



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 139

Sample # 250714

Regular PT Scheme Sample Doubles with P Scheme

Labs Reporting: 77

19-19-19

Statistical Summary

Issue Date : 08/31/2025

Method Code	Analyte & Method Sample # 250714	# 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 (%)	5	5	4.421	1.840	4.421		1.840	1.029	41.62%		0.2093	3.20%
001.99	Ammoniacal N, Other (%)	21	20	3.751	0.6008	3.792		0.5182	0.1449	13.67%		0.0636	3.27%
005.00	Urea N, Urease (as N) (%)	3	3	14.12	2.171	14.12		2.171	1.567	15.37%		0.1767	2.66%
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	1		13.38									
005.99	Urea N, Other (%)	11	11	14.27	2.188	14.01		1.513	0.5702	10.80%		0.2222	2.67%
007.20	Urea, HPLC,85%acetonitrilemobilephase (%)	1		13.30									
010.11	Total N, Modified Comprehensive (19%)	1		17.14									
010.12	Total N, Salicylic (19%)	3	3	17.15	1.130	17.15	0.6873	1.130	0.8157	6.59%	3.83	0.2333	2.41%
010.60	Total N, Combustion (19%)	48	48	16.91	0.6150	16.82	0.6823	0.4564	0.0823	2.71%	1.56	0.1608	2.44%
010.99	Total N, Other (19%)	9	9	17.83	1.426	17.83	0.6974	1.617	0.6738	9.07%	5.40	0.1679	2.37%
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	1		15.90									
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	16	16	16.09	1.078	15.91		0.7898	0.2468	4.96%		0.1495	2.51%
020.40	Total P2O5, Automated (%)	3	3	15.39	0.3450	15.39		0.3450	0.2490	2.24%		0.2933	2.55%
020.50	Total P2O5, ICP (%)	19	17	15.24	3.413	15.94		0.8456	0.2564	5.31%		0.1758	2.50%
020.99	Total P2O5, Other (%)	6	6	17.74	1.512	17.74		1.714	0.8749	9.66%		0.2400	2.37%
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP	1		0.1000									
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	2	2	0.0900	0.0566								
030.50	Citrate Insoluble P2O5, ICP, test portion 963.03 A-B (%)	1		0.0550									
030.99	Citrate Insoluble P2O5, Other (%)	2	2	0.0725	0.0389								
040.40	Indirect Available P2O5, Automated (19%)	2	2	15.50	0.0248								
040.99	Indirect Available P2O5, Other (19%)	2	2	15.64	0.4720								
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	3	3	16.46	2.224	16.46	0.7023	2.224	1.605	13.51%	7.38	0.3133	2.46%
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA	7	7	15.76	0.3744	15.84	0.7000	0.2205	0.1042	1.39%	0.73	0.1503	2.51%
041.20	Direct Available P2O5, Spectrophotometric (19%)	2	2	16.15	0.1414								
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext.	7	6	15.36	0.6659	15.30	0.7000	0.8025	0.4095	5.25%	2.67	0.1256	2.56%
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	3	3	15.08	0.2489	15.08	0.7000	0.2489	0.1797	1.65%	0.83	0.4100	2.58%
041.50	Direct Available P2O5, ICP (19%)	3	3	15.77	0.8777	15.77	0.7000	0.8777	0.6334	5.56%	2.92	1.006	2.52%
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	10	10	15.56	0.6808	15.58	0.7000	0.7482	0.2958	4.80%	2.49	0.1664	2.53%
041.99	Direct Available P2O5, Other (19%)	4	4	17.70	1.596	17.70	0.7085	1.596	0.9974	9.02%	5.25	0.1350	2.38%

Method Code	Analyte & Method Sample # 250714	# 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)	Howitz %RSD
042.99	Water Soluble OrthoP As P2O5, Other (%)	1		19.13									
048.20	Water Soluble P2O5, Spectrophotometric (%)	6	6	14.08	0.6385	14.08		0.7240	0.3695	5.14%		0.0216	2.67%
048.40	Water Soluble P2O5, Automated (%)	1		14.02									
048.99	Water Soluble P2O5, Other (%)	2	2	14.52	0.0318								
050.00	Soluble K2O, STPB Oxalate (19%)	8	7	23.43	2.105	24.11	1.2133	1.368	0.6465	5.68%	2.63	0.1986	2.04%
050.30	Soluble K2O, AA (Oxalate) (19%)	2	2	22.18	4.207								
050.32	Soluble K2O, AA (Citrate-EDTA) (19%)	2	2	23.28	2.206								
050.50	Soluble K2O, ICP (Oxalate) (19%)	7	6	25.42	1.277	25.36	1.2507	1.573	0.8029	6.20%	2.93	0.2112	1.99%
050.51	Soluble K2O, ICP (Citrate) (19%)	3	3	25.45	0.8426	25.45	1.2536	0.8426	0.6081	3.31%	1.57	0.0459	1.98%
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	13	13	24.33	1.639	24.62	1.2286	1.056	0.3660	4.29%	2.00	0.2662	2.02%
050.60	Soluble K2O, Flame Photometric (Oxalate) (19%)	3	3	24.93	1.472	24.93	1.2378	1.472	1.063	5.91%	2.77	0.1134	2.00%
050.61	Soluble K2O, Flame Photometric (Citrate) (19%)	1		24.85									
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	4	4	25.44	0.8132	25.44	1.2531	0.8132	0.5082	3.20%	1.51	0.6200	1.98%
050.99	Soluble K2O, Other (19%)	32	31	22.23	4.388	22.62	1.1687	3.022	0.6785	13.36%	6.02	0.4042	2.10%
060.00	Water (Free), Vacuum Oven (%)	2	2	0.9200	0.2970								
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g samp	1		1.128									
060.99	Water (Free), Other (%)	1		1.402									
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual ε	1		0.1500									
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	3	3	0.1512	0.0409	0.1512	0.2076	0.0409	0.0295	27.06%	0.46	0.0103	5.32%
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	2	1	0.3500	0.2121								
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	3	2	0.0687	0.0524	0.0980	0.2049	0.0184	0.0163	18.76%	0.21	0.0160	5.67%
101.99	Acid Soluble Ca, Other (%)	1		0.1325									
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	1		0.4060									
121.03	Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual ε	1		0.3800									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	5	5	0.4727	0.1396	0.4727	0.2236	0.1396	0.0780	29.52%	1.45	0.0138	4.48%
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	1		0.3085									
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	5	5	0.4985	0.1060	0.4985	0.2249	0.1060	0.0592	21.26%	1.10	0.0481	4.44%
121.99	Acid Soluble Mg, Other (%)	3	3	0.4010	0.0578	0.4010	0.2201	0.0578	0.0417	14.42%	0.61	0.0300	4.59%
145.99	Sulfate S, HCl soluble, Other (%)	1		0.5725									
148.07	Total S, ICP, test portion as in 2017.02 (%)	3	2	0.3907	0.2523	0.5361	0.2268	0.0227	0.0201	4.23%	0.23	0.0712	4.39%
148.99	Total S, Other (%)	3	3	0.4707	0.0592	0.4707	0.2235	0.0592	0.0427	12.58%	0.62	0.0160	4.48%
149.04	S - HNO3 soluble, ICP (%)	1		0.5206									
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	1		0.4400									
151.30	Acid Soluble As, ICP (ppm)	6	3	1.334	2.426	0.5843		0.0529	0.0382	9.06%		0.0599	17.34%
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	2	0	1.750	1.768								
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	5	2	5.437	7.008	8.093		10.60	9.366	130.94%		13.74	11.68%
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	1		10.05									
151.99	Acid Soluble As, Other (ppm)	2	1	0.5225	0.0318								
165.00	Acid Soluble B, Spectrophotometric (%)	1		0.0060									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	2	1	0.0075	0.0106								

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165.99	Acid Soluble B, Other (%)	5	3	0.0056	0.0043	0.0058	0.0039	0.0037	0.0026	63.09%	2.20	0.0034	8.68%
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acic	1		0.1000									
181.30	Acid Soluble Cd, ICP (ppm)	10	10	16.63	2.907	16.59		3.082	1.218	18.58%		1.074	10.48%
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	2	2	16.30	0.4243								
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	5	5	17.20	1.716	17.20		1.716	0.9590	9.97%		0.2874	10.42%
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	2	2	11.55	6.293								
181.99	Acid Soluble Cd, Other (ppm)	1		16.90									
190.99	Water Soluble Cl, Other (%)	1		18.52									
191.30	Acid Soluble Cr, ICP (ppm)	9	9	96.79	15.09	96.79		17.11	7.128	17.67%		2.731	8.04%
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	2	2	98.53	1.450								
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	6	104.5	5.824	104.5		6.605	3.370	6.32%		4.858	7.95%
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	2	2	88.35	7.425								
191.99	Acid Soluble Cr, Other (ppm)	1		98.95									
202.30	Acid Soluble Co, ICP (ppm)	6	5	2.303	2.580	2.513	1.7540	2.827	1.580	112.47%	3.76	1.094	13.92%
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	2	1	0.7450	0.3606								
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	5	2	4.728	4.877	0.5692	1.1708	0.0767	0.0678	13.47%	0.15	0.0183	17.41%
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	1		0.1000									
202.99	Acid Soluble Co, Other (ppm)	2	1	0.2850	0.4031								
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	6	3	0.0027	0.0038	0.0020	0.0052	0.0007	0.0005	35.00%	0.31	0.0004	10.19%
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	1		0.0002									
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	7	2	1.429	3.779	0.0010	0.0051	0.0012	0.0011	126.92%	0.57	0.0003	11.35%
221.99	Acid Soluble Cu, Other (%)	4	2	0.0013	0.0025	0.0026	0.0053	0.0034	0.0030	133.18%	1.52	0.0001	9.81%
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	1		0.3995									
241.03	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual a	1		0.2350									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	5	5	0.2868	0.1592	0.2868	0.0337	0.1592	0.0890	55.52%	11.01	0.0019	4.83%
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	2	2	0.4432	0.1511								
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	3	3	0.2933	0.1459	0.2933	0.0343	0.1459	0.1053	49.74%	9.90	0.0026	4.81%
241.99	Acid Soluble Fe, Other (%)	3	3	0.3641	0.0368	0.3641	0.0414	0.0368	0.0266	10.12%	2.07	0.0147	4.66%
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	1		0.5000									
251.30	Acid Soluble Pb, ICP (ppm)	6	2	1.606	2.395	1.142		1.213	1.072	106.23%		0.4126	15.68%
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	2	1	2.320	2.376								
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	5	2	4.547	4.959	4.868		6.735	5.953	138.37%		0.5250	12.61%
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	2	2	7.175	2.652								
251.99	Acid Soluble Pb, Other (ppm)	3	2	0.9550	0.9542	0.4325		0.4278	0.3781	98.91%		0.0500	18.15%
261.00	Acid Soluble Mn, AA, Mn2+ only (%)	1		0.0065									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	3	2	0.0078	0.0019	0.0067	0.0057	0.0002	0.0002	2.63%	0.07	0.0001	8.49%
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	2	1	0.0035	0.0049								
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	1		0.0005									
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	2	2	0.0087	0.0026								
261.99	Acid Soluble Mn, Other (%)	1		0.0065									

