

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 60

Sample # 151111

Statistical Summary

Labs Reporting: 77

KCI

Issue Date : 12/31/2015

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
001.99	Ammoniacal Nitrogen, Other (%)	1		0.0000									
010.60	Total Nitrogen, Combustion (%)	5	2	0.2213	0.1043	0.2213		0.1043	0.0521	47.14%		0.0325	5.02%
010.99	Total Nitrogen, Other (%)	1		0.0000									
020.20	Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)	2	0	0.0000									
040.50	Indirect Available Phosphorus as P2O5, ICP (%)	1		0.0000									
041.10	Direct Available Phosphorus as P2O5, Gravimetric Q... (%)	2	0	0.0000									
041.50	Direct Available Phosphorus as P2O5, ICP (%)	1		0.0150									
041.60	Direct Available Phosphorus as P2O5, Citrate-EDTA ... (%)	1		0.0000									
048.20	Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)	1		0.0000									
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	12	11	60.86	0.7570	60.80	1.7854	0.7417	0.1581	1.22%	1.47%	0.2291	2.16%
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	7	7	61.94	4.733	60.37	1.7854	0.9359	0.2501	1.55%	1.48%	0.6672	2.16%
050.31	Soluble Potassium as K2O, AA (Citrate) (60%)	1		54.90									
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	9	8	60.65	1.309	60.41	1.7854	0.8496	0.2124	1.41%	1.48%	0.5139	2.16%
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	6	6	60.58	0.6395	60.58	1.7854	0.7252	0.2094	1.20%	1.47%	0.4317	2.16%
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	8	8	59.72	3.539	60.28	1.7854	1.016	0.2541	1.69%	1.48%	0.5541	2.16%
050.60	Soluble Potassium as K2O, Flame Photometric (Oxala... (60%)	6	6	60.51	0.2963	60.59	1.7854	0.1945	0.0561	0.32%	1.47%	0.0683	2.16%
050.61	Soluble Potassium as K2O, Flame Photometric (Citra... (60%)	3	3	61.00	3.124	61.00	1.7854	3.124	1.275	5.12%	1.46%	0.4433	2.15%
050.62	Soluble Potassium as K2O, Flame Photometric (Citra... (60%)	4	4	60.01	2.056	60.01	1.7854	2.056	0.7268	3.43%	1.49%	0.3460	2.16%
050.99	Soluble Potassium as K2O, Other (60%)	21	19	60.61	1.540	60.42	1.7854	1.137	0.1844	1.88%	1.48%	0.4533	2.16%
060.00	Water (Free), Vacuum Oven (%)	1		0.0330									
060.20	Water (Free), Karl Fischer (%)	1		0.0850									
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours,... (%)	1		0.0500									
060.99	Water (Free), Other (%)	2	2	0.1268	0.1531								
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	1		0.0510									
101.03	Acid Soluble Calcium, AA, 965.09, test portion 200... (%)	1		0.0523									
101.30	Acid Soluble Calcium, ICP, test portion inorganic ... (%)	3	3	0.0557	0.0070	0.0557		0.0070	0.0029	12.62%		0.0060	6.18%
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	1		0.0245									
121.03	Acid Soluble Magnesium, AA, 965.09, test portion 2... (%)	1		0.0238									
121.30	Acid Soluble Magnesium, ICP, test portion inorgani... (%)	3	3	0.0283	0.0029	0.0283		0.0029	0.0012	10.19%		0.0007	6.84%
148.07	Total Sulfur, ICP, test portion as in 2006.03 modi... (%)	1		0.0245									
148.99	Total Sulfur, Other (%)	3	2	0.0180	0.0240	0.0180		0.0240	0.0120	133.56%		0.0050	7.32%

