

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 132

Sample # 230111

Regular PT Scheme

Labs Reporting: 64

Organic 6-3-3.5

Statistical Summary

Issue Date : 03/03/2023

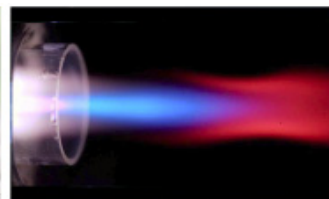
Method Code	Analyte & Method Sample # 230111	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.99	Ammoniacal N, Other (%)	2	2	0.4493	0.0484								
003.10	Water Insoluble N, Method I (%)	4	4	5.108	0.2131	5.108		0.2131	0.1332	4.17%		0.0550	3.13%
005.99	Urea N, Other (%)	1		0.3050									
010.11	Total N, Modified Comprehensive (6%)	2	2	7.013	0.2482								
010.12	Total N, Salicylic (6%)	4	4	6.786	0.3247	6.786	0.5357	0.3247	0.2029	4.78%	1.41	0.0675	3.00%
010.60	Total N, Combustion (6%)	47	46	7.044	0.1950	7.048	0.5405	0.1302	0.0240	1.85%	0.56	0.0745	2.98%
010.99	Total N, Other (6%)	6	6	7.470	0.4268	7.470	0.5447	0.4840	0.2470	6.48%	2.07	0.0681	2.96%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	2	2	6.013	0.2864								
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	8	7	6.066	0.2708	6.034		0.2908	0.1374	4.82%		0.0778	3.05%
020.40	Total P2O5, Automated (%)	1		5.850									
020.50	Total P2O5, ICP (%)	20	19	5.732	1.119	5.904		0.6708	0.1924	11.36%		0.1800	3.06%
020.99	Total P2O5, Other (%)	5	5	5.832	0.6524	5.832		0.6524	0.3647	11.19%		0.1448	3.07%
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	2	2	4.973	0.0035								
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	5	5	5.565	0.4503	5.565	0.6700	0.4503	0.2517	8.09%	1.57	0.0420	3.09%
041.20	Direct Available P2O5, Spectrophotometric (3%)	3	3	4.683	1.321	4.683	0.6700	1.321	0.9537	28.22%	4.60	0.1067	3.17%
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	9	9	5.516	0.4568	5.583	0.6700	0.3406	0.1419	6.10%	1.18	0.0867	3.09%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (3%)	1		5.664									
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	7	7	5.441	0.4028	5.463	0.6700	0.4041	0.1909	7.40%	1.41	0.1271	3.10%
041.99	Direct Available P2O5, Other (3%)	3	3	5.603	1.042	5.603	0.6700	1.042	0.7521	18.60%	3.62	0.1400	3.09%
048.20	Water Soluble P2O5, Spectrophotometric (%)	1		0.4200									
048.99	Water Soluble P2O5, Other (%)	1		0.7280									
050.00	Soluble K2O, STPB Oxalate (3.5%)	5	5	3.342	0.5011	3.342	0.4100	0.5011	0.2801	14.99%	2.85	0.1080	3.34%
050.30	Soluble K2O, AA (Oxalate) (3.5%)	3	3	4.219	0.0239	4.219	0.4144	0.0239	0.0173	0.57%	0.13	0.0190	3.22%
050.32	Soluble K2O, AA (Citrate-EDTA) (3.5%)	1		3.670									
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	7	7	3.916	0.2860	3.916	0.4100	0.3243	0.1532	8.28%	1.84	0.0591	3.26%
050.51	Soluble K2O, ICP (Citrate) (3.5%)	4	4	4.407	0.4197	4.407	0.4181	0.4197	0.2623	9.52%	2.34	0.0212	3.20%
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	9	9	4.017	0.1913	4.017	0.4103	0.2169	0.0904	5.40%	1.23	0.1070	3.24%
050.60	Soluble K2O, Flame Photometric (Oxalate) (3.5%)	2	2	3.747	0.0544								
050.61	Soluble K2O, Flame Photometric (Citrate) (3.5%)	1		4.150									

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050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (3.5%)	2	2	4.347	0.3857								
050.99	Soluble K2O, Other (3.5%)	26	25	4.017	0.4367	3.990	0.4100	0.3502	0.0875	8.78%	1.99	0.1083	3.25%
060.99	Water (Free), Other (%)	1		4.365									
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	6	6	7.203	2.444	7.935	0.5967	0.8405	0.4289	10.59%	3.28	0.1465	2.93%
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	14	13	8.015	0.5069	8.020	0.6010	0.5979	0.2073	7.46%	2.32	0.0607	2.92%
101.31	Acid Soluble Ca, ICP, test portion organic 965.09 (7.8%)	1		7.935									
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (7.8%)	3	3	7.819	0.2872	7.819	0.5910	0.2872	0.2073	3.67%	1.13	0.1138	2.93%
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	13	13	7.781	0.1665	7.781	0.5891	0.1888	0.0655	2.43%	0.75	0.1195	2.94%
101.70	Acid Soluble Ca, Titrimetric (7.8%)	1		8.096									
101.99	Acid Soluble Ca, Other (7.8%)	12	12	8.103	0.9343	7.942	0.5971	0.3778	0.1363	4.76%	1.47	0.1362	2.93%
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	7	7	0.5784	0.1584	0.6087	0.2304	0.1011	0.0477	16.60%	1.02	0.0271	4.31%
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	14	14	0.6836	0.0865	0.6934	0.2347	0.0403	0.0135	5.82%	0.40	0.0142	4.23%
121.31	Acid Soluble Mg, ICP, test portion organic 965.09 (0.7%)	1		0.6895									
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.7%)	4	4	0.6494	0.0181	0.6494	0.2325	0.0181	0.0113	2.78%	0.18	0.0213	4.27%
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	12	12	0.6975	0.0562	0.6880	0.2344	0.0353	0.0127	5.13%	0.35	0.0147	4.23%
121.70	Acid Soluble Mg, Titrimetric (EDTA) (0.7%)	1		0.8538									
121.99	Acid Soluble Mg, Other (0.7%)	15	15	0.7166	0.1664	0.6875	0.2344	0.0773	0.0249	11.24%	0.77	0.0258	4.23%
131.30	Water Soluble Mg, ICP (%)	1		0.2555									
131.99	Water Soluble Mg, Other (%)	2	2	0.2698	0.0202								
143.99	Elemental S, Other (%)	4	4	2.244	0.2286	2.244		0.2286	0.1429	10.19%		0.0774	3.54%
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	2	2	1.735	0.0849								
145.99	Sulfate S, HCl soluble, Other (%)	2	2	2.108	0.3995								
148.00	Total S, Combustion (2.5%)	7	7	2.351	0.1037	2.351	0.3176	0.1176	0.0555	5.00%	0.86	0.0399	3.52%
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	6	6	2.302	0.2324	2.302	0.3151	0.2635	0.1345	11.45%	1.95	0.0733	3.53%
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	12	12	2.328	0.1951	2.343	0.3172	0.1850	0.0668	7.90%	1.36	0.0667	3.52%
148.99	Total S, Other (2.5%)	16	15	2.289	0.3601	2.277	0.3138	0.2808	0.0906	12.33%	2.08	0.0364	3.53%
149.04	S - HNO3 soluble, ICP (%)	4	4	2.307	0.0506	2.307		0.0506	0.0316	2.19%		0.0424	3.53%
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	1		2.955									
151.30	Acid Soluble As, ICP (ppm)	6	5	11.27	15.98	13.53		16.77	9.372	123.94%		0.9938	10.81%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	3	2	2.617	2.400	3.825		1.662	1.469	43.44%		0.1500	13.07%
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	4	3	5.514	2.994	4.019		0.1758	0.1269	4.37%		0.1021	12.98%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		0.3000									
151.99	Acid Soluble As, Other (ppm)	3	3	2.666	1.589	2.666		1.589	1.146	59.60%		0.1297	13.80%
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	1		0.0100									
165.99	Acid Soluble B, Other (%)	5	2	0.0260	0.0444	0.0020	0.0033	0.0009	0.0008	47.14%	0.65	0.0001	10.23%
171.99	Water Soluble B, Other (%)	1		0.0110									
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
181.30	Acid Soluble Cd, ICP (ppm)	5	5	2.346	2.939	2.346		2.939	1.643	125.24%		1.818	14.07%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	3	2	1.203	0.2001	1.305		0.1344	0.1188	10.30%		0.0800	15.37%
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	4	2	1.914	2.065	0.8286		0.2880	0.2545	34.75%		0.0078	16.46%

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181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	1		0.8500									
181.99	Acid Soluble Cd, Other (ppm)	3	3	0.9880	0.3771	0.9880		0.3771	0.2721	38.17%		0.0487	16.03%
191.30	Acid Soluble Cr, ICP (ppm)	6	6	46.28	14.42	46.28		16.35	8.346	35.34%		3.338	8.98%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	42.55	16.19								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	4	4	41.95	15.64	41.95		15.64	9.775	37.28%		2.531	9.12%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	1		27.30									
191.99	Acid Soluble Cr, Other (ppm)	3	3	36.02	3.780	36.02		3.780	2.728	10.49%		3.117	9.33%
202.30	Acid Soluble Co, ICP (ppm)	6	6	15.29	4.205	15.29	5.5873	4.769	2.433	31.19%	1.99	0.7071	10.61%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	4	4	13.91	4.855	13.91	5.1734	4.855	3.035	34.90%	2.19	0.3875	10.76%
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	4	4	12.86	6.342	12.86	4.8579	6.342	3.964	49.32%	3.04	0.7911	10.89%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	2	10.70	4.667								
202.99	Acid Soluble Co, Other (ppm)	3	3	25.22	29.40	25.22	8.5651	29.40	21.22	116.59%	8.00	5.090	9.84%
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual ε	1		0.0031									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	5	3	0.0043	0.0036	0.0038	0.0054	0.0003	0.0002	8.32%	0.14	0.0000	9.25%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	4	4	0.0036	0.0002	0.0036	0.0054	0.0002	0.0001	6.40%	0.10	0.0001	9.35%
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	6	6	0.0041	0.0010	0.0038	0.0054	0.0004	0.0002	9.40%	0.15	0.0002	9.25%
221.99	Acid Soluble Cu, Other (%)	7	7	0.0033	0.0011	0.0035	0.0053	0.0007	0.0003	20.56%	0.31	0.0000	9.38%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	6	6	0.2608	0.0880	0.2697	0.0320	0.0783	0.0400	29.05%	5.71	0.0034	4.87%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	15	14	0.2881	0.0412	0.2958	0.0346	0.0352	0.0118	11.91%	2.37	0.0140	4.80%
241.31	Acid Soluble Fe, ICP, test portion organic 965.09 (0.2%)	1		0.1935									
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (0.2%)	4	4	0.3220	0.0069	0.3220	0.0372	0.0069	0.0043	2.16%	0.44	0.0061	4.74%
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	12	12	0.3228	0.0420	0.3228	0.0373	0.0476	0.0172	14.76%	2.98	0.0083	4.74%
241.99	Acid Soluble Fe, Other (0.2%)	13	13	0.2887	0.0541	0.2874	0.0337	0.0381	0.0132	13.25%	2.63	0.0096	4.83%
251.30	Acid Soluble Pb, ICP (ppm)	6	5	3.675	5.268	4.410		5.536	3.095	125.54%		0.2472	12.80%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	3	1	2.933	2.386	4.410		5.536	6.920	125.54%		0.4000	12.80%
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	4	2	3.024	1.398	2.048		0.2298	0.2032	11.23%		0.0094	14.36%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	1		0.6000									
251.99	Acid Soluble Pb, Other (ppm)	3	3	1.987	0.8951	1.987		0.8951	0.6460	45.04%		0.4317	14.43%
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	2	2	0.0403	0.0004								
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	1		0.0100									
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0425									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	4	4	0.0434	0.0023	0.0434	0.0093	0.0023	0.0014	5.32%	0.58	0.0009	6.41%
261.99	Acid Soluble Mn, Other (%)	3	3	0.0419	0.0020	0.0419	0.0092	0.0020	0.0014	4.70%	0.50	0.0015	6.45%
281.00	Acid Soluble Hg, AA (ppm)	1		0.5000									
281.30	Acid Soluble Hg, ICP (ppm)	4	2	0.5268	0.9826	0.0530		0.0255	0.0225	48.03%		0.0120	22.00%
281.99	Acid Soluble Hg, Other (ppm)	4	4	0.0547	0.0053	0.0547		0.0053	0.0033	9.77%		0.0035	22.00%
289.30	Acid Soluble Mo, ICP (ppm)	6	6	3.489	1.913	3.489	2.0467	2.169	1.107	62.16%	2.47	0.4905	13.25%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	3	2	2.517	2.111	3.725	2.1175	0.3889	0.3438	10.44%	0.43	0.0500	13.12%
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	4	3.442	1.003	3.053	1.9158	0.5738	0.3586	18.80%	0.70	0.2886	13.52%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		1.750									