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281.00	Acid Soluble Hg, AA (ppm)	2	0	0.2750	0.3182								
281.30	Acid Soluble Hg, ICP (ppm)	5	0	0.6722	0.9101	0.0087		0.0026		30.07%		0.0001	22.00%
281.99	Acid Soluble Hg, Other (ppm)	2	1	0.0051	0.0070								
289.30	Acid Soluble Mo, ICP (ppm)	9	8	4.929	4.087	3.893	2.1678	1.406	0.6211	36.11%	1.51	0.2499	13.04%
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	2	2	3.483	0.0248								
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	3	3	3.490	0.4412	3.490	2.0469	0.4412	0.3184	12.64%	0.50	0.1788	13.25%
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	1		2.350									
289.99	Acid Soluble Mo, Other (ppm)	1		3.480									
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid	1		10.00									
291.30	Acid Soluble Ni, ICP (ppm)	9	9	14.06	3.883	13.59		3.231	1.346	23.77%		0.9061	10.80%
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	2	2	13.25	0.3536								
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	5	5	12.26	1.436	12.26		1.436	0.8028	11.71%		0.2566	10.97%
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	2	2	23.93	11.84								
291.99	Acid Soluble Ni, Other (ppm)	2	2	13.17	0.1697								
301.30	Acid Soluble Se, ICP (ppm)	4	3	1.963	2.924	0.5336		0.7542	0.5443	141.35%		0.0516	17.58%
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	2	1	5.243	6.728								
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	4	2	10.36	14.75	15.71		22.09	19.53	140.66%		25.48	10.57%
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	1		1.400									
301.99	Acid Soluble Se, Other (ppm)	2	1	0.1150	0.1626								
311.00	Sodium, AA (%)	1		0.5510									
311.32	Sodium, ICP, 2006.03 test portion (%)	1		0.6610									
311.33	Sodium, ICP, test portion as in 2017.02 (%)	4	4	0.5923	0.0597	0.5923	0.0642	0.0597	0.0373	10.08%	2.17	0.0147	4.33%
311.99	Sodium, Other (%)	2	2	0.5700	0.0000								
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	1		0.0225									
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual a	1		0.0235									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	6	5	0.0209	0.0056	0.0204	0.0070	0.0061	0.0034	29.88%	2.02	0.0000	7.19%
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	3	3	0.0227	0.0022	0.0227	0.0073	0.0022	0.0016	9.70%	0.70	0.0038	7.07%
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	11	11	0.0240	0.0070	0.0223	0.0072	0.0024	0.0009	10.79%	0.78	0.0024	7.09%
321.99	Acid Soluble Zn, Other (%)	8	7	0.0165	0.0095	0.0207	0.0071	0.0031	0.0015	15.19%	1.04	0.0008	7.17%
325.30	Water Soluble Zn, ICP (%)	1		0.0199									

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 # 250714

Regular PT Scheme Sample Doubles with P Scheme

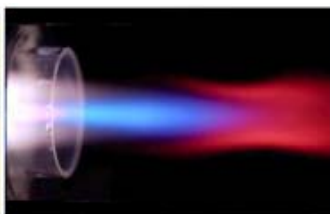
19-19-19

Method Precision Report

Issue Date : 08/31/2025

Method Code	Analyte & Method	# Tests Submitted	# Tests Used in Precision Calcs	Mean	SD	Between Labs sL	Within Labs sr	Reproducibility SR	Between Labs %RSD	Within Labs %rsd	Reproducibility %RSD	sR/sr
001.99	Ammoniacal N, Other (%)	21	18	3.792	0.4029	0.4008	0.0582	0.4050	10.57%	1.53%	10.68%	6.962
005.99	Urea N, Other (%)	11	9	13.89	1.261	1.258	0.1247	1.264	9.06%	0.90%	9.10%	10.13
010.60	Total N, Combustion (19%)	48	44	16.77	0.3810	0.3611	0.1720	0.4000	2.15%	1.03%	2.39%	2.325
010.99	Total N, Other (19%)	9	9	17.83	1.426	1.423	0.1402	1.429	7.98%	0.79%	8.02%	10.20
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	16	15	15.92	0.8626	0.8576	0.1318	0.8677	5.39%	0.83%	5.45%	6.584
020.50	Total P2O5, ICP (%)	19	17	16.03	0.9888	0.9819	0.1648	0.9956	6.13%	1.03%	6.21%	6.042
020.99	Total P2O5, Other (%)	6	6	17.74	1.512	1.504	0.2112	1.519	8.48%	1.19%	8.56%	7.193
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA E	7	6	15.89	0.1409	0.1050	0.1328	0.1693	0.66%	0.84%	1.07%	1.275
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	7	6	15.30	0.7076	0.7036	0.1070	0.7117	4.60%	0.70%	4.65%	6.650
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	10	10	15.56	0.6808	0.6714	0.1600	0.6901	4.31%	1.03%	4.43%	4.314
048.20	Water Soluble P2O5, Spectrophotometric (%)	6	5	13.99	0.6752	0.6751	0.0131	0.6753	4.83%	0.09%	4.83%	51.65
050.00	Soluble K2O, STPB Oxalate (19%)	8	7	23.73	2.084	2.080	0.1709	2.087	8.77%	0.72%	8.80%	12.22
050.50	Soluble K2O, ICP (Oxalate) (19%)	7	6	25.36	1.387	1.382	0.1749	1.393	5.45%	0.69%	5.49%	7.966
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	13	12	24.71	0.9220	0.8949	0.3134	0.9482	3.62%	1.27%	3.84%	3.026
050.99	Soluble K2O, Other (19%)	32	29	22.62	2.478	2.461	0.4137	2.495	10.88%	1.83%	11.03%	6.032
181.30	Acid Soluble Cd, ICP (ppm)	10	9	17.18	2.474	2.413	0.7695	2.533	14.05%	4.48%	14.75%	3.292
191.30	Acid Soluble Cr, ICP (ppm)	9	9	96.79	15.09	15.02	1.956	15.15	15.52%	2.02%	15.65%	7.743
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	6	6	104.5	5.824	4.843	4.576	6.663	4.64%	4.38%	6.38%	1.456
289.30	Acid Soluble Mo, ICP (ppm)	9	7	3.416	1.677	1.672	0.1817	1.682	48.95%	5.32%	49.24%	9.257
291.30	Acid Soluble Ni, ICP (ppm)	9	8	12.99	2.346	2.304	0.6231	2.387	17.74%	4.80%	18.38%	3.831
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	11	9	0.0216	0.0015	0.0015	0.0003	0.0015	6.90%	1.24%	7.01%	5.634
321.99	Acid Soluble Zn, Other (%)	8	7	0.0189	0.0072	0.0072	0.0006	0.0072	38.27%	3.22%	38.41%	11.92

