690	0.0443	3	1.04		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	0.0050	0.0000				1			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0040	0.0000	0.0069	0.0026	0.0003	7	-1.01	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0096	0.0055	0.0003	0.0069	0.0026	0.0003	7	-0.51	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0095	0.0057	0.0005	0.0069	0.0026	0.0003	7	-0.44	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0402	0.0064	0.0005	0.0069	0.0026	0.0003	7	-0.19	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0069	0.0006	0.0069	0.0026	0.0003	7	0.00	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	0.0100	0.0000	0.0069	0.0026	0.0003	7	1.07	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0472	0.0100	0.0000	0.0069	0.0026	0.0003	7	1.07	OK	0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0450	52.25	2.900	0.0069	0.0026	0.0003	7	18151.66	High	2
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0423	0.0050	0.0000	0.0055	0.0005	0.0001	3	-1.03		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0394	0.0056	0.0003	0.0055	0.0005	0.0001	3	0.07		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0529	0.0060	0.0000	0.0055	0.0005	0.0001	3	0.97		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0494	0.0056	0.0012	0.0062	0.0007	0.0004	7	-0.79	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	0.0057	0.0001	0.0062	0.0007	0.0004	7	-0.73	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0043	0.0060	0.0000	0.0062	0.0007	0.0004	7	-0.28	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0546	0.0061	0.0001	0.0062	0.0007	0.0004	7	-0.22	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0233	0.0061	0.0000	0.0062	0.0007	0.0004	7	-0.15	OK	0

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			Value	Range	Rob Mean	Rob SD	R-bar				
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0069	0.0001	0.0062	0.0007	0.0004	7	0.81	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0076	0.0011	0.0062	0.0007	0.0004	7	1.72	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	62.70	1.640	0.0062	0.0007	0.0004	7	80731.98	High	2
221.99	Acid Soluble Cu, Other (%)	0516	0.0035	0.0050	0.0055	0.0015	0.0015	5	-1.34		0
221.99	Acid Soluble Cu, Other (%)	0389	0.0050	0.0000	0.0055	0.0015	0.0015	5	-0.34		0
221.99	Acid Soluble Cu, Other (%)	0524	0.0056	0.0001	0.0055	0.0015	0.0015	5	0.03		0
221.99	Acid Soluble Cu, Other (%)	0405	0.0059	0.0001	0.0055	0.0015	0.0015	5	0.23		0
221.99	Acid Soluble Cu, Other (%)	0515	0.0077	0.0023	0.0055	0.0015	0.0015	5	1.43		0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	0.7675	0.0350				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	0.7655	0.0490	0.7940	0.0290	0.0180	5	-0.98		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.7745	0.0410	0.7940	0.0290	0.0180	5	-0.67		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0472	0.7900	0.0000	0.7940	0.0290	0.0180	5	-0.14		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.8000	0.0000	0.7940	0.0290	0.0180	5	0.21		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0444	0.8400	0.0000	0.7940	0.0290	0.0180	5	1.59		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.7775	0.0010				1			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	0.7419	0.0125	0.8593	0.1545	0.0126	5	-0.76		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0546	0.7647	0.0046	0.8593	0.1545	0.0126	5	-0.61		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0563	0.8031	0.0069	0.8593	0.1545	0.0126	5	-0.36		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.8639	0.0136	0.8593	0.1545	0.0126	5	0.03		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	1.123	0.0254	0.8593	0.1545	0.0126	5	1.71		0
241.99	Acid Soluble Fe, Other (%)	0516	0.7500	0.0060	0.7878	0.0255	0.0271	4	-1.48		0
241.99	Acid Soluble Fe, Other (%)	0524	0.7959	0.0155	0.7878	0.0255	0.0271	4	0.32		0
241.99	Acid Soluble Fe, Other (%)	0515	0.8002	0.0768	0.7878	0.0255	0.0271	4	0.49		0
241.99	Acid Soluble Fe, Other (%)	0389	0.8050	0.0100	0.7878	0.0255	0.0271	4	0.68		0
251.30	Acid Soluble Pb, ICP (ppm)	0255	1.667	0.0000	3.984	2.822	0.3336	7	-0.74	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0096	2.350	0.9000	3.984	2.822	0.3336	7	-0.52	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0035	2.420	0.4600	3.984	2.822	0.3336	7	-0.50	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0389	3.105	0.0500	3.984	2.822	0.3336	7	-0.28	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	3.385	0.0151	3.984	2.822	0.3336	7	-0.19	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0394	6.745	0.1100	3.984	2.822	0.3336	7	0.88	NA	0
251.30	Acid Soluble Pb, ICP (ppm)	0450	8.400	0.8000	3.984	2.822	0.3336	7	1.41	NA	0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0529	1.555	0.0100				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	2.435	0.3700	5.257	3.311	1.258	4	-0.85		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	3.989	0.2582	5.257	3.311	1.258	4	-0.38		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	4.566	0.0268	5.257	3.311	1.258	4	-0.21		0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	10.04	4.375	5.257	3.311	1.258	4	1.44		0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	4.080	5.215				1			0