Method Code	Analyte & Method	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Analyte Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	IA %RSD	Average Range (R-bar)	Horwitz %RSD
165.30	Acid Soluble Boron , ICP, test portion in 982.01 (%)	1		0.0020									
181.30	Acid Soluble Cadmium , ICP (ppm)	1		0.0000									
190.00	Water Soluble Chlorine, Titrimetric (%)	9	9	48.25	4.919	47.03		1.913	0.4509	4.07%		0.7811	2.24%
190.99	Water Soluble Chlorine, Other (%)	2	2	46.52	1.315								
191.30	Acid Soluble Chromium , ICP (ppm)	1		0.2160									
191.99	Acid Soluble Chromium , Other (ppm)	1		386.8									
202.99	Acid Soluble Cobalt , Other (ppm)	1		10.99									
221.03	Acid Soluble Copper , AA, 965.09, test portion 20... (%)	1		0.0007									
221.30	Acid Soluble Copper , ICP, test portion inorganic... (%)	2	2	0.0013	0.0017								
221.99	Acid Soluble Copper , Other (%)	1		0.0002									
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	1		0.0883									
241.03	Acid Soluble Iron , AA, 965.09, test portion 2006.... (%)	1		0.0871									
241.30	Acid Soluble Iron , ICP, test portion inorganic 96... (%)	5	5	0.0833	0.0087	0.0833		0.0087	0.0028	10.48%		0.0041	5.81%
251.00	Acid Soluble Lead , AA, test portion as in 2006.0... (ppm)	1		0.0000									
251.99	Acid Soluble Lead , Other (ppm)	1		70.83									
261.15	Acid Soluble Manganese , AA, 965.09, test portion... (%)	1		0.0010									
261.30	Acid Soluble Manganese , ICP, test portion 972.02a (%)	2	2	0.0010	0.0001								
291.30	Acid Soluble Nickel , ICP (ppm)	1		2.390									
291.99	Acid Soluble Nickel , Other (ppm)	1		41.60									
301.30	Acid Soluble Selenium , ICP (ppm)	1		0.0000									
311.00	Sodium, AA (%)	2	2	1.370	0.0495								
311.30	Sodium, Flame Photometric (%)	3	3	1.452	0.1227	1.452		0.1227	0.0501	8.45%		0.0433	3.78%
311.32	Sodium, ICP, 2006.03 test portion (%)	3	3	1.267	0.0681	1.267		0.0681	0.0278	5.37%		0.0400	3.86%
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test ... (%)	3	3	1.275	0.1252	1.275		0.1251	0.0511	9.82%		0.1584	3.86%
311.99	Sodium, Other (%)	8	8	1.383	0.2348	1.421		0.1626	0.0406	11.44%		0.0460	3.79%
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	1		0.0003									
321.03	Acid Soluble Zinc , AA, 965.09, test portion 2006... (%)	1		0.0004									
321.30	Acid Soluble Zinc , ICP, test portion inorganic 9... (%)	3	1	0.0010		1.421		0.1626	0.1150	11.44%		0.0000	3.79%
321.99	Acid Soluble Zinc , Other (%)	1		0.0639									

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 151111

Method Precision Report

Issue Date : 12/31/2015

KCI

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
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	12	10	60.94	0.7511	0.7448	0.1370	0.7573	1.22%	0.22%	1.24%	5.528
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	7	6	60.17	0.6976	0.4916	0.7000	0.8553	0.82%	1.16%	1.42%	1.222
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	9	7	60.23	0.6107	0.5243	0.4428	0.6863	0.87%	0.74%	1.14%	1.550
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	6	6	60.58	0.6395	0.5584	0.4409	0.7115	0.92%	0.73%	1.17%	1.614
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	8	6	60.91	1.982	1.975	0.2363	1.989	3.24%	0.39%	3.27%	8.419
050.60	Soluble Potassium as K2O, Flame Photometric (Oxalate) (60%)	6	6	60.51	0.2963	0.2936	0.0562	0.2989	0.49%	0.09%	0.49%	5.319
050.99	Soluble Potassium as K2O, Other (60%)	21	18	60.42	1.336	1.310	0.3728	1.362	2.17%	0.62%	2.25%	3.654
190.00	Water Soluble Chlorine, Titrimetric (%)	9	8	46.67	1.389	1.336	0.5353	1.440	2.86%	1.15%	3.08%	2.690
311.99	Sodium, Other (%)	8	7	1.454	0.1284	0.1245	0.0447	0.1322	8.56%	3.07%	9.09%	2.958