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 139

Sample # 250714

Regular PT Scheme Sample Doubles with P Scheme

Labs Reporting: 77

19-19-19

Lab Values

Issue Date : 08/31/2025

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0231	3.510	0.1200	4.421	1.840	0.2093	5	-0.49		0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0389	3.510	0.0200	4.421	1.840	0.2093	5	-0.49		0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0027	3.578	0.0870	4.421	1.840	0.2093	5	-0.46		0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0498	3.800	0.0000	4.421	1.840	0.2093	5	-0.34		0
001.10	Ammoniacal N, Magnesium Oxide Method (%)	0117	7.705	0.6100	4.421	1.840	0.2093	5	1.79		0
001.99	Ammoniacal N, Other (%)	0231	2.555	0.2300	3.792	0.5182	0.0636	20	-2.39	NA	0
001.99	Ammoniacal N, Other (%)	0368	3.107	0.0290	3.792	0.5182	0.0636	20	-1.32	NA	0
001.99	Ammoniacal N, Other (%)	0394	3.132	0.0400	3.792	0.5182	0.0636	20	-1.27	NA	0
001.99	Ammoniacal N, Other (%)	0472	3.450	0.1000	3.792	0.5182	0.0636	20	-0.66	NA	0
001.99	Ammoniacal N, Other (%)	0582	3.479	0.0060	3.792	0.5182	0.0636	20	-0.60	NA	0
001.99	Ammoniacal N, Other (%)	0593	3.580	0.0900	3.792	0.5182	0.0636	20	-0.41	NA	0
001.99	Ammoniacal N, Other (%)	0581	3.590	0.0200	3.792	0.5182	0.0636	20	-0.39	NA	0
001.99	Ammoniacal N, Other (%)	0136	3.600	0.2000	3.792	0.5182	0.0636	20	-0.37	NA	0
001.99	Ammoniacal N, Other (%)	0605	3.650	0.0200	3.792	0.5182	0.0636	20	-0.27	NA	0
001.99	Ammoniacal N, Other (%)	0096	3.665	0.0100	3.792	0.5182	0.0636	20	-0.24	NA	0
001.99	Ammoniacal N, Other (%)	0510	3.676	0.0273	3.792	0.5182	0.0636	20	-0.22	NA	0
001.99	Ammoniacal N, Other (%)	0553	3.875	0.0100	3.792	0.5182	0.0636	20	0.16	NA	0
001.99	Ammoniacal N, Other (%)	0647	3.930	0.0400	3.792	0.5182	0.0636	20	0.27	NA	0
001.99	Ammoniacal N, Other (%)	0423	4.015	0.0700	3.792	0.5182	0.0636	20	0.43	NA	0
001.99	Ammoniacal N, Other (%)	0536	4.085	0.0700	3.792	0.5182	0.0636	20	0.57	NA	0
001.99	Ammoniacal N, Other (%)	0600	4.250	0.1000	3.792	0.5182	0.0636	20	0.88	NA	0
001.99	Ammoniacal N, Other (%)	0220	4.300	0.0800	3.792	0.5182	0.0636	20	0.98	NA	0
001.99	Ammoniacal N, Other (%)	0548	4.340	0.1400	3.792	0.5182	0.0636	20	1.06	NA	0
001.99	Ammoniacal N, Other (%)	0405	4.525	0.1100	3.792	0.5182	0.0636	20	1.42	NA	0
001.99	Ammoniacal N, Other (%)	0545	5.190	0.0200	3.792	0.5182	0.0636	20	2.70	NA	0
001.99	Ammoniacal N, Other (%)	0524	2.787	1.278	3.792	0.5182	0.0636	20	-1.94	NA	1
005.00	Urea N, Urease (as N) (%)	0136	12.40	0.2000	14.12	2.171	0.1767	3	-0.79		0
005.00	Urea N, Urease (as N) (%)	0368	13.40	0.1701	14.12	2.171	0.1767	3	-0.33		0
005.00	Urea N, Urease (as N) (%)	0389	16.56	0.1600	14.12	2.171	0.1767	3	1.12		0
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	0394	13.38	0.0320				1			0
005.99	Urea N, Other (%)	0545	11.11	0.1800	14.01	1.513	0.2222	11	-1.80	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				
005.99	Urea N, Other (%)	0524	12.26	0.7008	14.01	1.513	0.2222	11	-1.08	NA	0
005.99	Urea N, Other (%)	0029	13.12	0.1600	14.01	1.513	0.2222	11	-0.55	NA	0
005.99	Urea N, Other (%)	0027	13.18	0.2500	14.01	1.513	0.2222	11	-0.52	NA	0
005.99	Urea N, Other (%)	0605	14.06	0.1700	14.01	1.513	0.2222	11	0.03	NA	0
005.99	Urea N, Other (%)	0405	14.12	0.0000	14.01	1.513	0.2222	11	0.07	NA	0
005.99	Urea N, Other (%)	0548	14.65	0.3000	14.01	1.513	0.2222	11	0.39	NA	0
005.99	Urea N, Other (%)	0647	14.77	0.1500	14.01	1.513	0.2222	11	0.46	NA	0
005.99	Urea N, Other (%)	0536	14.83	0.0900	14.01	1.513	0.2222	11	0.50	NA	0
005.99	Urea N, Other (%)	0600	15.15	0.1000	14.01	1.513	0.2222	11	0.70	NA	0
005.99	Urea N, Other (%)	0638	19.73	0.4000	14.01	1.513	0.2222	11	3.54	NA	0
007.20	Urea, HPLC,85%acetonitrilemobilephase (%)	0220	13.30	0.0800				1			0
010.11	Total N, Modified Comprehensive (19%)	0510	17.14	0.0170				1			0
010.12	Total N, Salicylic (19%)	0602	16.40	0.2000	17.15	1.130	0.2333	3	-0.66		0
010.12	Total N, Salicylic (19%)	0117	16.60	0.4000	17.15	1.130	0.2333	3	-0.49		0
010.12	Total N, Salicylic (19%)	0498	18.45	0.1000	17.15	1.130	0.2333	3	1.15		0
010.60	Total N, Combustion (19%)	0586	16.20	0.2300	16.82	0.4564	0.1608	48	-1.37	OK	0
010.60	Total N, Combustion (19%)	0527	16.20	0.6020	16.82	0.4564	0.1608	48	-1.36	OK	0
010.60	Total N, Combustion (19%)	0102	16.21	0.0800	16.82	0.4564	0.1608	48	-1.34	OK	0
010.60	Total N, Combustion (19%)	0043	16.23	0.2600	16.82	0.4564	0.1608	48	-1.30	OK	0
010.60	Total N, Combustion (19%)	0421	16.25	0.2700	16.82	0.4564	0.1608	48	-1.26	OK	0
010.60	Total N, Combustion (19%)	0177	16.29	0.5180	16.82	0.4564	0.1608	48	-1.17	OK	0
010.60	Total N, Combustion (19%)	0131	16.43	0.1010	16.82	0.4564	0.1608	48	-0.85	OK	0
010.60	Total N, Combustion (19%)	0360	16.44	0.6500	16.82	0.4564	0.1608	48	-0.85	OK	0
010.60	Total N, Combustion (19%)	0324	16.50	0.0000	16.82	0.4564	0.1608	48	-0.71	OK	0
010.60	Total N, Combustion (19%)	0049	16.52	0.1800	16.82	0.4564	0.1608	48	-0.66	OK	0
010.60	Total N, Combustion (19%)	0452	16.52	0.0200	16.82	0.4564	0.1608	48	-0.66	OK	0
010.60	Total N, Combustion (19%)	0561	16.53	0.0700	16.82	0.4564	0.1608	48	-0.65	OK	0
010.60	Total N, Combustion (19%)	0389	16.58	0.0700	16.82	0.4564	0.1608	48	-0.54	OK	0
010.60	Total N, Combustion (19%)	0402	16.59	0.1270	16.82	0.4564	0.1608	48	-0.52	OK	0
010.60	Total N, Combustion (19%)	0231	16.60	0.0800	16.82	0.4564	0.1608	48	-0.49	OK	0
010.60	Total N, Combustion (19%)	0027	16.62	0.1300	16.82	0.4564	0.1608	48	-0.45	OK	0
010.60	Total N, Combustion (19%)	0292	16.62	0.0900	16.82	0.4564	0.1608	48	-0.45	OK	0
010.60	Total N, Combustion (19%)	0040	16.65	0.1000	16.82	0.4564	0.1608	48	-0.38	OK	0
010.60	Total N, Combustion (19%)	0055	16.66	0.0200	16.82	0.4564	0.1608	48	-0.37	OK	0
010.60	Total N, Combustion (19%)	0521	16.66	0.0000	16.82	0.4564	0.1608	48	-0.36	OK	0
010.60	Total N, Combustion (19%)	0494	16.66	0.1200	16.82	0.4564	0.1608	48	-0.35	OK	0
010.60	Total N, Combustion (19%)	0422	16.67	0.0900	16.82	0.4564	0.1608	48	-0.34	OK	0
010.60	Total N, Combustion (19%)	0136	16.70	0.2000	16.82	0.4564	0.1608	48	-0.27	OK	0
010.60	Total N, Combustion (19%)	0260	16.72	0.5800	16.82	0.4564	0.1608	48	-0.22	OK	0
010.60	Total N, Combustion (19%)	0405	16.74	0.0100	16.82	0.4564	0.1608	48	-0.19	OK	0
010.60	Total N, Combustion (19%)	0220	16.77	0.0900	16.82	0.4564	0.1608	48	-0.12	OK	0
010.60	Total N, Combustion (19%)	0234	16.77	0.2600	16.82	0.4564	0.1608	48	-0.11	OK	0
010.60	Total N, Combustion (19%)	0368	16.78	0.1590	16.82	0.4564	0.1608	48	-0.10	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 (19%)	0095	16.80	0.1300	16.82	0.4564	0.1608	48	-0.06	OK	0
010.60	Total N, Combustion (19%)	0023	16.83	0.1480	16.82	0.4564	0.1608	48	0.01	OK	0
010.60	Total N, Combustion (19%)	0543	16.84	0.0500	16.82	0.4564	0.1608	48	0.03	OK	0
010.60	Total N, Combustion (19%)	0291	16.92	0.0100	16.82	0.4564	0.1608	48	0.20	OK	0
010.60	Total N, Combustion (19%)	0542	16.93	0.1600	16.82	0.4564	0.1608	48	0.24	OK	0
010.60	Total N, Combustion (19%)	0035	17.10	0.2000	16.82	0.4564	0.1608	48	0.61	OK	0
010.60	Total N, Combustion (19%)	0034	17.11	0.3000	16.82	0.4564	0.1608	48	0.63	OK	0
010.60	Total N, Combustion (19%)	0354	17.20	0.0000	16.82	0.4564	0.1608	48	0.83	OK	0
010.60	Total N, Combustion (19%)	0025	17.21	0.1100	16.82	0.4564	0.1608	48	0.84	OK	0
010.60	Total N, Combustion (19%)	0612	17.23	0.5800	16.82	0.4564	0.1608	48	0.89	OK	0
010.60	Total N, Combustion (19%)	0029	17.25	0.4200	16.82	0.4564	0.1608	48	0.94	OK	0
010.60	Total N, Combustion (19%)	0169	17.29	0.0800	16.82	0.4564	0.1608	48	1.03	OK	0
010.60	Total N, Combustion (19%)	0582	17.32	0.0700	16.82	0.4564	0.1608	48	1.08	OK	0
010.60	Total N, Combustion (19%)	0377	17.40	0.0300	16.82	0.4564	0.1608	48	1.26	OK	0
010.60	Total N, Combustion (19%)	0255	17.48	0.7940	16.82	0.4564	0.1608	48	1.44	OK	0
010.60	Total N, Combustion (19%)	0472	17.54	0.0300	16.82	0.4564	0.1608	48	1.56	High	0
010.60	Total N, Combustion (19%)	0624	17.83	0.0770	16.82	0.4564	0.1608	48	2.22	High	0
010.60	Total N, Combustion (19%)	0371	18.72	0.3400	16.82	0.4564	0.1608	48	4.16	High	0
010.60	Total N, Combustion (19%)	0423	18.78	0.0300	16.82	0.4564	0.1608	48	4.28	High	0
010.60	Total N, Combustion (19%)	0534	18.80	0.2000	16.82	0.4564	0.1608	48	4.33	High	0
010.99	Total N, Other (19%)	0545	16.30	0.2000	17.83	1.617	0.1679	9	-0.87	Low	0
010.99	Total N, Other (19%)	0524	16.39	0.1037	17.83	1.617	0.1679	9	-0.82	Low	0
010.99	Total N, Other (19%)	0602	16.40	0.2000	17.83	1.617	0.1679	9	-0.81	Low	0
010.99	Total N, Other (19%)	0513	16.62	0.0300	17.83	1.617	0.1679	9	-0.69	Low	0
010.99	Total N, Other (19%)	0605	17.71	0.1800	17.83	1.617	0.1679	9	-0.07	OK	0
010.99	Total N, Other (19%)	0577	19.02	0.3700	17.83	1.617	0.1679	9	0.68	High	0
010.99	Total N, Other (19%)	0600	19.15	0.1000	17.83	1.617	0.1679	9	0.76	High	0
010.99	Total N, Other (19%)	0584	19.32	0.2700	17.83	1.617	0.1679	9	0.85	High	0
010.99	Total N, Other (19%)	0558	19.55	0.1000	17.83	1.617	0.1679	9	0.98	High	0
020.10	Total P2O5, Gravimetric Quinolinium MolybdoP (%)	0157	15.90	0.4000				1			0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0394	14.72	0.3700	15.91	0.7898	0.1495	16	-1.51	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0510	14.87	0.0382	15.91	0.7898	0.1495	16	-1.33	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0169	15.25	0.0500	15.91	0.7898	0.1495	16	-0.85	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0405	15.35	0.0100	15.91	0.7898	0.1495	16	-0.72	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0582	15.43	0.0640	15.91	0.7898	0.1495	16	-0.61	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0581	15.54	0.0400	15.91	0.7898	0.1495	16	-0.47	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0231	15.77	0.1200	15.91	0.7898	0.1495	16	-0.18	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0593	16.02	0.1050	15.91	0.7898	0.1495	16	0.13	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0561	16.13	0.0200	15.91	0.7898	0.1495	16	0.27	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0476	16.14	0.3398	15.91	0.7898	0.1495	16	0.29	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0371	16.15	0.2300	15.91	0.7898	0.1495	16	0.29	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0602	16.15	0.1000	15.91	0.7898	0.1495	16	0.30	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0292	16.41	0.0100	15.91	0.7898	0.1495	16	0.62	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 (%)	0324	16.50	0.4000	15.91	0.7898	0.1495	16	0.74	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0548	18.35	0.1000	15.91	0.7898	0.1495	16	3.09	NA	0
020.20	Total P2O5, Spectrophotometric MolybdovanadoP (%)	0498	18.65	0.5000	15.91	0.7898	0.1495	16	3.47	NA	0
020.40	Total P2O5, Automated (%)	0035	15.00	0.4000	15.39	0.3450	0.2933	3	-1.14		0
020.40	Total P2O5, Automated (%)	0586	15.54	0.0500	15.39	0.3450	0.2933	3	0.41		0
020.40	Total P2O5, Automated (%)	0096	15.65	0.4300	15.39	0.3450	0.2933	3	0.73		0
020.50	Total P2O5, ICP (%)	0543	14.58	0.0390	15.94	0.8456	0.1758	17	-1.61	NA	0
020.50	Total P2O5, ICP (%)	0472	14.91	0.1200	15.94	0.8456	0.1758	17	-1.22	NA	0
020.50	Total P2O5, ICP (%)	0169	15.05	0.0900	15.94	0.8456	0.1758	17	-1.06	NA	0
020.50	Total P2O5, ICP (%)	0389	15.35	0.3000	15.94	0.8456	0.1758	17	-0.70	NA	0
020.50	Total P2O5, ICP (%)	0521	15.49	0.0000	15.94	0.8456	0.1758	17	-0.53	NA	0
020.50	Total P2O5, ICP (%)	0582	15.58	0.1070	15.94	0.8456	0.1758	17	-0.42	NA	0
020.50	Total P2O5, ICP (%)	0291	15.70	0.0100	15.94	0.8456	0.1758	17	-0.29	NA	0
020.50	Total P2O5, ICP (%)	0433	15.70	0.0900	15.94	0.8456	0.1758	17	-0.29	NA	0
020.50	Total P2O5, ICP (%)	0234	15.90	0.4000	15.94	0.8456	0.1758	17	-0.05	NA	0
020.50	Total P2O5, ICP (%)	0524	15.97	0.0819	15.94	0.8456	0.1758	17	0.03	NA	0
020.50	Total P2O5, ICP (%)	0368	16.28	0.2916	15.94	0.8456	0.1758	17	0.41	NA	0
020.50	Total P2O5, ICP (%)	0527	16.29	0.0105	15.94	0.8456	0.1758	17	0.42	NA	0
020.50	Total P2O5, ICP (%)	0402	16.43	0.0200	15.94	0.8456	0.1758	17	0.58	NA	0
020.50	Total P2O5, ICP (%)	0255	16.50	0.4420	15.94	0.8456	0.1758	17	0.66	NA	0
020.50	Total P2O5, ICP (%)	0260	16.74	0.5080	15.94	0.8456	0.1758	17	0.95	NA	0
020.50	Total P2O5, ICP (%)	0422	17.20	0.2720	15.94	0.8456	0.1758	17	1.49	NA	0
020.50	Total P2O5, ICP (%)	0423	18.81	0.1000	15.94	0.8456	0.1758	17	3.40	NA	0
020.50	Total P2O5, ICP (%)	0612	15.40	1.850	15.94	0.8456	0.1758	17	-0.64	NA	1
020.50	Total P2O5, ICP (%)	0523	1.697	0.0480	15.94	0.8456	0.1758	17	-16.84	NA	2
020.99	Total P2O5, Other (%)	0513	15.91	0.0400	17.74	1.714	0.2400	6	-0.95	NA	0
020.99	Total P2O5, Other (%)	0602	16.15	0.1000	17.74	1.714	0.2400	6	-0.83	NA	0
020.99	Total P2O5, Other (%)	0515	17.20	0.3800	17.74	1.714	0.2400	6	-0.28	NA	0
020.99	Total P2O5, Other (%)	0600	19.02	0.1600	17.74	1.714	0.2400	6	0.66	NA	0
020.99	Total P2O5, Other (%)	0647	19.05	0.2000	17.74	1.714	0.2400	6	0.68	NA	0
020.99	Total P2O5, Other (%)	0638	19.12	0.5600	17.74	1.714	0.2400	6	0.72	NA	0
030.20	Citrate Insoluble P2O5, Spectrophotometric MolybdovanadoP (	0602	0.1000	0.0000				1			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0586	0.0500	0.0200				2			0
