



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 98

Sample # 250311

Regular PT Scheme

Labs Reporting: 58

Gypsum

Statistical Summary

Issue Date : 04/30/2025

Method Code	Analyte & Method Sample # 250311	# 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
001.99	Ammoniacal N, Other (%)	1		0.2718									
005.99	Urea N, Other (%)	1		0.0759									
010.12	Total N, Salicylic (%)	1		0.4880									
010.60	Total N, Combustion (%)	5	5	0.5075	0.0229	0.5075	0.4900	0.0229	0.0128	4.51%	0.11	0.0117	4.43%
010.99	Total N, Other (%)	1		0.5056									
020.50	Total P2O5, ICP (%)	4	3	0.0299	0.0271	0.0395		0.0234	0.0169	59.33%		0.0068	6.51%
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	2	2	0.0913	0.0689								
050.50	Soluble K2O, ICP (Oxalate) (%)	1		0.1012									
050.51	Soluble K2O, ICP (Citrate) (%)	1		0.1200									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	1		0.0690									
050.99	Soluble K2O, Other (%)	2	2	0.0613	0.0278								
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	2	2	20.60	0.4278								
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual ε	1		21.40									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	14	13	21.77	1.168	21.59	1.0000	1.140	0.3952	5.28%	2.66	0.3340	2.15%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	4	4	21.87	2.098	21.87	1.0000	2.098	1.311	9.59%	4.89	1.230	2.14%
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	16	15	21.32	1.065	21.18	1.0000	1.043	0.3366	4.93%	2.43	0.3466	2.17%
101.70	Acid Soluble Ca, Titrimetric (21%)	2	2	21.50	0.7778								
101.99	Acid Soluble Ca, Other (21%)	14	14	21.76	1.260	21.76	1.0000	1.403	0.4686	6.45%	3.27	0.5097	2.14%
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	4	4	0.1388	0.0211	0.1388	0.2069	0.0211	0.0132	15.19%	0.24	0.0097	5.38%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.1510									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	3	3	0.1325	0.0447	0.1325	0.2066	0.0447	0.0323	33.77%	0.50	0.0079	5.42%
121.99	Acid Soluble Mg, Other (%)	2	2	0.1411	0.0086								
143.99	Elemental S, Other (%)	3	3	16.90	1.206	16.90		1.206	0.8701	7.14%		0.0367	2.43%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	7	7	16.41	0.5475	16.49		0.4271	0.2018	2.59%		0.1019	2.46%
145.99	Sulfate S, HCl soluble, Other (%)	1		16.22									
148.00	Total S, Combustion (17%)	5	5	15.92	1.303	15.92	0.9961	1.303	0.7282	8.18%	3.05	0.4350	2.51%
148.01	Total S, Gravimetric - sulfate and elemental (17%)	9	9	16.47	0.6633	16.58	1.0000	0.4523	0.1884	2.73%	1.05	0.2773	2.46%
148.02	Total S, Turbidimetric, w/Br digestion, modification of JAOAC €	1		16.80									
148.03	Total S, Spectrometric, w/Br digestion (17%)	1		16.80									

