

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 127

Sample # 240714

Regular PT Scheme Sample Doubles with P Scheme

Labs Reporting: 84

18-46-0 DAP

Statistical Summary

Issue Date : 08/31/2024

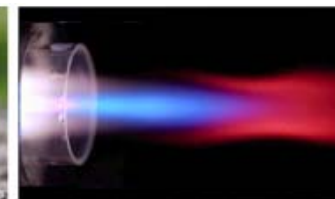
Method Code	Analyte & Method Sample # 240714	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.10	Ammoniacal N, Magnesium Oxide Method (%)	6	6	17.41	0.6628	17.41		0.7516	0.3836	4.32%		0.1241	2.40%
001.99	Ammoniacal N, Other (%)	27	26	17.54	0.8817	17.71		0.5418	0.1328	3.06%		0.0709	2.38%
002.99	Nitrate N, Other (%)	1		0.0100									
005.99	Urea N, Other (%)	2	2	9.505	12.61								
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	1		17.95									
010.11	Total N, Modified Comprehensive (18%)	1		18.15									
010.12	Total N, Salicylic (18%)	3	3	18.19	0.4212	18.19	0.7029	0.4212	0.3040	2.32%	1.40	0.6184	2.34%
010.60	Total N, Combustion (18%)	57	56	18.13	0.3780	18.11	0.7016	0.2604	0.0435	1.44%	0.86	0.1280	2.35%
010.99	Total N, Other (18%)	9	9	17.86	0.5815	17.82	0.6974	0.5741	0.2392	3.22%	1.92	0.1232	2.37%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	4	4	46.54	0.5069	46.54		0.5069	0.3168	1.09%		0.1175	1.47%
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	20	19	46.51	0.5166	46.51		0.4941	0.1417	1.06%		0.1145	1.47%
020.40	Total P2O5, Automated (%)	3	3	46.97	0.2988	46.97		0.2988	0.2156	0.64%		0.1300	1.46%
020.50	Total P2O5, ICP (%)	21	20	45.20	2.225	45.33		2.324	0.6496	5.13%		0.4228	1.49%
020.99	Total P2O5, Other (%)	10	9	45.65	1.533	46.13		0.1216	0.0507	0.26%		0.1261	1.47%
030.10	Citrate Insoluble P2O5, Gravimetric Quinolinium MolybdoP (%)	1		44.10									
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP	3	3	0.1367	0.0801	0.1367		0.0801	0.0578	58.57%		0.0333	5.40%
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	2	2	1.660	1.683								
030.50	Citrate Insoluble P2O5, ICP, test portion 963.03 A-B (%)	2	2	0.1600	0.0283								
030.99	Citrate Insoluble P2O5, Other (%)	1		0.0350									
040.10	Indirect Available P2O5, Gravimetric Quinolinium (46%)	1		47.66									
040.40	Indirect Available P2O5, Automated (46%)	2	2	45.17	1.927								
040.50	Indirect Available P2O5, ICP (46%)	1		45.75									
040.99	Indirect Available P2O5, Other (46%)	3	3	46.70	0.3289	46.70	1.0104	0.3289	0.2374	0.70%	0.76	0.1367	1.46%
041.10	Direct Available P2O5, Gravimetric Quinolinium (46%)	4	4	46.62	0.4125	46.62	1.0094	0.4125	0.2578	0.88%	0.95	0.2180	1.46%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	9	9	46.53	0.4429	46.49	1.0073	0.3930	0.1638	0.85%	0.91	0.2176	1.47%
041.20	Direct Available P2O5, Spectrophotometric (46%)	4	4	45.96	0.5891	45.96	0.9993	0.5891	0.3682	1.28%	1.37	0.4733	1.47%
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	9	8	46.00	0.8215	45.89	0.9979	0.9119	0.4030	1.99%	2.13	0.2329	1.48%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (46%)	2	2	46.87	0.3875								
041.50	Direct Available P2O5, ICP (46%)	1		46.79									

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041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	7	7	46.99	0.7572	46.99	1.0148	0.8587	0.4057	1.83%	1.97	0.6700	1.46%
041.99	Direct Available P2O5, Other (46%)	7	7	46.04	0.2120	46.01	1.0002	0.1843	0.0871	0.40%	0.43	0.0829	1.47%
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	2	2	42.13	0.3889								
048.20	Water Soluble P2O5, Spectrophotometric (%)	8	7	41.37	1.142	41.55		0.4361	0.2060	1.05%		0.0942	1.55%
048.40	Water Soluble P2O5, Automated (%)	2	2	41.64	0.1520								
048.50	Water Soluble P2O5, ICP (%)	1		42.72									
048.99	Water Soluble P2O5, Other (%)	10	10	41.68	1.151	41.69		1.290	0.5097	3.09%		0.2316	1.55%
050.50	Soluble K2O, ICP (Oxalate) (%)	2	2	0.1980	0.0799								
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	2	2	0.1928	0.0484								
050.99	Soluble K2O, Other (%)	9	6	0.0834	0.0607	0.1078	0.4100	0.0588	0.0300	54.58%	0.33	0.0063	5.59%
060.00	Water (Free), Vacuum Oven (%)	3	3	1.228	0.4994	1.228		0.4994	0.3604	40.66%		0.1100	3.88%
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g samp	1		1.375									
060.99	Water (Free), Other (%)	1		1.448									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	5	5	0.2644	0.0341	0.2644	0.2132	0.0341	0.0191	12.90%	0.37	0.0246	4.89%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	3	2	0.3750	0.1303	0.3125	0.2156	0.1025	0.0906	32.81%	1.11	0.0300	4.76%
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	2	1	0.1350	0.1768								
101.99	Acid Soluble Ca, Other (%)	5	5	0.2515	0.1273	0.2515	0.2126	0.1273	0.0712	50.62%	1.40	0.0246	4.92%
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	6	5	0.5700	0.1442	0.5796	0.2290	0.1591	0.0889	27.45%	1.62	0.0104	4.34%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	2	2	0.4803	0.0138								
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	4	4	0.4884	0.1100	0.4884	0.2244	0.1100	0.0688	22.53%	1.14	0.0134	4.46%
121.99	Acid Soluble Mg, Other (%)	6	6	0.4578	0.0768	0.4578	0.2229	0.0871	0.0444	19.02%	0.91	0.0388	4.50%
131.99	Water Soluble Mg, Other (%)	1		0.0798									
145.99	Sulfate S, HCl soluble, Other (%)	1		4.470									
148.00	Total S, Combustion (%)	1		1.985									
148.01	Total S, Gravimetric - sulfate and elemental (%)	1		1.260									
148.07	Total S, ICP, test portion as in 2017.02 (%)	4	3	0.9826	0.6638	1.307	0.2653	0.1741	0.1256	13.32%	1.53	0.0258	3.84%
148.99	Total S, Other (%)	5	5	1.248	0.1758	1.248	0.2624	0.1758	0.0983	14.09%	1.56	0.0496	3.87%
149.04	S - HNO3 soluble, ICP (%)	2	2	1.305	0.0004								
151.30	Acid Soluble As, ICP (ppm)	7	6	8.790	7.608	7.846		1.669	0.8517	21.27%		0.1892	11.73%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	3	2	6.083	5.188	9.025		1.379	1.219	15.28%		0.1000	11.49%
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	4	3	4.896	3.566	6.528		1.760	1.270	26.97%		0.4100	12.06%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	2	2	8.700	4.172								
151.99	Acid Soluble As, Other (ppm)	3	3	8.635	0.6350	8.635		0.6350	0.4583	7.35%		0.1905	11.56%
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	4	3	0.0128	0.0119	0.0171	0.0056	0.0101	0.0073	59.39%	4.25	0.0084	7.38%
165.99	Acid Soluble B, Other (%)	9	5	0.0089	0.0086	0.0100	0.0045	0.0112	0.0063	112.73%	5.82	0.0021	8.00%
171.99	Water Soluble B, Other (%)	1		0.0109									
181.30	Acid Soluble Cd, ICP (ppm)	9	8	5.701	2.141	4.855		0.5187	0.2292	10.68%		0.2705	12.61%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	3	3	4.558	0.5270	4.558		0.5270	0.3803	11.56%		0.1500	12.73%
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	4	3	3.457	2.187	4.547		0.2445	0.1765	5.38%		0.1422	12.74%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	1	2.542	3.406								