030.40	Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%)	0096	0.1300	0.0200				2			0
030.50	Citrate Insoluble P2O5, ICP, test portion 963.03 A-B (%)	0581	0.0550	0.0100				1			0
030.99	Citrate Insoluble P2O5, Other (%)	0593	0.0450	0.0000				2			0
030.99	Citrate Insoluble P2O5, Other (%)	0602	0.1000	0.0000				2			0
040.40	Indirect Available P2O5, Automated (19%)	0586	15.49	0.0300				2			0
040.40	Indirect Available P2O5, Automated (19%)	0096	15.52	0.4400				2			0
040.99	Indirect Available P2O5, Other (19%)	0405	15.31	0.0100				2			0
040.99	Indirect Available P2O5, Other (19%)	0593	15.97	0.1050				2			0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0494	14.70	0.6000	16.46	2.224	0.3133	3	-0.79		0
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0102	15.72	0.3200	16.46	2.224	0.3133	3	-0.33		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		*Robust Method Values			#	Magruder PT	Method IA	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar	Tests	Z Score	Status	
041.10	Direct Available P2O5, Gravimetric Quinolinium (19%)	0536	18.96	0.0200	16.46	2.224	0.3133	3	1.12		0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0405	14.96	0.0000	15.84	0.2205	0.1503	7	-3.59	Low	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0055	15.76	0.3500	15.84	0.2205	0.1503	7	-0.33	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0513	15.78	0.0500	15.84	0.2205	0.1503	7	-0.25	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0049	15.84	0.2500	15.84	0.2205	0.1503	7	0.00	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0220	15.85	0.0400	15.84	0.2205	0.1503	7	0.06	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0185	16.03	0.1100	15.84	0.2205	0.1503	7	0.78	OK	0
041.11	Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA I	0177	16.10	0.1018	15.84	0.2205	0.1503	7	1.09	OK	0
041.20	Direct Available P2O5, Spectrophotometric (19%)	0602	16.05	0.1000				2			0
041.20	Direct Available P2O5, Spectrophotometric (19%)	0452	16.25	0.0400				2			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0394	14.31	0.0730	15.30	0.8025	0.1256	6	-1.10	Low	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0472	14.68	0.0100	15.30	0.8025	0.1256	6	-0.69	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0354	15.10	0.2000	15.30	0.8025	0.1256	6	-0.22	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0055	15.81	0.2650	15.30	0.8025	0.1256	6	0.57	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0231	15.92	0.1200	15.30	0.8025	0.1256	6	0.69	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0177	15.97	0.0858	15.30	0.8025	0.1256	6	0.75	OK	0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (	0095	15.73	1.090	15.30	0.8025	0.1256	6	0.47	OK	1
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0034	14.87	0.2100	15.08	0.2489	0.4100	3	-0.84		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0029	15.01	0.7800	15.08	0.2489	0.4100	3	-0.26		0
041.40	Direct Available P2O5, Automated, Citrate-EDTA Ext. (19%)	0028	15.35	0.2400	15.08	0.2489	0.4100	3	1.10		0
041.50	Direct Available P2O5, ICP (19%)	0624	14.98	0.0493	15.77	0.8777	1.006	3	-0.90		0
041.50	Direct Available P2O5, ICP (19%)	0605	15.62	0.1800	15.77	0.8777	1.006	3	-0.17		0
041.50	Direct Available P2O5, ICP (19%)	0421	16.72	2.790	15.77	0.8777	1.006	3	1.08		0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0494	14.35	0.3700	15.58	0.7482	0.1664	10	-1.53	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0377	14.71	0.0900	15.58	0.7482	0.1664	10	-1.08	Low	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0136	15.25	0.3000	15.58	0.7482	0.1664	10	-0.40	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0040	15.55	0.1000	15.58	0.7482	0.1664	10	-0.03	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0043	15.61	0.0400	15.58	0.7482	0.1664	10	0.04	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0025	15.62	0.4500	15.58	0.7482	0.1664	10	0.05	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0360	15.73	0.0700	15.58	0.7482	0.1664	10	0.19	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0117	15.91	0.2400	15.58	0.7482	0.1664	10	0.42	OK	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0027	16.30	0.0100	15.58	0.7482	0.1664	10	0.89	High	0
041.51	Direct Available P2O5, ICP, Citrate-EDTA Ext. (19%)	0023	16.64	0.0120	15.58	0.7482	0.1664	10	1.33	High	0
041.99	Direct Available P2O5, Other (19%)	0602	16.05	0.1000	17.70	1.596	0.1350	4	-1.03		0
041.99	Direct Available P2O5, Other (19%)	0545	16.63	0.1800	17.70	1.596	0.1350	4	-0.67		0
041.99	Direct Available P2O5, Other (19%)	0600	18.83	0.1400	17.70	1.596	0.1350	4	0.71		0
041.99	Direct Available P2O5, Other (19%)	0584	19.28	0.1200	17.70	1.596	0.1350	4	0.99		0
042.99	Water Soluble OrthoP As P2O5, Other (%)	0577	19.13	0.4300				1			0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0472	13.17	0.0100	14.08	0.7240	0.0216	6	-1.12	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0394	13.44	0.0280	14.08	0.7240	0.0216	6	-0.79	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0581	14.17	0.0200	14.08	0.7240	0.0216	6	0.11	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0593	14.41	0.0050	14.08	0.7240	0.0216	6	0.41	NA	0
048.20	Water Soluble P2O5, Spectrophotometric (%)	0602	14.50	0.1000	14.08	0.7240	0.0216	6	0.52	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				
048.20	Water Soluble P2O5, Spectrophotometric (%)	0231	14.78	0.0200	14.08	0.7240	0.0216	6	0.86	NA	0
048.40	Water Soluble P2O5, Automated (%)	0096	14.02	0.2400				1			0
048.99	Water Soluble P2O5, Other (%)	0602	14.50	0.1000				2			0
048.99	Water Soluble P2O5, Other (%)	0513	14.55	0.0700				2			0
050.00	Soluble K2O, STPB Oxalate (19%)	0405	19.36	0.0800	24.11	1.368	0.1986	7	-3.14	Low	0
050.00	Soluble K2O, STPB Oxalate (19%)	0602	23.30	0.2000	24.11	1.368	0.1986	7	-0.54	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0220	23.73	0.0600	24.11	1.368	0.1986	7	-0.25	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0102	24.35	0.2400	24.11	1.368	0.1986	7	0.16	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0231	24.66	0.0500	24.11	1.368	0.1986	7	0.36	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0055	24.93	0.4500	24.11	1.368	0.1986	7	0.54	OK	0
050.00	Soluble K2O, STPB Oxalate (19%)	0494	25.76	0.3100	24.11	1.368	0.1986	7	1.09	High	0
050.00	Soluble K2O, STPB Oxalate (19%)	0049	21.35	1.570	24.11	1.368	0.1986	7	-1.83	Low	1
050.30	Soluble K2O, AA (Oxalate) (19%)	0558	19.20	0.2000				2			0
050.30	Soluble K2O, AA (Oxalate) (19%)	0040	25.15	0.3000				2			0
050.32	Soluble K2O, AA (Citrate-EDTA) (19%)	0472	21.72	0.0100				2			0
050.32	Soluble K2O, AA (Citrate-EDTA) (19%)	0185	24.84	0.4100				2			0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0169	24.06	0.0400	25.36	1.573	0.2112	6	-0.73	Low	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0292	24.33	0.1500	25.36	1.573	0.2112	6	-0.58	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0055	24.48	0.2250	25.36	1.573	0.2112	6	-0.50	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0231	25.10	0.2700	25.36	1.573	0.2112	6	-0.15	OK	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0422	27.09	0.1330	25.36	1.573	0.2112	6	0.98	High	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0582	27.10	0.4490	25.36	1.573	0.2112	6	0.99	High	0
050.50	Soluble K2O, ICP (Oxalate) (19%)	0324	25.80	2.000	25.36	1.573	0.2112	6	0.25	OK	1
050.51	Soluble K2O, ICP (Citrate) (19%)	0291	24.49	0.0200	25.45	0.8426	0.0459	3	-1.15		0
050.51	Soluble K2O, ICP (Citrate) (19%)	0368	25.83	0.0477	25.45	0.8426	0.0459	3	0.45		0
050.51	Soluble K2O, ICP (Citrate) (19%)	0452	26.05	0.0700	25.45	0.8426	0.0459	3	0.70		0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0423	19.73	0.4210	24.62	1.056	0.2662	13	-4.63	Low	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0543	22.60	0.1260	24.62	1.056	0.2662	13	-1.91	Low	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0043	24.02	0.0500	24.62	1.056	0.2662	13	-0.57	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0027	24.16	0.1400	24.62	1.056	0.2662	13	-0.43	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0136	24.30	0.2000	24.62	1.056	0.2662	13	-0.30	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0513	24.31	0.0700	24.62	1.056	0.2662	13	-0.30	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0025	24.82	0.4200	24.62	1.056	0.2662	13	0.19	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0023	24.85	0.2880	24.62	1.056	0.2662	13	0.22	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0117	24.93	0.9800	24.62	1.056	0.2662	13	0.29	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0360	25.32	0.2600	24.62	1.056	0.2662	13	0.66	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0377	25.65	0.1600	24.62	1.056	0.2662	13	0.98	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0354	25.70	0.2000	24.62	1.056	0.2662	13	1.02	OK	0
050.52	Soluble K2O, ICP (Citrate-EDTA) (19%)	0494	25.92	0.9600	24.62	1.056	0.2662	13	1.23	High	0
050.60	Soluble K2O, Flame Photometric (Oxalate) (19%)	0602	23.30	0.2000	24.93	1.472	0.1134	3	-1.10		0
050.60	Soluble K2O, Flame Photometric (Oxalate) (19%)	0169	25.31	0.1000	24.93	1.472	0.1134	3	0.26		0
050.60	Soluble K2O, Flame Photometric (Oxalate) (19%)	0510	26.17	0.0402	24.93	1.472	0.1134	3	0.84		0
050.61	Soluble K2O, Flame Photometric (Citrate) (19%)	0035	24.85	0.5000				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				
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0095	24.84	1.310	25.44	0.8132	0.6200	4	-0.74		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0028	24.94	0.2500	25.44	0.8132	0.6200	4	-0.61		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0034	25.37	0.0900	25.44	0.8132	0.6200	4	-0.09		0
050.62	Soluble K2O, Flame Photometric (Citrate-EDTA) (19%)	0029	26.61	0.8300	25.44	0.8132	0.6200	4	1.44		0
050.99	Soluble K2O, Other (19%)	0523	2.673	0.0400	22.62	3.022	0.4042	31	-6.60	Low	0
050.99	Soluble K2O, Other (19%)	0371	18.48	0.2800	22.62	3.022	0.4042	31	-1.37	Low	0
050.99	Soluble K2O, Other (19%)	0600	18.98	0.1500	22.62	3.022	0.4042	31	-1.21	Low	0
050.99	Soluble K2O, Other (19%)	0534	19.39	0.5000	22.62	3.022	0.4042	31	-1.07	Low	0
050.99	Soluble K2O, Other (19%)	0584	19.42	0.4800	22.62	3.022	0.4042	31	-1.06	Low	0
050.99	Soluble K2O, Other (19%)	0577	19.43	0.2600	22.62	3.022	0.4042	31	-1.06	Low	0
050.99	Soluble K2O, Other (19%)	0548	19.60	0.2000	22.62	3.022	0.4042	31	-1.00	Low	0
050.99	Soluble K2O, Other (19%)	0647	19.68	0.5300	22.62	3.022	0.4042	31	-0.98	Low	0
050.99	Soluble K2O, Other (19%)	0638	19.94	1.400	22.62	3.022	0.4042	31	-0.89	Low	0
050.99	Soluble K2O, Other (19%)	0515	20.20	1.120	22.62	3.022	0.4042	31	-0.80	Low	0
050.99	Soluble K2O, Other (19%)	0234	20.25	0.5000	22.62	3.022	0.4042	31	-0.79	Low	0
050.99	Soluble K2O, Other (19%)	0402	21.35	0.1850	22.62	3.022	0.4042	31	-0.42	Low	0
050.99	Soluble K2O, Other (19%)	0476	22.60	0.1307	22.62	3.022	0.4042	31	-0.01	OK	0
050.99	Soluble K2O, Other (19%)	0255	22.78	0.8190	22.62	3.022	0.4042	31	0.05	OK	0
050.99	Soluble K2O, Other (19%)	0602	23.30	0.2000	22.62	3.022	0.4042	31	0.22	OK	0
050.99	Soluble K2O, Other (19%)	0389	23.94	0.3600	22.62	3.022	0.4042	31	0.44	High	0
050.99	Soluble K2O, Other (19%)	0536	24.02	0.2000	22.62	3.022	0.4042	31	0.46	High	0
050.99	Soluble K2O, Other (19%)	0433	24.10	1.480	22.62	3.022	0.4042	31	0.49	High	0
050.99	Soluble K2O, Other (19%)	0096	24.15	0.6000	22.62	3.022	0.4042	31	0.51	High	0
050.99	Soluble K2O, Other (19%)	0524	24.17	0.5389	22.62	3.022	0.4042	31	0.51	High	0
050.99	Soluble K2O, Other (19%)	0624	24.42	0.1271	22.62	3.022	0.4042	31	0.59	High	0
050.99	Soluble K2O, Other (19%)	0498	24.45	0.1000	22.62	3.022	0.4042	31	0.60	High	0
050.99	Soluble K2O, Other (19%)	0177	24.52	0.2139	22.62	3.022	0.4042	31	0.63	High	0
050.99	Soluble K2O, Other (19%)	0545	24.58	0.1500	22.62	3.022	0.4042	31	0.65	High	0
050.99	Soluble K2O, Other (19%)	0561	24.89	0.0300	22.62	3.022	0.4042	31	0.75	High	0
050.99	Soluble K2O, Other (19%)	0260	24.90	1.082	22.62	3.022	0.4042	31	0.75	High	0
050.99	Soluble K2O, Other (19%)	0605	25.19	0.1800	22.62	3.022	0.4042	31	0.85	High	0
050.99	Soluble K2O, Other (19%)	0521	25.27	0.0000	22.62	3.022	0.4042	31	0.88	High	0
050.99	Soluble K2O, Other (19%)	0394	25.97	0.6460	22.62	3.022	0.4042	31	1.11	High	0
050.99	Soluble K2O, Other (19%)	0527	26.13	0.0428	22.62	3.022	0.4042	31	1.16	High	0
050.99	Soluble K2O, Other (19%)	0421	27.86	1.590	22.62	3.022	0.4042	31	1.73	High	0
050.99	Soluble K2O, Other (19%)	0612	24.73	2.310	22.62	3.022	0.4042	31	0.70	High	1
060.00	Water (Free), Vacuum Oven (%)	0513	0.7100	0.0200				2			0
060.00	Water (Free), Vacuum Oven (%)	0096	1.130	0.0800				2			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample)	0593	1.128	0.0350				1			0
060.99	Water (Free), Other (%)	0510	1.402	0.0151				1			0
101.03	Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual ac	0498	0.1500	0.0000				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0096	0.1140	0.0160	0.1512	0.0409	0.0103	3	-0.91		0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0035	0.1445	0.0050	0.1512	0.0409	0.0103	3	-0.16		0

