

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210311

Grade 46-0-0

Statistical Summary

Methods: 51

Labs Reporting: 92

Issue Date : 04/30/2021

Method Code	Analyte & Method Sample # 210311	# Tests Submitted	# Tests in Robust Calculations	Raw Mean	Raw SD	Assigned Value Robust Mean	IA at Method Value	Robust sd	Robust Uncertainty (U)	Robust % RSD	Method IA Ratio	Average Range (R-bar)	Horwitz %RSD
001.99	Ammoniacal N, Other (%)	3	3	1.477	0.8623	1.477		0.8623	0.6223	58.39%		0.0800	3.77%
005.00	Urea N, Urease (as N) (%)	1		45.30									
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	1		45.75									
005.99	Urea N, Other (%)	4	4	44.38	2.192	44.38		2.192	1.370	4.94%		0.3225	1.50%
006.10	Biuret N, Spectrophotometric (as N) (%)	2	2	1.155	0.2404								
006.99	Biuret N, Other (%)	2	2	0.5063	0.3094								
007.00	Urea, Urease (as Urea) (%)	2	2	45.84	0.1697								
007.99	Urea, Other (%)	2	2	45.57	0.0424								
008.00	Biuret, AA (as Biuret) (%)	2	2	0.5150	0.0636								
008.10	Biuret, Spectrophotometric (as Biuret) (%)	10	10	0.5931	0.1974	0.5789		0.1897	0.0750	32.76%		0.0111	4.34%
008.99	Biuret, Other (%)	2	2	0.4150	0.1202								
010.11	Total N, Modified Comprehensive (46%)	6	6	45.92	0.3866	45.92	0.8800	0.4384	0.2237	0.95%	1.16	0.1371	1.48%
010.12	Total N, Salicylic (46%)	5	5	45.12	2.147	45.12	0.8800	2.147	1.200	4.76%	5.69	0.2360	1.49%
010.60	Total N, Combustion (46%)	59	57	46.42	0.5142	46.41	0.8800	0.3850	0.0637	0.83%	1.02	0.2260	1.47%
010.99	Total N, Other (46%)	18	17	45.75	0.6273	45.81	0.8800	0.5018	0.1521	1.10%	1.33	0.0887	1.48%
020.50	Total P2O5, ICP (%)	2	2	0.0283	0.0117								
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	2	2	0.0370	0.0028								
041.50	Direct Available P2O5, ICP (%)	1		0.0000									
041.99	Direct Available P2O5, Other (%)	1		3.975									
050.00	Soluble K2O, STPB Oxalate (%)	1		46.54									
050.51	Soluble K2O, ICP (Citrate) (%)	1		0.0500									
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	1		0.0240									
050.99	Soluble K2O, Other (%)	4	3	4.535	8.986	6.047	0.4728	10.36	7.480	171.39%	51.07	0.0245	3.05%
060.00	Water (Free), Vacuum Oven (%)	3	3	0.2983	0.1266	0.2983		0.1266	0.0914	42.44%		0.0233	4.80%
060.20	Water (Free), Karl Fischer (%)	1		0.2570									
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%)	1		0.8880									
060.99	Water (Free), Other (%)	6	5	0.7753	0.7862	0.4723		0.2905	0.1624	61.50%		0.0160	4.48%
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	2	1	0.0102	0.0003								
101.99	Acid Soluble Ca, Other (%)	1		0.0100									
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	2	1	0.0078	0.0031								
121.99	Acid Soluble Mg, Other (%)	2	2	0.0048	0.0011								
143.99	Elemental S, Other (%)	1		0.1100									
148.99	Total S, Other (%)	1		0.0300									

Method Code	Analyte & Method Sample # 210311	# 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
149.04	S - HNO3 soluble, ICP (%)	1		0.0972									
151.30	Acid Soluble As, ICP (ppm)	1		0.0020									
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	1		0.0100									
181.30	Acid Soluble Cd, ICP (ppm)	1		0.0061									
191.30	Acid Soluble Cr, ICP (ppm)	2	2	0.1154	0.0490								
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	1		0.0100									
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	1		0.0100									
241.99	Acid Soluble Fe, Other (%)	1		0.0024									
251.30	Acid Soluble Pb, ICP (ppm)	1		0.0520									
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	1		0.0100									
261.99	Acid Soluble Mn, Other (%)	1		0.0001									
281.99	Acid Soluble Hg, Other (ppm)	1		0.0012									
289.30	Acid Soluble Mo, ICP (ppm)	1		0.0551									
291.30	Acid Soluble Ni, ICP (ppm)	1		0.4149									
301.30	Acid Soluble Se, ICP (ppm)	1		0.0046									
311.99	Sodium, Other (%)	1		0.0100									
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	1		0.0100									
321.99	Acid Soluble Zn, Other (%)	1		0.0001									

The Method IA Ratio = $2.33 * \text{Robust SD} / \text{IA at the Method Assigned Value}$. 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.