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289.99	Acid Soluble Mo, Other (ppm)	2	2	3.770	0.3960								
291.30	Acid Soluble Ni, ICP (ppm)	6	6	21.63	3.584	21.63		4.065	2.074	18.80%		1.163	10.07%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	3	3	19.20	3.729	19.20		3.729	2.691	19.42%		0.4000	10.25%
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	4	4	18.29	6.071	18.29		6.071	3.795	33.20%		1.136	10.33%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	20.30	5.940								
291.99	Acid Soluble Ni, Other (ppm)	3	3	36.01	30.08	36.01		30.08	21.71	83.53%		6.016	9.33%
301.30	Acid Soluble Se, ICP (ppm)	3	3	12.97	20.09	12.97		20.09	14.50	154.94%		0.9099	10.88%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	2	1	6.000	5.657								
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	2	1	1.203	1.686								
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		1.100									
301.99	Acid Soluble Se, Other (ppm)	4	3	9.823	16.82	12.93		19.15	13.82	148.08%		12.86	10.88%
311.33	Sodium, ICP, test portion as in 2017.02 (%)	3	3	0.6795	0.0364	0.6795	0.0730	0.0364	0.0262	5.35%	1.16	0.0066	4.24%
311.99	Sodium, Other (%)	3	3	0.6825	0.0499	0.6825	0.0733	0.0499	0.0360	7.32%	1.59	0.0123	4.24%
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual a	1		0.0195									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	5	5	0.0310	0.0302	0.0310	0.0081	0.0302	0.0169	97.52%	8.70	0.0020	6.75%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	4	4	0.0160	0.0015	0.0160	0.0066	0.0015	0.0010	9.59%	0.54	0.0006	7.45%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	7	6	24.79	65.54	0.0171	0.0067	0.0019	0.0010	11.11%	0.66	0.0006	7.38%
321.99	Acid Soluble Zn, Other (%)	7	6	0.0186	0.0051	0.0165	0.0066	0.0018	0.0009	10.95%	0.63	0.0003	7.42%
325.99	Water Soluble Zn, Other (%)	1		0.0015									
431.99	Soluble Si in nonliquids, Other (%)	1		0.0066									
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precip	1		0.0100									
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	6	5	5.075	2.964	6.088		1.812	1.013	29.75%		0.2273	3.05%
441.99	Humic Acids, Other (%)	3	3	3.352	0.1314	3.352		0.1314	0.0948	3.92%		0.0767	3.33%

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 # 230111

Regular PT Scheme

Organic 6-3-3.5

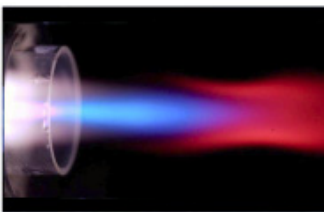
Method Precision Report

Issue Date : 03/03/2023

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 (6%)	47	42	7.037	0.1124	0.1058	0.0537	0.1187	1.50%	0.76%	1.69%	2.212
010.99	Total N, Other (6%)	6	6	7.470	0.4268	0.4241	0.0674	0.4294	5.68%	0.90%	5.75%	6.376
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	8	6	6.107	0.1858	0.1838	0.0382	0.1878	3.01%	0.63%	3.07%	4.918
020.50	Total P2O5, ICP (%)	20	17	5.948	0.8779	0.8698	0.1685	0.8859	14.62%	2.83%	14.90%	5.256
020.99	Total P2O5, Other (%)	5	5	5.832	0.6524	0.6453	0.1351	0.6593	11.07%	2.32%	11.31%	4.881
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA E	5	5	5.565	0.4503	0.4496	0.0362	0.4510	8.08%	0.65%	8.10%	12.46
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (:	9	8	5.647	0.2473	0.2419	0.0724	0.2525	4.28%	1.28%	4.47%	3.487
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	7	7	5.441	0.4028	0.3949	0.1122	0.4105	7.26%	2.06%	7.55%	3.660
050.00	Soluble K2O, STPB Oxalate (3.5%)	5	5	3.342	0.5011	0.4957	0.1043	0.5065	14.83%	3.12%	15.16%	4.856
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	7	6	3.974	0.2635	0.2624	0.0334	0.2646	6.60%	0.84%	6.66%	7.913
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	9	9	4.017	0.1913	0.1792	0.0944	0.2026	4.46%	2.35%	5.04%	2.145
050.99	Soluble K2O, Other (3.5%)	26	23	3.971	0.3496	0.3426	0.0983	0.3564	8.63%	2.47%	8.98%	3.627
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	6	5	8.187	0.4581	0.4532	0.0939	0.4628	5.54%	1.15%	5.65%	4.930
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	14	12	8.009	0.5493	0.5484	0.0439	0.5501	6.85%	0.55%	6.87%	12.55
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	13	12	7.797	0.1638	0.1535	0.0808	0.1734	1.97%	1.04%	2.22%	2.146
101.99	Acid Soluble Ca, Other (7.8%)	12	11	7.854	0.3782	0.3646	0.1419	0.3913	4.64%	1.81%	4.98%	2.758
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	7	6	0.6340	0.0646	0.0620	0.0253	0.0670	9.78%	3.99%	10.57%	2.647
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	14	12	0.7044	0.0477	0.0470	0.0118	0.0484	6.67%	1.68%	6.88%	4.105
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	12	11	0.6832	0.0276	0.0255	0.0149	0.0295	3.74%	2.18%	4.32%	1.988
121.99	Acid Soluble Mg, Other (0.7%)	15	14	0.6889	0.1318	0.1304	0.0278	0.1333	18.92%	4.04%	19.35%	4.787
148.00	Total S, Combustion (2.5%)	7	7	2.351	0.1037	0.1005	0.0360	0.1068	4.27%	1.53%	4.54%	2.963
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	6	6	2.302	0.2324	0.2272	0.0687	0.2374	9.87%	2.98%	10.31%	3.456
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	12	12	2.328	0.1951	0.1900	0.0623	0.2000	8.16%	2.68%	8.59%	3.208
148.99	Total S, Other (2.5%)	16	13	2.202	0.2743	0.2735	0.0295	0.2751	12.42%	1.34%	12.50%	9.327
191.30	Acid Soluble Cr, ICP (ppm)	6	6	46.28	14.42	14.14	3.993	14.70	30.56%	8.63%	31.75%	3.680
202.30	Acid Soluble Co, ICP (ppm)	6	5	16.32	3.755	3.746	0.3546	3.763	22.95%	2.17%	23.05%	10.61

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
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	6	5	0.0037	0.0002	0.0002	0.0001	0.0002	4.81%	3.09%	5.72%	1.850
221.99	Acid Soluble Cu, Other (%)	7	6	0.0037	0.0005	0.0005	0.0000	0.0005	12.47%	1.12%	12.52%	11.19
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	6	6	0.2608	0.0880	0.0879	0.0034	0.0880	33.72%	1.32%	33.75%	25.59
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	15	12	0.2969	0.0316	0.0307	0.0103	0.0324	10.34%	3.47%	10.91%	3.142
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	12	12	0.3228	0.0420	0.0416	0.0080	0.0424	12.89%	2.48%	13.13%	5.300
241.99	Acid Soluble Fe, Other (0.2%)	13	12	0.2780	0.0395	0.0388	0.0108	0.0403	13.96%	3.87%	14.49%	3.746
289.30	Acid Soluble Mo, ICP (ppm)	6	6	3.489	1.913	1.877	0.5233	1.948	53.78%	15.00%	55.83%	3.723
291.30	Acid Soluble Ni, ICP (ppm)	6	5	22.37	3.449	3.426	0.5662	3.472	15.31%	2.53%	15.52%	6.132
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	7	6	0.0171	0.0017	0.0016	0.0006	0.0018	9.57%	3.68%	10.25%	2.789
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	6	5	6.088	1.812	1.807	0.1896	1.816	29.67%	3.11%	29.84%	9.580