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101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	0.1950	0.0100	0.1512	0.0409	0.0103	3	1.07		0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0581	0.2000	0.0000				1			0
101.32	Acid Soluble Ca, ICP, test portion 2006.03A-C (%)	0423	< 0.5					1			5
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0472	0.0850	0.0300				2			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0582	0.1110	0.0020				2			0
101.33	Acid Soluble Ca, ICP, 2017.02 (%)	0527	< 0.01					2			5
101.99	Acid Soluble Ca, Other (%)	0593	0.1325	0.0150				1			0
121.00	Acid Soluble Mg, AA, inorganic 965.09 (%)	0553	0.4060	0.0060				1			0
121.03	Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual a	0498	0.3800	0.0000				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0371	0.3800	0.0200	0.4727	0.1396	0.0138	5	-0.66		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0096	0.4100	0.0200	0.4727	0.1396	0.0138	5	-0.45		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	0.4250	0.0100	0.4727	0.1396	0.0138	5	-0.34		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0035	0.4285	0.0050	0.4727	0.1396	0.0138	5	-0.32		0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0581	0.7200	0.0000	0.4727	0.1396	0.0138	5	1.77		0
121.32	Acid Soluble Mg, ICP, test portion 2006.03A-C (%)	0423	0.3085	0.0130				1			0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0624	0.4268	0.0027	0.4985	0.1060	0.0481	5	-0.68		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0527	0.4410	0.0073	0.4985	0.1060	0.0481	5	-0.54		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0515	0.4648	0.2186	0.4985	0.1060	0.0481	5	-0.32		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0472	0.4750	0.0100	0.4985	0.1060	0.0481	5	-0.22		0
121.33	Acid Soluble Mg, ICP, 2017.02 (%)	0582	0.6850	0.0020	0.4985	0.1060	0.0481	5	1.76		0
121.99	Acid Soluble Mg, Other (%)	0515	0.3343	0.0343	0.4010	0.0578	0.0300	3	-1.15		0
121.99	Acid Soluble Mg, Other (%)	0524	0.4338	0.0457	0.4010	0.0578	0.0300	3	0.57		0
121.99	Acid Soluble Mg, Other (%)	0593	0.4350	0.0100	0.4010	0.0578	0.0300	3	0.59		0
145.99	Sulfate S, HCl soluble, Other (%)	0593	0.5725	0.0050				1			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0472	0.5200	0.0000				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0515	0.5521	0.0712				2			0
148.07	Total S, ICP, test portion as in 2017.02 (%)	0527	< 0.1					2			5
148.99	Total S, Other (%)	0354	0.4050	0.0300	0.4707	0.0592	0.0160	3	-1.11		0
148.99	Total S, Other (%)	0422	0.4870	0.0020	0.4707	0.0592	0.0160	3	0.28		0
148.99	Total S, Other (%)	0096	0.5200	0.0000	0.4707	0.0592	0.0160	3	0.83		0
149.04	S - HNO3 soluble, ICP (%)	0524	0.5206	0.0482				1			0
151.00	Acid Soluble As, AA, test portion 2006.03 modified w/dual acid	0498	0.4400	0.0800				1			0
151.30	Acid Soluble As, ICP (ppm)	0476	0.5235	0.0270	0.5843	0.0529	0.0599	3	-0.93		0
151.30	Acid Soluble As, ICP (ppm)	0524	0.6095	0.0326	0.5843	0.0529	0.0599	3	0.39		0
151.30	Acid Soluble As, ICP (ppm)	0593	0.6200	0.1200	0.5843	0.0529	0.0599	3	0.55		0
151.30	Acid Soluble As, ICP (ppm)	0255	0.0000	0.0000	0.5843	0.0529	0.0599	3			4
151.30	Acid Soluble As, ICP (ppm)	0586	0.0000	0.0000	0.5843	0.0529	0.0599	3			4
151.30	Acid Soluble As, ICP (ppm)	0605	< 6.25		0.5843	0.0529	0.0599	3			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0220	< 0.5					0			5
151.32	Acid Soluble As, ICP, 2006.03 (ppm)	0405	< 3					0			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0548	0.6000	0.0400				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0515	15.59	27.43				2			0
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0527	< 0.0001					2			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				
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0136	< 1					2			5
151.33	Acid Soluble As, ICP, 2017.02 (ppm)	0027	< 10					2			5
151.34	Acid Soluble As, ICP, EPA 3050B/6010C (ppm)	0368	10.05	1.500				1			0
151.99	Acid Soluble As, Other (ppm)	0534	0.5450	0.0500				1			0
151.99	Acid Soluble As, Other (ppm)	0220	< 0.5					1			5
165.00	Acid Soluble B, Spectrophotometric (%)	0553	0.0060	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	0.0150	0.0100				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0371	0.0000	0.0000				1			4
165.99	Acid Soluble B, Other (%)	0524	0.0033	0.0000	0.0058	0.0037	0.0034	3	-0.68		0
165.99	Acid Soluble B, Other (%)	0515	0.0041	0.0034	0.0058	0.0037	0.0034	3	-0.46		0
165.99	Acid Soluble B, Other (%)	0472	0.0100	0.0000	0.0058	0.0037	0.0034	3	1.15		0
165.99	Acid Soluble B, Other (%)	0423	< 0.0005		0.0058	0.0037	0.0034	3			5
165.99	Acid Soluble B, Other (%)	0527	< 0.01		0.0058	0.0037	0.0034	3			5
181.00	Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid	0498	< 0.1					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0524	11.69	3.747	16.59	3.082	1.074	10	-1.48	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0476	13.91	0.6790	16.59	3.082	1.074	10	-0.81	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0605	15.19	0.3600	16.59	3.082	1.074	10	-0.42	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0102	16.00	0.2000	16.59	3.082	1.074	10	-0.18	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0394	16.00	0.4000	16.59	3.082	1.074	10	-0.18	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0255	16.64	0.7600	16.59	3.082	1.074	10	0.02	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0593	17.30	0.2000	16.59	3.082	1.074	10	0.22	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0035	17.50	0.0000	16.59	3.082	1.074	10	0.28	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0096	20.15	2.100	16.59	3.082	1.074	10	1.08	NA	0
181.30	Acid Soluble Cd, ICP (ppm)	0586	21.90	2.200	16.59	3.082	1.074	10	1.60	NA	0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0405	16.00	0.0000				2			0
181.32	Acid Soluble Cd, ICP, 2006.03 (ppm)	0220	16.60	0.6000				2			0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0086	14.58	0.7260	17.20	1.716	0.2874	5	-1.53		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0136	16.40	0.0000	17.20	1.716	0.2874	5	-0.47		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0027	18.02	0.2780	17.20	1.716	0.2874	5	0.48		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0527	18.23	0.1354	17.20	1.716	0.2874	5	0.60		0
181.33	Acid Soluble Cd, ICP, 2017.02 (ppm)	0548	18.79	0.0100	17.20	1.716	0.2874	5	0.92		0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0515	7.100	8.600				2			0
181.34	Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm)	0368	16.00	0.0000				2			0
181.99	Acid Soluble Cd, Other (ppm)	0220	16.90	0.2000				1			0
190.99	Water Soluble Cl, Other (%)	0513	18.52	0.0900				1			0
191.30	Acid Soluble Cr, ICP (ppm)	0524	76.03	0.9784	96.79	17.11	2.731	9	-1.12	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0394	81.35	4.500	96.79	17.11	2.731	9	-0.83	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0476	83.79	6.305	96.79	17.11	2.731	9	-0.70	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0035	90.40	1.200	96.79	17.11	2.731	9	-0.34	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0605	95.77	2.300	96.79	17.11	2.731	9	-0.05	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0586	106.0	0.0000	96.79	17.11	2.731	9	0.50	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0102	107.8	1.100	96.79	17.11	2.731	9	0.59	NA	0
191.30	Acid Soluble Cr, ICP (ppm)	0096	109.0	0.0000	96.79	17.11	2.731	9	0.66	NA	0