Method Code	Analyte & Method Sample # 250311	# 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
148.07	Total S, ICP, test portion as in 2017.02 (17%)	16	15	16.84	0.9684	16.84	1.0000	0.6054	0.1954	3.60%	1.41	0.3061	2.44%
148.99	Total S, Other (17%)	12	12	17.05	0.5694	17.05	1.0000	0.6374	0.2300	3.74%	1.49	0.2194	2.42%
149.04	S - HNO3 soluble, ICP (%)	3	3	15.90	1.865	15.90		1.865	1.346	11.73%		0.8532	2.51%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	1		0.2700									
151.30	Acid Soluble As, ICP (ppm)	4	2	1.776	2.990	0.4264		0.1077	0.0952	25.25%		0.0028	18.19%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	1	1.650	1.909								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	3	1	8.753	14.30	0.4264		0.1077	0.1346	25.25%		0.0010	18.19%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.7310									
151.99	Acid Soluble As, Other (ppm)	3	2	0.4033	0.0950	0.3550		0.0636	0.0563	17.93%		0.0000	18.69%
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	1	0.0053	0.0067								
165.99	Acid Soluble B, Other (%)	3	2	0.0036	0.0055	0.0004	0.0031	0.0000	0.0000	8.32%	0.03	0.0007	12.87%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	1		0.1300									
181.30	Acid Soluble Cd, ICP (ppm)	5	2	0.1367	0.0668	0.1278		0.0074	0.0065	5.78%		0.0096	21.80%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	1	0.5500	0.6364								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	3	1	0.9897	0.9845	0.1278		0.0074	0.0092	5.78%		0.0040	21.80%
181.99	Acid Soluble Cd, Other (ppm)	3	2	0.2300	0.2339	0.0950		0.0071	0.0063	7.44%		0.0400	22.00%
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid	1		17.70									
191.30	Acid Soluble Cr, ICP (ppm)	6	6	11.50	3.966	11.50		4.498	2.295	39.12%		0.7465	11.08%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	12.58	2.722								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	3	3	11.08	6.902	11.08		6.902	4.981	62.30%		1.402	11.14%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		9.437									
191.99	Acid Soluble Cr, Other (ppm)	3	2	11.92	7.374	7.878		3.285	2.903	41.69%		0.5450	11.73%
202.30	Acid Soluble Co, ICP (ppm)	3	3	3.782	0.7196	3.782	2.1345	0.7196	0.5193	19.03%	0.79	0.5423	13.09%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	2	2.750	1.768								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	3	2	3.159	1.551	3.488	2.0465	2.039	1.802	58.45%	2.32	0.2897	13.25%
202.99	Acid Soluble Co, Other (ppm)	3	3	12.47	18.69	12.47	4.7400	18.69	13.49	149.94%	9.19	5.710	10.94%
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual acid	1		0.0010									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	3	0	0.0033	0.0058	12.47	1.0000	18.69		149.94%	43.55	0.0400	2.74%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0002									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	4	3	0.0003	0.0001	0.0003	0.0050	0.0002	0.0001	61.97%	0.08	0.0001	13.68%
221.99	Acid Soluble Cu, Other (%)	5	4	0.0024	0.0043	0.0005	0.0051	0.0004	0.0002	71.18%	0.16	0.0000	12.56%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	3	3	0.0670	0.0034	0.0670	0.0117	0.0034	0.0025	5.09%	0.68	0.0047	6.01%
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	3	3	0.0896	0.0016	0.0896	0.0140	0.0016	0.0011	1.77%	0.27	0.0097	5.75%
241.99	Acid Soluble Fe, Other (%)	2	2	0.0555	0.0018								
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
251.30	Acid Soluble Pb, ICP (ppm)	5	2	1.529	2.647	0.4968		0.0406	0.0358	8.16%		0.0138	17.77%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	2	1	2.275	2.440								
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	3	1	1.874	1.634	0.4968		0.0406	0.0507	8.16%		0.0030	17.77%
251.99	Acid Soluble Pb, Other (ppm)	3	2	0.6667	0.2970	0.5000		0.0990	0.0875	19.80%		0.0600	17.76%
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	3	2	0.0050	0.0044	0.0025	0.0052	0.0004	0.0003	15.71%	0.17	0.0001	9.87%

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261.35	Acid Soluble Mn, ICP, 2017.02 (%)	2	2	0.0070	0.0054								
261.99	Acid Soluble Mn, Other (%)	1		0.0025									
281.00	Acid Soluble Hg, AA (ppm)	2	0	0.5000	0.0000								
281.30	Acid Soluble Hg, ICP (ppm)	4	0	0.8378	0.9601	0.0070		0.0054		77.32%		0.0001	22.00%
281.99	Acid Soluble Hg, Other (ppm)	4	4	0.1828	0.0626	0.1828		0.0626	0.0391	34.26%		0.0043	20.66%
289.30	Acid Soluble Mo, ICP (ppm)	3	3	0.8797	0.3820	0.8797	1.2639	0.3820	0.2757	43.42%	0.70	0.0858	16.31%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	2	1	0.9750	0.0354								
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	3	1	1.998	1.800	0.8797	1.2639	0.3820	0.4775	43.42%	0.70	0.0370	16.31%
289.99	Acid Soluble Mo, Other (ppm)	2	1	1.740	1.160								
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid	1		10.00									
291.30	Acid Soluble Ni, ICP (ppm)	5	5	3.532	1.198	3.532		1.198	0.6695	33.90%		0.3542	13.23%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	2	2	5.225	1.096								
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	3	2	6.033	5.278	7.800		6.082	5.375	77.97%		0.5669	11.74%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	1		1.694									
291.99	Acid Soluble Ni, Other (ppm)	3	3	16.02	22.34	16.02		22.34	16.12	139.45%		4.597	10.54%
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
301.30	Acid Soluble Se, ICP (ppm)	3	2	3.436	2.440	2.029		0.1648	0.1457	8.12%		0.0110	14.38%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	2	1	5.850	5.869								
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	2	1	3.410	4.808								
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		2.664									
301.99	Acid Soluble Se, Other (ppm)	3	2	1.160	1.006	1.740		0.0849	0.0750	4.88%		0.2500	14.72%
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.0046									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	1		0.0064									
311.99	Sodium, Other (%)	1		0.0300									
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual a	1		0.0100									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	3	2	0.0043	0.0049	0.0015	0.0051	0.0001	0.0001	4.88%	0.03	0.0010	10.70%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	2	2	0.0009	0.0001								
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	4	3	0.0011	0.0002	0.0011	0.0051	0.0002	0.0002	20.83%	0.10	0.0002	11.15%
321.99	Acid Soluble Zn, Other (%)	5	4	0.0040	0.0043	0.0025	0.0052	0.0030	0.0019	123.84%	1.35	0.0002	9.88%

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. The Horwitz %RSD is calculated using the Thompson Modification, Analyst,2000,125,385-386.