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181.99	Acid Soluble Cd, Other (ppm)	3	3	4.589	0.2207	4.589		0.2207	0.1593	4.81%		0.1466	12.72%
191.30	Acid Soluble Cr, ICP (ppm)	10	10	72.15	7.541	72.45		7.864	3.109	10.85%		3.166	8.40%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	71.10	1.556								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	4	4	64.63	9.759	64.63		9.759	6.099	15.10%		3.433	8.54%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	69.11	7.901								
191.99	Acid Soluble Cr, Other (ppm)	3	3	70.97	15.08	70.97		15.08	10.88	21.25%		1.868	8.42%
202.30	Acid Soluble Co, ICP (ppm)	9	9	4.692	2.142	4.657	2.3971	2.350	0.9792	50.46%	2.28	0.2824	12.69%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	4	4	5.159	2.464	5.159	2.5476	2.464	1.540	47.77%	2.25	0.2300	12.50%
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	3	2	3.500	2.812	5.120	2.5360	0.2543	0.2248	4.97%	0.23	0.3168	12.51%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	2	1	2.395	3.190								
202.99	Acid Soluble Co, Other (ppm)	3	3	7.336	5.578	7.336	3.2007	5.578	4.025	76.04%	4.06	7.691	11.85%
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	1		0.0050									
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	8	3	0.0054	0.0105	0.0012	0.0051	0.0013	0.0009	108.53%	0.58	0.0003	11.05%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	2	1	0.0007	0.0004								
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	4	3	0.0004	0.0002	0.0005	0.0050	0.0001	0.0001	16.37%	0.04	0.0001	12.69%
221.99	Acid Soluble Cu, Other (%)	8	5	0.0008	0.0009	0.0010	0.0051	0.0011	0.0006	119.36%	0.52	0.0000	11.38%
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	7	6	1.166	0.2561	1.245	0.1295	0.0474	0.0242	3.81%	0.85	0.0425	3.87%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	3	3	1.400	0.3554	1.400	0.1450	0.3554	0.2565	25.38%	5.71	0.0000	3.80%
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	4	4	1.197	0.1218	1.197	0.1247	0.1218	0.0761	10.18%	2.28	0.0569	3.89%
241.99	Acid Soluble Fe, Other (%)	5	5	1.173	0.1404	1.173	0.1223	0.1404	0.0785	11.97%	2.67	0.0215	3.90%
251.30	Acid Soluble Pb, ICP (ppm)	7	5	2.792	2.765	2.909		2.878	1.609	98.95%		0.3579	13.62%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	3	1	2.900	2.352	2.909		2.878	3.598	98.95%		0.0186	13.62%
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	3	1	1.383	1.447	2.909		2.878	3.598	98.95%		0.0186	13.62%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	2	3.769	1.300								
251.99	Acid Soluble Pb, Other (ppm)	3	2	2.451	1.816	2.676		2.508	2.217	93.73%		0.0582	13.79%
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	4	4	0.0399	0.0013	0.0399	0.0090	0.0013	0.0008	3.23%	0.33	0.0014	6.49%
261.31	Acid Soluble Mn, ICP, test portion 972.02b (%)	1		0.0385									
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	2	1	0.0225	0.0248								
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	2	2	0.0343	0.0081								
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	3	3	0.0295	0.0195	0.0295	0.0079	0.0195	0.0141	66.22%	5.72	0.0003	6.80%
261.99	Acid Soluble Mn, Other (%)	4	4	0.0354	0.0051	0.0354	0.0085	0.0051	0.0032	14.33%	1.38	0.0009	6.61%
281.00	Acid Soluble Hg, AA (ppm)	1		0.5000									
281.30	Acid Soluble Hg, ICP (ppm)	4	0	0.8378	0.9601	0.0354		0.0051		14.33%		0.0005	22.00%
281.99	Acid Soluble Hg, Other (ppm)	3	2	0.0087	0.0064	0.0086		0.0091	0.0080	105.96%		0.0051	22.00%
289.30	Acid Soluble Mo, ICP (ppm)	10	10	10.69	2.247	10.60	4.1808	2.348	0.9283	22.15%	1.31	0.8470	11.21%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	3	3	7.950	5.637	7.950	3.3850	5.637	4.068	70.91%	3.88	0.7870	11.71%
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	5	4	5.897	5.583	7.314	3.1942	5.308	3.318	72.57%	3.87	0.3645	11.86%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	2	1	6.489	8.925								
289.99	Acid Soluble Mo, Other (ppm)	2	2	11.10	0.2845								
291.30	Acid Soluble Ni, ICP (ppm)	11	11	18.96	2.783	18.99		3.077	1.160	16.20%		0.6426	10.27%

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291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	3	3	17.77	2.967	17.77		2.967	2.141	16.70%		1.000	10.37%
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	3	3	14.44	9.390	14.44		9.390	6.777	65.01%		0.7925	10.70%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	14.08	6.889								
291.99	Acid Soluble Ni, Other (ppm)	3	3	30.02	22.55	30.02		22.55	16.28	75.14%		11.44	9.59%
301.30	Acid Soluble Se, ICP (ppm)	3	2	0.6567	0.8732	0.1601		0.2122	0.1876	132.59%		0.0141	21.08%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	2	0	5.150	6.859								
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	2	0	0.1400	0.1838								
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	2	0	0.8130	0.8301								
301.99	Acid Soluble Se, Other (ppm)	4	1	0.6433	0.7808	0.1601		0.2122	0.2653	132.59%		0.0071	21.08%
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.1253									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.1462	0.0266	0.1462	0.0196	0.0266	0.0166	18.17%	3.15	0.0071	5.34%
311.99	Sodium, Other (%)	4	4	0.1553	0.0565	0.1553	0.0205	0.0565	0.0353	36.36%	6.41	0.0178	5.29%
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	9	7	0.0257	0.0523	0.0080	0.0058	0.0021	0.0010	25.86%	0.83	0.0014	8.28%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	5	5	0.0078	0.0038	0.0078	0.0058	0.0038	0.0021	48.08%	1.52	0.0004	8.30%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	7	6	0.0064	0.0031	0.0073	0.0057	0.0025	0.0013	34.28%	1.02	0.0003	8.38%
321.99	Acid Soluble Zn, Other (%)	8	6	4.888	13.78	0.0065	0.0057	0.0015	0.0007	22.31%	0.60	0.0006	8.53%
325.99	Water Soluble Zn, Other (%)	1		0.0017									
431.99	Soluble Si in nonliquids, Other (%)	1		0.0070									

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 # 240714

Regular PT Scheme Sample Doubles with P Scheme

18-46-0 DAP

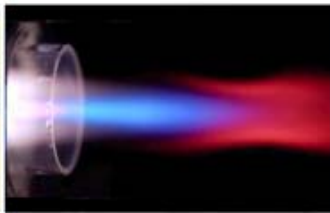
Method Precision Report

Issue Date : 08/31/2024

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility SR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.10	Ammoniacal N, Magnesium Oxide Method (%)	6	6	17.41	0.6628	0.6568	0.1259	0.6688	3.77%	0.72%	3.84%	5.313
001.99	Ammoniacal N, Other (%)	27	25	17.69	0.6379	0.6364	0.0607	0.6393	3.60%	0.34%	3.61%	10.52
010.60	Total N, Combustion (18%)	57	53	18.09	0.3027	0.2904	0.1208	0.3146	1.61%	0.67%	1.74%	2.604
010.99	Total N, Other (18%)	9	8	17.72	0.4168	0.4123	0.0865	0.4213	2.33%	0.49%	2.38%	4.873
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	20	17	46.46	0.4507	0.4386	0.1471	0.4626	0.94%	0.32%	1.00%	3.146
020.50	Total P2O5, ICP (%)	21	19	45.15	2.327	2.281	0.6507	2.372	5.05%	1.44%	5.25%	3.646
020.99	Total P2O5, Other (%)	10	9	46.14	0.1151	0.0775	0.1204	0.1432	0.17%	0.26%	0.31%	1.189
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA E	9	8	46.41	0.2853	0.2471	0.2018	0.3190	0.53%	0.43%	0.69%	1.581
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	9	8	45.89	0.8041	0.7860	0.2399	0.8218	1.71%	0.52%	1.79%	3.425
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	7	7	46.99	0.7572	0.6002	0.6529	0.8868	1.28%	1.39%	1.89%	1.358
041.99	Direct Available P2O5, Other (46%)	7	7	46.04	0.2120	0.2070	0.0646	0.2168	0.45%	0.14%	0.47%	3.357
048.20	Water Soluble P2O5, Spectrophotometric (%)	8	5	41.61	0.2907	0.2889	0.0455	0.2925	0.69%	0.11%	0.70%	6.430
048.99	Water Soluble P2O5, Other (%)	10	9	41.50	1.069	1.041	0.3415	1.096	2.51%	0.82%	2.64%	3.209
050.99	Soluble K2O, Other (%)	9	6	0.1078	0.0519	0.0518	0.0045	0.0520	48.04%	4.15%	48.22%	11.63
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	5	5	0.2644	0.0341	0.0304	0.0218	0.0375	11.50%	8.26%	14.16%	1.714
121.99	Acid Soluble Mg, Other (%)	6	5	0.4494	0.0827	0.0818	0.0169	0.0836	18.21%	3.76%	18.59%	4.950
148.99	Total S, Other (%)	5	5	1.248	0.1758	0.1732	0.0431	0.1784	13.87%	3.45%	14.30%	4.144
151.30	Acid Soluble As, ICP (ppm)	7	5	7.346	0.9096	0.8980	0.2045	0.9210	12.22%	2.78%	12.54%	4.504
181.30	Acid Soluble Cd, ICP (ppm)	9	7	4.675	0.5237	0.4897	0.2625	0.5556	10.47%	5.62%	11.88%	2.116
191.30	Acid Soluble Cr, ICP (ppm)	10	10	72.15	7.541	7.241	2.978	7.830	10.04%	4.13%	10.85%	2.629
202.30	Acid Soluble Co, ICP (ppm)	9	9	4.692	2.142	2.130	0.3134	2.153	45.39%	6.68%	45.88%	6.869
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	7	6	1.259	0.0730	0.0687	0.0346	0.0769	5.46%	2.74%	6.11%	2.227
241.99	Acid Soluble Fe, Other (%)	5	5	1.173	0.1404	0.1399	0.0168	0.1409	11.93%	1.43%	12.01%	8.390
289.30	Acid Soluble Mo, ICP (ppm)	10	10	10.69	2.247	2.177	0.7874	2.315	20.37%	7.37%	21.66%	2.940
291.30	Acid Soluble Ni, ICP (ppm)	11	10	18.74	2.836	2.813	0.5051	2.858	15.01%	2.70%	15.25%	5.658
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	9	6	0.0078	0.0021	0.0021	0.0003	0.0021	26.51%	4.45%	26.88%	6.039

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
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	5	5	0.0078	0.0038	0.0038	0.0002	0.0038	48.05%	2.59%	48.12%	18.61
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	7	6	0.0073	0.0022	0.0022	0.0002	0.0022	30.18%	2.33%	30.27%	13.01
321.99	Acid Soluble Zn, Other (%)	8	6	0.0158	0.0239	0.0239	0.0005	0.0239	150.84%	3.45%	150.88%	43.69