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 132

Sample # 230111

Regular PT Scheme

Labs Reporting: 64

Organic 6-3-3.5

Lab Values

Issue Date : 03/03/2023

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
001.99	Ammoniacal N, Other (%)	0423	0.4150	0.0300				2			0
001.99	Ammoniacal N, Other (%)	0524	0.4835	0.0270				2			0
003.10	Water Insoluble N, Method I (%)	0220	4.795	0.0700	5.108	0.2131	0.0550	4	-1.47		0
003.10	Water Insoluble N, Method I (%)	0029	5.150	0.0400	5.108	0.2131	0.0550	4	0.20		0
003.10	Water Insoluble N, Method I (%)	0027	5.230	0.0600	5.108	0.2131	0.0550	4	0.57		0
003.10	Water Insoluble N, Method I (%)	0451	5.255	0.0500	5.108	0.2131	0.0550	4	0.69		0
005.99	Urea N, Other (%)	0524	0.3050	0.1500				1			0
010.11	Total N, Modified Comprehensive (6%)	0510	6.837	0.0640				2			0
010.11	Total N, Modified Comprehensive (6%)	0419	7.188	0.5260				2			0
010.12	Total N, Salicylic (6%)	0534	6.300	0.0200	6.786	0.3247	0.0675	4	-1.50		0
010.12	Total N, Salicylic (6%)	0481	6.925	0.2100	6.786	0.3247	0.0675	4	0.43		0
010.12	Total N, Salicylic (6%)	0568	6.950	0.0000	6.786	0.3247	0.0675	4	0.50		0
010.12	Total N, Salicylic (6%)	0580	6.970	0.0400	6.786	0.3247	0.0675	4	0.57		0
010.60	Total N, Combustion (6%)	0452	6.245	0.1300	7.048	0.1302	0.0745	46	-6.17	Low	0
010.60	Total N, Combustion (6%)	0234	6.805	0.1300	7.048	0.1302	0.0745	46	-1.87	OK	0
010.60	Total N, Combustion (6%)	0619	6.820	0.0600	7.048	0.1302	0.0745	46	-1.75	OK	0
010.60	Total N, Combustion (6%)	0588	6.825	0.0500	7.048	0.1302	0.0745	46	-1.71	OK	0
010.60	Total N, Combustion (6%)	0527	6.827	0.0670	7.048	0.1302	0.0745	46	-1.70	OK	0
010.60	Total N, Combustion (6%)	0040	6.900	0.0000	7.048	0.1302	0.0745	46	-1.14	OK	0
010.60	Total N, Combustion (6%)	0230	6.900	0.0000	7.048	0.1302	0.0745	46	-1.14	OK	0
010.60	Total N, Combustion (6%)	0423	6.910	0.0600	7.048	0.1302	0.0745	46	-1.06	OK	0
010.60	Total N, Combustion (6%)	0231	6.920	0.0400	7.048	0.1302	0.0745	46	-0.98	OK	0
010.60	Total N, Combustion (6%)	0114	6.930	0.1800	7.048	0.1302	0.0745	46	-0.91	OK	0
010.60	Total N, Combustion (6%)	0451	6.969	0.1840	7.048	0.1302	0.0745	46	-0.61	OK	0
010.60	Total N, Combustion (6%)	0481	6.975	0.0500	7.048	0.1302	0.0745	46	-0.56	OK	0
010.60	Total N, Combustion (6%)	0055	6.985	0.1500	7.048	0.1302	0.0745	46	-0.48	OK	0
010.60	Total N, Combustion (6%)	0136	6.995	0.0300	7.048	0.1302	0.0745	46	-0.41	OK	0
010.60	Total N, Combustion (6%)	0523	6.995	0.0000	7.048	0.1302	0.0745	46	-0.41	OK	0
010.60	Total N, Combustion (6%)	0501	7.000	0.0000	7.048	0.1302	0.0745	46	-0.37	OK	0
010.60	Total N, Combustion (6%)	0291	7.005	0.0100	7.048	0.1302	0.0745	46	-0.33	OK	0
010.60	Total N, Combustion (6%)	0422	7.015	0.0300	7.048	0.1302	0.0745	46	-0.25	OK	0
010.60	Total N, Combustion (6%)	0157	7.020	0.0200	7.048	0.1302	0.0745	46	-0.22	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
010.60	Total N, Combustion (6%)	0389	7.025	0.0100	7.048	0.1302	0.0745	46	-0.18	OK	0
010.60	Total N, Combustion (6%)	0049	7.035	0.0300	7.048	0.1302	0.0745	46	-0.10	OK	0
010.60	Total N, Combustion (6%)	0485	7.035	0.1100	7.048	0.1302	0.0745	46	-0.10	OK	0
010.60	Total N, Combustion (6%)	0547	7.040	0.0400	7.048	0.1302	0.0745	46	-0.06	OK	0
010.60	Total N, Combustion (6%)	0073	7.055	0.0500	7.048	0.1302	0.0745	46	0.05	OK	0
010.60	Total N, Combustion (6%)	0029	7.058	0.0180	7.048	0.1302	0.0745	46	0.08	OK	0
010.60	Total N, Combustion (6%)	0543	7.068	0.0360	7.048	0.1302	0.0745	46	0.15	OK	0
010.60	Total N, Combustion (6%)	0043	7.080	0.0400	7.048	0.1302	0.0745	46	0.25	OK	0
010.60	Total N, Combustion (6%)	0324	7.085	0.0900	7.048	0.1302	0.0745	46	0.28	OK	0
010.60	Total N, Combustion (6%)	0354	7.095	0.0100	7.048	0.1302	0.0745	46	0.36	OK	0
010.60	Total N, Combustion (6%)	0450	7.100	0.0000	7.048	0.1302	0.0745	46	0.40	OK	0
010.60	Total N, Combustion (6%)	0177	7.115	0.1010	7.048	0.1302	0.0745	46	0.51	OK	0
010.60	Total N, Combustion (6%)	0377	7.125	0.0900	7.048	0.1302	0.0745	46	0.59	OK	0
010.60	Total N, Combustion (6%)	0356	7.129	0.0200	7.048	0.1302	0.0745	46	0.62	OK	0
010.60	Total N, Combustion (6%)	0025	7.140	0.1000	7.048	0.1302	0.0745	46	0.71	OK	0
010.60	Total N, Combustion (6%)	0086	7.140	0.1221	7.048	0.1302	0.0745	46	0.71	OK	0
010.60	Total N, Combustion (6%)	0102	7.150	0.1000	7.048	0.1302	0.0745	46	0.78	OK	0
010.60	Total N, Combustion (6%)	0095	7.155	0.1300	7.048	0.1302	0.0745	46	0.82	OK	0
010.60	Total N, Combustion (6%)	0405	7.155	0.0500	7.048	0.1302	0.0745	46	0.82	OK	0
010.60	Total N, Combustion (6%)	0220	7.165	0.3900	7.048	0.1302	0.0745	46	0.90	OK	0
010.60	Total N, Combustion (6%)	0587	7.170	0.0800	7.048	0.1302	0.0745	46	0.94	OK	0
010.60	Total N, Combustion (6%)	0472	7.175	0.0500	7.048	0.1302	0.0745	46	0.98	OK	0
010.60	Total N, Combustion (6%)	0368	7.187	0.0090	7.048	0.1302	0.0745	46	1.06	OK	0
010.60	Total N, Combustion (6%)	0260	7.215	0.0700	7.048	0.1302	0.0745	46	1.28	OK	0
010.60	Total N, Combustion (6%)	0027	7.245	0.0100	7.048	0.1302	0.0745	46	1.51	OK	0
010.60	Total N, Combustion (6%)	0255	7.492	0.3810	7.048	0.1302	0.0745	46	3.41	OK	0
010.60	Total N, Combustion (6%)	0042	7.650	0.1000	7.048	0.1302	0.0745	46	4.62	High	0
010.60	Total N, Combustion (6%)	0035	6.950	0.5000	7.048	0.1302	0.0745	46	-0.75	OK	1
010.99	Total N, Other (6%)	0619	6.820	0.0600	7.470	0.4840	0.0681	6	-1.20	Low	0
010.99	Total N, Other (6%)	0524	7.068	0.0183	7.470	0.4840	0.0681	6	-0.74	OK	0
010.99	Total N, Other (6%)	0563	7.550	0.1000	7.470	0.4840	0.0681	6	0.15	OK	0
010.99	Total N, Other (6%)	0600	7.750	0.2000	7.470	0.4840	0.0681	6	0.51	OK	0
010.99	Total N, Other (6%)	0562	7.810	0.0200	7.470	0.4840	0.0681	6	0.62	OK	0
010.99	Total N, Other (6%)	0559	7.825	0.0100	7.470	0.4840	0.0681	6	0.65	OK	0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0619	5.810	0.0800				2			0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0049	6.215	0.0300				2			0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0563	5.555	0.3300	6.034	0.2908	0.0778	7	-1.49	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	5.760	0.0400	6.034	0.2908	0.0778	7	-0.85	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	6.105	0.0100	6.034	0.2908	0.0778	7	0.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0580	6.110	0.0000	6.034	0.2908	0.0778	7	0.24	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0419	6.130	0.0200	6.034	0.2908	0.0778	7	0.30	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	6.265	0.1220	6.034	0.2908	0.0778	7	0.72	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	6.270	0.0225	6.034	0.2908	0.0778	7	0.73	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	6.330	0.9000	6.034	0.2908	0.0778	7	0.92	NA	1
020.40	Total P2O5, Automated (%)	0035	5.850	0.3000				1			0
020.50	Total P2O5, ICP (%)	0423	2.550	0.0200	5.904	0.6708	0.1800	19	-5.00	NA	0
020.50	Total P2O5, ICP (%)	0552	3.170	0.3400	5.904	0.6708	0.1800	19	-4.08	NA	0
020.50	Total P2O5, ICP (%)	0450	5.020	0.8000	5.904	0.6708	0.1800	19	-1.32	NA	0
020.50	Total P2O5, ICP (%)	0291	5.155	0.0100	5.904	0.6708	0.1800	19	-1.12	NA	0
020.50	Total P2O5, ICP (%)	0255	5.678	0.5520	5.904	0.6708	0.1800	19	-0.34	NA	0
020.50	Total P2O5, ICP (%)	0543	5.746	0.0010	5.904	0.6708	0.1800	19	-0.24	NA	0
020.50	Total P2O5, ICP (%)	0433	5.810	0.1600	5.904	0.6708	0.1800	19	-0.14	NA	0
020.50	Total P2O5, ICP (%)	0619	5.810	0.0600	5.904	0.6708	0.1800	19	-0.14	NA	0
020.50	Total P2O5, ICP (%)	0422	5.865	0.0114	5.904	0.6708	0.1800	19	-0.06	NA	0
020.50	Total P2O5, ICP (%)	0524	5.921	0.0067	5.904	0.6708	0.1800	19	0.03	NA	0
020.50	Total P2O5, ICP (%)	0472	6.010	0.0000	5.904	0.6708	0.1800	19	0.16	NA	0
020.50	Total P2O5, ICP (%)	0451	6.148	0.0020	5.904	0.6708	0.1800	19	0.36	NA	0
020.50	Total P2O5, ICP (%)	0260	6.170	0.4000	5.904	0.6708	0.1800	19	0.40	NA	0
020.50	Total P2O5, ICP (%)	0588	6.205	0.2900	5.904	0.6708	0.1800	19	0.45	NA	0
020.50	Total P2O5, ICP (%)	0527	6.238	0.1214	5.904	0.6708	0.1800	19	0.50	NA	0
020.50	Total P2O5, ICP (%)	0389	6.365	0.0500	5.904	0.6708	0.1800	19	0.69	NA	0
020.50	Total P2O5, ICP (%)	0234	6.420	0.0400	5.904	0.6708	0.1800	19	0.77	NA	0
020.50	Total P2O5, ICP (%)	0368	7.052	0.0561	5.904	0.6708	0.1800	19	1.71	NA	0
020.50	Total P2O5, ICP (%)	0042	7.350	0.5000	5.904	0.6708	0.1800	19	2.16	NA	0
020.50	Total P2O5, ICP (%)	0523	5.950	5.700	5.904	0.6708	0.1800	19	0.07	NA	1
020.99	Total P2O5, Other (%)	0481	4.720	0.0400	5.832	0.6524	0.1448	5	-1.70		0
020.99	Total P2O5, Other (%)	0619	5.810	0.0800	5.832	0.6524	0.1448	5	-0.03		0
020.99	Total P2O5, Other (%)	0572	6.064	0.3340	5.832	0.6524	0.1448	5	0.36		0
020.99	Total P2O5, Other (%)	0559	6.230	0.0200	5.832	0.6524	0.1448	5	0.61		0
020.99	Total P2O5, Other (%)	0587	6.335	0.2500	5.832	0.6524	0.1448	5	0.77		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	0041	4.970	0.0400				2			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (3%)	0102	4.975	0.0500				2			0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0055	5.000	0.0400	5.565	0.4503	0.0420	5	-1.25		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0405	5.450	0.0000	5.565	0.4503	0.0420	5	-0.26		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0073	5.525	0.0300	5.565	0.4503	0.0420	5	-0.09		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0485	5.595	0.0500	5.565	0.4503	0.0420	5	0.07		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	0220	6.255	0.0900	5.565	0.4503	0.0420	5	1.53		0
041.20	Direct Available P2O5, Spectrophotometric (3%)	0553	3.205	0.2700	4.683	1.321	0.1067	3	-1.12		0
041.20	Direct Available P2O5, Spectrophotometric (3%)	0452	5.095	0.0100	4.683	1.321	0.1067	3	0.31		0
041.20	Direct Available P2O5, Spectrophotometric (3%)	0027	5.750	0.0400	4.683	1.321	0.1067	3	0.81		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0055	4.465	0.3300	5.583	0.3406	0.0867	9	-3.03	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0354	5.350	0.0800	5.583	0.3406	0.0867	9	-0.63	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0405	5.390	0.0000	5.583	0.3406	0.0867	9	-0.52	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0419	5.450	0.0600	5.583	0.3406	0.0867	9	-0.36	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0568	5.570	0.0000	5.583	0.3406	0.0867	9	-0.04	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0231	5.735	0.0100	5.583	0.3406	0.0867	9	0.41	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0095	5.755	0.2700	5.583	0.3406	0.0867	9	0.47	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0472	5.890	0.0000	5.583	0.3406	0.0867	9	0.83	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	0230	6.035	0.0300	5.583	0.3406	0.0867	9	1.23	OK	0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (3%)	0029	5.664	0.1090				1			0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0547	4.700	0.0000	5.463	0.4041	0.1271	7	-1.71	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0136	5.280	0.0600	5.463	0.4041	0.1271	7	-0.41	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0025	5.300	0.1400	5.463	0.4041	0.1271	7	-0.36	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0040	5.450	0.3000	5.463	0.4041	0.1271	7	-0.03	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0043	5.660	0.1800	5.463	0.4041	0.1271	7	0.44	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0377	5.845	0.1700	5.463	0.4041	0.1271	7	0.85	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (3%)	0423	5.850	0.0400	5.463	0.4041	0.1271	7	0.87	OK	0
041.99	Direct Available P2O5, Other (3%)	0518	4.400	0.2000	5.603	1.042	0.1400	3	-1.15		0
041.99	Direct Available P2O5, Other (3%)	0600	6.200	0.2000	5.603	1.042	0.1400	3	0.57		0
041.99	Direct Available P2O5, Other (3%)	0562	6.210	0.0200	5.603	1.042	0.1400	3	0.58		0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	0.4200	0.0000				1			0
048.99	Water Soluble P2O5, Other (%)	0572	0.7280	0.1360				1			0
050.00	Soluble K2O, STPB Oxalate (3.5%)	0049	2.485	0.2700	3.342	0.5011	0.1080	5	-1.71		0
050.00	Soluble K2O, STPB Oxalate (3.5%)	0102	3.435	0.0300	3.342	0.5011	0.1080	5	0.19		0
050.00	Soluble K2O, STPB Oxalate (3.5%)	0114	3.435	0.0500	3.342	0.5011	0.1080	5	0.19		0
050.00	Soluble K2O, STPB Oxalate (3.5%)	0619	3.560	0.1800	3.342	0.5011	0.1080	5	0.44		0
050.00	Soluble K2O, STPB Oxalate (3.5%)	0405	3.795	0.0100	3.342	0.5011	0.1080	5	0.90		0
050.30	Soluble K2O, AA (Oxalate) (3.5%)	0040	4.200	0.0000	4.219	0.0239	0.0190	3	-0.77		0
050.30	Soluble K2O, AA (Oxalate) (3.5%)	0073	4.210	0.0400	4.219	0.0239	0.0190	3	-0.36		0
050.30	Soluble K2O, AA (Oxalate) (3.5%)	0356	4.246	0.0170	4.219	0.0239	0.0190	3	1.13		0
050.32	Soluble K2O, AA (Citrate-EDTA) (3.5%)	0472	3.670	0.0000				1			0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0619	3.565	0.1900	3.916	0.3243	0.0591	7	-0.98	OK	0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0230	3.640	0.0400	3.916	0.3243	0.0591	7	-0.77	OK	0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0422	3.745	0.0036	3.916	0.3243	0.0591	7	-0.48	OK	0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0055	3.960	0.0200	3.916	0.3243	0.0591	7	0.12	OK	0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0231	4.055	0.0100	3.916	0.3243	0.0591	7	0.39	OK	0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0419	4.060	0.0800	3.916	0.3243	0.0591	7	0.40	OK	0
050.50	Soluble K2O, ICP (Oxalate) (3.5%)	0324	4.385	0.0700	3.916	0.3243	0.0591	7	1.31	High	0
050.51	Soluble K2O, ICP (Citrate) (3.5%)	0368	3.990	0.0648	4.407	0.4197	0.0212	4	-1.00		0
050.51	Soluble K2O, ICP (Citrate) (3.5%)	0291	4.305	0.0100	4.407	0.4197	0.0212	4	-0.24		0
050.51	Soluble K2O, ICP (Citrate) (3.5%)	0452	4.345	0.0100	4.407	0.4197	0.0212	4	-0.15		0
050.51	Soluble K2O, ICP (Citrate) (3.5%)	0568	4.990	0.0000	4.407	0.4197	0.0212	4	1.39		0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0547	3.700	0.0800	4.017	0.2169	0.1070	9	-1.35	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0485	3.820	0.3000	4.017	0.2169	0.1070	9	-0.84	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0423	3.885	0.0900	4.017	0.2169	0.1070	9	-0.56	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0543	3.977	0.0230	4.017	0.2169	0.1070	9	-0.17	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0377	4.020	0.1200	4.017	0.2169	0.1070	9	0.01	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0354	4.125	0.0100	4.017	0.2169	0.1070	9	0.46	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0025	4.165	0.1100	4.017	0.2169	0.1070	9	0.63	OK	0