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STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 210311

Method Precision Report

Grade 46-0-0

Issue Date : 04/30/2021

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
008.10	Biuret, Spectrophotometric (as Biuret) (%)	10	9	0.5473	0.1422	0.1421	0.0077	0.1423	25.97%	1.40%	26.01%	18.54
010.11	Total N, Modified Comprehensive (46%)	6	5	46.04	0.2972	0.2943	0.0581	0.3000	0.64%	0.13%	0.65%	5.161
010.12	Total N, Salicylic (46%)	5	5	45.12	2.147	2.140	0.2456	2.154	4.74%	0.54%	4.77%	8.771
010.60	Total N, Combustion (46%)	59	54	46.39	0.4047	0.3764	0.2101	0.4311	0.81%	0.45%	0.93%	2.052
010.99	Total N, Other (46%)	18	16	45.84	0.5897	0.5882	0.0595	0.5912	1.28%	0.13%	1.29%	9.930
060.99	Water (Free), Other (%)	6	5	0.4723	0.2905	0.2903	0.0147	0.2906	61.46%	3.10%	61.54%	19.82

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

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Method Proficiency For All Labs (Lab Values)

Sample # 210311

Grade 46-0-0

Lab Values

Methods: 51

Labs Reporting: 92

Issue Date : 04/30/2021

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
001.99	Ammoniacal N, Other (%)	0524	0.4850	0.0700	1.477	0.8623	0.0800	3	-1.15		0
001.99	Ammoniacal N, Other (%)	0506	1.895	0.0900	1.477	0.8623	0.0800	3	0.49		0
001.99	Ammoniacal N, Other (%)	0533	2.050	0.0800	1.477	0.8623	0.0800	3	0.66		0
005.00	Urea N, Urease (as N) (%)	0368	45.30	0.2242				1			0
005.10	Urea N, HPLC(asN),H2Omobilephase (%)	0394	45.75	0.0900				1			0
005.99	Urea N, Other (%)	0524	41.48	0.5300	44.38	2.192	0.3225	4	-1.33		0
005.99	Urea N, Other (%)	0506	43.90	0.0000	44.38	2.192	0.3225	4	-0.22		0
005.99	Urea N, Other (%)	0027	46.05	0.7400	44.38	2.192	0.3225	4	0.76		0
005.99	Urea N, Other (%)	0546	46.10	0.0200	44.38	2.192	0.3225	4	0.78		0
006.10	Biuret N, Spectrophotometric (as N) (%)	0450	0.9850	0.0300				2			0
006.10	Biuret N, Spectrophotometric (as N) (%)	0550	1.325	0.1100				2			0
006.99	Biuret N, Other (%)	0506	0.2875	0.0250				2			0
006.99	Biuret N, Other (%)	0220	0.7250	0.0500				2			0
007.00	Urea, Urease (as Urea) (%)	0537	45.72	0.1900				2			0
007.00	Urea, Urease (as Urea) (%)	0220	45.96	0.0700				2			0
007.99	Urea, Other (%)	0549	45.54	0.2900				2			0
007.99	Urea, Other (%)	0569	45.60	0.1500				2			0
008.00	Biuret, AA (as Biuret) (%)	0498	0.4700	0.0400				2			0
008.00	Biuret, AA (as Biuret) (%)	0444	0.5600	0.0400				2			0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0572	0.3667	0.0063	0.5789	0.1897	0.0111	10	-1.04	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0546	0.4100	0.0000	0.5789	0.1897	0.0111	10	-0.83	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0513	0.4750	0.0100	0.5789	0.1897	0.0111	10	-0.51	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0481	0.5100	0.0200	0.5789	0.1897	0.0111	10	-0.34	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0444	0.5400	0.0000	0.5789	0.1897	0.0111	10	-0.19	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0510	