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 127

Sample # 240714

Regular PT Scheme Sample Doubles with P Scheme

Labs Reporting: 84

18-46-0 DAP

Lab Values

Issue Date : 08/31/2024

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				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0389	16.56	0.1600	17.41	0.7516	0.1241	6	-1.01	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0231	16.80	0.1000	17.41	0.7516	0.1241	6	-0.72	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0451	17.12	0.3600	17.41	0.7516	0.1241	6	-0.34	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0444	17.95	0.1000	17.41	0.7516	0.1241	6	0.64	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0619	18.00	0.1000	17.41	0.7516	0.1241	6	0.70	NA	0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0136	18.03	0.0700	17.41	0.7516	0.1241	6	0.73	NA	0
001.99	Ammoniacal N, Other (%)	0368	14.44	0.2890	17.71	0.5418	0.0709	26	-6.04	NA	0
001.99	Ammoniacal N, Other (%)	0423	15.58	0.2200	17.71	0.5418	0.0709	26	-3.94	NA	0
001.99	Ammoniacal N, Other (%)	0394	16.76	0.0720	17.71	0.5418	0.0709	26	-1.75	NA	0
001.99	Ammoniacal N, Other (%)	0558	16.77	0.0224	17.71	0.5418	0.0709	26	-1.73	NA	0
001.99	Ammoniacal N, Other (%)	0564	17.23	0.0500	17.71	0.5418	0.0709	26	-0.90	NA	0
001.99	Ammoniacal N, Other (%)	0600	17.23	0.1500	17.71	0.5418	0.0709	26	-0.90	NA	0
001.99	Ammoniacal N, Other (%)	0553	17.33	0.0500	17.71	0.5418	0.0709	26	-0.71	NA	0
001.99	Ammoniacal N, Other (%)	0560	17.48	0.0800	17.71	0.5418	0.0709	26	-0.43	NA	0
001.99	Ammoniacal N, Other (%)	0220	17.52	0.0200	17.71	0.5418	0.0709	26	-0.35	NA	0
001.99	Ammoniacal N, Other (%)	0572	17.62	0.0456	17.71	0.5418	0.0709	26	-0.17	NA	0
001.99	Ammoniacal N, Other (%)	0562	17.66	0.1100	17.71	0.5418	0.0709	26	-0.11	NA	0
001.99	Ammoniacal N, Other (%)	0027	17.82	0.0310	17.71	0.5418	0.0709	26	0.21	NA	0
001.99	Ammoniacal N, Other (%)	0255	17.83	0.0000	17.71	0.5418	0.0709	26	0.22	NA	0
001.99	Ammoniacal N, Other (%)	0586	17.86	0.1600	17.71	0.5418	0.0709	26	0.27	NA	0
001.99	Ammoniacal N, Other (%)	0581	17.90	0.0500	17.71	0.5418	0.0709	26	0.34	NA	0
001.99	Ammoniacal N, Other (%)	0405	17.98	0.0300	17.71	0.5418	0.0709	26	0.49	NA	0
001.99	Ammoniacal N, Other (%)	0619	18.00	0.1000	17.71	0.5418	0.0709	26	0.53	NA	0
001.99	Ammoniacal N, Other (%)	0096	18.05	0.1100	17.71	0.5418	0.0709	26	0.61	NA	0
001.99	Ammoniacal N, Other (%)	0593	18.05	0.1130	17.71	0.5418	0.0709	26	0.63	NA	0
001.99	Ammoniacal N, Other (%)	0584	18.06	0.0300	17.71	0.5418	0.0709	26	0.63	NA	0
001.99	Ammoniacal N, Other (%)	0605	18.06	0.0350	17.71	0.5418	0.0709	26	0.64	NA	0
001.99	Ammoniacal N, Other (%)	0510	18.10	0.0020	17.71	0.5418	0.0709	26	0.72	NA	0
001.99	Ammoniacal N, Other (%)	0517	18.10	0.1000	17.71	0.5418	0.0709	26	0.72	NA	0
001.99	Ammoniacal N, Other (%)	0513	18.12	0.0300	17.71	0.5418	0.0709	26	0.74	NA	0
001.99	Ammoniacal N, Other (%)	0612	18.43	0.0400	17.71	0.5418	0.0709	26	1.33	NA	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				
001.99	Ammoniacal N, Other (%)	0481	18.74	0.0500	17.71	0.5418	0.0709	26	1.89	NA	0
001.99	Ammoniacal N, Other (%)	0524	17.03	0.5296	17.71	0.5418	0.0709	26	-1.26	NA	1
002.99	Nitrate N, Other (%)	0423	< 0.01					0			5
005.99	Urea N, Other (%)	0524	0.5891	0.1472				2			0
005.99	Urea N, Other (%)	0638	18.42	0.0800				2			0
009.10	Ammoniacal Plus Nitrate N, Devarda (%)	0444	17.95	0.1000				1			0
010.11	Total N, Modified Comprehensive (18%)	0510	18.15	0.0477				1			0
010.12	Total N, Salicylic (18%)	0117	17.82	0.0718	18.19	0.4212	0.6184	3	-0.89		0
010.12	Total N, Salicylic (18%)	0602	18.11	0.0400	18.19	0.4212	0.6184	3	-0.20		0
010.12	Total N, Salicylic (18%)	0572	18.65	1.744	18.19	0.4212	0.6184	3	1.08		0
010.60	Total N, Combustion (18%)	0102	17.23	0.0400	18.11	0.2604	0.1280	56	-3.37	Low	0
010.60	Total N, Combustion (18%)	0588	17.30	0.4000	18.11	0.2604	0.1280	56	-3.10	Low	0
010.60	Total N, Combustion (18%)	0292	17.60	0.0600	18.11	0.2604	0.1280	56	-1.95	OK	0
010.60	Total N, Combustion (18%)	0018	17.65	0.1000	18.11	0.2604	0.1280	56	-1.76	OK	0
010.60	Total N, Combustion (18%)	0422	17.68	0.0100	18.11	0.2604	0.1280	56	-1.66	OK	0
010.60	Total N, Combustion (18%)	0177	17.68	0.3440	18.11	0.2604	0.1280	56	-1.66	OK	0
010.60	Total N, Combustion (18%)	0472	17.78	0.2700	18.11	0.2604	0.1280	56	-1.28	OK	0
010.60	Total N, Combustion (18%)	0543	17.79	0.0100	18.11	0.2604	0.1280	56	-1.24	OK	0
010.60	Total N, Combustion (18%)	0260	17.80	0.2000	18.11	0.2604	0.1280	56	-1.18	OK	0
010.60	Total N, Combustion (18%)	0534	17.80	0.0000	18.11	0.2604	0.1280	56	-1.18	OK	0
010.60	Total N, Combustion (18%)	0494	17.85	0.7200	18.11	0.2604	0.1280	56	-0.99	OK	0
010.60	Total N, Combustion (18%)	0073	17.91	0.0700	18.11	0.2604	0.1280	56	-0.78	OK	0
010.60	Total N, Combustion (18%)	0043	17.93	0.0300	18.11	0.2604	0.1280	56	-0.70	OK	0
010.60	Total N, Combustion (18%)	0389	17.94	0.0100	18.11	0.2604	0.1280	56	-0.67	OK	0
010.60	Total N, Combustion (18%)	0521	17.95	0.0000	18.11	0.2604	0.1280	56	-0.61	OK	0
010.60	Total N, Combustion (18%)	0169	17.98	0.0500	18.11	0.2604	0.1280	56	-0.51	OK	0
010.60	Total N, Combustion (18%)	0007	18.00	0.0000	18.11	0.2604	0.1280	56	-0.42	OK	0
010.60	Total N, Combustion (18%)	0371	18.00	0.0000	18.11	0.2604	0.1280	56	-0.42	OK	0
010.60	Total N, Combustion (18%)	0402	18.01	0.2080	18.11	0.2604	0.1280	56	-0.38	OK	0
010.60	Total N, Combustion (18%)	0324	18.05	0.1000	18.11	0.2604	0.1280	56	-0.22	OK	0
010.60	Total N, Combustion (18%)	0086	18.05	0.0540	18.11	0.2604	0.1280	56	-0.21	OK	0
010.60	Total N, Combustion (18%)	0561	18.06	0.0100	18.11	0.2604	0.1280	56	-0.20	OK	0
010.60	Total N, Combustion (18%)	0055	18.06	0.0800	18.11	0.2604	0.1280	56	-0.19	OK	0
010.60	Total N, Combustion (18%)	0234	18.08	0.1300	18.11	0.2604	0.1280	56	-0.13	OK	0
010.60	Total N, Combustion (18%)	0231	18.10	0.0300	18.11	0.2604	0.1280	56	-0.05	OK	0
010.60	Total N, Combustion (18%)	0356	18.11	0.1980	18.11	0.2604	0.1280	56	-0.01	OK	0
010.60	Total N, Combustion (18%)	0095	18.14	0.1500	18.11	0.2604	0.1280	56	0.10	OK	0
010.60	Total N, Combustion (18%)	0025	18.14	0.2400	18.11	0.2604	0.1280	56	0.12	OK	0
010.60	Total N, Combustion (18%)	0451	18.15	0.0900	18.11	0.2604	0.1280	56	0.14	OK	0
010.60	Total N, Combustion (18%)	0185	18.16	0.0800	18.11	0.2604	0.1280	56	0.20	OK	0
010.60	Total N, Combustion (18%)	0405	18.16	0.0200	18.11	0.2604	0.1280	56	0.20	OK	0
010.60	Total N, Combustion (18%)	0106	18.18	0.0500	18.11	0.2604	0.1280	56	0.26	OK	0
010.60	Total N, Combustion (18%)	0423	18.18	0.1000	18.11	0.2604	0.1280	56	0.28	OK	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				
010.60	Total N, Combustion (18%)	0368	18.19	0.1500	18.11	0.2604	0.1280	56	0.33	OK	0
010.60	Total N, Combustion (18%)	0291	18.20	0.0100	18.11	0.2604	0.1280	56	0.33	OK	0
010.60	Total N, Combustion (18%)	0452	18.21	0.3830	18.11	0.2604	0.1280	56	0.38	OK	0
010.60	Total N, Combustion (18%)	0582	18.22	0.0400	18.11	0.2604	0.1280	56	0.43	OK	0
010.60	Total N, Combustion (18%)	0136	18.25	0.1900	18.11	0.2604	0.1280	56	0.52	OK	0