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050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0136	4.170	0.0800	4.017	0.2169	0.1070	9	0.65	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (3.5%)	0043	4.295	0.1500	4.017	0.2169	0.1070	9	1.18	OK	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (3.5%)	0510	3.708	0.1841				2			0
050.60	Soluble K2O, Flame Photometric (Oxalate) (3.5%)	0580	3.785	0.0300				2			0
050.61	Soluble K2O, Flame Photometric (Citrate) (3.5%)	0035	4.150	0.5000				1			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (3.5%)	0029	4.075	0.0870				2			0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (3.5%)	0095	4.620	0.0000				2			0
050.99	Soluble K2O, Other (3.5%)	0481	3.355	0.0500	3.990	0.3502	0.1083	25	-1.81	Low	0
050.99	Soluble K2O, Other (3.5%)	0553	3.380	0.1000	3.990	0.3502	0.1083	25	-1.74	Low	0
050.99	Soluble K2O, Other (3.5%)	0552	3.500	0.0000	3.990	0.3502	0.1083	25	-1.40	Low	0
050.99	Soluble K2O, Other (3.5%)	0501	3.545	0.3300	3.990	0.3502	0.1083	25	-1.27	Low	0
050.99	Soluble K2O, Other (3.5%)	0220	3.705	0.0100	3.990	0.3502	0.1083	25	-0.81	OK	0
050.99	Soluble K2O, Other (3.5%)	0518	3.770	0.0000	3.990	0.3502	0.1083	25	-0.63	OK	0
050.99	Soluble K2O, Other (3.5%)	0563	3.815	0.0300	3.990	0.3502	0.1083	25	-0.50	OK	0
050.99	Soluble K2O, Other (3.5%)	0600	3.875	0.1500	3.990	0.3502	0.1083	25	-0.33	OK	0
050.99	Soluble K2O, Other (3.5%)	0433	3.915	0.0300	3.990	0.3502	0.1083	25	-0.21	OK	0
050.99	Soluble K2O, Other (3.5%)	0451	3.925	0.1110	3.990	0.3502	0.1083	25	-0.19	OK	0
050.99	Soluble K2O, Other (3.5%)	0562	3.925	0.0500	3.990	0.3502	0.1083	25	-0.19	OK	0
050.99	Soluble K2O, Other (3.5%)	0559	3.945	0.0100	3.990	0.3502	0.1083	25	-0.13	OK	0
050.99	Soluble K2O, Other (3.5%)	0389	3.955	0.0300	3.990	0.3502	0.1083	25	-0.10	OK	0
050.99	Soluble K2O, Other (3.5%)	0572	3.989	0.2670	3.990	0.3502	0.1083	25	0.00	OK	0
050.99	Soluble K2O, Other (3.5%)	0255	4.042	0.4250	3.990	0.3502	0.1083	25	0.15	OK	0
050.99	Soluble K2O, Other (3.5%)	0260	4.055	0.2500	3.990	0.3502	0.1083	25	0.19	OK	0
050.99	Soluble K2O, Other (3.5%)	0177	4.117	0.0424	3.990	0.3502	0.1083	25	0.36	OK	0
050.99	Soluble K2O, Other (3.5%)	0527	4.235	0.0567	3.990	0.3502	0.1083	25	0.70	OK	0
050.99	Soluble K2O, Other (3.5%)	0524	4.244	0.0761	3.990	0.3502	0.1083	25	0.73	OK	0
050.99	Soluble K2O, Other (3.5%)	0450	4.280	0.3000	3.990	0.3502	0.1083	25	0.83	OK	0
050.99	Soluble K2O, Other (3.5%)	0027	4.305	0.1700	3.990	0.3502	0.1083	25	0.90	OK	0
050.99	Soluble K2O, Other (3.5%)	0587	4.315	0.0900	3.990	0.3502	0.1083	25	0.93	OK	0
050.99	Soluble K2O, Other (3.5%)	0234	4.335	0.0300	3.990	0.3502	0.1083	25	0.99	OK	0
050.99	Soluble K2O, Other (3.5%)	0042	4.850	0.1000	3.990	0.3502	0.1083	25	2.46	High	0
050.99	Soluble K2O, Other (3.5%)	0523	5.400	0.0000	3.990	0.3502	0.1083	25	4.03	High	0
050.99	Soluble K2O, Other (3.5%)	0619	3.675	0.6100	3.990	0.3502	0.1083	25	-0.90	OK	1
060.99	Water (Free), Other (%)	0510	4.365	0.0818				1			0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	0534	2.285	0.2700	7.935	0.8405	0.1465	6	-5.99	Low	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	0553	7.725	0.1500	7.935	0.8405	0.1465	6	-0.22	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	0157	7.985	0.1300	7.935	0.8405	0.1465	6	0.05	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	0485	8.040	0.2000	7.935	0.8405	0.1465	6	0.11	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	0029	8.250	0.0790	7.935	0.8405	0.1465	6	0.33	OK	0
101.00	Acid Soluble Ca, AA, inorganic 965.09 (7.8%)	0580	8.935	0.0500	7.935	0.8405	0.1465	6	1.06	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0073	7.140	0.0400	8.020	0.5979	0.0607	13	-1.47	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0231	7.300	0.1000	8.020	0.5979	0.0607	13	-1.20	Low	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0255	7.638	0.0070	8.020	0.5979	0.0607	13	-0.64	OK	0