0.5635	0.0227	0.5789	0.1897	0.0111	10	-0.08	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0415	0.6000	0.0000	0.5789	0.1897	0.0111	10	0.10	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0476	0.6008	0.0025	0.5789	0.1897	0.0111	10	0.11	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0534	0.8600	0.0000	0.5789	0.1897	0.0111	10	1.38	NA	0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0117	1.006	0.0490	0.5789	0.1897	0.0111	10	2.09	NA	0
008.99	Biuret, Other (%)	0234	0.3300	0.0200				2			0
008.99	Biuret, Other (%)	0394	0.5000	0.0200				2			0
010.11	Total N, Modified Comprehensive (46%)	0540	45.35	0.5000	45.92	0.4384	0.1371	6	-1.16	OK	0
010.11	Total N, Modified Comprehensive (46%)	0522	45.64	0.0000	45.92	0.4384	0.1371	6	-0.58	OK	0
010.11	Total N, Modified Comprehensive (46%)	0544	45.90	0.0300	45.92	0.4384	0.1371	6	-0.06	OK	0
010.11	Total N, Modified Comprehensive (46%)	0551	46.03	0.1500	45.92	0.4384	0.1371	6	0.21	OK	0
010.11	Total N, Modified Comprehensive (46%)	0309	46.21	0.0600	45.92	0.4384	0.1371	6	0.58	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.11	Total N, Modified Comprehensive (46%)	0510	46.42	0.0824	45.92	0.4384	0.1371	6	1.01	OK	0
010.12	Total N, Salicylic (46%)	0415	41.45	0.7000	45.12	2.147	0.2360	5	-1.71		0
010.12	Total N, Salicylic (46%)	0568	45.10	0.0000	45.12	2.147	0.2360	5	-0.01		0
010.12	Total N, Salicylic (46%)	0572	46.02	0.1500	45.12	2.147	0.2360	5	0.42		0
010.12	Total N, Salicylic (46%)	0498	46.15	0.3000	45.12	2.147	0.2360	5	0.48		0
010.12	Total N, Salicylic (46%)	0481	46.89	0.0300	45.12	2.147	0.2360	5	0.82		0
010.60	Total N, Combustion (46%)	0516	45.43	0.6200	46.41	0.3850	0.2260	57	-2.54	Low	0
010.60	Total N, Combustion (46%)	0136	45.55	0.1000	46.41	0.3850	0.2260	57	-2.23	OK	0
010.60	Total N, Combustion (46%)	0157	45.60	0.0000	46.41	0.3850	0.2260	57	-2.10	OK	0
010.60	Total N, Combustion (46%)	0041	45.75	0.3800	46.41	0.3850	0.2260	57	-1.71	OK	0
010.60	Total N, Combustion (46%)	0234	45.85	0.2200	46.41	0.3850	0.2260	57	-1.45	OK	0
010.60	Total N, Combustion (46%)	0027	45.97	0.7300	46.41	0.3850	0.2260	57	-1.15	OK	0
010.60	Total N, Combustion (46%)	0547	46.00	0.0700	46.41	0.3850	0.2260	57	-1.07	OK	0
010.60	Total N, Combustion (46%)	0325	46.00	0.6000	46.41	0.3850	0.2260	57	-1.06	OK	0
010.60	Total N, Combustion (46%)	0523	46.02	0.0500	46.41	0.3850	0.2260	57	-1.02	OK	0
010.60	Total N, Combustion (46%)	0292	46.03	0.1300	46.41	0.3850	0.2260	57	-1.00	OK	0
010.60	Total N, Combustion (46%)	0291	46.09	0.0100	46.41	0.3850	0.2260	57	-0.84	OK	0
010.60	Total N, Combustion (46%)	0472	46.09	0.0300	46.41	0.3850	0.2260	57	-0.84	OK	0
010.60	Total N, Combustion (46%)	0443	46.13	0.2000	46.41	0.3850	0.2260	57	-0.72	OK	0
010.60	Total N, Combustion (46%)	0231	46.15	0.0100	46.41	0.3850	0.2260	57	-0.68	OK	0
010.60	Total N, Combustion (46%)	0405	46.17	0.0700	46.41	0.3850	0.2260	57	-0.63	OK	0
010.60	Total N, Combustion (46%)	0169	46.19	0.0500	46.41	0.3850	0.2260	57	-0.58	OK	0