010.60	Total N, Combustion (18%)	0040	18.25	0.1000	18.11	0.2604	0.1280	56	0.54	OK	0
010.60	Total N, Combustion (18%)	0354	18.25	0.1000	18.11	0.2604	0.1280	56	0.54	OK	0
010.60	Total N, Combustion (18%)	0220	18.26	0.0200	18.11	0.2604	0.1280	56	0.58	OK	0
010.60	Total N, Combustion (18%)	0593	18.28	0.2100	18.11	0.2604	0.1280	56	0.64	OK	0
010.60	Total N, Combustion (18%)	0034	18.29	0.0280	18.11	0.2604	0.1280	56	0.68	OK	0
010.60	Total N, Combustion (18%)	0612	18.29	0.5600	18.11	0.2604	0.1280	56	0.70	OK	0
010.60	Total N, Combustion (18%)	0481	18.30	0.0700	18.11	0.2604	0.1280	56	0.72	OK	0
010.60	Total N, Combustion (18%)	0518	18.30	0.2000	18.11	0.2604	0.1280	56	0.74	OK	0
010.60	Total N, Combustion (18%)	0035	18.30	0.4000	18.11	0.2604	0.1280	56	0.74	OK	0
010.60	Total N, Combustion (18%)	0255	18.36	0.0800	18.11	0.2604	0.1280	56	0.95	OK	0
010.60	Total N, Combustion (18%)	0527	18.37	0.0140	18.11	0.2604	0.1280	56	1.01	OK	0
010.60	Total N, Combustion (18%)	0377	18.38	0.2100	18.11	0.2604	0.1280	56	1.02	OK	0
010.60	Total N, Combustion (18%)	0029	18.39	0.1600	18.11	0.2604	0.1280	56	1.08	OK	0
010.60	Total N, Combustion (18%)	0542	18.41	0.2730	18.11	0.2604	0.1280	56	1.14	OK	0
010.60	Total N, Combustion (18%)	0027	18.52	0.1100	18.11	0.2604	0.1280	56	1.56	OK	0
010.60	Total N, Combustion (18%)	0049	18.54	0.1200	18.11	0.2604	0.1280	56	1.66	OK	0
010.60	Total N, Combustion (18%)	0485	19.05	0.5000	18.11	0.2604	0.1280	56	3.62	High	0
010.60	Total N, Combustion (18%)	0023	19.85	0.1340	18.11	0.2604	0.1280	56	6.68	High	0
010.60	Total N, Combustion (18%)	0307	18.45	0.9000	18.11	0.2604	0.1280	56	1.31	OK	1
010.99	Total N, Other (18%)	0558	17.07	0.0377	17.82	0.5741	0.1232	9	-1.21	Low	0
010.99	Total N, Other (18%)	0562	17.30	0.1700	17.82	0.5741	0.1232	9	-0.85	OK	0
010.99	Total N, Other (18%)	0600	17.59	0.1000	17.82	0.5741	0.1232	9	-0.38	OK	0
010.99	Total N, Other (18%)	0564	17.63	0.0500	17.82	0.5741	0.1232	9	-0.32	OK	0
010.99	Total N, Other (18%)	0560	17.70	0.1700	17.82	0.5741	0.1232	9	-0.21	OK	0
010.99	Total N, Other (18%)	0605	18.06	0.0350	17.82	0.5741	0.1232	9	0.38	OK	0
010.99	Total N, Other (18%)	0602	18.08	0.1000	17.82	0.5741	0.1232	9	0.41	OK	0
010.99	Total N, Other (18%)	0524	18.31	0.1914	17.82	0.5741	0.1232	9	0.78	OK	0
010.99	Total N, Other (18%)	0481	19.01	0.4600	17.82	0.5741	0.1232	9	1.91	High	0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	46.05	0.1000	46.54	0.5069	0.1175	4	-0.96		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0619	46.25	0.1000	46.54	0.5069	0.1175	4	-0.56		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0513	46.65	0.0700	46.54	0.5069	0.1175	4	0.21		0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0157	47.20	0.2000	46.54	0.5069	0.1175	4	1.31		0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0558	45.50	0.0432	46.51	0.4941	0.1145	19	-2.04	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0534	45.89	0.0300	46.51	0.4941	0.1145	19	-1.26	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	45.90	0.0505	46.51	0.4941	0.1145	19	-1.22	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0169	46.04	0.0800	46.51	0.4941	0.1145	19	-0.94	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	46.05	0.0300	46.51	0.4941	0.1145	19	-0.93	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0615	46.30	1.000	46.51	0.4941	0.1145	19	-0.42	NA	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				
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0602	46.35	0.1000	46.51	0.4941	0.1145	19	-0.31	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	46.44	0.0200	46.51	0.4941	0.1145	19	-0.13	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	46.47	0.0100	46.51	0.4941	0.1145	19	-0.08	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0394	46.55	0.4420	46.51	0.4941	0.1145	19	0.09	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	46.56	0.0500	46.51	0.4941	0.1145	19	0.10	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0581	46.67	0.1400	46.51	0.4941	0.1145	19	0.33	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	46.70	0.0000	46.51	0.4941	0.1145	19	0.39	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0517	46.80	0.1000	46.51	0.4941	0.1145	19	0.60	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0582	46.80	0.1000	46.51	0.4941	0.1145	19	0.60	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0481	46.96	0.0600	46.51	0.4941	0.1145	19	0.92	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0356	47.05	0.6310	46.51	0.4941	0.1145	19	1.11	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0593	47.08	0.2700	46.51	0.4941	0.1145	19	1.15	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0220	47.80	0.1400	46.51	0.4941	0.1145	19	2.62	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0324	46.25	1.900	46.51	0.4941	0.1145	19	-0.52	NA	1
020.40	Total P2O5, Automated (%)	0096	46.66	0.0300	46.97	0.2988	0.1300	3	-1.05		0
020.40	Total P2O5, Automated (%)	0586	47.00	0.0600	46.97	0.2988	0.1300	3	0.11		0
020.40	Total P2O5, Automated (%)	0035	47.25	0.3000	46.97	0.2988	0.1300	3	0.94		0
020.50	Total P2O5, ICP (%)	0543	40.33	0.1120	45.33	2.324	0.4228	20	-2.15	NA	0
020.50	Total P2O5, ICP (%)	0389	41.00	0.2000	45.33	2.324	0.4228	20	-1.86	NA	0
020.50	Total P2O5, ICP (%)	0423	41.90	0.0100	45.33	2.324	0.4228	20	-1.48	NA	0
020.50	Total P2O5, ICP (%)	0255	42.23	2.153	45.33	2.324	0.4228	20	-1.33	NA	0
020.50	Total P2O5, ICP (%)	0307	42.85	0.1000	45.33	2.324	0.4228	20	-1.07	NA	0
020.50	Total P2O5, ICP (%)	0588	45.01	2.860	45.33	2.324	0.4228	20	-0.14	NA	0
020.50	Total P2O5, ICP (%)	0472	45.11	0.1900	45.33	2.324	0.4228	20	-0.10	NA	0
020.50	Total P2O5, ICP (%)	0444	45.82	0.3100	45.33	2.324	0.4228	20	0.21	NA	0
020.50	Total P2O5, ICP (%)	0402	45.86	0.2140	45.33	2.324	0.4228	20	0.23	NA	0
020.50	Total P2O5, ICP (%)	0612	45.89	1.370	45.33	2.324	0.4228	20	0.24	NA	0
020.50	Total P2O5, ICP (%)	0451	45.92	0.1600	45.33	2.324	0.4228	20	0.25	NA	0
020.50	Total P2O5, ICP (%)	0291	46.23	0.0100	45.33	2.324	0.4228	20	0.38	NA	0
020.50	Total P2O5, ICP (%)	0157	46.40	4.600	45.33	2.324	0.4228	20	0.46	NA	0
020.50	Total P2O5, ICP (%)	0521	46.49	0.0000	45.33	2.324	0.4228	20	0.50	NA	0
020.50	Total P2O5, ICP (%)	0527	46.53	0.0139	45.33	2.324	0.4228	20	0.51	NA	0
020.50	Total P2O5, ICP (%)	0524	46.72	0.6941	45.33	2.324	0.4228	20	0.60	NA	0
020.50	Total P2O5, ICP (%)	0368	46.89	0.2652	45.33	2.324	0.4228	20	0.67	NA	0
020.50	Total P2O5, ICP (%)	0234	47.20	0.2000	45.33	2.324	0.4228	20	0.80	NA	0
020.50	Total P2O5, ICP (%)	0542	47.57	0.3580	45.33	2.324	0.4228	20	0.96	NA	0
020.50	Total P2O5, ICP (%)	0422	48.33	0.6416	45.33	2.324	0.4228	20	1.29	NA	0
020.50	Total P2O5, ICP (%)	0552	44.99	5.270	45.33	2.324	0.4228	20	-0.15	NA	1
020.99	Total P2O5, Other (%)	0638	45.99	0.3600	46.13	0.1216	0.1261	9	-1.08	NA	0
020.99	Total P2O5, Other (%)	0513	46.03	0.0400	46.13	0.1216	0.1261	9	-0.78	NA	0
020.99	Total P2O5, Other (%)	0560	46.06	0.0300	46.13	0.1216	0.1261	9	-0.59	NA	0
020.99	Total P2O5, Other (%)	0564	46.07	0.0300	46.13	0.1216	0.1261	9	-0.51	NA	0
020.99	Total P2O5, Other (%)	0572	46.14	0.2509	46.13	0.1216	0.1261	9	0.03	NA	0