251.99	Acid Soluble Pb, Other (ppm)	0220	2.900	0.0000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0405	4.150	0.1000				2			0
261.12	Acid Soluble Mn, AA, inorganic 965.09 (%)	0553	0.0200	0.0040				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	0.0100	0.0000	0.0175	0.0042	0.0005	5	-1.78		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	0.0186	0.0003	0.0175	0.0042	0.0005	5	0.25		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0195	0.0010	0.0175	0.0042	0.0005	5	0.47		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0444	0.0195	0.0010	0.0175	0.0042	0.0005	5	0.47		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0472	0.0200	0.0000	0.0175	0.0042	0.0005	5	0.59		0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	198.8	8.600				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0563	0.0179	0.0005	0.0240	0.0108	0.0133	5	-0.57		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0546	0.0189	0.0002	0.0240	0.0108	0.0133	5	-0.47		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0200	0.0003	0.0240	0.0108	0.0133	5	-0.38		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0494	0.0202	0.0005	0.0240	0.0108	0.0133	5	-0.36		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0434	0.0649	0.0240	0.0108	0.0133	5	1.78		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0180	0.0000	0.0187	0.0007	0.0034	4	-0.97		0
261.99	Acid Soluble Mn, Other (%)	0524	0.0183	0.0007	0.0187	0.0007	0.0034	4	-0.63		0
261.99	Acid Soluble Mn, Other (%)	0516	0.0190	0.0000	0.0187	0.0007	0.0034	4	0.37		0
261.99	Acid Soluble Mn, Other (%)	0515	0.0197	0.0129	0.0187	0.0007	0.0034	4	1.24		0
281.30	Acid Soluble Hg, ICP (ppm)	0563	0.0037	0.0004				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0529	0.0250	0.0100				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0515	0.0000	0.0000				2			4
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					2			5
281.99	Acid Soluble Hg, Other (ppm)	0220	< 0.01					0			5
281.99	Acid Soluble Hg, Other (ppm)	0405	< 0.01					0			5
289.30	Acid Soluble Mo, ICP (ppm)	0255	15.00	1.226	17.11	2.364	0.8973	6	-0.80	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0035	15.05	0.3000	17.11	2.364	0.8973	6	-0.77	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0450	15.95	1.500	17.11	2.364	0.8973	6	-0.44	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	17.74	0.1578	17.11	2.364	0.8973	6	0.24	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0096	19.05	2.100	17.11	2.364	0.8973	6	0.73	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0402	19.85	0.1000	17.11	2.364	0.8973	6	1.03	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0516	25.00	10.00	17.11	2.364	0.8973	6	2.97	High	1
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0529	15.00	1.190				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	16.17	1.542	19.39	2.181	0.5700	6	-1.32	OK	0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	18.85	0.0600	19.39	2.181	0.5700	6	-0.22	OK	0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0494	19.53	1.255	19.39	2.181	0.5700	6	0.05	OK	0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0546	19.85	0.1130	19.39	2.181	0.5700	6	0.19	OK	0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	19.87	0.1200	19.39	2.181	0.5700	6	0.19	OK	0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	22.10	0.3295	19.39	2.181	0.5700	6	1.10	OK	0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	66.40	71.88	19.39	2.181	0.5700	6	19.20	High	1
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	20.23	3.646				1			0
289.99	Acid Soluble Mo, Other (ppm)	0405	17.84	0.0100				2			0
289.99	Acid Soluble Mo, Other (ppm)	0220	19.00	0.4000				2			0
291.30	Acid Soluble Ni, ICP (ppm)	0444	185.0	0.0000	217.5	25.78	6.716	7	-1.14	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	196.0	10.00	217.5	25.78	6.716	7	-0.75	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0389	212.5	1.000	217.5	25.78	6.716	7	-0.17	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0450	219.0	24.00	217.5	25.78	6.716	7	0.05	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	221.5	1.000	217.5	25.78	6.716	7	0.14	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	236.5	3.409	217.5	25.78	6.716	7	0.67	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0096	251.8	7.600	217.5	25.78	6.716	7	1.20	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0529	225.7	5.890				1			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	184.8	0.2260	237.0	31.25	2.480	5	-1.46		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0233	236.3	5.200	237.0	31.25	2.480	5	-0.02		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0494	243.2	2.409	237.0	31.25	2.480	5	0.17		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	255.5	1.000	237.0	31.25	2.480	5	0.52		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	265.3	3.566	237.0	31.25	2.480	5	0.79		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	254.9	23.85	237.0	31.25	2.480	5	0.50		1