010.60	Total N, Combustion (46%)	0450	46.20	0.0000	46.41	0.3850	0.2260	57	-0.54	OK	0
010.60	Total N, Combustion (46%)	0356	46.22	1.227	46.41	0.3850	0.2260	57	-0.50	OK	0
010.60	Total N, Combustion (46%)	0486	46.25	0.0100	46.41	0.3850	0.2260	57	-0.43	OK	0
010.60	Total N, Combustion (46%)	0131	46.26	0.2770	46.41	0.3850	0.2260	57	-0.38	OK	0
010.60	Total N, Combustion (46%)	0534	46.30	0.0000	46.41	0.3850	0.2260	57	-0.28	OK	0
010.60	Total N, Combustion (46%)	0025	46.30	0.1130	46.41	0.3850	0.2260	57	-0.27	OK	0
010.60	Total N, Combustion (46%)	0307	46.32	0.0700	46.41	0.3850	0.2260	57	-0.24	OK	0
010.60	Total N, Combustion (46%)	0040	46.35	0.3000	46.41	0.3850	0.2260	57	-0.15	OK	0
010.60	Total N, Combustion (46%)	0354	46.35	0.3000	46.41	0.3850	0.2260	57	-0.15	OK	0
010.60	Total N, Combustion (46%)	0389	46.36	0.5700	46.41	0.3850	0.2260	57	-0.14	OK	0
010.60	Total N, Combustion (46%)	0055	46.37	0.0300	46.41	0.3850	0.2260	57	-0.11	OK	0
010.60	Total N, Combustion (46%)	0561	46.37	0.1200	46.41	0.3850	0.2260	57	-0.10	OK	0
010.60	Total N, Combustion (46%)	0371	46.40	0.0100	46.41	0.3850	0.2260	57	-0.04	OK	0
010.60	Total N, Combustion (46%)	0423	46.40	0.2100	46.41	0.3850	0.2260	57	-0.04	OK	0
010.60	Total N, Combustion (46%)	0324	46.40	0.0000	46.41	0.3850	0.2260	57	-0.02	OK	0
010.60	Total N, Combustion (46%)	0501	46.40	0.6000	46.41	0.3850	0.2260	57	-0.02	OK	0
010.60	Total N, Combustion (46%)	0043	46.43	0.0200	46.41	0.3850	0.2260	57	0.06	OK	0
010.60	Total N, Combustion (46%)	0451	46.45	0.7000	46.41	0.3850	0.2260	57	0.11	OK	0
010.60	Total N, Combustion (46%)	0444	46.49	0.0100	46.41	0.3850	0.2260	57	0.20	OK	0
010.60	Total N, Combustion (46%)	0049	46.51	0.0900	46.41	0.3850	0.2260	57	0.25	OK	0
010.60	Total N, Combustion (46%)	0095	46.51	0.2700	46.41	0.3850	0.2260	57	0.25	OK	0
010.60	Total N, Combustion (46%)	0550	46.57	0.4300	46.41	0.3850	0.2260	57	0.41	OK	0
010.60	Total N, Combustion (46%)	0230	46.60	0.4000	46.41	0.3850	0.2260	57	0.50	OK	0
010.60	Total N, Combustion (46%)	0452	46.62	0.1400	46.41	0.3850	0.2260	57	0.55	OK	0
010.60	Total N, Combustion (46%)	0255	46.65	0.2910	46.41	0.3850	0.2260	57	0.63	OK	0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
010.60	Total N, Combustion (46%)	0073	46.66	0.2200	46.41	0.3850	0.2260	57	0.65	OK	0
010.60	Total N, Combustion (46%)	0481	46.67	0.1100	46.41	0.3850	0.2260	57	0.67	OK	0
010.60	Total N, Combustion (46%)	0220	46.67	0.0000	46.41	0.3850	0.2260	57	0.68	OK	0
010.60	Total N, Combustion (46%)	0377	46.69	0.2700	46.41	0.3850	0.2260	57	0.72	OK	0
010.60	Total N, Combustion (46%)	0521	46.69	0.0000	46.41	0.3850	0.2260	57	0.74	OK	0
010.60	Total N, Combustion (46%)	0260	46.70	0.2000	46.41	0.3850	0.2260	57	0.76	OK	0
010.60	Total N, Combustion (46%)	0029	46.75	0.1000	46.41	0.3850	0.2260	57	0.89	OK	0
010.60	Total N, Combustion (46%)	0177	46.83	0.0200	46.41	0.3850	0.2260	57	1.09	OK	0
010.60	Total N, Combustion (46%)	0422	46.85	0.3000	46.41	0.3850	0.2260	57	1.15	OK	0
