

Analyte PT For All Labs

### Magruder Fertilizer Proficiency Testing Program

# Analytes: 22

Sample # 240451

Potassium Select PT Scheme

# Labs Reporting: 17

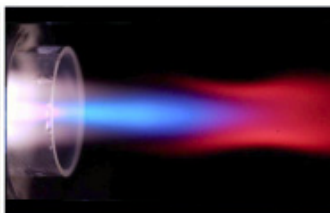
Grade 0-0-50

### Statistical Summary

Issue Date : 05/31/2024

Analyte Code	Analyte Sample # 240451	# 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	Analyte IA Ratio	Average Range (R-bar)	Horwitz %RSD
010	Total N (%)	1		0.0000									
020	Total P2O5 (%)	1		0.0100									
041	Direct Available P2O5 (%)	1		0.0000									
050	Soluble K2O (50%)	20	19	50.62	2.517	50.27	1.6627	0.6291	0.1804	1.25%	0.88	0.2348	1.41%
101	Acid Soluble Ca (%)	1		0.1500									
121	Acid Soluble Mg (%)	2	2	0.6441	0.4468								
145	Sulfate S, HCl soluble (%)	4	4	17.96	0.3520	17.96		0.3520	0.2200	1.96%		0.0525	2.36%
148	Total S (17.5%)	10	9	15.87	5.605	17.64	1.0000	0.6660	0.2775	3.78%	1.55	0.3506	2.38%
151	Acid Soluble As (ppm)	5	3	0.8724	1.198	0.4207		0.0261	0.0188	6.20%		0.0895	18.22%
181	Acid Soluble Cd (ppm)	4	2	0.2900	0.4745	0.0300		0.0000	0.0000	0.00%		0.0000	22.00%
190	Water Soluble Cl (0.8%)	5	4	0.1540	0.0971	0.1900	0.0240	0.0627	0.0392	33.01%	6.09	0.0215	5.14%
191	Acid Soluble Cr (ppm)	3	2	7.600	6.634	11.35		1.909	1.688	16.82%		0.2000	11.10%
202	Acid Soluble Co (ppm)	1		1.000									
221	Acid Soluble Cu (%)	1		0.0002									
241	Acid Soluble Fe (%)	1		0.0552									
251	Acid Soluble Pb (ppm)	1		4.000									
281	Acid Soluble Hg (ppm)	3	2	0.8503	1.033	0.2755		0.3882	0.3431	140.91%		0.0506	19.42%
289	Acid Soluble Mo (ppm)	1		1.000									
291	Acid Soluble Ni (ppm)	2	2	1.600	0.1414								
301	Acid Soluble Se (ppm)	2	1	5.020	7.042								
311	Sodium (%)	2	2	0.1551	0.0494								
321	Acid Soluble Zn (%)	2	2	0.0021	0.0012								

The Analyte IA Ratio = 2.33 \* Robust SD / IA at the Analyte 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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Sample # 240451