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020.99	Total P2O5, Other (%)	0562	46.18	0.1500	46.13	0.1216	0.1261	9	0.32	NA	0
020.99	Total P2O5, Other (%)	0600	46.18	0.1500	46.13	0.1216	0.1261	9	0.32	NA	0
020.99	Total P2O5, Other (%)	0619	46.25	0.1000	46.13	0.1216	0.1261	9	0.89	NA	0
020.99	Total P2O5, Other (%)	0602	46.35	0.1000	46.13	0.1216	0.1261	9	1.65	NA	0
020.99	Total P2O5, Other (%)	0515	41.30	1.800	46.13	0.1216	0.1261	9	-36.67	NA	1
030.10	Citrate Insoluble P2O5, Gravimetric Quinolinium MolybdoP (%)	0444	44.10	0.6000				1			0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (	0405	0.0550	0.0100	0.1367	0.0801	0.0333	3	-1.02		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (	0220	0.1400	0.0400	0.1367	0.0801	0.0333	3	0.04		0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (	0602	0.2150	0.0500	0.1367	0.0801	0.0333	3	0.98		0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0586	0.4700	0.0400				2			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	2.850	0.3600				2			0
030.50	Citrate Insoluble P2O5, ICP, test portion 963.03 A-B (%)	0582	0.1400	0.0400				2			0
030.50	Citrate Insoluble P2O5, ICP, test portion 963.03 A-B (%)	0581	0.1800	0.0800				2			0
030.99	Citrate Insoluble P2O5, Other (%)	0593	0.0350	0.0300				1			0
040.10	Indirect Available P2O5, Gravimetric Quinolinium (46%)	0220	47.66	0.1000				1			0
040.40	Indirect Available P2O5, Automated (46%)	0096	43.81	0.3900				2			0
040.40	Indirect Available P2O5, Automated (46%)	0586	46.53	0.0200				2			0
040.50	Indirect Available P2O5, ICP (46%)	0547	45.75	0.1000				1			0
040.99	Indirect Available P2O5, Other (46%)	0405	46.39	0.0300	46.70	0.3289	0.1367	3	-0.94		0
040.99	Indirect Available P2O5, Other (46%)	0582	46.66	0.1400	46.70	0.3289	0.1367	3	-0.11		0
040.99	Indirect Available P2O5, Other (46%)	0593	47.04	0.2400	46.70	0.3289	0.1367	3	1.05		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (46%)	0177	46.22	0.0939	46.62	0.4125	0.2180	4	-0.98		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (46%)	0102	46.36	0.4200	46.62	0.4125	0.2180	4	-0.64		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (46%)	0040	46.80	0.0000	46.62	0.4125	0.2180	4	0.42		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (46%)	0494	47.12	0.1400	46.62	0.4125	0.2180	4	1.20		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0185	45.92	0.2900	46.49	0.3930	0.2176	9	-1.35	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0049	46.20	0.5800	46.49	0.3930	0.2176	9	-0.68	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0405	46.27	0.0200	46.49	0.3930	0.2176	9	-0.51	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0513	46.37	0.0900	46.49	0.3930	0.2176	9	-0.29	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0055	46.53	0.4150	46.49	0.3930	0.2176	9	0.10	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0517	46.55	0.1000	46.49	0.3930	0.2176	9	0.14	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0485	46.70	0.2000	46.49	0.3930	0.2176	9	0.50	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0220	46.79	0.0100	46.49	0.3930	0.2176	9	0.70	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0073	47.48	0.3100	46.49	0.3930	0.2176	9	2.32	OK	0
041.20	Direct Available P2O5, Spectrophotometric (46%)	0452	45.12	1.290	45.96	0.5891	0.4733	4	-1.44		0
041.20	Direct Available P2O5, Spectrophotometric (46%)	0553	46.13	0.3000	45.96	0.5891	0.4733	4	0.28		0
041.20	Direct Available P2O5, Spectrophotometric (46%)	0602	46.14	0.0500	45.96	0.5891	0.4733	4	0.29		0
041.20	Direct Available P2O5, Spectrophotometric (46%)	0027	46.48	0.2530	45.96	0.5891	0.4733	4	0.87		0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0472	44.85	0.0300	45.89	0.9119	0.2329	8	-1.05	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0106	44.90	0.7200	45.89	0.9119	0.2329	8	-1.00	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0558	45.32	0.0093	45.89	0.9119	0.2329	8	-0.58	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0231	45.97	0.2300	45.89	0.9119	0.2329	8	0.07	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (0177	46.06	0.2284	45.89	0.9119	0.2329	8	0.17	OK	0