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Method Proficiency For All Labs (Lab Values)

Methods: 60

Sample # 151111

Lab Values

Labs Reporting: 77

KCI

Issue Date : 12/31/2015

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.99	Ammoniacal Nitrogen, Other (%)	0420	0.0000	0.0000			0.0000	0			4
010.60	Total Nitrogen, Combustion (%)	0354	0.1475	0.0350	0.2213	0.1043	0.0325	2	-0.71	17%	0
010.60	Total Nitrogen, Combustion (%)	0472	0.2950	0.0300	0.2213	0.1043	0.0325	2	0.71	17%	0
010.60	Total Nitrogen, Combustion (%)	0072	0.0000	0.0000	0.2213	0.1043	0.0325	2	-2.12	50%	4
010.60	Total Nitrogen, Combustion (%)	0292	0.0000	0.0000	0.2213	0.1043	0.0325	2	-2.12	50%	4
010.60	Total Nitrogen, Combustion (%)	0325	0.2000	0.4000	0.2213	0.1043	0.0325	2	-0.20	5%	4
010.99	Total Nitrogen, Other (%)	0420	0.0000	0.0000			0.0000	0			4
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0292	0.0000	0.0000	0.2213	0.1043	0.0000	0	-2.12	50%	4
020.20	Total Phosphorus as P2O5, Spectrophotometric ... (%)	0420	0.0000	0.0000	0.2213	0.1043	0.0000	0	-2.12	50%	4
040.50	Indirect Available Phosphorus as P2O5, ICP (%)	0072	0.0000	0.0000			0.0000	0			4
041.10	Direct Available Phosphorus as P2O5, Gravimet... (%)	0009	0.0000	0.0000	0.2213	0.1043	0.0000	0	-2.12	50%	4
041.10	Direct Available Phosphorus as P2O5, Gravimet... (%)	0072	0.0000	0.0000	0.2213	0.1043	0.0000	0	-2.12	50%	4
041.50	Direct Available Phosphorus as P2O5, ICP (%)	0325	0.0150	0.0100			0.0100	1			0
041.60	Direct Available Phosphorus as P2O5, Citrate... (%)	0354	0.0000	0.0000			0.0000	0			4
048.20	Water Soluble Phosphorus as P2O5, Spectrophot... (%)	0420	0.0000	0.0000			0.0000	0			4
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0489	60.03	0.0400	60.80	0.7417	0.2291	11	-1.04	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0072	60.09	1.020	60.80	0.7417	0.2291	11	-0.96	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0090	60.20	0.2000	60.80	0.7417	0.2291	11	-0.81	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0220	60.25	0.0400	60.80	0.7417	0.2291	11	-0.75	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0231	60.56	0.2100	60.80	0.7417	0.2291	11	-0.34	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0405	60.60	0.0400	60.80	0.7417	0.2291	11	-0.28	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0114	60.94	0.1200	60.80	0.7417	0.2291	11	0.18	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0049	61.22	0.1400	60.80	0.7417	0.2291	11	0.56	0%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0494	61.49	0.3400	60.80	0.7417	0.2291	11	0.92	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0055	61.80	0.3700	60.80	0.7417	0.2291	11	1.34	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0102	62.30	0.0000	60.80	0.7417	0.2291	11	2.02	1%	0
050.00	Soluble Potassium as K2O, STPB Oxalate (60%)	0230	81.90	2.800	60.80	0.7417	0.2291	11	28.44	17%	1
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0356	59.45	0.0900	60.37	0.9359	0.6672	7	-0.98	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0040	59.55	0.1000	60.37	0.9359	0.6672	7	-0.87	1%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0136	59.90	0.2000	60.37	0.9359	0.6672	7	-0.50	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0157	60.10	1.400	60.37	0.9359	0.6672	7	-0.28	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0516	60.86	0.1300	60.37	0.9359	0.6672	7	0.52	0%	0