Potassium Select PT Scheme

# Labs Reporting: 17

Grade 0-0-50

Lab Values

Issue Date : 05/31/2024

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
010	Total N (%)	0131	0.0000	0.0000				0		010.60	4
020	Total P2O5 (%)	0611	< 0.01					0		020.50	5
041	Direct Available P2O5 (%)	0131	0.0000	0.0000				0		041.50	4
050	Soluble K2O (50%)	0543	45.15†	0.0010	50.27	0.6291	0.2348	19	-8.15	050.99	0
050	Soluble K2O (50%)	0007	48.70	0.8000	50.27	0.6291	0.2348	19	-2.50	050.51	0
050	Soluble K2O (50%)	0597	48.80	0.0900	50.27	0.6291	0.2348	19	-2.35	050.00	0
050	Soluble K2O (50%)	0615	49.66	0.4400	50.27	0.6291	0.2348	19	-0.97	050.99	0
050	Soluble K2O (50%)	0055	50.10	0.8750	50.27	0.6291	0.2348	19	-0.28	050.50	0
050	Soluble K2O (50%)	0405	50.13	0.1000	50.27	0.6291	0.2348	19	-0.23	050.00	0
050	Soluble K2O (50%)	0590	50.21	0.0000	50.27	0.6291	0.2348	19	-0.10	050.99	0
050	Soluble K2O (50%)	0602	50.31	0.0700	50.27	0.6291	0.2348	19	0.05	050.00	0
050	Soluble K2O (50%)	0602	50.31	0.0700	50.27	0.6291	0.2348	19	0.05	050.60	0
050	Soluble K2O (50%)	0602	50.31	0.0700	50.27	0.6291	0.2348	19	0.05	050.99	0
050	Soluble K2O (50%)	0055	50.32	0.0400	50.27	0.6291	0.2348	19	0.07	050.00	0
050	Soluble K2O (50%)	0494	50.37	0.3100	50.27	0.6291	0.2348	19	0.15	050.52	0
050	Soluble K2O (50%)	0494	50.43	0.0500	50.27	0.6291	0.2348	19	0.24	050.00	0
050	Soluble K2O (50%)	0220	50.47	0.1800	50.27	0.6291	0.2348	19	0.31	050.00	0
050	Soluble K2O (50%)	0561	50.59	0.2600	50.27	0.6291	0.2348	19	0.50	050.99	0
050	Soluble K2O (50%)	0611	50.75	0.1000	50.27	0.6291	0.2348	19	0.76	050.99	0
050	Soluble K2O (50%)	0040	50.95	0.7000	50.27	0.6291	0.2348	19	1.08	050.30	0
050	Soluble K2O (50%)	0371	51.10	0.4000	50.27	0.6291	0.2348	19	1.32	050.99	0
050	Soluble K2O (50%)	0131	56.04‡	0.2970	50.27	0.6291	0.2348	19	9.17	050.51	0
050	Soluble K2O (50%)	0042	57.80‡	3.400	50.27	0.6291	0.2348	19	11.97	050.99	1
101	Acid Soluble Ca (%)	0494	0.1500	0.0210				1		101.33	0
121	Acid Soluble Mg (%)	0494	0.3282	0.0128				2		121.33	0
121	Acid Soluble Mg (%)	0611	0.9600	0.0000				2		121.99	0
145	Sulfate S, HCl soluble (%)	0494	17.49	0.0300	17.96	0.3520	0.0525	4	-1.35	145.00	0
145	Sulfate S, HCl soluble (%)	0405	17.92	0.0200	17.96	0.3520	0.0525	4	-0.11	145.00	0
145	Sulfate S, HCl soluble (%)	0220	18.13	0.0800	17.96	0.3520	0.0525	4	0.49	145.00	0
145	Sulfate S, HCl soluble (%)	0561	18.30	0.0800	17.96	0.3520	0.0525	4	0.97	145.00	0
148	Total S (17.5%)	0543	16.62†	0.7410	17.64	0.6660	0.3506	9	-1.41	148.07	0