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041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (46%)	0394	46.34	0.1460	45.89	0.9119	0.2329	8	0.45	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (46%)	0354	46.85	0.1000	45.89	0.9119	0.2329	8	0.96	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (46%)	0055	46.87	0.5150	45.89	0.9119	0.2329	8	0.98	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (46%)	0095	46.89	2.210	45.89	0.9119	0.2329	8	0.99	OK	1
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (46%)	0018	46.60	0.0000				2			0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (46%)	0034	47.15	0.2809				2			0
041.50	Direct Available P2O5, ICP (46%)	0605	46.79	0.2580				1			0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0494	46.04	0.0900	46.99	0.8587	0.6700	7	-1.01	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0043	46.33	0.1600	46.99	0.8587	0.6700	7	-0.69	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0423	46.69	0.0200	46.99	0.8587	0.6700	7	-0.32	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0025	46.95	1.300	46.99	0.8587	0.6700	7	-0.04	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0377	46.99	1.580	46.99	0.8587	0.6700	7	0.00	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0136	47.75	1.300	46.99	0.8587	0.6700	7	0.80	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (46%)	0023	48.18	0.2400	46.99	0.8587	0.6700	7	1.26	High	0
041.99	Direct Available P2O5, Other (46%)	0560	45.86	0.0700	46.01	0.1843	0.0829	7	-0.77	OK	0
041.99	Direct Available P2O5, Other (46%)	0564	45.89	0.0200	46.01	0.1843	0.0829	7	-0.60	OK	0
041.99	Direct Available P2O5, Other (46%)	0600	45.90	0.1000	46.01	0.1843	0.0829	7	-0.55	OK	0
041.99	Direct Available P2O5, Other (46%)	0562	45.93	0.1500	46.01	0.1843	0.0829	7	-0.43	OK	0
041.99	Direct Available P2O5, Other (46%)	0584	46.10	0.0900	46.01	0.1843	0.0829	7	0.40	OK	0
041.99	Direct Available P2O5, Other (46%)	0602	46.14	0.0500	46.01	0.1843	0.0829	7	0.60	OK	0
041.99	Direct Available P2O5, Other (46%)	0518	46.45	0.1000	46.01	0.1843	0.0829	7	2.14	OK	0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0444	41.85	0.1000				2			0
048.10	Water Soluble P2O5, Gravimetric Quinolinium (%)	0619	42.40	0.0000				2			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	38.68	0.1700	41.55	0.4361	0.0942	7	-5.95	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0405	41.12	0.0100	41.55	0.4361	0.0942	7	-0.89	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0231	41.65	0.0100	41.55	0.4361	0.0942	7	0.20	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0394	41.68	0.0220	41.55	0.4361	0.0942	7	0.28	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0582	41.78	0.1000	41.55	0.4361	0.0942	7	0.48	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0602	41.85	0.1000	41.55	0.4361	0.0942	7	0.63	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0593	41.86	0.4600	41.55	0.4361	0.0942	7	0.65	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0220	42.37	1.130	41.55	0.4361	0.0942	7	1.70	NA	1
048.40	Water Soluble P2O5, Automated (%)	0096	41.53	0.0400				2			0
048.40	Water Soluble P2O5, Automated (%)	0586	41.75	0.2500				2			0
048.50	Water Soluble P2O5, ICP (%)	0444	42.72	0.5400				1			0
048.99	Water Soluble P2O5, Other (%)	0513	39.68	0.1200	41.69	1.290	0.2316	10	-1.45	NA	0
048.99	Water Soluble P2O5, Other (%)	0517	40.00	0.2000	41.69	1.290	0.2316	10	-1.22	NA	0
048.99	Water Soluble P2O5, Other (%)	0564	41.60	0.1000	41.69	1.290	0.2316	10	-0.06	NA	0
048.99	Water Soluble P2O5, Other (%)	0562	41.60	0.2000	41.69	1.290	0.2316	10	-0.06	NA	0
048.99	Water Soluble P2O5, Other (%)	0600	41.60	0.2000	41.69	1.290	0.2316	10	-0.06	NA	0
048.99	Water Soluble P2O5, Other (%)	0560	41.70	0.0700	41.69	1.290	0.2316	10	0.01	NA	0
048.99	Water Soluble P2O5, Other (%)	0602	41.85	0.1000	41.69	1.290	0.2316	10	0.12	NA	0
048.99	Water Soluble P2O5, Other (%)	0619	42.40	0.0000	41.69	1.290	0.2316	10	0.51	NA	0
048.99	Water Soluble P2O5, Other (%)	0605	43.11	1.393	41.69	1.290	0.2316	10	1.02	NA	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
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048.99	Water Soluble P2O5, Other (%)	0572	43.26	1.634	41.69	1.290	0.2316	10	1.14	NA	0
050.50	Soluble K2O, ICP (Oxalate) (%)	0422	0.1416	0.0021				2			0
050.50	Soluble K2O, ICP (Oxalate) (%)	0324	0.2545	0.0890				2			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.1585	0.0010				2			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0423	0.2270	0.0060				2			0
050.99	Soluble K2O, Other (%)	0255	0.0210	0.0020	0.1078	0.0588	0.0063	6	-1.31	OK	0
050.99	Soluble K2O, Other (%)	0542	0.0744	0.0086	0.1078	0.0588	0.0063	6	-0.51	OK	0
050.99	Soluble K2O, Other (%)	0481	0.1100	0.0000	0.1078	0.0588	0.0063	6	0.03	OK	0
050.99	Soluble K2O, Other (%)	0572	0.1373	0.0058	0.1078	0.0588	0.0063	6	0.45	OK	0
050.99	Soluble K2O, Other (%)	0524	0.1492	0.0053	0.1078	0.0588	0.0063	6	0.63	OK	0
050.99	Soluble K2O, Other (%)	0096	0.1550	0.0100	0.1078	0.0588	0.0063	6	0.71	OK	0
050.99	Soluble K2O, Other (%)	0588	0.0935	0.0730	0.1078	0.0588	0.0063	6	-0.22	OK	1
050.99	Soluble K2O, Other (%)	0552	0.0000	0.0000	0.1078	0.0588	0.0063	6			4
050.99	Soluble K2O, Other (%)	0527	< 0.01		0.1078	0.0588	0.0063	6			5
060.00	Water (Free), Vacuum Oven (%)	0517	0.9350	0.0300	1.228	0.4994	0.1100	3	-0.59		0
060.00	Water (Free), Vacuum Oven (%)	0513	0.9450	0.0100	1.228	0.4994	0.1100	3	-0.57		0
060.00	Water (Free), Vacuum Oven (%)	0096	1.805	0.2900	1.228	0.4994	0.1100	3	1.15		0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample)	0593	1.375	0.1700				1			0
060.99	Water (Free), Other (%)	0510	1.448	0.0436				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0422	0.2262	0.0051	0.2644	0.0341	0.0246	5	-1.12		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	0.2455	0.0010	0.2644	0.0341	0.0246	5	-0.55		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0324	0.2565	0.0330	0.2644	0.0341	0.0246	5	-0.23		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.2790	0.0340	0.2644	0.0341	0.0246	5	0.43		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.3150	0.0500	0.2644	0.0341	0.0246	5	1.48		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0095	0.2400	0.0000				2			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0581	0.3850	0.0300				2			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	< 0.5					2			5
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0472	0.2600	0.0000				1			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	< 0.01					1			5
101.99	Acid Soluble Ca, Other (%)	0515	0.1192	0.0005	0.2515	0.1273	0.0246	5	-1.04		0
101.99	Acid Soluble Ca, Other (%)	0542	0.1920	0.0044	0.2515	0.1273	0.0246	5	-0.47		0
101.99	Acid Soluble Ca, Other (%)	0572	0.2015	0.0082	0.2515	0.1273	0.0246	5	-0.39		0
101.99	Acid Soluble Ca, Other (%)	0593	0.2950	0.0100	0.2515	0.1273	0.0246	5	0.34		0
101.99	Acid Soluble Ca, Other (%)	0552	0.4500	0.1000	0.2515	0.1273	0.0246	5	1.56		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0422	0.4734	0.0026	0.5796	0.1591	0.0104	5	-0.58		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.5050	0.0100	0.5796	0.1591	0.0104	5	-0.41		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	0.5100	0.0200	0.5796	0.1591	0.0104	5	-0.38		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.5495	0.0090	0.5796	0.1591	0.0104	5	-0.17		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0581	0.8600	0.0000	0.5796	0.1591	0.0104	5	1.54		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0324	0.5220	0.0720	0.5796	0.1591	0.0104	5	-0.32		1
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.4705	0.0010				2			0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0095	0.4900	0.0000				2			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.3539	0.0150	0.4884	0.1100	0.0134	4	-1.22		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				
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0494	0.4685	0.0232	0.4884	0.1100	0.0134	4	-0.18		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.5114	0.0021	0.4884	0.1100	0.0134	4	0.21		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.6200	0.0000	0.4884	0.1100	0.0134	4	1.20		0
121.99	Acid Soluble Mg, Other (%)	0515	0.3843	0.0322	0.4578	0.0871	0.0388	6	-0.75	OK	0
121.99	Acid Soluble Mg, Other (%)	0542	0.3848	0.0066	0.4578	0.0871	0.0388	6	-0.75	OK	0
121.99	Acid Soluble Mg, Other (%)	0572	0.3990	0.0167	0.4578	0.0871	0.0388	6	-0.60	OK	0
121.99	Acid Soluble Mg, Other (%)	0552	0.5000	0.1000	0.4578	0.0871	0.0388	6	0.43	OK	0
121.99	Acid Soluble Mg, Other (%)	0593	0.5300	0.0000	0.4578	0.0871	0.0388	6	0.74	OK	0
121.99	Acid Soluble Mg, Other (%)	0524	0.5489	0.0386	0.4578	0.0871	0.0388	6	0.93	OK	0
131.99	Water Soluble Mg, Other (%)	0572	0.0798	0.0081				1			0
145.99	Sulfate S, HCl soluble, Other (%)	0593	4.470	0.0800				1			0
148.00	Total S, Combustion (%)	0593	1.985	0.0100				1			0
148.01	Total S, Gravimetric - sulfate and elemental (%)	0324	1.260	0.4200				1			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	1.106	0.0360	1.307	0.1741	0.0258	3	-1.15		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0472	1.400	0.0000	1.307	0.1741	0.0258	3	0.54		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0494	1.415	0.0156	1.307	0.1741	0.0258	3	0.62		0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	< 0.01		1.307	0.1741	0.0258	3			5
148.99	Total S, Other (%)	0572	1.050	0.0589	1.248	0.1758	0.0496	5	-1.13		0
148.99	Total S, Other (%)	0542	1.068	0.0370	1.248	0.1758	0.0496	5	-1.03		0
148.99	Total S, Other (%)	0422	1.328	0.0020	1.248	0.1758	0.0496	5	0.45		0
148.99	Total S, Other (%)	0096	1.380	0.0400	1.248	0.1758	0.0496	5	0.75		0
148.99	Total S, Other (%)	0354	1.415	0.1100	1.248	0.1758	0.0496	5	0.95		0
149.04	S - HNO3 soluble, ICP (%)	0524	1.305	0.0464				2			0
149.04	S - HNO3 soluble, ICP (%)	0423	1.305	0.0100				2			0
151.30	Acid Soluble As, ICP (ppm)	0513	5.990	0.0400	7.846	1.669	0.1892	6	-0.99	NA	0
151.30	Acid Soluble As, ICP (ppm)	0593	7.000	0.2000	7.846	1.669	0.1892	6	-0.45	NA	0
151.30	Acid Soluble As, ICP (ppm)	0586	7.600	0.2000	7.846	1.669	0.1892	6	-0.13	NA	0
151.30	Acid Soluble As, ICP (ppm)	0605	7.724	0.5710	7.846	1.669	0.1892	6	-0.07	NA	0
151.30	Acid Soluble As, ICP (ppm)	0524	8.416	0.1025	7.846	1.669	0.1892	6	0.30	NA	0
151.30	Acid Soluble As, ICP (ppm)	0096	24.80	0.2000	7.846	1.669	0.1892	6	9.05	NA	0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000	7.846	1.669	0.1892	6			4
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	8.050	0.1000				2			0
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	10.00	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)	0515	4.519	0.9000	6.528	1.760	0.4100	3	-1.14		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0494	7.265	0.1300	6.528	1.760	0.4100	3	0.42		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	7.800	0.2000	6.528	1.760	0.4100	3	0.72		0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.001		6.528	1.760	0.4100	3			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0515	5.751	5.511				2			0
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	11.65	0.1000				2			0
151.99	Acid Soluble As, Other (ppm)	0220	8.000	0.0000	8.635	0.6350	0.1905	3	-1.00		0
151.99	Acid Soluble As, Other (ppm)	0572	8.635	0.1609	8.635	0.6350	0.1905	3	0.00		0
151.99	Acid Soluble As, Other (ppm)	0481	9.270	0.2200	8.635	0.6350	0.1905	3	1.00		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				
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0422	0.0057	0.0003	0.0171	0.0101	0.0084	3	-1.13		0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0324	0.0205	0.0150	0.0171	0.0101	0.0084	3	0.34		0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	0.0250	0.0100	0.0171	0.0101	0.0084	3	0.79		0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0371	0.0000	0.0000	0.0171	0.0101	0.0084	3			4
165.99	Acid Soluble B, Other (%)	0542	0.0037	0.0002	0.0100	0.0112	0.0021	5	-0.49		0
165.99	Acid Soluble B, Other (%)	0593	0.0052	0.0001	0.0100	0.0112	0.0021	5	-0.37		0
165.99	Acid Soluble B, Other (%)	0524	0.0053	0.0001	0.0100	0.0112	0.0021	5	-0.37		0
165.99	Acid Soluble B, Other (%)	0515	0.0057	0.0080	0.0100	0.0112	0.0021	5	-0.33		0
165.99	Acid Soluble B, Other (%)	0472	0.0300	0.0000	0.0100	0.0112	0.0021	5	1.56		0
165.99	Acid Soluble B, Other (%)	0552	0.0000	0.0000	0.0100	0.0112	0.0021	5			4
165.99	Acid Soluble B, Other (%)	0423	< 0.01		0.0100	0.0112	0.0021	5			5
165.99	Acid Soluble B, Other (%)	0527	< 0.01		0.0100	0.0112	0.0021	5			5
165.99	Acid Soluble B, Other (%)	0572	< 0.0104		0.0100	0.0112	0.0021	5			5
171.99	Water Soluble B, Other (%)	0572	< 0.0109					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0513	3.595	0.0900	4.855	0.5187	0.2705	8	-2.22	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0524	4.451	0.0744	4.855	0.5187	0.2705	8	-0.71	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	4.810	0.0830	4.855	0.5187	0.2705	8	-0.08	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0593	4.875	0.0100	4.855	0.5187	0.2705	8	0.04	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	4.880	0.5400	4.855	0.5187	0.2705	8	0.04	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0389	4.920	0.1200	4.855	0.5187	0.2705	8	0.11	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0605	5.194	0.7990	4.855	0.5187	0.2705	8	0.60	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0586	10.25	0.5000	4.855	0.5187	0.2705	8	9.51	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	8.338	7.684	4.855	0.5187	0.2705	8	6.14	NA	1
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0485	3.975	0.1500	4.558	0.5270	0.1500	3	-1.11		0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	4.700	0.0000	4.558	0.5270	0.1500	3	0.27		0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	5.000	0.0000	4.558	0.5270	0.1500	3	0.84		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0494	4.365	0.2100	4.547	0.2445	0.1422	3	-0.74		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	4.450	0.1000	4.547	0.2445	0.1422	3	-0.39		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	4.825	0.1165	4.547	0.2445	0.1422	3	1.14		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0515	< 0.19		4.547	0.2445	0.1422	3			5
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	4.950	0.1000				1			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	< 0.133					1			5
181.99	Acid Soluble Cd, Other (ppm)	0481	4.335	0.2300	4.589	0.2207	0.1466	3	-1.15		0
181.99	Acid Soluble Cd, Other (ppm)	0220	4.700	0.0000	4.589	0.2207	0.1466	3	0.50		0
181.99	Acid Soluble Cd, Other (ppm)	0572	4.733	0.0632	4.589	0.2207	0.1466	3	0.65		0
191.30	Acid Soluble Cr, ICP (ppm)	0513	57.66	3.190	72.45	7.864	3.166	10	-1.75	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0524	65.57	0.3183	72.45	7.864	3.166	10	-0.81	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	67.52	3.796	72.45	7.864	3.166	10	-0.58	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	68.10	5.200	72.45	7.864	3.166	10	-0.51	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0096	73.25	4.500	72.45	7.864	3.166	10	0.09	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0593	75.35	0.7000	72.45	7.864	3.166	10	0.34	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0389	75.65	1.500	72.45	7.864	3.166	10	0.38	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0605	75.85	9.010	72.45	7.864	3.166	10	0.40	NA	0