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101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0377	7.745	0.0700	8.020	0.5979	0.0607	13	-0.46	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0568	7.810	0.0000	8.020	0.5979	0.0607	13	-0.35	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0451	7.866	0.1020	8.020	0.5979	0.0607	13	-0.26	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0035	8.065	0.0500	8.020	0.5979	0.0607	13	0.08	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0354	8.105	0.0100	8.020	0.5979	0.0607	13	0.14	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0324	8.115	0.0700	8.020	0.5979	0.0607	13	0.16	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0234	8.145	0.1900	8.020	0.5979	0.0607	13	0.21	OK	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0433	8.720	0.1000	8.020	0.5979	0.0607	13	1.17	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0291	8.755	0.0100	8.020	0.5979	0.0607	13	1.23	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0452	8.850	0.0400	8.020	0.5979	0.0607	13	1.39	High	0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (7.8%)	0619	7.950	0.3600	8.020	0.5979	0.0607	13	-0.12	OK	1
101.31	Acid Soluble Ca, ICP, test portion organic 965.09 (7.8%)	0619	7.935	0.3300				1			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (7.8%)	0405	7.532	0.1520	7.819	0.2872	0.1138	3	-1.00		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (7.8%)	0423	7.820	0.1200	7.819	0.2872	0.1138	3	0.00		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (7.8%)	0095	8.106	0.0693	7.819	0.2872	0.1138	3	1.00		0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0043	7.500	0.1000	7.781	0.1888	0.1195	13	-1.49	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0055	7.595	0.4300	7.781	0.1888	0.1195	13	-0.99	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0543	7.621	0.0420	7.781	0.1888	0.1195	13	-0.85	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0260	7.638	0.2850	7.781	0.1888	0.1195	13	-0.76	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0040	7.640	0.0800	7.781	0.1888	0.1195	13	-0.75	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0472	7.805	0.0700	7.781	0.1888	0.1195	13	0.12	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0102	7.820	0.1000	7.781	0.1888	0.1195	13	0.20	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0563	7.855	0.0500	7.781	0.1888	0.1195	13	0.39	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0136	7.860	0.0200	7.781	0.1888	0.1195	13	0.42	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0527	7.871	0.0940	7.781	0.1888	0.1195	13	0.48	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0177	7.919	0.1295	7.781	0.1888	0.1195	13	0.73	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0419	8.005	0.1100	7.781	0.1888	0.1195	13	1.18	OK	0
101.33	Acid Soluble Ca, ICP, 2017.02 (7.8%)	0117	8.030	0.0434	7.781	0.1888	0.1195	13	1.31	OK	0
101.70	Acid Soluble Ca, Titrimetric (7.8%)	0510	8.096	0.0382				1			0
101.99	Acid Soluble Ca, Other (7.8%)	0481	6.975	0.0300	7.942	0.3778	0.1362	12	-2.56	Low	0
101.99	Acid Soluble Ca, Other (7.8%)	0450	7.530	0.0400	7.942	0.3778	0.1362	12	-1.09	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0368	7.640	0.2814	7.942	0.3778	0.1362	12	-0.80	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0027	7.865	0.1500	7.942	0.3778	0.1362	12	-0.20	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0572	7.866	0.2730	7.942	0.3778	0.1362	12	-0.20	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0559	7.910	0.0200	7.942	0.3778	0.1362	12	-0.08	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0619	7.950	0.3600	7.942	0.3778	0.1362	12	0.02	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0552	7.980	0.3600	7.942	0.3778	0.1362	12	0.10	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0587	8.025	0.0300	7.942	0.3778	0.1362	12	0.22	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0389	8.310	0.0600	7.942	0.3778	0.1362	12	0.97	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0501	8.345	0.0100	7.942	0.3778	0.1362	12	1.07	OK	0
101.99	Acid Soluble Ca, Other (7.8%)	0523	10.84	0.0200	7.942	0.3778	0.1362	12	7.67	High	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0580	0.2450	0.0100	0.6087	0.1011	0.0271	7	-3.25	Low	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0534	0.5400	0.0600	0.6087	0.1011	0.0271	7	-0.61	OK	0

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121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0073	0.5790	0.0100	0.6087	0.1011	0.0271	7	-0.27	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0485	0.6360	0.0520	0.6087	0.1011	0.0271	7	0.24	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0040	0.6650	0.0300	0.6087	0.1011	0.0271	7	0.50	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0029	0.6663	0.0126	0.6087	0.1011	0.0271	7	0.52	OK	0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (0.7%)	0553	0.7175	0.0150	0.6087	0.1011	0.0271	7	0.97	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0568	0.4250	0.0000	0.6934	0.0403	0.0142	14	-6.65	Low	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0377	0.6400	0.0000	0.6934	0.0403	0.0142	14	-1.32	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0035	0.6745	0.0150	0.6934	0.0403	0.0142	14	-0.47	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0451	0.6770	0.0109	0.6934	0.0403	0.0142	14	-0.41	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0231	0.6800	0.0000	0.6934	0.0403	0.0142	14	-0.33	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0619	0.6805	0.0170	0.6934	0.0403	0.0142	14	-0.32	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0324	0.6830	0.0400	0.6934	0.0403	0.0142	14	-0.26	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0255	0.6930	0.0540	0.6934	0.0403	0.0142	14	-0.01	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0354	0.6950	0.0100	0.6934	0.0403	0.0142	14	0.04	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0234	0.7000	0.0000	0.6934	0.0403	0.0142	14	0.16	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0049	0.7126	0.0153	0.6934	0.0403	0.0142	14	0.48	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0452	0.7400	0.0000	0.6934	0.0403	0.0142	14	1.16	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0291	0.7450	0.0100	0.6934	0.0403	0.0142	14	1.28	OK	0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (0.7%)	0433	0.8250	0.0260	0.6934	0.0403	0.0142	14	3.26	OK	0
121.31	Acid Soluble Mg, ICP, test portion organic 965.09 (0.7%)	0619	0.6895	0.0010				1			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.7%)	0423	0.6320	0.0120	0.6494	0.0181	0.0213	4	-0.96		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.7%)	0220	0.6400	0.0200	0.6494	0.0181	0.0213	4	-0.52		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.7%)	0095	0.6520	0.0500	0.6494	0.0181	0.0213	4	0.15		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (0.7%)	0405	0.6735	0.0030	0.6494	0.0181	0.0213	4	1.34		0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0055	0.6350	0.0100	0.6880	0.0353	0.0147	12	-1.50	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0177	0.6414	0.0035	0.6880	0.0353	0.0147	12	-1.32	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0543	0.6680	0.0040	0.6880	0.0353	0.0147	12	-0.57	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0136	0.6700	0.0200	0.6880	0.0353	0.0147	12	-0.51	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0260	0.6730	0.0480	0.6880	0.0353	0.0147	12	-0.42	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0043	0.6900	0.0000	0.6880	0.0353	0.0147	12	0.06	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0419	0.7050	0.0100	0.6880	0.0353	0.0147	12	0.48	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0472	0.7050	0.0100	0.6880	0.0353	0.0147	12	0.48	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0117	0.7052	0.0094	0.6880	0.0353	0.0147	12	0.49	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0102	0.7100	0.0400	0.6880	0.0353	0.0147	12	0.62	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0527	0.7122	0.0117	0.6880	0.0353	0.0147	12	0.68	OK	0
121.33	Acid Soluble Mg, ICP, 2017.02 (0.7%)	0563	0.8550	0.0100	0.6880	0.0353	0.0147	12	4.73	OK	0
121.70	Acid Soluble Mg, Titrimetric (EDTA) (0.7%)	0510	0.8538	0.0250				1			0
121.99	Acid Soluble Mg, Other (0.7%)	0450	0.4450	0.0900	0.6875	0.0773	0.0258	15	-3.14	Low	0
121.99	Acid Soluble Mg, Other (0.7%)	0481	0.6100	0.0000	0.6875	0.0773	0.0258	15	-1.00	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0524	0.6151	0.0082	0.6875	0.0773	0.0258	15	-0.94	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0572	0.6195	0.0050	0.6875	0.0773	0.0258	15	-0.88	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0368	0.6451	0.0270	0.6875	0.0773	0.0258	15	-0.55	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0389	0.6740	0.0000	0.6875	0.0773	0.0258	15	-0.17	OK	0