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Sample # 250311

Regular PT Scheme

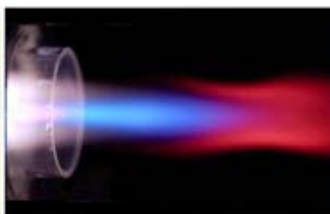
Gypsum

Method Precision Report

Issue Date : 04/30/2025

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 N, Combustion (%)	5	5	0.5075	0.0229	0.0223	0.0072	0.0235	4.40%	1.43%	4.62%	3.237
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	14	13	21.63	1.081	1.059	0.3033	1.102	4.90%	1.40%	5.09%	3.632
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	16	14	21.28	1.067	1.050	0.2720	1.085	4.93%	1.28%	5.10%	3.987
101.99	Acid Soluble Ca, Other (21%)	14	13	21.93	1.132	1.100	0.3792	1.163	5.02%	1.73%	5.31%	3.069
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	7	6	16.60	0.2729	0.2661	0.0856	0.2795	1.60%	0.52%	1.68%	3.267
148.00	Total S, Combustion (17%)	5	5	15.92	1.303	1.285	0.2998	1.320	8.07%	1.88%	8.29%	4.403
148.01	Total S, Gravimetric - sulfate and elemental (17%)	9	7	16.68	0.3534	0.3336	0.1649	0.3721	2.00%	0.99%	2.23%	2.257
148.07	Total S, ICP, test portion as in 2017.02 (17%)	16	13	16.87	0.5172	0.4989	0.1932	0.5350	2.96%	1.15%	3.17%	2.769
148.99	Total S, Other (17%)	12	12	17.05	0.5694	0.5556	0.1761	0.5828	3.26%	1.03%	3.42%	3.309
191.30	Acid Soluble Cr, ICP (ppm)	6	5	11.57	4.430	4.418	0.4619	4.442	38.19%	3.99%	38.40%	9.616

Notes: Precision data calculated when 5 or more Tests included.