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191.30	Acid Soluble Cr, ICP (ppm)	0586	78.50	1.000	72.45	7.864	3.166	10	0.71	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0027	84.10	4.529	72.45	7.864	3.166	10	1.38	NA	0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	70.00	0.0000				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	72.20	0.4000				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0494	55.70	2.400	64.63	9.759	3.433	4	-0.91		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	56.79	4.710	64.63	9.759	3.433	4	-0.80		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	71.63	0.4230	64.63	9.759	3.433	4	0.72		0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	74.40	6.200	64.63	9.759	3.433	4	1.00		0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	63.53	5.197				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	74.70	0.4000				2			0
191.99	Acid Soluble Cr, Other (ppm)	0572	55.31	0.0051	70.97	15.08	1.868	3	-1.04		0
191.99	Acid Soluble Cr, Other (ppm)	0220	72.20	2.000	70.97	15.08	1.868	3	0.08		0
191.99	Acid Soluble Cr, Other (ppm)	0481	85.40	3.600	70.97	15.08	1.868	3	0.96		0
202.30	Acid Soluble Co, ICP (ppm)	0513	1.495	0.0100	4.657	2.350	0.2824	9	-1.24	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0096	2.010	0.1800	4.657	2.350	0.2824	9	-1.04	Low	0
202.30	Acid Soluble Co, ICP (ppm)	0542	3.766	0.2720	4.657	2.350	0.2824	9	-0.35	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0593	4.560	0.0400	4.657	2.350	0.2824	9	-0.04	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0389	4.860	0.2400	4.657	2.350	0.2824	9	0.08	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0035	5.130	0.3200	4.657	2.350	0.2824	9	0.19	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0605	5.462	0.7070	4.657	2.350	0.2824	9	0.32	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0524	6.449	0.0154	4.657	2.350	0.2824	9	0.70	OK	0
202.30	Acid Soluble Co, ICP (ppm)	0586	8.500	1.000	4.657	2.350	0.2824	9	1.51	High	0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0485	2.650	0.5800	5.159	2.464	0.2300	4	-1.02		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	4.450	0.1000	5.159	2.464	0.2300	4	-0.29		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	5.000	0.0000	5.159	2.464	0.2300	4	-0.06		0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0423	8.535	0.0100	5.159	2.464	0.2300	4	1.37		0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	4.940	0.2336				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	5.300	0.4000				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0515	< 0.26					2			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	4.650	0.1000				1			0
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0515	< 0.139					1			5
202.99	Acid Soluble Co, Other (ppm)	0572	3.746	0.0147	7.336	5.578	7.691	3	-0.64		0
202.99	Acid Soluble Co, Other (ppm)	0220	4.500	0.2000	7.336	5.578	7.691	3	-0.51		0
202.99	Acid Soluble Co, Other (ppm)	0255	13.76	22.86	7.336	5.578	7.691	3	1.15		0
221.00	Acid Soluble Cu, AA, inorganic 965.09 (%)	0553	< 0.005					0			5
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0422	0.0002	0.0000	0.0012	0.0013	0.0003	3	-0.62		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0007	0.0002	0.0012	0.0013	0.0003	3	-0.30		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0402	0.0026	0.0004	0.0012	0.0013	0.0003	3	0.92		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000	0.0012	0.0013	0.0003	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0324	0.0000	0.0000	0.0012	0.0013	0.0003	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0371	0.0000	0.0000	0.0012	0.0013	0.0003	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0552	0.0300	0.0600	0.0012	0.0013	0.0003	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0012	0.0013	0.0003	3			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				
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0405	0.0004	0.0000				1			0
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0423	< 0.001					1			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	0.0004	0.0000	0.0005	0.0001	0.0001	3	-0.87		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0394	0.0005	0.0001	0.0005	0.0001	0.0001	3	-0.22		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	0.0006	0.0001	0.0005	0.0001	0.0001	3	1.09		0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0106	0.0000	0.0000	0.0005	0.0001	0.0001	3			4
221.99	Acid Soluble Cu, Other (%)	0524	0.0003	0.0000	0.0010	0.0011	0.0000	5	-0.50		0
221.99	Acid Soluble Cu, Other (%)	0542	0.0004	0.0000	0.0010	0.0011	0.0000	5	-0.43		0
221.99	Acid Soluble Cu, Other (%)	0572	0.0005	0.0000	0.0010	0.0011	0.0000	5	-0.35		0
221.99	Acid Soluble Cu, Other (%)	0593	0.0006	0.0000	0.0010	0.0011	0.0000	5	-0.27		0
221.99	Acid Soluble Cu, Other (%)	0389	0.0030	0.0000	0.0010	0.0011	0.0000	5	1.55		0
221.99	Acid Soluble Cu, Other (%)	0368	0.0008	0.0002	0.0010	0.0011	0.0000	5	-0.12		1
221.99	Acid Soluble Cu, Other (%)	0586	0.0000	0.0000	0.0010	0.0011	0.0000	5			4
221.99	Acid Soluble Cu, Other (%)	0481	< 0.001		0.0010	0.0011	0.0000	5			5
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0371	1.195	0.0500	1.245	0.0474	0.0425	6	-0.94	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0324	1.215	0.0500	1.245	0.0474	0.0425	6	-0.57	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	1.240	0.0200	1.245	0.0474	0.0425	6	-0.10	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	1.245	0.0500	1.245	0.0474	0.0425	6	0.00	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	1.260	0.0800	1.245	0.0474	0.0425	6	0.28	OK	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0422	1.401	0.0050	1.245	0.0474	0.0425	6	2.92	High	0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0552	0.6050	1.210	1.245	0.0474	0.0425	6			4
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	1.180	0.0000	1.400	0.3554	0.0000	3	-0.62		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0095	1.210	0.0000	1.400	0.3554	0.0000	3	-0.53		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0581	1.810	0.0000	1.400	0.3554	0.0000	3	1.15		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0515	1.029	0.0310	1.197	0.1218	0.0569	4	-1.38		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0494	1.196	0.1274	1.197	0.1218	0.0569	4	-0.01		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0472	1.250	0.0000	1.197	0.1218	0.0569	4	0.44		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	1.312	0.0123	1.197	0.1218	0.0569	4	0.95		0
241.99	Acid Soluble Fe, Other (%)	0542	0.9547	0.0185	1.173	0.1404	0.0215	5	-1.56		0
241.99	Acid Soluble Fe, Other (%)	0515	1.109	0.0110	1.173	0.1404	0.0215	5	-0.46		0
241.99	Acid Soluble Fe, Other (%)	0593	1.260	0.0000	1.173	0.1404	0.0215	5	0.62		0
241.99	Acid Soluble Fe, Other (%)	0572	1.264	0.0478	1.173	0.1404	0.0215	5	0.65		0
241.99	Acid Soluble Fe, Other (%)	0524	1.279	0.0085	1.173	0.1404	0.0215	5	0.75		0
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.7230	0.0186	2.909	2.878	0.3579	5	-0.66		0
251.30	Acid Soluble Pb, ICP (ppm)	0593	0.9450	0.0500	2.909	2.878	0.3579	5	-0.60		0
251.30	Acid Soluble Pb, ICP (ppm)	0394	1.026	0.0210	2.909	2.878	0.3579	5	-0.57		0
251.30	Acid Soluble Pb, ICP (ppm)	0586	4.750	1.500	2.909	2.878	0.3579	5	0.56		0
251.30	Acid Soluble Pb, ICP (ppm)	0096	7.100	0.2000	2.909	2.878	0.3579	5	1.27		0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.0000	0.0000	2.909	2.878	0.3579	5			4
251.30	Acid Soluble Pb, ICP (ppm)	0605	< 5		2.909	2.878	0.3579	5			5
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	4.500	0.0000				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