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0428	61.16	1.961	60.37	0.9359	0.6672	7	0.85	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.30	Soluble Potassium as K2O, AA (Oxalate) (60%)	0073	72.58	0.7900	60.37	0.9359	0.6672	7	13.05	10%	0
050.31	Soluble Potassium as K2O, AA (Citrate) (60%)	0472	54.90*	3.000			3.000	1			0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0406	59.40	1.350	60.41	0.8496	0.5139	8	-1.19	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0420	59.67	0.7400	60.41	0.8496	0.5139	8	-0.87	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0055	59.98	0.0800	60.41	0.8496	0.5139	8	-0.50	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0292	60.27	0.2500	60.41	0.8496	0.5139	8	-0.17	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0390	60.50	0.4000	60.41	0.8496	0.5139	8	0.11	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0397	60.62	0.3264	60.41	0.8496	0.5139	8	0.25	0%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0324	61.20	0.2000	60.41	0.8496	0.5139	8	0.93	1%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0086	63.57	0.7650	60.41	0.8496	0.5139	8	3.73	3%	0
050.50	Soluble Potassium as K2O, ICP (Oxalate) (60%)	0157	62.05	3.300	60.41	0.8496	0.5139	8	1.93	1%	1
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	0072	59.80	1.330	60.58	0.7252	0.4317	6	-1.08	1%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	0043	60.02	0.1600	60.58	0.7252	0.4317	6	-0.77	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	0452	60.50	0.0800	60.58	0.7252	0.4317	6	-0.10	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	0291	60.55	0.0100	60.58	0.7252	0.4317	6	-0.04	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	0007	61.10	0.4000	60.58	0.7252	0.4317	6	0.72	0%	0
050.51	Soluble Potassium as K2O, ICP (Citrate) (60%)	0483	61.50	0.6100	60.58	0.7252	0.4317	6	1.27	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0025	52.03*	0.8100	60.28	1.016	0.5541	8	-8.13	7%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0486	58.83	0.2500	60.28	1.016	0.5541	8	-1.44	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0360	59.75	0.1500	60.28	1.016	0.5541	8	-0.53	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0023	60.32	1.870	60.28	1.016	0.5541	8	0.03	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0421	60.50	0.6000	60.28	1.016	0.5541	8	0.21	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0485	60.87	0.3800	60.28	1.016	0.5541	8	0.58	0%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0354	60.89	0.1130	60.28	1.016	0.5541	8	0.59	1%	0
050.52	Soluble Potassium as K2O, ICP (Citrate-EDTA) (60%)	0377	64.62	0.2600	60.28	1.016	0.5541	8	4.27	4%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (60%)	0510	60.04	0.0400	60.59	0.1945	0.0683	6	-2.83	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (60%)	0309	60.26	0.1500	60.59	0.1945	0.0683	6	-1.73	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (60%)	0105	60.63	0.0400	60.59	0.1945	0.0683	6	0.20	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (60%)	0200	60.65	0.0300	60.59	0.1945	0.0683	6	0.28	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (60%)	0169	60.72	0.0700	60.59	0.1945	0.0683	6	0.64	0%	0
050.60	Soluble Potassium as K2O, Flame Photometric ... (60%)	0041	60.79	0.0800	60.59	0.1945	0.0683	6	1.03	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (60%)	0035	57.79*	0.5500	61.00	3.124	0.4433	3	-1.03	3%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (60%)	0513	61.18	0.1500	61.00	3.124	0.4433	3	0.06	0%	0