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			Value	Range	Rob Mean	Rob SD	Range				
121.99	Acid Soluble Mg, Other (0.7%)	0619	0.6805	0.0170	0.6875	0.0773	0.0258	15	-0.09	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0587	0.6850	0.0100	0.6875	0.0773	0.0258	15	-0.03	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0501	0.7000	0.0400	0.6875	0.0773	0.0258	15	0.16	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0027	0.7100	0.0000	0.6875	0.0773	0.0258	15	0.29	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0559	0.7250	0.0100	0.6875	0.0773	0.0258	15	0.49	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0600	0.7250	0.0500	0.6875	0.0773	0.0258	15	0.49	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0552	0.7450	0.0900	0.6875	0.0773	0.0258	15	0.74	OK	0
121.99	Acid Soluble Mg, Other (0.7%)	0523	1.065	0.0100	0.6875	0.0773	0.0258	15	4.89	High	0
121.99	Acid Soluble Mg, Other (0.7%)	0042	1.105	0.0300	0.6875	0.0773	0.0258	15	5.40	High	0
131.30	Water Soluble Mg, ICP (%)	0619	0.2555	0.0070				1			0
131.99	Water Soluble Mg, Other (%)	0619	0.2555	0.0070				2			0
131.99	Water Soluble Mg, Other (%)	0572	0.2840	0.0200				2			0
143.99	Elemental S, Other (%)	0389	1.905	0.0100	2.244	0.2286	0.0774	4	-1.48		0
143.99	Elemental S, Other (%)	0291	2.315	0.0100	2.244	0.2286	0.0774	4	0.31		0
143.99	Elemental S, Other (%)	0255	2.363	0.2050	2.244	0.2286	0.0774	4	0.52		0
143.99	Elemental S, Other (%)	0368	2.395	0.0846	2.244	0.2286	0.0774	4	0.66		0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0405	1.675	0.0700				2			0
145.00	Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%)	0027	1.795	0.0700				2			0
145.99	Sulfate S, HCl soluble, Other (%)	0619	1.825	0.0100				2			0
145.99	Sulfate S, HCl soluble, Other (%)	0553	2.390	0.1000				2			0
148.00	Total S, Combustion (2.5%)	0547	2.195	0.0300	2.351	0.1176	0.0399	7	-1.20	OK	0
148.00	Total S, Combustion (2.5%)	0029	2.293	0.0500	2.351	0.1176	0.0399	7	-0.45	OK	0
148.00	Total S, Combustion (2.5%)	0025	2.298	0.1050	2.351	0.1176	0.0399	7	-0.41	OK	0
148.00	Total S, Combustion (2.5%)	0157	2.315	0.0500	2.351	0.1176	0.0399	7	-0.28	OK	0
148.00	Total S, Combustion (2.5%)	0451	2.423	0.0340	2.351	0.1176	0.0399	7	0.55	OK	0
148.00	Total S, Combustion (2.5%)	0073	2.455	0.0100	2.351	0.1176	0.0399	7	0.80	OK	0
148.00	Total S, Combustion (2.5%)	0049	2.480	0.0000	2.351	0.1176	0.0399	7	0.99	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	0324	1.930	0.0400	2.302	0.2635	0.0733	6	-1.26	Low	0
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	0095	2.200	0.0400	2.302	0.2635	0.0733	6	-0.34	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	0055	2.285	0.0300	2.302	0.2635	0.0733	6	-0.06	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	0580	2.300	0.2000	2.302	0.2635	0.0733	6	-0.01	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	0485	2.535	0.1100	2.302	0.2635	0.0733	6	0.79	OK	0
148.01	Total S, Gravimetric - sulfate and elemental (2.5%)	0534	2.560	0.0200	2.302	0.2635	0.0733	6	0.87	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0619	1.890	0.0000	2.343	0.1850	0.0667	12	-2.45	Low	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0472	2.125	0.0100	2.343	0.1850	0.0667	12	-1.18	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0040	2.200	0.0000	2.343	0.1850	0.0667	12	-0.77	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0117	2.280	0.0647	2.343	0.1850	0.0667	12	-0.34	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0136	2.285	0.1100	2.343	0.1850	0.0667	12	-0.31	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0260	2.335	0.1900	2.343	0.1850	0.0667	12	-0.04	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0563	2.390	0.0600	2.343	0.1850	0.0667	12	0.25	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0102	2.395	0.0700	2.343	0.1850	0.0667	12	0.28	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0543	2.405	0.0360	2.343	0.1850	0.0667	12	0.33	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0177	2.473	0.0197	2.343	0.1850	0.0667	12	0.70	OK	0

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			Value	Range	Rob Mean	Rob SD	Range				
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0043	2.565	0.0900	2.343	0.1850	0.0667	12	1.20	OK	0
148.07	Total S, ICP, test portion as in 2017.02 (2.5%)	0527	2.599	0.1501	2.343	0.1850	0.0667	12	1.38	OK	0
148.99	Total S, Other (2.5%)	0481	1.545	0.0100	2.277	0.2808	0.0364	15	-2.61	Low	0
148.99	Total S, Other (2.5%)	0619	1.890	0.0000	2.277	0.2808	0.0364	15	-1.38	Low	0
148.99	Total S, Other (2.5%)	0422	2.030	0.1010	2.277	0.2808	0.0364	15	-0.88	OK	0
148.99	Total S, Other (2.5%)	0433	2.055	0.0900	2.277	0.2808	0.0364	15	-0.79	OK	0
148.99	Total S, Other (2.5%)	0572	2.132	0.0350	2.277	0.2808	0.0364	15	-0.52	OK	0
148.99	Total S, Other (2.5%)	0419	2.225	0.0100	2.277	0.2808	0.0364	15	-0.19	OK	0
148.99	Total S, Other (2.5%)	0220	2.265	0.0300	2.277	0.2808	0.0364	15	-0.04	OK	0
148.99	Total S, Other (2.5%)	0450	2.275	0.0100	2.277	0.2808	0.0364	15	-0.01	OK	0
148.99	Total S, Other (2.5%)	0354	2.370	0.0200	2.277	0.2808	0.0364	15	0.33	OK	0
148.99	Total S, Other (2.5%)	0377	2.375	0.0300	2.277	0.2808	0.0364	15	0.35	OK	0
148.99	Total S, Other (2.5%)	0452	2.420	0.0200	2.277	0.2808	0.0364	15	0.51	OK	0
148.99	Total S, Other (2.5%)	0562	2.515	0.0100	2.277	0.2808	0.0364	15	0.85	OK	0
148.99	Total S, Other (2.5%)	0559	2.525	0.0100	2.277	0.2808	0.0364	15	0.88	OK	0
148.99	Total S, Other (2.5%)	0600	2.525	0.1500	2.277	0.2808	0.0364	15	0.88	OK	0
148.99	Total S, Other (2.5%)	0523	3.230	0.0200	2.277	0.2808	0.0364	15	3.39	High	0
148.99	Total S, Other (2.5%)	0501	2.250	0.5000	2.277	0.2808	0.0364	15	-0.10	OK	1
149.04	S - HNO3 soluble, ICP (%)	0423	2.245	0.0300	2.307	0.0506	0.0424	4	-1.23		0
149.04	S - HNO3 soluble, ICP (%)	0588	2.305	0.0900	2.307	0.0506	0.0424	4	-0.04		0
149.04	S - HNO3 soluble, ICP (%)	0231	2.310	0.0000	2.307	0.0506	0.0424	4	0.06		0
149.04	S - HNO3 soluble, ICP (%)	0524	2.369	0.0497	2.307	0.0506	0.0424	4	1.22		0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	0534	2.955	0.1100				1			0
151.30	Acid Soluble As, ICP (ppm)	0524	3.562	0.0810	13.53	16.77	0.9938	5	-0.52		0
151.30	Acid Soluble As, ICP (ppm)	0450	3.850	0.3000	13.53	16.77	0.9938	5	-0.50		0
151.30	Acid Soluble As, ICP (ppm)	0523	4.396	0.1180	13.53	16.77	0.9938	5	-0.48		0
151.30	Acid Soluble As, ICP (ppm)	0027	13.18	1.240	13.53	16.77	0.9938	5	-0.02		0
151.30	Acid Soluble As, ICP (ppm)	0419	42.65	3.230	13.53	16.77	0.9938	5	1.52		0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000	13.53	16.77	0.9938	5			4
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	2.650	0.3000				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	5.000	0.0000				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0485	< 0.2					2			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	3.896	0.2262	4.019	0.1758	0.1021	3	-0.70		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	3.940	0.0800	4.019	0.1758	0.1021	3	-0.45		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0563	4.220	0.0000	4.019	0.1758	0.1021	3	1.15		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0117	< 10		4.019	0.1758	0.1021	3			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	< 0.3					0			5
151.99	Acid Soluble As, Other (ppm)	0481	0.9200	0.0800	2.666	1.589	0.1297	3	-1.10		0
151.99	Acid Soluble As, Other (ppm)	0220	3.050	0.3000	2.666	1.589	0.1297	3	0.24		0
151.99	Acid Soluble As, Other (ppm)	0572	4.027	0.0090	2.666	1.589	0.1297	3	0.86		0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					0			5
165.99	Acid Soluble B, Other (%)	0524	0.0013	0.0002				2			0
165.99	Acid Soluble B, Other (%)	0423	0.0026	0.0000				2			0