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 98

Sample # 250311

Regular PT Scheme

Labs Reporting: 58

Gypsum

Lab Values

Issue Date : 04/30/2025

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
001.99	Ammoniacal N, Other (%)	0524	0.2718	0.1152				1			0
005.99	Urea N, Other (%)	0524	0.0759	0.0081				1			0
010.12	Total N, Salicylic (%)	0568	0.4880	0.0000				1			0
010.60	Total N, Combustion (%)	0423	0.4800	0.0200	0.5075	0.0229	0.0117	5	-1.20		0
010.60	Total N, Combustion (%)	0472	0.4885	0.0050	0.5075	0.0229	0.0117	5	-0.83		0
010.60	Total N, Combustion (%)	0422	0.5150	0.0100	0.5075	0.0229	0.0117	5	0.33		0
010.60	Total N, Combustion (%)	0527	0.5180	0.0000	0.5075	0.0229	0.0117	5	0.46		0
010.60	Total N, Combustion (%)	0354	0.5360	0.0000	0.5075	0.0229	0.0117	5	1.25		0
010.99	Total N, Other (%)	0524	0.5056	0.0246				1			0
020.50	Total P2O5, ICP (%)	0422	0.0190	0.0019	0.0395	0.0234	0.0068	3	-0.88		0
020.50	Total P2O5, ICP (%)	0524	0.0345	0.0086	0.0395	0.0234	0.0068	3	-0.21		0
020.50	Total P2O5, ICP (%)	0472	0.0650	0.0100	0.0395	0.0234	0.0068	3	1.09		0
020.50	Total P2O5, ICP (%)	0527	< 0.001		0.0395	0.0234	0.0068	3			5
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0354	0.0425	0.0070				2			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0568	0.1400	0.0000				2			0
050.50	Soluble K2O, ICP (Oxalate) (%)	0422	0.1012	0.0012				1			0
050.51	Soluble K2O, ICP (Citrate) (%)	0568	0.1200	0.0000				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0690	0.0140				1			0
050.99	Soluble K2O, Other (%)	0524	0.0417	0.0021				2			0
050.99	Soluble K2O, Other (%)	0527	0.0810	0.0049				2			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0553	20.30	0.4100				2			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (21%)	0615	20.90	0.4000				2			0
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual ac	0498	21.40	0.8000				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0255	20.05	0.1800	21.59	1.140	0.3340	13	-1.35	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0377	20.46	0.9400	21.59	1.140	0.3340	13	-0.99	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0231	20.72	0.4700	21.59	1.140	0.3340	13	-0.77	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0451	20.79	0.2300	21.59	1.140	0.3340	13	-0.71	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0568	21.00	0.0000	21.59	1.140	0.3340	13	-0.52	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0049	21.17	0.2400	21.59	1.140	0.3340	13	-0.37	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0035	21.50	0.0000	21.59	1.140	0.3340	13	-0.08	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0324	21.75	0.5000	21.59	1.140	0.3340	13	0.14	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			#	Magruder PT	Method IA	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar	Tests	Z Score	Status	
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0354	22.15	0.1000	21.59	1.140	0.3340	13	0.49	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0234	22.34	0.9000	21.59	1.140	0.3340	13	0.66	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0422	22.58	0.0100	21.59	1.140	0.3340	13	0.86	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0433	22.91	0.2700	21.59	1.140	0.3340	13	1.15	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0291	23.79	0.0400	21.59	1.140	0.3340	13	1.93	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (21%)	0360	23.63	5.480	21.59	1.140	0.3340	13	1.79	High	1
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	0405	19.12	0.0500	21.87	2.098	1.230	4	-1.31		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	0423	21.37	0.5500	21.87	2.098	1.230	4	-0.24		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	0307	23.35	0.7000	21.87	2.098	1.230	4	0.71		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (21%)	0095	23.65	3.620	21.87	2.098	1.230	4	0.85		0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0177	19.98	0.0321	21.18	1.043	0.3466	15	-1.14	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0102	20.10	0.2800	21.18	1.043	0.3466	15	-1.03	Low	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0521	20.19	0.0000	21.18	1.043	0.3466	15	-0.95	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0055	20.60	0.1100	21.18	1.043	0.3466	15	-0.56	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0043	20.67	1.370	21.18	1.043	0.3466	15	-0.49	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0421	20.75	0.7500	21.18	1.043	0.3466	15	-0.41	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0040	20.86	0.5100	21.18	1.043	0.3466	15	-0.31	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0527	20.97	0.2800	21.18	1.043	0.3466	15	-0.20	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0612	20.98	0.3700	21.18	1.043	0.3466	15	-0.19	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0169	21.28	0.0500	21.18	1.043	0.3466	15	0.09	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0136	21.30	0.4000	21.18	1.043	0.3466	15	0.12	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0543	22.12	0.3210	21.18	1.043	0.3466	15	0.91	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0394	22.40	0.0590	21.18	1.043	0.3466	15	1.17	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0472	22.79	0.0300	21.18	1.043	0.3466	15	1.54	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0452	23.56	0.8200	21.18	1.043	0.3466	15	2.28	High	0
101.33	Acid Soluble Ca, ICP, 2017.02 (21%)	0515	22.64	3.960	21.18	1.043	0.3466	15	1.40	High	1
101.70	Acid Soluble Ca, Titrimetric (21%)	0602	20.95	0.1000				2			0
101.70	Acid Soluble Ca, Titrimetric (21%)	0517	22.05	0.3000				2			0
101.99	Acid Soluble Ca, Other (21%)	0042	19.55	1.700	21.76	1.403	0.5097	14	-1.58	Low	0
101.99	Acid Soluble Ca, Other (21%)	0481	20.35	0.2500	21.76	1.403	0.5097	14	-1.01	Low	0
101.99	Acid Soluble Ca, Other (21%)	0029	20.74	0.0000	21.76	1.403	0.5097	14	-0.73	Low	0
101.99	Acid Soluble Ca, Other (21%)	0602	20.95	0.1000	21.76	1.403	0.5097	14	-0.58	OK	0
101.99	Acid Soluble Ca, Other (21%)	0389	21.11	0.0800	21.76	1.403	0.5097	14	-0.46	OK	0
101.99	Acid Soluble Ca, Other (21%)	0584	21.38	0.1700	21.76	1.403	0.5097	14	-0.28	OK	0
101.99	Acid Soluble Ca, Other (21%)	0605	21.44	0.1580	21.76	1.403	0.5097	14	-0.23	OK	0
101.99	Acid Soluble Ca, Other (21%)	0023	21.73	0.0770	21.76	1.403	0.5097	14	-0.02	OK	0
101.99	Acid Soluble Ca, Other (21%)	0231	21.85	0.0000	21.76	1.403	0.5097	14	0.06	OK	0
101.99	Acid Soluble Ca, Other (21%)	0572	22.00	0.4000	21.76	1.403	0.5097	14	0.17	OK	0
101.99	Acid Soluble Ca, Other (21%)	0523	22.69	0.7000	21.76	1.403	0.5097	14	0.66	OK	0
101.99	Acid Soluble Ca, Other (21%)	0307	23.35	0.7000	21.76	1.403	0.5097	14	1.13	High	0
101.99	Acid Soluble Ca, Other (21%)	0515	23.55	1.240	21.76	1.403	0.5097	14	1.28	High	0
101.99	Acid Soluble Ca, Other (21%)	0027	23.93	0.9600	21.76	1.403	0.5097	14	1.55	High	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0422	0.1237	0.0001	0.1388	0.0211	0.0097	4	-0.72		0