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
191.30	Acid Soluble Cr, ICP (ppm)	0593	121.0	0.0000	96.79	17.11	2.731	9	1.31	NA	0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0405	97.50	1.000				2			0
191.32	Acid Soluble Cr, ICP, 2006.03 (ppm)	0220	99.55	1.100				2			0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0136	98.60	2.800	104.5	6.605	4.858	6	-0.79	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0515	99.83	11.35	104.5	6.605	4.858	6	-0.63	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0612	100.3	10.03	104.5	6.605	4.858	6	-0.56	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0527	106.5	0.4480	104.5	6.605	4.858	6	0.27	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0027	108.2	0.9110	104.5	6.605	4.858	6	0.51	NA	0
191.33	Acid Soluble Cr, ICP, 2017.02 (ppm)	0548	113.3	3.610	104.5	6.605	4.858	6	1.20	NA	0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0368	83.10	0.6000				2			0
191.34	Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm)	0515	93.60	10.20				2			0
191.99	Acid Soluble Cr, Other (ppm)	0220	98.95	0.5000				1			0
202.30	Acid Soluble Co, ICP (ppm)	0476	0.5330	0.0460	2.513	2.827	1.094	5	-0.61		0
202.30	Acid Soluble Co, ICP (ppm)	0593	0.6000	0.0000	2.513	2.827	1.094	5	-0.59		0
202.30	Acid Soluble Co, ICP (ppm)	0524	1.189	0.1400	2.513	2.827	1.094	5	-0.41		0
202.30	Acid Soluble Co, ICP (ppm)	0586	3.000	2.000	2.513	2.827	1.094	5	0.15		0
202.30	Acid Soluble Co, ICP (ppm)	0096	7.245	2.190	2.513	2.827	1.094	5	1.46		0
202.30	Acid Soluble Co, ICP (ppm)	0605	< 1.25		2.513	2.827	1.094	5			5
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0220	0.4900	0.0000				1			0
202.32	Acid Soluble Co, ICP, 2006.03 (ppm)	0405	< 1					1			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0548	0.5150	0.0100				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0527	0.6235	0.0265				2			0
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0136	< 2.5					2			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0027	< 10					2			5
202.33	Acid Soluble Co, ICP, 2017.02 (ppm)	0086	< 10					2			5
202.34	Acid Soluble Co, ICP, EPA 3050B/6010C (ppm)	0368	< 0.1					0			5
202.99	Acid Soluble Co, Other (ppm)	0220	0.5700	0.0200				1			0
202.99	Acid Soluble Co, Other (ppm)	0255	0.0000	0.0000				1			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0035	0.0013	0.0004	0.0020	0.0007	0.0004	3	-0.81		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0096	0.0020	0.0000	0.0020	0.0007	0.0004	3	0.00		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0402	0.0027	0.0004	0.0020	0.0007	0.0004	3	0.81		0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0255	0.0000	0.0000	0.0020	0.0007	0.0004	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0371	0.0000	0.0000	0.0020	0.0007	0.0004	3			4
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01		0.0020	0.0007	0.0004	3			5
221.32	Acid Soluble Cu, ICP, test portion 2006.03A-C (%)	0405	< 0.0002					0			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0548	0.0001	0.0000				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0624	0.0019	0.0003				2			0
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0527	< 0.0001					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0136	< 0.0002					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0394	< 0.0002					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0027	< 0.001					2			5
221.33	Acid Soluble Cu, ICP, 2017.02 (%)	0086	< 10					2			5
221.99	Acid Soluble Cu, Other (%)	0524	0.0002	0.0001				2			0

