



Analyte PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Analytes: 17

Sample # 250451

Potassium Select PT Scheme

Labs Reporting: 11

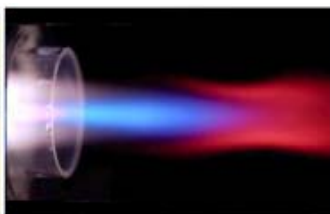
Soluable Potash

Statistical Summary

Issue Date : 05/31/2025

Analyte Code	Analyte Sample # 250451	# 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
050	Soluble K ₂ O (60%)	12	12	60.14	1.284	60.40	1.7840	0.5103	0.1841	0.84%	0.67	0.2578	1.29%
060	Water (Free) (%)	3	3	0.4693	0.5778	0.4693		0.5778	0.4170	123.10%		0.0473	4.48%
121	Acid Soluble Mg (%)	1		0.0950									
148	Total S (%)	1		0.0300									
151	Acid Soluble As (ppm)	3	0	1.333	1.443	0.4693		0.5778		123.10%		0.0020	17.93%
181	Acid Soluble Cd (ppm)	3	2	0.5667	0.3753	0.3500		0.0000	0.0000	0.00%		0.0200	18.73%
190	Water Soluble Cl (%)	4	4	47.50	1.019	47.50	1.0000	1.019	0.6370	2.15%	2.37	0.0733	1.45%
191	Acid Soluble Cr (ppm)	3	2	0.6083	0.3396	0.4125		0.0247	0.0219	6.00%		0.0450	18.28%
202	Acid Soluble Co (ppm)	3	0	0.4000	0.5196	0.4125	1.1238	0.0247		6.00%	0.05	0.0400	18.28%
221	Acid Soluble Cu (%)	1		0.0002									
251	Acid Soluble Pb (ppm)	3	2	1.480	2.183	0.2200		0.0707	0.0625	32.14%		0.0900	20.09%
281	Acid Soluble Hg (ppm)	2	0	1.005	1.407								
289	Acid Soluble Mo (ppm)	3	0	0.5333	0.4041	0.2200	1.0660	0.0707		32.14%	0.15	0.0400	20.09%
291	Acid Soluble Ni (ppm)	3	3	0.5033	0.4302	0.5033		0.4302	0.3105	85.48%		0.0900	17.74%
301	Acid Soluble Se (ppm)	3	0	3.533	5.600	0.5033		0.4302		85.48%		0.0350	17.74%
311	Sodium (%)	3	3	1.222	0.1274	1.222	0.1272	0.1274	0.0920	10.43%	2.33	0.0120	3.88%
321	Acid Soluble Zn (%)	1		0.0003									

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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Analytes: 17