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0568	0.1300	0.0000	0.1388	0.0211	0.0097	4	-0.42		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.1315	0.0090	0.1388	0.0211	0.0097	4	-0.35		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.1700	0.0200	0.1388	0.0211	0.0097	4	1.48		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.1510	0.0040				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.0850	0.0100	0.1325	0.0447	0.0079	3	-1.06		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.1387	0.0019	0.1325	0.0447	0.0079	3	0.14		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.1739	0.0119	0.1325	0.0447	0.0079	3	0.92		0
121.99	Acid Soluble Mg, Other (%)	0524	0.1350	0.0024				2			0
121.99	Acid Soluble Mg, Other (%)	0515	0.1472	0.0108				2			0
143.99	Elemental S, Other (%)	0255	15.51	0.0800	16.90	1.206	0.0367	3	-1.15		0
143.99	Elemental S, Other (%)	0291	17.47	0.0100	16.90	1.206	0.0367	3	0.47		0
143.99	Elemental S, Other (%)	0389	17.71	0.0200	16.90	1.206	0.0367	3	0.68		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0106	15.31	0.0900	16.49	0.4271	0.1019	7	-2.50	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0027	16.36	0.1400	16.49	0.4271	0.1019	7	-0.27	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0220	16.38	0.0000	16.49	0.4271	0.1019	7	-0.23	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0177	16.42	0.2184	16.49	0.4271	0.1019	7	-0.15	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0029	16.60	0.0100	16.49	0.4271	0.1019	7	0.23	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0476	16.76	0.1427	16.49	0.4271	0.1019	7	0.58	NA	0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0405	17.06	0.0100	16.49	0.4271	0.1019	7	1.20	NA	0
145.99	Sulfate S, HCl soluble, Other (%)	0553	16.22	0.2300				1			0
148.00	Total S, Combustion (17%)	0025	14.06	0.5000	15.92	1.303	0.4350	5	-1.43		0
148.00	Total S, Combustion (17%)	0451	15.35	0.7000	15.92	1.303	0.4350	5	-0.44		0
148.00	Total S, Combustion (17%)	0049	15.91	0.1900	15.92	1.303	0.4350	5	-0.01		0
148.00	Total S, Combustion (17%)	0405	17.10	0.0000	15.92	1.303	0.4350	5	0.90		0
148.00	Total S, Combustion (17%)	0547	17.20	0.3500	15.92	1.303	0.4350	5	0.98		0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0545	14.91	0.5700	16.58	0.4523	0.2773	9	-3.43	Low	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0028	16.30	0.1300	16.58	0.4523	0.2773	9	-0.59	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0498	16.40	0.4000	16.58	0.4523	0.2773	9	-0.38	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0231	16.55	0.2200	16.58	0.4523	0.2773	9	-0.07	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0177	16.57	0.0558	16.58	0.4523	0.2773	9	-0.03	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0029	16.60	0.0100	16.58	0.4523	0.2773	9	0.02	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0324	16.60	1.400	16.58	0.4523	0.2773	9	0.03	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0055	17.12	0.3900	16.58	0.4523	0.2773	9	1.08	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (17%)	0534	17.23	0.0100	16.58	0.4523	0.2773	9	1.31	OK	0
148.02	Total S, Turbidimetric, w/Br digestion, modification of JAOAC 6:	0602	16.80	0.2000				1			0
148.03	Total S, Spectrometric, w/Br digestion (17%)	0602	16.80	0.2000				1			0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0421	15.90	1.000	16.84	0.6054	0.3061	15	-1.55	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0169	16.24	0.0300	16.84	0.6054	0.3061	15	-1.00	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0177	16.41	0.0053	16.84	0.6054	0.3061	15	-0.71	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0472	16.47	0.0200	16.84	0.6054	0.3061	15	-0.61	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0043	16.48	0.2400	16.84	0.6054	0.3061	15	-0.59	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0612	16.67	0.2500	16.84	0.6054	0.3061	15	-0.29	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0040	16.70	0.4000	16.84	0.6054	0.3061	15	-0.23	OK	0