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
221.99	Acid Soluble Cu, Other (%)	0605	0.0050	0.0000				2			0
221.99	Acid Soluble Cu, Other (%)	0586	0.0000	0.0000				2			4
221.99	Acid Soluble Cu, Other (%)	0593	< 0.0001					2			5
241.00	Acid Soluble Fe, AA, inorganic 965.09 (%)	0553	0.3995	0.0050				1			0
241.03	Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual ac	0498	0.2350	0.0100				1			0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0096	0.0037	0.0001	0.2868	0.1592	0.0019	5	-1.78		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0371	0.3300	0.0000	0.2868	0.1592	0.0019	5	0.27		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0035	0.3560	0.0020	0.2868	0.1592	0.0019	5	0.43		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	0.3700	0.0000	0.2868	0.1592	0.0019	5	0.52		0
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0402	0.3742	0.0035	0.2868	0.1592	0.0019	5	0.55		0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0423	0.3364	0.0203				2			0
241.32	Acid Soluble Fe, ICP, test portion 2006.03A-C (%)	0581	0.5500	0.0200				2			0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0582	0.1260	0.0040	0.2933	0.1459	0.0026	3	-1.15		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0472	0.3600	0.0000	0.2933	0.1459	0.0026	3	0.46		0
241.33	Acid Soluble Fe, ICP, 2017.02 (%)	0527	0.3939	0.0012	0.2933	0.1459	0.0026	3	0.69		0
241.99	Acid Soluble Fe, Other (%)	0515	0.3216	0.0234	0.3641	0.0368	0.0147	3	-1.15		0
241.99	Acid Soluble Fe, Other (%)	0524	0.3831	0.0157	0.3641	0.0368	0.0147	3	0.52		0
241.99	Acid Soluble Fe, Other (%)	0593	0.3875	0.0050	0.3641	0.0368	0.0147	3	0.64		0
251.00	Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid	0498	< 0.5					0			5
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.2842	0.4126				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0586	2.000	0.0000				2			0
251.30	Acid Soluble Pb, ICP (ppm)	0255	0.0000	0.0000				2			4
251.30	Acid Soluble Pb, ICP (ppm)	0476	< 0.1					2			5
251.30	Acid Soluble Pb, ICP (ppm)	0394	< 1					2			5
251.30	Acid Soluble Pb, ICP (ppm)	0605	< 6.25					2			5
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0220	0.6400	0.2600				1			0
251.32	Acid Soluble Pb, ICP, 2006.03 (ppm)	0405	< 4					1			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0548	0.1050	0.0100				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0515	9.630	1.040				2			0
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0527	< 0.0001					2			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0136	< 3					2			5
251.33	Acid Soluble Pb, ICP, 2017.02 (ppm)	0027	< 10					2			5
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0515	5.300	0.8000				2			0
251.34	Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm)	0368	9.050	1.900				2			0
251.99	Acid Soluble Pb, Other (ppm)	0593	0.1300	0.0000				2			0
251.99	Acid Soluble Pb, Other (ppm)	0220	0.7350	0.0500				2			0
251.99	Acid Soluble Pb, Other (ppm)	0534	< 2					2			5
261.00	Acid Soluble Mn, AA, Mn2+ only (%)	0553	0.0065	0.0010				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0035	0.0066	0.0000				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0096	0.0069	0.0001				2			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					2			5
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0402	0.0069	0.0000				1			0
261.32	Acid Soluble Mn, ICP, test portion inorganic 965.09 (%)	0371	0.0000	0.0000				1			4