050.61	Soluble Potassium as K2O, Flame Photometric ... (60%)	0131	64.03	0.6300	61.00	3.124	0.4433	3	0.97	2%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (60%)	0095	56.93*	0.1100	60.01	2.056	0.3460	4	-1.50	3%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (60%)	0029	60.97	0.3400	60.01	2.056	0.3460	4	0.47	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (60%)	0034	61.05	0.6738	60.01	2.056	0.3460	4	0.51	1%	0
050.62	Soluble Potassium as K2O, Flame Photometric ... (60%)	0037	61.09	0.2600	60.01	2.056	0.3460	4	0.53	1%	0
050.99	Soluble Potassium as K2O, Other (60%)	0422	57.80*	1.200	60.42	1.137	0.4533	19	-2.31	2%	0
050.99	Soluble Potassium as K2O, Other (60%)	0325	58.70*	0.8000	60.42	1.137	0.4533	19	-1.52	1%	0
050.99	Soluble Potassium as K2O, Other (60%)	0402	58.97	0.1500	60.42	1.137	0.4533	19	-1.28	1%	0
050.99	Soluble Potassium as K2O, Other (60%)	0482	59.60	0.8000	60.42	1.137	0.4533	19	-0.73	1%	0
050.99	Soluble Potassium as K2O, Other (60%)	0506	59.75	0.5000	60.42	1.137	0.4533	19	-0.59	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.99	Soluble Potassium as K2O, Other (60%)	0096	59.94	0.0300	60.42	1.137	0.4533	19	-0.43	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0518	60.03	0.0000	60.42	1.137	0.4533	19	-0.35	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0481	60.16	0.8600	60.42	1.137	0.4533	19	-0.23	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0043	60.21	0.0500	60.42	1.137	0.4533	19	-0.19	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0508	60.30	0.0500	60.42	1.137	0.4533	19	-0.11	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0444	60.64	0.5200	60.42	1.137	0.4533	19	0.19	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0389	60.68	0.4700	60.42	1.137	0.4533	19	0.22	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0457	60.98	0.1000	60.42	1.137	0.4533	19	0.49	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0371	61.01	0.2600	60.42	1.137	0.4533	19	0.52	0%	0
050.99	Soluble Potassium as K2O, Other (60%)	0394	61.35	0.1000	60.42	1.137	0.4533	19	0.81	1%	0
050.99	Soluble Potassium as K2O, Other (60%)	0177	61.45	0.2430	60.42	1.137	0.4533	19	0.90	1%	0
050.99	Soluble Potassium as K2O, Other (60%)	0234	62.66	0.0500	60.42	1.137	0.4533	19	1.96	2%	0
050.99	Soluble Potassium as K2O, Other (60%)	0451	63.44	0.7900	60.42	1.137	0.4533	19	2.65	2%	0
050.99	Soluble Potassium as K2O, Other (60%)	0307	64.03	1.639	60.42	1.137	0.4533	19	3.17	3%	0
050.99	Soluble Potassium as K2O, Other (60%)	0260	61.15	8.440	60.42	1.137	0.4533	19	0.64	1%	1
050.99	Soluble Potassium as K2O, Other (60%)	0501	40.54*	0.0700	60.42	1.137	0.4533	19	-17.50	16%	2
060.00	Water (Free), Vacuum Oven (%)	0394	0.0330	0.0180			0.0180	1			0
060.20	Water (Free), Karl Fischer (%)	0394	0.0850	0.0100			0.0100	1			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)	0055	0.0500	0.1000			0.1000	0			4
060.99	Water (Free), Other (%)	0510	0.0185	0.0010	0.1268	0.1531	0.0155	2	-0.71	43%	0
060.99	Water (Free), Other (%)	0513	0.2350	0.0300	0.1268	0.1531	0.0155	2	0.71	43%	0
101.00	Acid Soluble Calcium, AA, inorganic 965.09 (%)	0105	0.0510	0.0000			0.0000	1			0
101.03	Acid Soluble Calcium, AA, 965.09, test portio... (%)	0105	0.0523	0.0004			0.0004	1			0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0102	0.0490	0.0000	0.0557	0.0070	0.0060	3	-0.95	6%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0482	0.0550	0.0100	0.0557	0.0070	0.0060	3	-0.09	1%	0