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148.07	Total S, ICP, test portion as in 2017.02 (17%)	0102	16.74	0.1100	16.84	0.6054	0.3061	15	-0.17	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0394	16.74	0.3660	16.84	0.6054	0.3061	15	-0.17	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0136	17.00	0.0000	16.84	0.6054	0.3061	15	0.27	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0452	17.03	0.5600	16.84	0.6054	0.3061	15	0.32	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0307	17.20	0.0000	16.84	0.6054	0.3061	15	0.60	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0035	17.50	0.2000	16.84	0.6054	0.3061	15	1.09	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0527	18.15	0.4356	16.84	0.6054	0.3061	15	2.16	High	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0543	19.36	0.6510	16.84	0.6054	0.3061	15	4.16	High	0
148.07	Total S, ICP, test portion as in 2017.02 (17%)	0515	14.94	2.910	16.84	0.6054	0.3061	15	-3.15	Low	1
148.99	Total S, Other (17%)	0572	16.05	0.5000	17.05	0.6374	0.2194	12	-1.57	Low	0
148.99	Total S, Other (17%)	0377	16.33	0.4100	17.05	0.6374	0.2194	12	-1.14	OK	0
148.99	Total S, Other (17%)	0523	16.40	0.3000	17.05	0.6374	0.2194	12	-1.02	OK	0
148.99	Total S, Other (17%)	0602	16.80	0.2000	17.05	0.6374	0.2194	12	-0.40	OK	0
148.99	Total S, Other (17%)	0023	16.99	0.1430	17.05	0.6374	0.2194	12	-0.09	OK	0
148.99	Total S, Other (17%)	0605	17.04	0.2220	17.05	0.6374	0.2194	12	-0.02	OK	0
148.99	Total S, Other (17%)	0307	17.20	0.0000	17.05	0.6374	0.2194	12	0.23	OK	0
148.99	Total S, Other (17%)	0584	17.29	0.1400	17.05	0.6374	0.2194	12	0.37	OK	0
148.99	Total S, Other (17%)	0433	17.36	0.2000	17.05	0.6374	0.2194	12	0.48	OK	0
148.99	Total S, Other (17%)	0354	17.50	0.2000	17.05	0.6374	0.2194	12	0.70	OK	0
148.99	Total S, Other (17%)	0422	17.74	0.1000	17.05	0.6374	0.2194	12	1.08	OK	0
148.99	Total S, Other (17%)	0220	17.89	0.1300	17.05	0.6374	0.2194	12	1.31	OK	0
149.04	S - HNO3 soluble, ICP (%)	0524	13.75	1.337	15.90	1.865	0.8532	3	-1.15		0
149.04	S - HNO3 soluble, ICP (%)	0423	16.89	0.3690	15.90	1.865	0.8532	3	0.53		0
149.04	S - HNO3 soluble, ICP (%)	0521	17.06	0.0000	15.90	1.865	0.8532	3	0.62		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	0498	0.2700	0.0200				1			0
151.30	Acid Soluble As, ICP (ppm)	0524	0.3503	0.0045				2			0
151.30	Acid Soluble As, ICP (ppm)	0523	0.5025	0.0010				2			0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000				2			4
151.30	Acid Soluble As, ICP (ppm)	0605	< 6.25					2			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	0.3000	0.0000				1			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	< 3					1			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	25.26	0.3000				1			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	< 1					1			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	0.7310	0.3180				1			0
151.99	Acid Soluble As, Other (ppm)	0572	0.3100	0.0000				2			0
151.99	Acid Soluble As, Other (ppm)	0220	0.4000	0.0000				2			0
151.99	Acid Soluble As, Other (ppm)	0481	< 0.5					2			5
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0422	0.0005	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					1			5
165.99	Acid Soluble B, Other (%)	0524	0.0004	0.0000				2			0
165.99	Acid Soluble B, Other (%)	0515	0.0005	0.0007				2			0
165.99	Acid Soluble B, Other (%)	0527	< 0.01					2			5

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181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	0498	0.1300	0.0200				1			0
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.1226	0.0151				2			0
181.30	Acid Soluble Cd, ICP (ppm)	0523	0.1330	0.0040				2			0
181.30	Acid Soluble Cd, ICP (ppm)	0255	0.0780	0.1560				2			4
181.30	Acid Soluble Cd, ICP (ppm)	0394	< 0.1					2			5
181.30	Acid Soluble Cd, ICP (ppm)	0605	< 0.25					2			5
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	0.1000	0.0000				1			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	< 1					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	1.969	0.4700				1			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1					1			5
181.99	Acid Soluble Cd, Other (ppm)	0572	0.0900	0.0400				2			0
181.99	Acid Soluble Cd, Other (ppm)	0220	0.1000	0.0000				2			0
181.99	Acid Soluble Cd, Other (ppm)	0481	< 0.5					2			5
191.00	Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid	0498	17.70	0.0000				1			0
191.30	Acid Soluble Cr, ICP (ppm)	0035	6.955	1.230	11.50	4.498	0.7465	6	-0.90	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	8.115	0.0351	11.50	4.498	0.7465	6	-0.67	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	10.38	0.3180	11.50	4.498	0.7465	6	-0.22	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0605	11.13	2.812	11.50	4.498	0.7465	6	-0.07	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0523	15.50	0.0110	11.50	4.498	0.7465	6	0.79	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0027	16.90	0.7200	11.50	4.498	0.7465	6	1.07	NA	0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	10.65	0.3000				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	14.50	1.000				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	5.250	1.500	11.08	6.902	1.402	3	-0.84		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	9.287	0.4247	11.08	6.902	1.402	3	-0.26		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	18.70	2.280	11.08	6.902	1.402	3	1.10		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	9.437	1.566				1			0
191.99	Acid Soluble Cr, Other (ppm)	0572	5.555	0.4900				2			0
191.99	Acid Soluble Cr, Other (ppm)	0220	10.20	0.6000				2			0
191.99	Acid Soluble Cr, Other (ppm)	0481	< 20					2			5
202.30	Acid Soluble Co, ICP (ppm)	0605	2.967	0.8740	3.782	0.7196	0.5423	3	-1.13		0
202.30	Acid Soluble Co, ICP (ppm)	0523	4.047	0.0250	3.782	0.7196	0.5423	3	0.37		0
202.30	Acid Soluble Co, ICP (ppm)	0524	4.331	0.7280	3.782	0.7196	0.5423	3	0.76		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	1.500	0.0000				2			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	4.000	0.0000				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	2.047	0.0234				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	4.930	0.5560				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 2.5					2			5
202.99	Acid Soluble Co, Other (ppm)	0572	1.450	0.0800	12.47	18.69	5.710	3	-0.59		0
202.99	Acid Soluble Co, Other (ppm)	0220	1.900	0.0000	12.47	18.69	5.710	3	-0.57		0
202.99	Acid Soluble Co, Other (ppm)	0255	34.05	11.34	12.47	18.69	5.710	3	1.15		0
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual acid	0498	< 0.001					0			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000				0			4