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			Value	Range	Rob Mean	Rob SD	Rob R-bar				
261.34	Acid Soluble Mn, ICP, test portion 2006.03A-C (%)	0423	< 0.0005					0			5
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0527	0.0069	0.0001				2			0
261.35	Acid Soluble Mn, ICP, 2017.02 (%)	0624	0.0106	0.0001				2			0
261.99	Acid Soluble Mn, Other (%)	0524	0.0065	0.0002				1			0
281.00	Acid Soluble Hg, AA (ppm)	0534	< 0.05					0			5
281.00	Acid Soluble Hg, AA (ppm)	0498	< 0.5					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0527	< 0.001					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0515	< 0.01					0			5
281.30	Acid Soluble Hg, ICP (ppm)	0476	< 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	0.0002	0.0001				1			0
281.99	Acid Soluble Hg, Other (ppm)	0220	< 0.01					1			5
289.30	Acid Soluble Mo, ICP (ppm)	0523	0.0530	0.0180	3.893	1.406	0.2499	8	-2.50	Low	0
289.30	Acid Soluble Mo, ICP (ppm)	0035	2.735	0.0700	3.893	1.406	0.2499	8	-0.75	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0524	3.191	0.4245	3.893	1.406	0.2499	8	-0.46	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0605	3.950	0.0200	3.893	1.406	0.2499	8	0.04	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0255	4.380	0.4200	3.893	1.406	0.2499	8	0.32	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0593	4.750	0.1000	3.893	1.406	0.2499	8	0.56	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0402	4.850	0.3000	3.893	1.406	0.2499	8	0.62	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0586	5.500	1.000	3.893	1.406	0.2499	8	1.05	OK	0
289.30	Acid Soluble Mo, ICP (ppm)	0096	14.95	2.900	3.893	1.406	0.2499	8	7.20	High	1
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0220	3.465	0.0100				2			0
289.32	Acid Soluble Mo, ICP, 2006.03 (ppm)	0405	3.500	1.000				2			0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0548	3.100	0.0200	3.490	0.4412	0.1788	3	-0.88		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0136	3.400	0.4000	3.490	0.4412	0.1788	3	-0.20		0
289.33	Acid Soluble Mo, ICP, 2017.02 (ppm)	0527	3.969	0.1165	3.490	0.4412	0.1788	3	1.09		0
289.34	Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm)	0368	2.350	0.5000				1			0
289.99	Acid Soluble Mo, Other (ppm)	0220	3.480	0.0200				1			0
291.00	Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (	0498	< 10					0			5
291.30	Acid Soluble Ni, ICP (ppm)	0524	10.31	1.411	13.59	3.231	0.9061	9	-0.94	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0476	10.52	0.8250	13.59	3.231	0.9061	9	-0.88	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0394	11.55	0.1000	13.59	3.231	0.9061	9	-0.58	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0605	12.59	0.0100	13.59	3.231	0.9061	9	-0.29	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0586	13.00	0.0000	13.59	3.231	0.9061	9	-0.17	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0035	13.20	0.2000	13.59	3.231	0.9061	9	-0.11	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0593	16.25	0.5000	13.59	3.231	0.9061	9	0.76	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0102	16.50	1.800	13.59	3.231	0.9061	9	0.83	NA	0
291.30	Acid Soluble Ni, ICP (ppm)	0096	22.60	4.000	13.59	3.231	0.9061	9	2.57	NA	0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0220	13.00	0.2000				2			0
291.32	Acid Soluble Ni, ICP, 2006.03 (ppm)	0405	13.50	1.000				2			0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0086	10.63	0.8520	12.26	1.436	0.2566	5	-1.14		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0548	11.23	0.2800	12.26	1.436	0.2566	5	-0.72		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				
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0136	12.35	0.1000	12.26	1.436	0.2566	5	0.06		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0027	12.76	0.0270	12.26	1.436	0.2566	5	0.35		0
291.33	Acid Soluble Ni, ICP, 2017.02 (ppm)	0527	14.33	0.0238	12.26	1.436	0.2566	5	1.44		0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0368	15.55	0.5000				2			0
291.34	Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm)	0515	32.30	5.400				2			0
291.99	Acid Soluble Ni, Other (ppm)	0220	13.05	0.1000				2			0
291.99	Acid Soluble Ni, Other (ppm)	0255	13.29	0.1800				2			0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.0963	0.0262	0.5336	0.7542	0.0516	3	-0.58		0
301.30	Acid Soluble Se, ICP (ppm)	0593	0.1000	0.0000	0.5336	0.7542	0.0516	3	-0.57		0
301.30	Acid Soluble Se, ICP (ppm)	0476	1.405	0.0770	0.5336	0.7542	0.0516	3	1.15		0
301.30	Acid Soluble Se, ICP (ppm)	0605	< 6.25		0.5336	0.7542	0.0516	3			5
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0220	0.4850	0.3500				1			0
301.32	Acid Soluble Se, ICP, 2006.03 (ppm)	0405	< 10					1			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0548	0.0850	0.0100				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0515	31.33	50.94				2			0
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0527	< 0.01					2			5
301.33	Acid Soluble Se, ICP, 2017.02 (ppm)	0027	< 10					2			5
301.34	Acid Soluble Se, ICP, EPA 3050B/6010C (ppm)	0368	< 1.4					0			5
301.99	Acid Soluble Se, Other (ppm)	0220	0.2300	0.0000				1			0
301.99	Acid Soluble Se, Other (ppm)	0255	0.0000	0.0000				1			4
311.00	Sodium, AA (%)	0553	0.5510	0.0040				1			0
311.32	Sodium, ICP, 2006.03 test portion (%)	0582	0.6610	0.0440				1			0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0423	0.5460	0.0020	0.5923	0.0597	0.0147	4	-0.78		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0035	0.5560	0.0260	0.5923	0.0597	0.0147	4	-0.61		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0527	0.5899	0.0136	0.5923	0.0597	0.0147	4	-0.04		0
311.33	Sodium, ICP, test portion as in 2017.02 (%)	0624	0.6774	0.0171	0.5923	0.0597	0.0147	4	1.42		0
311.99	Sodium, Other (%)	0096	0.5700	0.0200				2			0
311.99	Sodium, Other (%)	0354	0.5700	0.0400				2			0
321.00	Acid Soluble Zn, AA, inorganic 965.09 (%)	0553	0.0225	0.0010				1			0
321.03	Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual ac	0498	0.0235	0.0010				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	0.0100	0.0000	0.0204	0.0061	0.0000	5	-1.49		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0371	0.0200	0.0000	0.0204	0.0061	0.0000	5	-0.05		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0255	0.0230	0.0000	0.0204	0.0061	0.0000	5	0.38		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0035	0.0240	0.0000	0.0204	0.0061	0.0000	5	0.52		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0096	0.0249	0.0000	0.0204	0.0061	0.0000	5	0.65		0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0402	0.0238	0.0003	0.0204	0.0061	0.0000	5	0.48		1
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0405	0.0207	0.0007	0.0227	0.0022	0.0038	3	-0.91		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0220	0.0223	0.0006	0.0227	0.0022	0.0038	3	-0.16		0
321.32	Acid Soluble Zn, ICP, test portion 2006.03A-C (%)	0095	0.0250	0.0100	0.0227	0.0022	0.0038	3	1.07		0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0136	0.0200	0.0000	0.0223	0.0024	0.0024	11	-0.90	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0472	0.0200	0.0000	0.0223	0.0024	0.0024	11	-0.90	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0548	0.0200	0.0000	0.0223	0.0024	0.0024	11	-0.90	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0086	0.0206	0.0008	0.0223	0.0024	0.0024	11	-0.67	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				
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0394	0.0213	0.0004	0.0223	0.0024	0.0024	11	-0.40	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0515	0.0229	0.0001	0.0223	0.0024	0.0024	11	0.20	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0027	0.0230	0.0000	0.0223	0.0024	0.0024	11	0.26	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0043	0.0230	0.0000	0.0223	0.0024	0.0024	11	0.26	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0527	0.0236	0.0007	0.0223	0.0024	0.0024	11	0.48	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0612	0.0254	0.0067	0.0223	0.0024	0.0024	11	1.17	OK	0
321.33	Acid Soluble Zn, ICP, 2017.02 (%)	0624	0.0445	0.0056	0.0223	0.0024	0.0024	11	8.61	High	0
321.99	Acid Soluble Zn, Other (%)	0523	0.0030	0.0000	0.0207	0.0031	0.0008	7	-5.09	Low	0
321.99	Acid Soluble Zn, Other (%)	0593	0.0195	0.0010	0.0207	0.0031	0.0008	7	-0.35	OK	0
321.99	Acid Soluble Zn, Other (%)	0368	0.0199	0.0003	0.0207	0.0031	0.0008	7	-0.25	OK	0
321.99	Acid Soluble Zn, Other (%)	0605	0.0200	0.0000	0.0207	0.0031	0.0008	7	-0.21	OK	0
321.99	Acid Soluble Zn, Other (%)	0220	0.0225	0.0009	0.0207	0.0031	0.0008	7	0.49	OK	0
321.99	Acid Soluble Zn, Other (%)	0515	0.0229	0.0002	0.0207	0.0031	0.0008	7	0.62	OK	0
321.99	Acid Soluble Zn, Other (%)	0524	0.0244	0.0018	0.0207	0.0031	0.0008	7	1.05	OK	0
321.99	Acid Soluble Zn, Other (%)	0586	0.0000	0.0000	0.0207	0.0031	0.0008	7			4
325.30	Water Soluble Zn, ICP (%)	0368	0.0199	0.0003				1			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 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