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			Value	Range	Rob Mean	Rob SD	Range				
165.99	Acid Soluble B, Other (%)	0552	0.1050	0.2100				2			4
165.99	Acid Soluble B, Other (%)	0527	< 0.01					2			5
165.99	Acid Soluble B, Other (%)	0572	< 0.0113					2			5
171.99	Water Soluble B, Other (%)	0572	< 0.011					0			5
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	0534	< 0.5					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.7560	0.0269	2.346	2.939	1.818	5	-0.54		0
181.30	Acid Soluble Cd, ICP (ppm)	0389	0.8050	0.0100	2.346	2.939	1.818	5	-0.52		0
181.30	Acid Soluble Cd, ICP (ppm)	0523	1.003	0.0090	2.346	2.939	1.818	5	-0.46		0
181.30	Acid Soluble Cd, ICP (ppm)	0419	1.600	0.0200	2.346	2.939	1.818	5	-0.25		0
181.30	Acid Soluble Cd, ICP (ppm)	0255	7.569	9.022	2.346	2.939	1.818	5	1.78		0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0485	1.210	0.1600				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	1.400	0.0000				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	< 1					2			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0563	0.6250	0.0100				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	1.032	0.0055				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	< 1					2			5
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0117	< 5					2			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	0.8500	0.1000				1			0
181.99	Acid Soluble Cd, Other (ppm)	0481	0.6600	0.0800	0.9880	0.3771	0.0487	3	-0.87		0
181.99	Acid Soluble Cd, Other (ppm)	0572	0.9040	0.0660	0.9880	0.3771	0.0487	3	-0.22		0
181.99	Acid Soluble Cd, Other (ppm)	0220	1.400	0.0000	0.9880	0.3771	0.0487	3	1.09		0
191.30	Acid Soluble Cr, ICP (ppm)	0524	27.91	0.0899	46.28	16.35	3.338	6	-1.00	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	35.40	0.1300	46.28	16.35	3.338	6	-0.59	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	39.45	10.50	46.28	16.35	3.338	6	-0.37	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0419	53.06	0.2500	46.28	16.35	3.338	6	0.37	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0523	55.37	0.0570	46.28	16.35	3.338	6	0.50	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0450	66.50	9.000	46.28	16.35	3.338	6	1.10	NA	0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	31.10	0.2000				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	54.00	4.000				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	20.77	3.040	41.95	15.64	2.531	4	-1.35		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	39.92	0.3231	41.95	15.64	2.531	4	-0.13		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0563	51.18	5.000	41.95	15.64	2.531	4	0.59		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0117	55.95	1.762	41.95	15.64	2.531	4	0.89		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	27.30	0.4000				1			0
191.99	Acid Soluble Cr, Other (ppm)	0572	31.70	7.651	36.02	3.780	3.117	3	-1.14		0
191.99	Acid Soluble Cr, Other (ppm)	0220	37.60	0.4000	36.02	3.780	3.117	3	0.42		0
191.99	Acid Soluble Cr, Other (ppm)	0481	38.75	1.300	36.02	3.780	3.117	3	0.72		0
202.30	Acid Soluble Co, ICP (ppm)	0035	10.13	2.350	15.29	4.769	0.7071	6	-0.96	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0524	12.34	0.1525	15.29	4.769	0.7071	6	-0.55	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0389	12.95	0.1000	15.29	4.769	0.7071	6	-0.44	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0450	16.20	0.8000	15.29	4.769	0.7071	6	0.17	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0523	19.30	0.0800	15.29	4.769	0.7071	6	0.75	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0419	20.83	0.7600	15.29	4.769	0.7071	6	1.03	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	7.050	0.3000	13.91	4.855	0.3875	4	-1.41		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0485	15.00	0.0000	13.91	4.855	0.3875	4	0.22		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	15.10	0.2500	13.91	4.855	0.3875	4	0.24		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	18.50	1.000	13.91	4.855	0.3875	4	0.95		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	4.540	0.9400	12.86	6.342	0.7911	4	-1.31		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	12.26	0.3322	12.86	6.342	0.7911	4	-0.09		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0563	14.95	1.610	12.86	6.342	0.7911	4	0.33		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0117	19.70	0.2820	12.86	6.342	0.7911	4	1.08		0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	7.400	1.400				2			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0501	14.00	2.000				2			0
202.99	Acid Soluble Co, Other (ppm)	0572	6.126	0.1600	25.22	29.40	5.090	3	-0.65		0
202.99	Acid Soluble Co, Other (ppm)	0220	10.45	0.1000	25.22	29.40	5.090	3	-0.50		0
202.99	Acid Soluble Co, Other (ppm)	0255	59.08	15.01	25.22	29.40	5.090	3	1.15		0
221.03	Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual a	0534	0.0031	0.0001				1			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0035	0.0001	0.0038	0.0003	0.0000	3	-1.15		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0049	0.0040	0.0000	0.0038	0.0003	0.0000	3	0.58		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0040	0.0000	0.0038	0.0003	0.0000	3	0.58		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0000	0.0000	0.0038	0.0003	0.0000	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0038	0.0003	0.0000	3			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0220	0.0033	0.0001	0.0036	0.0002	0.0001	4	-1.32		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0423	0.0035	0.0000	0.0036	0.0002	0.0001	4	-0.22		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0405	0.0037	0.0002	0.0036	0.0002	0.0001	4	0.66		0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0095	0.0038	0.0001	0.0036	0.0002	0.0001	4	0.88		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0563	0.0035	0.0001	0.0038	0.0004	0.0002	6	-0.87	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	0.0036	0.0003	0.0038	0.0004	0.0002	6	-0.62	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0043	0.0038	0.0001	0.0038	0.0004	0.0002	6	-0.12	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0038	0.0001	0.0038	0.0004	0.0002	6	-0.12	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0117	0.0040	0.0001	0.0038	0.0004	0.0002	6	0.38	OK	0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0419	0.0062	0.0003	0.0038	0.0004	0.0002	6	5.87	OK	0
221.99	Acid Soluble Cu, Other (%)	0523	0.0010	0.0000	0.0035	0.0007	0.0000	7	-3.13	OK	0
221.99	Acid Soluble Cu, Other (%)	0524	0.0029	0.0001	0.0035	0.0007	0.0000	7	-0.79	OK	0
221.99	Acid Soluble Cu, Other (%)	0220	0.0035	0.0000	0.0035	0.0007	0.0000	7	0.04	OK	0
221.99	Acid Soluble Cu, Other (%)	0368	0.0036	0.0001	0.0035	0.0007	0.0000	7	0.10	OK	0
221.99	Acid Soluble Cu, Other (%)	0389	0.0040	0.0000	0.0035	0.0007	0.0000	7	0.67	OK	0
221.99	Acid Soluble Cu, Other (%)	0481	0.0040	0.0000	0.0035	0.0007	0.0000	7	0.67	OK	0
221.99	Acid Soluble Cu, Other (%)	0572	0.0040	0.0000	0.0035	0.0007	0.0000	7	0.67	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	0534	0.0990	0.0020	0.2697	0.0783	0.0034	6	-1.94	Low	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	0553	0.2180	0.0100	0.2697	0.0783	0.0034	6	-0.59	Low	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	0580	0.3000	0.0000	0.2697	0.0783	0.0034	6	0.34	OK	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	0029	0.3113	0.0036	0.2697	0.0783	0.0034	6	0.47	High	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	0485	0.3165	0.0050	0.2697	0.0783	0.0034	6	0.53	High	0
241.00	Acid Soluble Fe, AA, inorganic 965.09 (0.2%)	0040	0.3200	0.0000	0.2697	0.0783	0.0034	6	0.57	High	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0619	0.1935	0.0010	0.2958	0.0352	0.0140	14	-2.90	Low	0

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			Value	Range	Rob Mean	Rob SD	Range				
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0377	0.2280	0.0200	0.2958	0.0352	0.0140	14	-1.92	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0452	0.2600	0.0000	0.2958	0.0352	0.0140	14	-1.01	Low	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0324	0.2790	0.0240	0.2958	0.0352	0.0140	14	-0.48	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0035	0.2845	0.0190	0.2958	0.0352	0.0140	14	-0.32	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0231	0.2850	0.0100	0.2958	0.0352	0.0140	14	-0.31	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0234	0.3000	0.0000	0.2958	0.0352	0.0140	14	0.12	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0157	0.3005	0.0150	0.2958	0.0352	0.0140	14	0.13	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0451	0.3182	0.0013	0.2958	0.0352	0.0140	14	0.64	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0255	0.3188	0.0267	0.2958	0.0352	0.0140	14	0.65	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0433	0.3200	0.0600	0.2958	0.0352	0.0140	14	0.69	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0049	0.3239	0.0086	0.2958	0.0352	0.0140	14	0.80	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0354	0.3300	0.0000	0.2958	0.0352	0.0140	14	0.97	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0291	0.3350	0.0100	0.2958	0.0352	0.0140	14	1.11	High	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (0.2%)	0552	0.2450	0.0900	0.2958	0.0352	0.0140	14	-1.44	Low	1
241.31	Acid Soluble Fe, ICP, test portion organic 965.09 (0.2%)	0619	0.1935	0.0010				1			0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (0.2%)	0095	0.3136	0.0152	0.3220	0.0069	0.0061	4	-1.21		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (0.2%)	0220	0.3200	0.0000	0.3220	0.0069	0.0061	4	-0.29		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (0.2%)	0423	0.3245	0.0010	0.3220	0.0069	0.0061	4	0.36		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (0.2%)	0405	0.3300	0.0080	0.3220	0.0069	0.0061	4	1.15		0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0543	0.2645	0.0070	0.3228	0.0476	0.0083	12	-1.22	Low	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0563	0.2650	0.0100	0.3228	0.0476	0.0083	12	-1.21	Low	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0136	0.2900	0.0000	0.3228	0.0476	0.0083	12	-0.69	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0472	0.2900	0.0000	0.3228	0.0476	0.0083	12	-0.69	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0043	0.2962	0.0003	0.3228	0.0476	0.0083	12	-0.56	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0055	0.3150	0.0100	0.3228	0.0476	0.0083	12	-0.16	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0419	0.3300	0.0000	0.3228	0.0476	0.0083	12	0.15	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0177	0.3436	0.0103	0.3228	0.0476	0.0083	12	0.43	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0260	0.3595	0.0250	0.3228	0.0476	0.0083	12	0.77	OK	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0527	0.3644	0.0059	0.3228	0.0476	0.0083	12	0.87	High	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0117	0.3711	0.0205	0.3228	0.0476	0.0083	12	1.01	High	0
241.33	Acid Soluble Fe, ICP, 2017.02 (0.2%)	0102	0.3850	0.0100	0.3228	0.0476	0.0083	12	1.30	High	0
241.99	Acid Soluble Fe, Other (0.2%)	0619	0.1950	0.0000	0.2874	0.0381	0.0096	13	-2.42	Low	0
241.99	Acid Soluble Fe, Other (0.2%)	0042	0.2100	0.0000	0.2874	0.0381	0.0096	13	-2.03	Low	0
241.99	Acid Soluble Fe, Other (0.2%)	0524	0.2640	0.0067	0.2874	0.0381	0.0096	13	-0.61	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0572	0.2795	0.0050	0.2874	0.0381	0.0096	13	-0.21	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0501	0.2800	0.0200	0.2874	0.0381	0.0096	13	-0.19	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0562	0.2800	0.0000	0.2874	0.0381	0.0096	13	-0.19	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0600	0.2900	0.0200	0.2874	0.0381	0.0096	13	0.07	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0027	0.2950	0.0100	0.2874	0.0381	0.0096	13	0.20	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0389	0.3000	0.0020	0.2874	0.0381	0.0096	13	0.33	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0368	0.3022	0.0002	0.2874	0.0381	0.0096	13	0.39	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0587	0.3050	0.0300	0.2874	0.0381	0.0096	13	0.46	OK	0
241.99	Acid Soluble Fe, Other (0.2%)	0481	0.3350	0.0300	0.2874	0.0381	0.0096	13	1.25	High	0