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	226.0	5.998				1			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
291.99	Acid Soluble Ni, Other (ppm)	0255	186.8	0.0240	220.8	30.18	1.008	3	-1.13		0
291.99	Acid Soluble Ni, Other (ppm)	0405	231.0	2.000	220.8	30.18	1.008	3	0.34		0
291.99	Acid Soluble Ni, Other (ppm)	0220	244.5	1.000	220.8	30.18	1.008	3	0.79		0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.2250	0.0100				1			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0529	5.905	1.170				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	2.337	0.3917				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	6.056	0.4547				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	0.0000	0.0000				2			4
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	6.176	4.522				1			0
301.99	Acid Soluble Se, Other (ppm)	0220	0.9000	0.0000	4.219	5.662	0.0210	3	-0.59		0
301.99	Acid Soluble Se, Other (ppm)	0405	1.000	0.0000	4.219	5.662	0.0210	3	-0.57		0
301.99	Acid Soluble Se, Other (ppm)	0255	10.76	0.0630	4.219	5.662	0.0210	3	1.15		0
311.00	Sodium, AA (%)	0553	0.0395	0.0050				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0563	0.0345	0.0046	0.0536	0.0159	0.0037	5	-1.20		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0494	0.0498	0.0004	0.0536	0.0159	0.0037	5	-0.24		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.0505	0.0030	0.0536	0.0159	0.0037	5	-0.19		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0546	0.0016	0.0536	0.0159	0.0037	5	0.06		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.0785	0.0090	0.0536	0.0159	0.0037	5	1.57		0
311.99	Sodium, Other (%)	0096	0.0650	0.0100				2			0
311.99	Sodium, Other (%)	0354	0.1000	0.0000				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	0.1890	0.0120				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.1420	0.0000	0.1953	0.0257	5.227	9	-1.92	Low	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0472	0.1800	0.0000	0.1953	0.0257	5.227	9	-0.55	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0095	0.1850	0.0100	0.1953	0.0257	5.227	9	-0.37	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.1900	0.0000	0.1953	0.0257	5.227	9	-0.19	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0444	0.1900	0.0000	0.1953	0.0257	5.227	9	-0.19	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.1955	0.0150	0.1953	0.0257	5.227	9	0.01	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0041	0.2050	0.0100	0.1953	0.0257	5.227	9	0.35	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0402	0.2218	0.0048	0.1953	0.0257	5.227	9	0.95	High	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	1,931	47.00	0.1953	0.0257	5.227	9	69365.92	High	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0450	1,811	189.0	0.1953	0.0257	5.227	9	65053.69	High	1
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0529	0.1700	0.0200	0.1850	0.0139	0.0073	3	-1.08		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0394	0.1875	0.0010	0.1850	0.0139	0.0073	3	0.18		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.1975	0.0010	0.1850	0.0139	0.0073	3	0.90		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.1800	0.0000	0.1945	0.0140	0.0072	8	-0.94	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.1846	0.0079	0.1945	0.0140	0.0072	8	-0.65	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0494	0.1886	0.0101	0.1945	0.0140	0.0072	8	-0.39	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0233	0.1887	0.0135	0.1945	0.0140	0.0072	8	-0.38	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0546	0.1932	0.0023	0.1945	0.0140	0.0072	8	-0.09	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.1950	0.0100	0.1945	0.0140	0.0072	8	0.04	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.2103	0.0009	0.1945	0.0140	0.0072	8	1.03	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0563	0.2247	0.0131	0.1945	0.0140	0.0072	8	1.97	High	0
321.99	Acid Soluble Zn, Other (%)	0516	0.1720	0.0000	0.1845	0.0112	0.0032	6	-0.99	OK	0
321.99	Acid Soluble Zn, Other (%)	0220	0.1780	0.0020	0.1845	0.0112	0.0032	6	-0.52	OK	0
321.99	Acid Soluble Zn, Other (%)	0405	0.1835	0.0030	0.1845	0.0112	0.0032	6	-0.08	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.1856	0.0021	0.1845	0.0112	0.0032	6	0.08	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.1867	0.0020	0.1845	0.0112	0.0032	6	0.17	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
321.99	Acid Soluble Zn, Other (%)	0389	0.3250	0.0100	0.1845	0.0112	0.0032	6	11.16	High	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, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. 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 grey and included for information only. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower, Green indicates within the IA range. Method 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.