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221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0422	0.0000	0.0000				0			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					0			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0405	< 0.0002					0			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0394	0.0001	0.0000	0.0003	0.0002	0.0001	3	-1.04		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0003	0.0000	0.0003	0.0002	0.0001	3	0.09		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0515	0.0005	0.0001	0.0003	0.0002	0.0001	3	0.95		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	< 0.0002		0.0003	0.0002	0.0001	3			5
221.99	Acid Soluble Cu, Other (%)	0572	0.0002	0.0000	0.0005	0.0004	0.0000	4	-0.84		0
221.99	Acid Soluble Cu, Other (%)	0515	0.0003	0.0000	0.0005	0.0004	0.0000	4	-0.56		0
221.99	Acid Soluble Cu, Other (%)	0524	0.0005	0.0000	0.0005	0.0004	0.0000	4	0.00		0
221.99	Acid Soluble Cu, Other (%)	0523	0.0010	0.0000	0.0005	0.0004	0.0000	4	1.40		0
221.99	Acid Soluble Cu, Other (%)	0481	< 0.01		0.0005	0.0004	0.0000	4			5
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.0650	0.0040	0.0670	0.0034	0.0047	3	-0.58		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.0650	0.0100	0.0670	0.0034	0.0047	3	-0.58		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0422	0.0709	0.0002	0.0670	0.0034	0.0047	3	1.15		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.0879	0.0009	0.0896	0.0016	0.0097	3	-1.10		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0472	0.0900	0.0000	0.0896	0.0016	0.0097	3	0.25		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	0.0910	0.0185	0.0896	0.0016	0.0097	3	0.85		0
241.99	Acid Soluble Fe, Other (%)	0515	0.0542	0.0174				2			0
241.99	Acid Soluble Fe, Other (%)	0524	0.0567	0.0002				2			0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	0498	< 0.5					0			5
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.4682	0.0245				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0523	0.5255	0.0030				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.0000	0.0000				2			4
251.30	Acid Soluble Pb, ICP (ppm)	0394	< 0.4					2			5
251.30	Acid Soluble Pb, ICP (ppm)	0605	< 6.25					2			5
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	0.5500	0.1000				1			0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0405	< 4					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	2.623	1.445				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3					1			5
251.99	Acid Soluble Pb, Other (ppm)	0572	0.4300	0.0000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	0.5700	0.0600				2			0
251.99	Acid Soluble Pb, Other (ppm)	0481	< 1					2			5
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0422	0.0022	0.0000				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0028	0.0001				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					2			5
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0032	0.0001				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0108	0.0075				2			0
261.99	Acid Soluble Mn, Other (%)	0524	0.0025	0.0000				1			0
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.00	Acid Soluble Hg, AA (ppm)	0498	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					0			5