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			Value	Range	Rob Mean	Rob SD	Range				
241.99	Acid Soluble Fe, Other (0.2%)	0523	0.4175	0.0010	0.2874	0.0381	0.0096	13	3.42	High	0
251.30	Acid Soluble Pb, ICP (ppm)	0524	1.641	0.0671	4.410	5.536	0.2472	5	-0.44		0
251.30	Acid Soluble Pb, ICP (ppm)	0501	1.750	0.5000	4.410	5.536	0.2472	5	-0.42		0
251.30	Acid Soluble Pb, ICP (ppm)	0450	2.000	0.2000	4.410	5.536	0.2472	5	-0.38		0
251.30	Acid Soluble Pb, ICP (ppm)	0523	2.358	0.0490	4.410	5.536	0.2472	5	-0.32		0
251.30	Acid Soluble Pb, ICP (ppm)	0419	14.30	0.4200	4.410	5.536	0.2472	5	1.56		0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.0000	0.0000	4.410	5.536	0.2472	5			4
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	4.600	0.4000				1			0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0485	< 0.2					1			5
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0405	< 4					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0563	1.885	0.0100				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	2.210	0.0087				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3					2			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0117	< 5					2			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	< 0.6					0			5
251.99	Acid Soluble Pb, Other (ppm)	0481	0.9600	0.0600	1.987	0.8951	0.4317	3	-1.15		0
251.99	Acid Soluble Pb, Other (ppm)	0572	2.402	0.6350	1.987	0.8951	0.4317	3	0.46		0
251.99	Acid Soluble Pb, Other (ppm)	0220	2.600	0.6000	1.987	0.8951	0.4317	3	0.68		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	0.0400	0.0000				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0405	0.0030				2			0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.0100	0.0200				0			4
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0425	0.0010				1			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0472	0.0400	0.0000	0.0434	0.0023	0.0009	4	-1.47		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0563	0.0440	0.0020	0.0434	0.0023	0.0009	4	0.26		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0419	0.0445	0.0010	0.0434	0.0023	0.0009	4	0.48		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0451	0.0006	0.0434	0.0023	0.0009	4	0.74		0
261.99	Acid Soluble Mn, Other (%)	0524	0.0397	0.0006	0.0419	0.0020	0.0015	3	-1.12		0
261.99	Acid Soluble Mn, Other (%)	0389	0.0425	0.0010	0.0419	0.0020	0.0015	3	0.30		0
261.99	Acid Soluble Mn, Other (%)	0572	0.0435	0.0030	0.0419	0.0020	0.0015	3	0.81		0
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0450	0.0350	0.0100				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0563	0.0710	0.0140				2			0
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					2			5
281.30	Acid Soluble Hg, ICP (ppm)	0405	< 2					2			5
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0476	0.0036	0.0547	0.0053	0.0035	4	-1.33		0
281.99	Acid Soluble Hg, Other (ppm)	0572	0.0540	0.0000	0.0547	0.0053	0.0035	4	-0.14		0
281.99	Acid Soluble Hg, Other (ppm)	0368	0.0573	0.0102	0.0547	0.0053	0.0035	4	0.48		0
281.99	Acid Soluble Hg, Other (ppm)	0220	0.0600	0.0000	0.0547	0.0053	0.0035	4	0.99		0
289.30	Acid Soluble Mo, ICP (ppm)	0523	1.550	0.0030	3.489	2.169	0.4905	6	-0.80	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0234	2.000	0.0000	3.489	2.169	0.4905	6	-0.61	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0035	2.870	1.560	3.489	2.169	0.4905	6	-0.25	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	2.946	0.0817	3.489	2.169	0.4905	6	-0.22	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0255	5.044	0.6880	3.489	2.169	0.4905	6	0.64	OK	0

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289.30	Acid Soluble Mo, ICP (ppm)	0419	6.525	0.6100	3.489	2.169	0.4905	6	1.25	High	0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	3.450	0.1000				2			0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	4.000	0.0000				2			0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0485	< 0.1					2			5
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	2.225	0.2500	3.053	0.5738	0.2886	4	-1.44		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0563	3.200	0.5000	3.053	0.5738	0.2886	4	0.26		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	3.236	0.3244	3.053	0.5738	0.2886	4	0.32		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	3.550	0.0800	3.053	0.5738	0.2886	4	0.87		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0117	< 5		3.053	0.5738	0.2886	4			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	1.750	0.9000				1			0
289.99	Acid Soluble Mo, Other (ppm)	0572	3.490	0.3800				2			0
289.99	Acid Soluble Mo, Other (ppm)	0220	4.050	0.1000				2			0
291.30	Acid Soluble Ni, ICP (ppm)	0035	17.90	3.800	21.63	4.065	1.163	6	-0.82	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0389	19.00	0.1300	21.63	4.065	1.163	6	-0.58	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	19.37	0.1857	21.63	4.065	1.163	6	-0.49	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0450	21.50	1.000	21.63	4.065	1.163	6	-0.03	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0523	25.69	0.4720	21.63	4.065	1.163	6	0.89	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0419	26.30	1.390	21.63	4.065	1.163	6	1.02	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	16.85	0.1000	19.20	3.729	0.4000	3	-0.63		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0485	17.25	0.1000	19.20	3.729	0.4000	3	-0.52		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	23.50	1.000	19.20	3.729	0.4000	3	1.15		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	10.64	1.090	18.29	6.071	1.136	4	-1.26		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	16.25	1.320	18.29	6.071	1.136	4	-0.33		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0563	22.39	1.620	18.29	6.071	1.136	4	0.68		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0117	23.86	0.5140	18.29	6.071	1.136	4	0.92		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	16.10	0.2000				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0501	24.50	3.000				2			0
291.99	Acid Soluble Ni, Other (ppm)	0572	16.71	3.369	36.01	30.08	6.016	3	-0.64		0
291.99	Acid Soluble Ni, Other (ppm)	0220	20.65	0.3000	36.01	30.08	6.016	3	-0.51		0
291.99	Acid Soluble Ni, Other (ppm)	0255	70.66	14.38	36.01	30.08	6.016	3	1.15		0
301.30	Acid Soluble Se, ICP (ppm)	0524	1.187	0.0617	12.97	20.09	0.9099	3	-0.59		0
301.30	Acid Soluble Se, ICP (ppm)	0523	1.549	0.3280	12.97	20.09	0.9099	3	-0.57		0
301.30	Acid Soluble Se, ICP (ppm)	0419	36.17	2.340	12.97	20.09	0.9099	3	1.15		0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	2.000	0.0000				1			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	< 10					1			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0563	2.395	0.0900				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)	0368	< 1.1					0			5
301.99	Acid Soluble Se, Other (ppm)	0572	1.752	0.0080	12.93	19.15	12.86	3	-0.58		0
301.99	Acid Soluble Se, Other (ppm)	0220	2.000	0.2000	12.93	19.15	12.86	3	-0.57		0
301.99	Acid Soluble Se, Other (ppm)	0255	35.04	38.38	12.93	19.15	12.86	3	1.15		0
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5		12.93	19.15	12.86	3			5
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.6475	0.0010	0.6795	0.0364	0.0066	3	-0.88		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.6720	0.0040	0.6795	0.0364	0.0066	3	-0.21		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.7191	0.0147	0.6795	0.0364	0.0066	3	1.09		0
311.99	Sodium, Other (%)	0572	0.6275	0.0170	0.6825	0.0499	0.0123	3	-1.10		0
311.99	Sodium, Other (%)	0354	0.6950	0.0100	0.6825	0.0499	0.0123	3	0.25		0
311.99	Sodium, Other (%)	0291	0.7250	0.0100	0.6825	0.0499	0.0123	3	0.85		0
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual a	0534	0.0195	0.0010				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0160	0.0000	0.0310	0.0302	0.0020	5	-0.50		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0049	0.0160	0.0000	0.0310	0.0302	0.0020	5	-0.50		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0180	0.0000	0.0310	0.0302	0.0020	5	-0.43		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.0200	0.0000	0.0310	0.0302	0.0020	5	-0.36		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.0850	0.0100	0.0310	0.0302	0.0020	5	1.79		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0485	0.0147	0.0006	0.0160	0.0015	0.0006	4	-0.83		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0154	0.0002	0.0160	0.0015	0.0006	4	-0.38		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	0.0156	0.0004	0.0160	0.0015	0.0006	4	-0.24		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0182	0.0012	0.0160	0.0015	0.0006	4	1.45		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0150	0.0000	0.0171	0.0019	0.0006	6	-0.98	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0117	0.0160	0.0018	0.0171	0.0019	0.0006	6	-0.51	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0168	0.0007	0.0171	0.0019	0.0006	6	-0.16	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0174	0.0001	0.0171	0.0019	0.0006	6	0.12	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0419	0.0175	0.0010	0.0171	0.0019	0.0006	6	0.19	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0472	0.0200	0.0000	0.0171	0.0019	0.0006	6	1.37	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0260	173.4	1.150	0.0171	0.0019	0.0006	6	81375.01	High	2
321.99	Acid Soluble Zn, Other (%)	0481	0.0150	0.0000	0.0165	0.0018	0.0003	6	-0.73	OK	0
321.99	Acid Soluble Zn, Other (%)	0220	0.0152	0.0002	0.0165	0.0018	0.0003	6	-0.63	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0160	0.0005	0.0165	0.0018	0.0003	6	-0.26	OK	0
321.99	Acid Soluble Zn, Other (%)	0389	0.0160	0.0000	0.0165	0.0018	0.0003	6	-0.23	OK	0
321.99	Acid Soluble Zn, Other (%)	0572	0.0175	0.0010	0.0165	0.0018	0.0003	6	0.51	OK	0
321.99	Acid Soluble Zn, Other (%)	0523	0.0290	0.0000	0.0165	0.0018	0.0003	6	6.19	High	0
321.99	Acid Soluble Zn, Other (%)	0368	0.0213	0.0046	0.0165	0.0018	0.0003	6	2.38	OK	1
325.99	Water Soluble Zn, Other (%)	0572	0.0015	0.0010				1			0
431.99	Soluble Si in nonliquids, Other (%)	0572	< 0.0066					0			5
441.00	Humic Acids, Gravimetry,Ash-free, alkali dissolved, acid precip	0220	< 0.01					0			5
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0518	3.300	0.2000	6.088	1.812	0.2273	5	-1.34		0
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0368	5.517	0.0310	6.088	1.812	0.2273	5	-0.28		0
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0527	6.720	0.2555	6.088	1.812	0.2273	5	0.30		0
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0547	6.780	0.1800	6.088	1.812	0.2273	5	0.33		0
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0572	8.125	0.4700	6.088	1.812	0.2273	5	0.98		0
441.10	Humic Acids, Gravimetry, alkali dissolved, acid precipitated (%)	0220	< 0.01		6.088	1.812	0.2273	5			5
441.99	Humic Acids, Other (%)	0600	3.200	0.2000	3.352	0.1314	0.0767	3	-1.15		0
441.99	Humic Acids, Other (%)	0559	3.425	0.0100	3.352	0.1314	0.0767	3	0.56		0
441.99	Humic Acids, Other (%)	0562	3.430	0.0200	3.352	0.1314	0.0767	3	0.60		0

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)

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Range				

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. IA Status describes where your result is relative to the Assigned Value ± 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 the purpose of this Proficiency Testing program.