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				
148	Total S (17.5%)	0611	17.15	0.5000	17.64	0.6660	0.3506	9	-0.68	148.99	0
148	Total S (17.5%)	0602	17.22	0.0700	17.64	0.6660	0.3506	9	-0.59	148.99	0
148	Total S (17.5%)	0597	17.40	0.1300	17.64	0.6660	0.3506	9	-0.34	148.99	0
148	Total S (17.5%)	0040	17.70	0.2000	17.64	0.6660	0.3506	9	0.08	148.07	0
148	Total S (17.5%)	0055	18.01	0.1950	17.64	0.6660	0.3506	9	0.51	148.01	0
148	Total S (17.5%)	0494	18.03	0.8788	17.64	0.6660	0.3506	9	0.55	148.07	0
148	Total S (17.5%)	0371	18.09	0.0000	17.64	0.6660	0.3506	9	0.62	148.99	0
148	Total S (17.5%)	0220	18.53	0.0900	17.64	0.6660	0.3506	9	1.23	148.99	0
148	Total S (17.5%)	0131	0.0000†	0.0000	17.64	0.6660	0.3506	9		148.00	4
151	Acid Soluble As (ppm)	0220	0.4000	0.0000	0.4207	0.0261	0.0895	3	-0.79	151.32	0
151	Acid Soluble As (ppm)	0086	0.4121	0.0789	0.4207	0.0261	0.0895	3	-0.33	151.32	0
151	Acid Soluble As (ppm)	0220	0.4500	0.1000	0.4207	0.0261	0.0895	3	1.12	151.99	0
151	Acid Soluble As (ppm)	0371	< 0.1		0.4207	0.0261	0.0895	3		151.99	5
151	Acid Soluble As (ppm)	0405	< 3		0.4207	0.0261	0.0895	3		151.32	5
181	Acid Soluble Cd (ppm)	0220	0.0300	0.0000				2		181.32	0
181	Acid Soluble Cd (ppm)	0220	0.0300	0.0000				2		181.99	0
181	Acid Soluble Cd (ppm)	0371	< 0.1					2		181.99	5
181	Acid Soluble Cd (ppm)	0405	< 1					2		181.32	5
190	Water Soluble Cl (0.8%)	0494	0.1100†	0.0060	0.1900	0.0627	0.0215	4	-1.28	190.00	0
190	Water Soluble Cl (0.8%)	0561	0.1700	0.0400	0.1900	0.0627	0.0215	4	-0.32	190.00	0
190	Water Soluble Cl (0.8%)	0602	0.2400‡	0.0200	0.1900	0.0627	0.0215	4	0.80	190.00	0
190	Water Soluble Cl (0.8%)	0602	0.2400‡	0.0200	0.1900	0.0627	0.0215	4	0.80	190.99	0
190	Water Soluble Cl (0.8%)	0220	< 0.01		0.1900	0.0627	0.0215	4		190.00	5
191	Acid Soluble Cr (ppm)	0405	10.00	0.0000				2		191.32	0
191	Acid Soluble Cr (ppm)	0494	12.70	0.2000				2		191.33	0
191	Acid Soluble Cr (ppm)	0371	< 0.1					2		191.99	5
202	Acid Soluble Co (ppm)	0405	< 1					0		202.32	5
221	Acid Soluble Cu (%)	0405	< 0.0002					0		221.32	5
241	Acid Soluble Fe (%)	0494	0.0552	0.0007				1		241.33	0
251	Acid Soluble Pb (ppm)	0405	< 4					0		251.32	5
281	Acid Soluble Hg (ppm)	0086	0.0010	0.0012				2		281.99	0
281	Acid Soluble Hg (ppm)	0371	0.5500	0.1000				2		281.30	0
281	Acid Soluble Hg (ppm)	0405	< 2					2		281.30	5
289	Acid Soluble Mo (ppm)	0405	< 1					0		289.32	5
291	Acid Soluble Ni (ppm)	0405	1.500	1.000				2		291.32	0
291	Acid Soluble Ni (ppm)	0371	1.700	0.0000				2		291.30	0
301	Acid Soluble Se (ppm)	0086	0.0408	0.0031				1		301.32	0
301	Acid Soluble Se (ppm)	0405	< 10					1		301.32	5
311	Sodium (%)	0494	0.1202	0.0040				2		311.33	0
311	Sodium (%)	0611	0.1900	0.0200				2		311.99	0
321	Acid Soluble Zn (%)	0405	0.0013	0.0009				2		321.32	0
321	Acid Soluble Zn (%)	0371	0.0030	0.0020				2		321.99	0

Interpreting Z Scores and Flags:

Analyte Group	Analyte (Units)	Lab Code	Lab Data		*Robust Method Values			# Tests	Magruder PT Z Score	Your Method	Flag
			Value	Range	Rob Mean	Rob SD	Rob R-bar				

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. Your offset values are higher (‡) or lower (†) than the Robust Analyte value ± Investigational Allowance. 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.