010.60	Total N, Combustion (46%)	0527	46.91	0.0050	46.41	0.3850	0.2260	57	1.31	OK	0
010.60	Total N, Combustion (46%)	0485	46.95	0.2206	46.41	0.3850	0.2260	57	1.40	OK	0
010.60	Total N, Combustion (46%)	0034	47.10	0.0000	46.41	0.3850	0.2260	57	1.80	OK	0
010.60	Total N, Combustion (46%)	0543	47.38	0.6020	46.41	0.3850	0.2260	57	2.51	High	0
010.60	Total N, Combustion (46%)	0042	47.45	0.7000	46.41	0.3850	0.2260	57	2.70	High	0
010.60	Total N, Combustion (46%)	0368	47.73	0.4790	46.41	0.3850	0.2260	57	3.44	High	0
010.60	Total N, Combustion (46%)	0023	48.30	0.2000	46.41	0.3850	0.2260	57	4.91	High	0
010.60	Total N, Combustion (46%)	0086	45.49	1.320	46.41	0.3850	0.2260	57	-2.38	Low	1
010.60	Total N, Combustion (46%)	0035	45.75	1.500	46.41	0.3850	0.2260	57	-1.71	OK	1
010.99	Total N, Other (46%)	0539	44.32	0.0900	45.81	0.5018	0.0887	17	-2.99	Low	0
010.99	Total N, Other (46%)	0524	44.65	0.4113	45.81	0.5018	0.0887	17	-2.32	Low	0
010.99	Total N, Other (46%)	0571	45.20	0.0000	45.81	0.5018	0.0887	17	-1.22	OK	0
010.99	Total N, Other (46%)	0558	45.45	0.1000	45.81	0.5018	0.0887	17	-0.72	OK	0
010.99	Total N, Other (46%)	0522	45.46	0.0400	45.81	0.5018	0.0887	17	-0.70	OK	0
010.99	Total N, Other (46%)	0537	45.71	0.0400	45.81	0.5018	0.0887	17	-0.21	OK	0
010.99	Total N, Other (46%)	0506	45.75	0.1000	45.81	0.5018	0.0887	17	-0.13	OK	0
010.99	Total N, Other (46%)	0532	45.84	0.0900	45.81	0.5018	0.0887	17	0.04	OK	0
010.99	Total N, Other (46%)	0564	45.92	0.0100	45.81	0.5018	0.0887	17	0.20	OK	0
010.99	Total N, Other (46%)	0565	45.92	0.0200	45.81	0.5018	0.0887	17	0.21	OK	0
010.99	Total N, Other (46%)	0551	46.03	0.0500	45.81	0.5018	0.0887	17	0.42	OK	0
010.99	Total N, Other (46%)	0562	46.05	0.2000	45.81	0.5018	0.0887	17	0.47	OK	0
010.99	Total N, Other (46%)	0513	46.12	0.0800	45.81	0.5018	0.0887	17	0.61	OK	0
010.99	Total N, Other (46%)	0518	46.15	0.1000	45.81	0.5018	0.0887	17	0.67	OK	0
010.99	Total N, Other (46%)	0476	46.15	0.0673	45.81	0.5018	0.0887	17	0.68	OK	0
010.99	Total N, Other (46%)	0559	46.40	0.0100	45.81	0.5018	0.0887	17	1.16	OK	0
010.99	Total N, Other (46%)	0545	47.06	0.1000	45.81	0.5018	0.0887	17	2.49	High	0
010.99	Total N, Other (46%)	0553	45.40	1.200	45.81	0.5018	0.0887	17	-0.82	OK	1
020.50	Total P2O5, ICP (%)	0389	0.0200	0.0000				2			0
020.50	Total P2O5, ICP (%)	0524	0.0365	0.0012				2			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0568	0.0350	0.0100				2			0
041.21	Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (%)	0354	0.0390	0.0060				2			0
041.50	Direct Available P2O5, ICP (%)	0325	0.0000	0.0000				0			4
041.99	Direct Available P2O5, Other (%)	0533	3.975	0.0500				1			0
050.00	Soluble K2O, STPB Oxalate (%)	0114	46.54	0.1960				1			0
050.51	Soluble K2O, ICP (Citrate) (%)	0568	0.0500	0.0200				1			0
050.52	Soluble K2O, ICP (Citrate-EDTA) (%)	0354	0.0240	0.0020				1			0
050.99	Soluble K2O, Other (%)	0389	0.0600	0.0000	6.047	10.36	0.0245	3	-0.58		0
050.99	Soluble K2O, Other (%)	0524	0.0666	0.0034	6.047	10.36	0.0245	3	-0.58		0