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
281.30	Acid Soluble Hg, ICP (ppm)	0515	< 0.1					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0605	< 1.25					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0405	< 2					0			5
281.99	Acid Soluble Hg, Other (ppm)	0524	0.1080	0.0030	0.1828	0.0626	0.0043	4	-1.19		0
281.99	Acid Soluble Hg, Other (ppm)	0572	0.1715	0.0030	0.1828	0.0626	0.0043	4	-0.18		0
281.99	Acid Soluble Hg, Other (ppm)	0035	0.1915	0.0070	0.1828	0.0626	0.0043	4	0.14		0
281.99	Acid Soluble Hg, Other (ppm)	0220	0.2600	0.0000	0.1828	0.0626	0.0043	4	1.23		0
289.30	Acid Soluble Mo, ICP (ppm)	0524	0.4521	0.0975	0.8797	0.3820	0.0858	3	-1.12		0
289.30	Acid Soluble Mo, ICP (ppm)	0234	1.000	0.0000	0.8797	0.3820	0.0858	3	0.31		0
289.30	Acid Soluble Mo, ICP (ppm)	0255	1.187	0.0740	0.8797	0.3820	0.0858	3	0.80		0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	0.9500	0.1000				1			0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	< 1					1			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	3.494	0.4320				1			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	< 0.0001					1			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	< 2.5					1			5
289.99	Acid Soluble Mo, Other (ppm)	0220	0.9200	0.0600				1			0
289.99	Acid Soluble Mo, Other (ppm)	0572	< 2.56					1			5
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (	0498	< 10					0			5
291.30	Acid Soluble Ni, ICP (ppm)	0035	1.670	0.3200	3.532	1.198	0.3542	5	-1.56		0
291.30	Acid Soluble Ni, ICP (ppm)	0605	3.504	1.212	3.532	1.198	0.3542	5	-0.02		0
291.30	Acid Soluble Ni, ICP (ppm)	0394	3.586	0.0210	3.532	1.198	0.3542	5	0.04		0
291.30	Acid Soluble Ni, ICP (ppm)	0524	3.914	0.1859	3.532	1.198	0.3542	5	0.32		0
291.30	Acid Soluble Ni, ICP (ppm)	0523	4.988	0.0320	3.532	1.198	0.3542	5	1.22		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	4.450	0.1000				2			0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	6.000	2.000				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	3.499	0.1738				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	12.10	0.9600				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	< 2.5					2			5
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	1.694	1.038				1			0
291.99	Acid Soluble Ni, Other (ppm)	0572	2.505	0.2700	16.02	22.34	4.597	3	-0.60		0
291.99	Acid Soluble Ni, Other (ppm)	0220	3.750	0.1000	16.02	22.34	4.597	3	-0.55		0
291.99	Acid Soluble Ni, Other (ppm)	0255	41.81	13.42	16.02	22.34	4.597	3	1.15		0
301.00	Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid	0498	< 0.5					0			5
301.30	Acid Soluble Se, ICP (ppm)	0523	1.912	0.0040				2			0
301.30	Acid Soluble Se, ICP (ppm)	0524	2.145	0.0179				2			0
301.30	Acid Soluble Se, ICP (ppm)	0605	< 6.25					2			5
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	1.700	0.2000				1			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	< 10					1			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	6.810	0.2030				1			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01					1			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	2.664	0.2010				1			0
301.99	Acid Soluble Se, Other (ppm)	0572	1.680	0.1000				2			0
301.99	Acid Soluble Se, Other (ppm)	0220	1.800	0.4000				2			0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
301.99	Acid Soluble Se, Other (ppm)	0255	0.0000	0.0000				2			4
311.32	Sodium, ICP, 2006.03 test portion (%)	0422	0.0046	0.0000				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.0064	0.0002				1			0
311.99	Sodium, Other (%)	0354	0.0300	0.0000				1			0
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual ac	0498	< 0.01					0			5
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0422	0.0014	0.0000				2			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0015	0.0010				2			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					2			5
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0009	0.0001				2			0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	0.0010	0.0001				2			0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0009	0.0001	0.0011	0.0002	0.0002	3	-1.09		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0012	0.0003	0.0011	0.0002	0.0002	3	0.22		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0394	0.0013	0.0002	0.0011	0.0002	0.0002	3	0.87		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	< 0.001		0.0011	0.0002	0.0002	3			5
321.99	Acid Soluble Zn, Other (%)	0524	0.0009	0.0001	0.0025	0.0030	0.0002	4	-0.53		0
321.99	Acid Soluble Zn, Other (%)	0515	0.0010	0.0003	0.0025	0.0030	0.0002	4	-0.49		0
321.99	Acid Soluble Zn, Other (%)	0572	0.0010	0.0000	0.0025	0.0030	0.0002	4	-0.48		0
321.99	Acid Soluble Zn, Other (%)	0523	0.0070	0.0000	0.0025	0.0030	0.0002	4	1.50		0
321.99	Acid Soluble Zn, Other (%)	0481	< 0.01		0.0025	0.0030	0.0002	4			5

Interpreting Z Scores and Flags:

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.

Notes:

*Robust statistics not used if < 6 labs used in calculations, in this case Values and Z Scores are grayed out and should be interpreted with extreme caution. Identical duplicates not included in calculation of Rob R-bar. IA Status describes where your result is relative to the Assigned Value $\pm$ IA. Red indicates Higher or Lower and Green indicates within the IA range about the Robust mean. Method codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for