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				
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	0.9391	0.0035				1			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	< 0.21					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3					1			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	2.850	0.3000				2			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	4.688	3.056				2			0
251.99	Acid Soluble Pb, Other (ppm)	0572	0.9025	0.0163				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	4.450	0.1000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0481	< 2					2			5
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0422	0.0384	0.0001	0.0399	0.0013	0.0014	4	-1.21		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	0.0398	0.0012	0.0399	0.0013	0.0014	4	-0.09		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	0.0400	0.0000	0.0399	0.0013	0.0014	4	0.07		0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0415	0.0030	0.0399	0.0013	0.0014	4	1.23		0
261.31	Acid Soluble Mn, ICP, test portion 972.02b (%)	0324	0.0385	0.0010				1			0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0371	0.0400	0.0000				1			0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0552	0.0050	0.0100				1			4
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	0.0285	0.0010				2			0
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0095	0.0400	0.0000				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0515	0.0070	0.0005	0.0295	0.0195	0.0003	3	-1.15		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0472	0.0400	0.0000	0.0295	0.0195	0.0003	3	0.54		0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0415	0.0001	0.0295	0.0195	0.0003	3	0.61		0
261.99	Acid Soluble Mn, Other (%)	0542	0.0309	0.0006	0.0354	0.0051	0.0009	4	-0.89		0
261.99	Acid Soluble Mn, Other (%)	0572	0.0312	0.0005	0.0354	0.0051	0.0009	4	-0.84		0
261.99	Acid Soluble Mn, Other (%)	0593	0.0395	0.0010	0.0354	0.0051	0.0009	4	0.81		0
261.99	Acid Soluble Mn, Other (%)	0524	0.0401	0.0016	0.0354	0.0051	0.0009	4	0.92		0
281.00	Acid Soluble Hg, AA (ppm)	0481	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					0			5
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	0.0022	0.0001				2			0
281.99	Acid Soluble Hg, Other (ppm)	0220	0.0150	0.0100				2			0
281.99	Acid Soluble Hg, Other (ppm)	0572	< 0.009					2			5
289.30	Acid Soluble Mo, ICP (ppm)	0542	7.957	0.5730	10.60	2.348	0.8470	10	-1.05	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0035	8.590	1.940	10.60	2.348	0.8470	10	-0.80	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0513	8.970	0.0200	10.60	2.348	0.8470	10	-0.65	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0255	9.006	0.7920	10.60	2.348	0.8470	10	-0.63	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0027	9.865	0.1700	10.60	2.348	0.8470	10	-0.29	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0402	11.00	2.000	10.60	2.348	0.8470	10	0.16	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	11.06	0.0279	10.60	2.348	0.8470	10	0.18	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0593	12.70	0.2000	10.60	2.348	0.8470	10	0.83	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0096	12.75	1.900	10.60	2.348	0.8470	10	0.85	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0586	15.00	0.0000	10.60	2.348	0.8470	10	1.74	High	0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0485	1.450	1.161	7.950	5.637	0.7870	3	-1.15		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				
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	10.90	0.2000	7.950	5.637	0.7870	3	0.52		0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	11.50	1.000	7.950	5.637	0.7870	3	0.63		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0106	0.0012	0.0001	7.314	5.308	0.3645	4	-1.38		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0423	6.790	0.0400	7.314	5.308	0.3645	4	-0.10		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	11.05	0.9000	7.314	5.308	0.3645	4	0.70		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	11.42	0.5179	7.314	5.308	0.3645	4	0.77		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0515	< 0.23		7.314	5.308	0.3645	4			5
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	12.80	0.2000				1			0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0515	< 0.178					1			5
289.99	Acid Soluble Mo, Other (ppm)	0220	10.90	0.4000				2			0
289.99	Acid Soluble Mo, Other (ppm)	0572	11.30	0.3403				2			0
291.30	Acid Soluble Ni, ICP (ppm)	0513	13.98	0.0800	18.99	3.077	0.6426	11	-1.52	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0542	14.48	0.6100	18.99	3.077	0.6426	11	-1.37	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0027	17.90	0.7720	18.99	3.077	0.6426	11	-0.33	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0389	18.30	0.4000	18.99	3.077	0.6426	11	-0.21	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0524	18.47	0.0267	18.99	3.077	0.6426	11	-0.16	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	18.71	0.9940	18.99	3.077	0.6426	11	-0.09	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	20.15	0.1000	18.99	3.077	0.6426	11	0.35	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0605	21.11	2.557	18.99	3.077	0.6426	11	0.64	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0586	21.50	1.000	18.99	3.077	0.6426	11	0.76	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0096	21.90	1.400	18.99	3.077	0.6426	11	0.88	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0593	22.05	0.1000	18.99	3.077	0.6426	11	0.93	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0485	14.40	0.8000	17.77	2.967	1.000	3	-1.13		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	18.90	1.200	17.77	2.967	1.000	3	0.38		0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	20.00	0.0000	17.77	2.967	1.000	3	0.75		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0515	3.602	0.9090	14.44	9.390	0.7925	3	-1.15		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	19.75	1.100	14.44	9.390	0.7925	3	0.57		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	19.98	0.3686	14.44	9.390	0.7925	3	0.59		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	9.208	6.985				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	18.95	0.7000				2			0
291.99	Acid Soluble Ni, Other (ppm)	0572	15.55	0.3803	30.02	22.55	11.44	3	-0.64		0
291.99	Acid Soluble Ni, Other (ppm)	0220	18.50	0.6000	30.02	22.55	11.44	3	-0.51		0
291.99	Acid Soluble Ni, Other (ppm)	0255	56.01	33.33	30.02	22.55	11.44	3	1.15		0
301.30	Acid Soluble Se, ICP (ppm)	0593	0.0100	0.0000				2			0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.3102	0.0141				2			0
301.30	Acid Soluble Se, ICP (ppm)	0605	< 1.65					2			5
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	< 0.3					0			5
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	< 10					0			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01					0			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	< 0.27					0			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0515	< 0.226					0			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.4					0			5
301.99	Acid Soluble Se, Other (ppm)	0572	1.773	0.1891				1			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				1			4
301.99	Acid Soluble Se, Other (ppm)	0220	< 0.3					1			5
301.99	Acid Soluble Se, Other (ppm)	0481	< 0.5					1			5
311.32	Sodium, ICP, 2006.03 test portion (%)	0422	0.1253	0.0002				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.1100	0.0000	0.1462	0.0266	0.0071	4	-1.36		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.1475	0.0023	0.1462	0.0266	0.0071	4	0.05		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0494	0.1540	0.0141	0.1462	0.0266	0.0071	4	0.29		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.1735	0.0050	0.1462	0.0266	0.0071	4	1.03		0
311.99	Sodium, Other (%)	0542	0.1042	0.0008	0.1553	0.0565	0.0178	4	-0.90		0
311.99	Sodium, Other (%)	0572	0.1119	0.0004	0.1553	0.0565	0.0178	4	-0.77		0
311.99	Sodium, Other (%)	0096	0.1850	0.0500	0.1553	0.0565	0.0178	4	0.53		0
311.99	Sodium, Other (%)	0354	0.2200	0.0200	0.1553	0.0565	0.0178	4	1.15		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0060	0.0000	0.0080	0.0021	0.0014	7	-0.86	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0422	0.0066	0.0000	0.0080	0.0021	0.0014	7	-0.60	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0070	0.0000	0.0080	0.0021	0.0014	7	-0.42	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0371	0.0070	0.0000	0.0080	0.0021	0.0014	7	-0.42	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0402	0.0086	0.0001	0.0080	0.0021	0.0014	7	0.26	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0324	0.0095	0.0030	0.0080	0.0021	0.0014	7	0.68	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	0.0117	0.0012	0.0080	0.0021	0.0014	7	1.65	OK	0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0552	0.1650	0.2100	0.0080	0.0021	0.0014	7	69.01	High	1
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0080	0.0021	0.0014	7			5
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0485	0.0032	0.0004	0.0078	0.0038	0.0004	5	-1.23		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	0.0062	0.0004	0.0078	0.0038	0.0004	5	-0.43		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0068	0.0003	0.0078	0.0038	0.0004	5	-0.29		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0100	0.0000	0.0078	0.0038	0.0004	5	0.58		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0423	0.0130	0.0000	0.0078	0.0038	0.0004	5	1.37		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0106	0.0050	0.0000	0.0073	0.0025	0.0003	6	-0.83	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0053	0.0003	0.0073	0.0025	0.0003	6	-0.74	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0066	0.0005	0.0073	0.0025	0.0003	6	-0.28	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0394	0.0073	0.0001	0.0073	0.0025	0.0003	6	-0.03	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0472	0.0100	0.0000	0.0073	0.0025	0.0003	6	0.94	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0593	0.0100	0.0000	0.0073	0.0025	0.0003	6	0.94	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	< 0.001		0.0073	0.0025	0.0003	6			5
321.99	Acid Soluble Zn, Other (%)	0542	0.0051	0.0002	0.0065	0.0015	0.0006	6	-0.87	OK	0
321.99	Acid Soluble Zn, Other (%)	0572	0.0054	0.0001	0.0065	0.0015	0.0006	6	-0.71	OK	0
321.99	Acid Soluble Zn, Other (%)	0027	0.0065	0.0010	0.0065	0.0015	0.0006	6	-0.01	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0067	0.0003	0.0065	0.0015	0.0006	6	0.08	OK	0
321.99	Acid Soluble Zn, Other (%)	0368	0.0068	0.0012	0.0065	0.0015	0.0006	6	0.17	OK	0
321.99	Acid Soluble Zn, Other (%)	0389	0.0645	0.0010	0.0065	0.0015	0.0006	6	35.53	High	0
321.99	Acid Soluble Zn, Other (%)	0586	39.00	10.00	0.0065	0.0015	0.0006	6	23893.33	High	1
321.99	Acid Soluble Zn, Other (%)	0481	< 0.01		0.0065	0.0015	0.0006	6			5
325.99	Water Soluble Zn, Other (%)	0572	0.0017	0.0001				1			0
431.99	Soluble Si in nonliquids, Other (%)	0572	< 0.007					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				

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