101.30	Acid Soluble Calcium, ICP, test portion inorg... (%)	0354	0.0630	0.0080	0.0557	0.0070	0.0060	3	1.04	7%	0
121.00	Acid Soluble Magnesium, AA, inorganic 965.09 (%)	0105	0.0245	0.0003			0.0003	1			0
121.03	Acid Soluble Magnesium, AA, 965.09, test port... (%)	0105	0.0238	0.0015			0.0015	1			0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0102	0.0250	0.0000	0.0283	0.0029	0.0007	3	-1.15	6%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0354	0.0300	0.0020	0.0283	0.0029	0.0007	3	0.58	3%	0
121.30	Acid Soluble Magnesium, ICP, test portion ino... (%)	0482	0.0300	0.0000	0.0283	0.0029	0.0007	3	0.58	3%	0
148.07	Total Sulfur, ICP, test portion as in 2006.03... (%)	0102	0.0245	0.0010			0.0010	1			0
148.99	Total Sulfur, Other (%)	0354	0.0010	0.0000	0.0180	0.0240	0.0050	2	-0.71	47%	0
148.99	Total Sulfur, Other (%)	0482	0.0350	0.0100	0.0180	0.0240	0.0050	2	0.71	47%	0
148.99	Total Sulfur, Other (%)	0072	0.0000	0.0000	0.0180	0.0240	0.0050	2	-0.75	50%	4
165.30	Acid Soluble Boron , ICP, test portion in 98... (%)	0354	0.0020	0.0000			0.0000	1			0
181.30	Acid Soluble Cadmium , ICP (ppm)	0009	0.0000	0.0000			0.0000	0			4
190.00	Water Soluble Chlorine, Titrimetric (%)	0027	44.80	1.800	47.03	1.913	0.7811	9	-1.16	2%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0506	45.00	0.0000	47.03	1.913	0.7811	9	-1.06	2%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0481	46.22	0.7800	47.03	1.913	0.7811	9	-0.42	1%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0043	46.48	0.2500	47.03	1.913	0.7811	9	-0.29	1%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0105	46.61	0.4800	47.03	1.913	0.7811	9	-0.22	0%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0444	47.29	0.3300	47.03	1.913	0.7811	9	0.14	0%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
190.00	Water Soluble Chlorine, Titrimetric (%)	0394	48.25	0.5000	47.03	1.913	0.7811	9	0.64	1%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0055	48.70	0.2900	47.03	1.913	0.7811	9	0.87	2%	0
190.00	Water Soluble Chlorine, Titrimetric (%)	0230	60.90	2.600	47.03	1.913	0.7811	9	7.25	15%	0
190.99	Water Soluble Chlorine, Other (%)	0501	45.59	0.6200	46.52	1.315	0.6600	2	-0.71	1%	0
190.99	Water Soluble Chlorine, Other (%)	0389	47.45	0.7000	46.52	1.315	0.6600	2	0.71	1%	0
191.30	Acid Soluble Chromium , ICP (ppm)	0102	0.2160	0.0120			0.0120	1			0
191.99	Acid Soluble Chromium , Other (ppm)	0512	386.8	20.66			20.66	1			0
202.99	Acid Soluble Cobalt , Other (ppm)	0512	10.99	2.000			2.000	1			0
221.03	Acid Soluble Copper , AA, 965.09, test porti... (%)	0105	0.0007	0.0000			0.0000	1			0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0102	0.0001	0.0000	0.0013	0.0017	0.0005	2	-0.71	46%	0
221.30	Acid Soluble Copper , ICP, test portion inor... (%)	0354	0.0025	0.0010	0.0013	0.0017	0.0005	2	0.71	46%	0
221.99	Acid Soluble Copper , Other (%)	0512	0.0002	0.0001			0.0001	1			0
241.00	Acid Soluble Iron , AA, inorganic 965.09 (%)	0105	0.0883	0.0011			0.0011	1			0
241.03	Acid Soluble Iron , AA, 965.09, test portion ... (%)	0105	0.0871	0.0041			0.0041	1			0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0420	0.0737	0.0029	0.0833	0.0087	0.0041	5	-1.11	6%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0102	0.0750	0.0015	0.0833	0.0087	0.0041	5	-0.96	5%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0472	0.0850	0.0100	0.0833	0.0087	0.0041	5	0.19	1%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0482	0.0900	0.0000	0.0833	0.0087	0.0041	5	0.77	4%	0