Method Code	Analyte Name and Method (Units)	Lab Code	Lab Data		Method Values			# Tests	Magruder CS Z Score	Method IA Status	Flag
			Value	Range	Rob Mean	Rob SD	R-bar				
050.99	Soluble K2O, Other (%)	0533	18.02	0.0700	6.047	10.36	0.0245	3	1.15		0
050.99	Soluble K2O, Other (%)	0325	0.0000	0.0000	6.047	10.36	0.0245	3			4
060.00	Water (Free), Vacuum Oven (%)	0405	0.1850	0.0100	0.2983	0.1266	0.0233	3	-0.90		0
060.00	Water (Free), Vacuum Oven (%)	0220	0.2750	0.0300	0.2983	0.1266	0.0233	3	-0.18		0
060.00	Water (Free), Vacuum Oven (%)	0561	0.4350	0.0300	0.2983	0.1266	0.0233	3	1.08		0
060.20	Water (Free), Karl Fischer (%)	0513	0.2570	0.0020				1			0
060.30	Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%)	0394	0.8880	0.0300				1			0
060.99	Water (Free), Other (%)	0136	0.2150	0.0100	0.4723	0.2905	0.0160	5	-0.77		0
060.99	Water (Free), Other (%)	0498	0.2400	0.0400	0.4723	0.2905	0.0160	5	-0.70		0
060.99	Water (Free), Other (%)	0550	0.3485	0.0110	0.4723	0.2905	0.0160	5	-0.37		0
060.99	Water (Free), Other (%)	0510	0.6959	0.0181	0.4723	0.2905	0.0160	5	0.67		0
060.99	Water (Free), Other (%)	0476	0.8622	0.0009	0.4723	0.2905	0.0160	5	1.17		0
060.99	Water (Free), Other (%)	0572	2.290	1.420	0.4723	0.2905	0.0160	5	5.46		1
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0568	0.0105	0.0011				1			0
101.30	Acid Soluble Ca, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					1			5
101.99	Acid Soluble Ca, Other (%)	0389	0.0100	0.0000				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0568	0.0057	0.0007				1			0
121.30	Acid Soluble Mg, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					1			5
121.99	Acid Soluble Mg, Other (%)	0389	0.0040	0.0000				2			0
121.99	Acid Soluble Mg, Other (%)	0524	0.0055	0.0004				2			0
143.99	Elemental S, Other (%)	0389	0.1100	0.0000				1			0
148.99	Total S, Other (%)	0354	0.0300	0.0200				1			0
149.04	S - HNO3 soluble, ICP (%)	0524	0.0972	0.0034				1			0
151.30	Acid Soluble As, ICP (ppm)	0524	0.0020	0.0000				1			0
165.30	Acid Soluble B, ICP, test portion in 982.01 (%)	0354	< 0.01					0			5
181.30	Acid Soluble Cd, ICP (ppm)	0524	0.0061	0.0000				1			0
191.30	Acid Soluble Cr, ICP (ppm)	0524	0.0808	0.0277				2			0
191.30	Acid Soluble Cr, ICP (ppm)	0389	0.1500	0.0000				2			0
221.30	Acid Soluble Cu, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					0			5
241.30	Acid Soluble Fe, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					0			5
241.99	Acid Soluble Fe, Other (%)	0524	0.0024	0.0004				1			0
251.30	Acid Soluble Pb, ICP (ppm)	0524	0.0520	0.0020				1			0
261.30	Acid Soluble Mn, ICP, test portion 972.02a (%)	0354	< 0.01					0			5
261.99	Acid Soluble Mn, Other (%)	0524	0.0001	0.0000				1			0
281.99	Acid Soluble Hg, Other (ppm)	0524	0.0012	0.0012				1			0
289.30	Acid Soluble Mo, ICP (ppm)	0524	0.0551	0.0100				1			0
291.30	Acid Soluble Ni, ICP (ppm)	0524	0.4149	0.1019				1			0
301.30	Acid Soluble Se, ICP (ppm)	0524	0.0046	0.0032				1			0
311.99	Sodium, Other (%)	0354	0.0100	0.0000				1			0
321.30	Acid Soluble Zn, ICP, test portion inorganic 965.09 (%)	0354	< 0.01					0			5
321.99	Acid Soluble Zn, Other (%)	0524	0.0001	0.0000				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, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are grey and included for information only. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower, Green indicates within the IA range. Method codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.