241.30	Acid Soluble Iron , ICP, test portion inorgan... (%)	0354	0.0930	0.0060	0.0833	0.0087	0.0041	5	1.11	6%	0
251.00	Acid Soluble Lead , AA, test portion as in 2... (ppm)	0009	0.0000	0.0000			0.0000	0			4
251.99	Acid Soluble Lead , Other (ppm)	0512	70.83	4.970			4.970	1			0
261.15	Acid Soluble Manganese , AA, 965.09, test po... (%)	0105	0.0010	0.0006			0.0006	1			0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0102	0.0009	0.0000	0.0010	0.0001	0.0000	2	-0.71	3%	0
261.30	Acid Soluble Manganese , ICP, test portion 9... (%)	0354	0.0010	0.0000	0.0010	0.0001	0.0000	2	0.71	3%	0
291.30	Acid Soluble Nickel , ICP (ppm)	0105	2.390	0.1580			0.1580	1			0
291.99	Acid Soluble Nickel , Other (ppm)	0512	41.60	2.760			2.760	1			0
301.30	Acid Soluble Selenium , ICP (ppm)	0009	0.0000	0.0000			0.0000	0			4
311.00	Sodium, AA (%)	0481	1.335	0.0100	1.370	0.0495	0.0100	2	-0.71	1%	0
311.00	Sodium, AA (%)	0405	1.405	0.0100	1.370	0.0495	0.0100	2	0.71	1%	0
311.30	Sodium, Flame Photometric (%)	0043	1.310	0.0000	1.452	0.1227	0.0433	3	-1.15	5%	0
311.30	Sodium, Flame Photometric (%)	0105	1.520	0.1200	1.452	0.1227	0.0433	3	0.56	2%	0
311.30	Sodium, Flame Photometric (%)	0510	1.525	0.0100	1.452	0.1227	0.0433	3	0.60	3%	0
311.32	Sodium, ICP, 2006.03 test portion (%)	0394	1.190	0.0200	1.267	0.0681	0.0400	3	-1.13	3%	0
311.32	Sodium, ICP, 2006.03 test portion (%)	0324	1.290	0.0400	1.267	0.0681	0.0400	3	0.34	1%	0
311.32	Sodium, ICP, 2006.03 test portion (%)	0444	1.320	0.0600	1.267	0.0681	0.0400	3	0.78	2%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0515	1.158	0.1742	1.275	0.1251	0.1584	3	-0.94	5%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0422	1.260	0.2800	1.275	0.1251	0.1584	3	-0.12	1%	0
311.33	Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)	0102	1.407	0.0210	1.275	0.1251	0.1584	3	1.05	5%	0
311.99	Sodium, Other (%)	0230	0.8815	0.0250	1.421	0.1626	0.0460	8	-3.32	19%	0
311.99	Sodium, Other (%)	0515	1.272	0.0739	1.421	0.1626	0.0460	8	-0.91	5%	0
311.99	Sodium, Other (%)	0389	1.375	0.0300	1.421	0.1626	0.0460	8	-0.28	2%	0
311.99	Sodium, Other (%)	0482	1.400	0.0200	1.421	0.1626	0.0460	8	-0.13	1%	0
311.99	Sodium, Other (%)	0096	1.450	0.0200	1.421	0.1626	0.0460	8	0.18	1%	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Threshold %RSD	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
311.99	Sodium, Other (%)	0371	1.450	0.0000	1.421	0.1626	0.0460	8	0.18	1%	0
311.99	Sodium, Other (%)	0354	1.571	0.1220	1.421	0.1626	0.0460	8	0.92	5%	0
311.99	Sodium, Other (%)	0501	1.662	0.0770	1.421	0.1626	0.0460	8	1.48	8%	0
321.00	Acid Soluble Zinc , AA, inorganic 965.09 (%)	0105	0.0003	0.0003			0.0003	1			0
321.03	Acid Soluble Zinc , AA, 965.09, test portion... (%)	0105	0.0004	0.0003			0.0003	1			0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0354	0.0010	0.0000	1.421	0.1626	0.0000	1	-8.73	50%	0
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0072	0.0000	0.0000	1.421	0.1626	0.0000	1	-8.74	50%	4
321.30	Acid Soluble Zinc , ICP, test portion inorga... (%)	0292	0.0000	0.0000	1.421	0.1626	0.0000	1	-8.74	50%	4
321.99	Acid Soluble Zinc , Other (%)	0512	0.0639	0.0005			0.0005	1			0

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an astrix indicates that the value is lower than the Analyte value less the IA. Method or Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.