Sample # 250451

Potassium Select PT Scheme

Labs Reporting: 11

Soluble Potash

Lab Values

Issue Date : 05/31/2025

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				
050	Soluble K ₂ O (60%)	0543	56.29†	0.0730	60.40	0.5103	0.2578	12	-8.06	050.52	0
050	Soluble K ₂ O (60%)	0547	59.87	1.130	60.40	0.5103	0.2578	12	-1.06	050.52	0
050	Soluble K ₂ O (60%)	0611	60.05	0.1000	60.40	0.5103	0.2578	12	-0.69	050.99	0
050	Soluble K ₂ O (60%)	0309	60.23	0.1000	60.40	0.5103	0.2578	12	-0.34	050.30	0
050	Soluble K ₂ O (60%)	0494	60.25	0.5000	60.40	0.5103	0.2578	12	-0.30	050.00	0
050	Soluble K ₂ O (60%)	0007	60.25	1.100	60.40	0.5103	0.2578	12	-0.30	050.51	0
050	Soluble K ₂ O (60%)	0185	60.40	0.3100	60.40	0.5103	0.2578	12	-0.02	050.32	0
050	Soluble K ₂ O (60%)	0494	60.55	0.3100	60.40	0.5103	0.2578	12	0.28	050.52	0
050	Soluble K ₂ O (60%)	0220	60.69	0.0600	60.40	0.5103	0.2578	12	0.56	050.00	0
050	Soluble K ₂ O (60%)	0405	60.85	0.0900	60.40	0.5103	0.2578	12	0.86	050.00	0
050	Soluble K ₂ O (60%)	0561	60.92	0.1000	60.40	0.5103	0.2578	12	1.01	050.99	0
050	Soluble K ₂ O (60%)	0040	61.40	0.2000	60.40	0.5103	0.2578	12	1.95	050.30	0
060	Water (Free) (%)	0405	0.0980	0.0020	0.4693	0.5778	0.0473	3	-0.64	060.99	0
060	Water (Free) (%)	0561	0.1750	0.0100	0.4693	0.5778	0.0473	3	-0.51	060.99	0
060	Water (Free) (%)	0220	1.135	0.1300	0.4693	0.5778	0.0473	3	1.15	060.30	0
121	Acid Soluble Mg (%)	0611	0.0950	0.0100				1		121.99	0
148	Total S (%)	0611	0.0300	0.0000				1		148.99	0
151	Acid Soluble As (ppm)	0220	< 0.5					0		151.32	5
151	Acid Soluble As (ppm)	0220	< 0.5					0		151.99	5
151	Acid Soluble As (ppm)	0405	< 3					0		151.32	5
181	Acid Soluble Cd (ppm)	0220	0.3500	0.0200				2		181.32	0
181	Acid Soluble Cd (ppm)	0220	0.3500	0.0200				2		181.99	0
181	Acid Soluble Cd (ppm)	0405	< 1					2		181.32	5
190	Water Soluble Cl (%)	0220	46.03	0.0100	47.50	1.019	0.0733	4	-1.45	190.00	0
190	Water Soluble Cl (%)	0405	47.64	0.1100	47.50	1.019	0.0733	4	0.13	190.00	0
190	Water Soluble Cl (%)	0561	48.10	0.0000	47.50	1.019	0.0733	4	0.59	190.00	0
190	Water Soluble Cl (%)	0611	48.25	0.1000	47.50	1.019	0.0733	4	0.73	190.99	0
191	Acid Soluble Cr (ppm)	0220	0.3950	0.0500				2		191.99	0
191	Acid Soluble Cr (ppm)	0220	0.4300	0.0400				2		191.32	0
191	Acid Soluble Cr (ppm)	0405	< 1					2		191.32	5
202	Acid Soluble Co (ppm)	0220	< 0.1					0		202.32	5

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				
202	Acid Soluble Co (ppm)	0220	< 0.1					0		202.99	5
202	Acid Soluble Co (ppm)	0405	< 1					0		202.32	5
221	Acid Soluble Cu (%)	0405	< 0.0002					0		221.32	5
251	Acid Soluble Pb (ppm)	0220	0.1700	0.1400				2		251.32	0
251	Acid Soluble Pb (ppm)	0220	0.2700	0.0400				2		251.99	0
251	Acid Soluble Pb (ppm)	0405	< 4					2		251.32	5
281	Acid Soluble Hg (ppm)	0220	< 0.01					0		281.99	5
281	Acid Soluble Hg (ppm)	0405	< 2					0		281.30	5
289	Acid Soluble Mo (ppm)	0220	< 0.3					0		289.32	5
289	Acid Soluble Mo (ppm)	0220	< 0.3					0		289.99	5
289	Acid Soluble Mo (ppm)	0405	< 1					0		289.32	5
291	Acid Soluble Ni (ppm)	0220	0.2450	0.1100	0.5033	0.4302	0.0900	3	-0.60	291.32	0
291	Acid Soluble Ni (ppm)	0220	0.2650	0.0700	0.5033	0.4302	0.0900	3	-0.55	291.99	0
291	Acid Soluble Ni (ppm)	0405	1.000	0.0000	0.5033	0.4302	0.0900	3	1.15	291.32	0
301	Acid Soluble Se (ppm)	0220	< 0.3					0		301.32	5
301	Acid Soluble Se (ppm)	0220	< 0.3					0		301.99	5
301	Acid Soluble Se (ppm)	0405	< 10					0		301.32	5
311	Sodium (%)	0405	1.077	0.0160	1.222	0.1274	0.0120	3	-1.14	311.00	0
311	Sodium (%)	0611	1.275	0.0100	1.222	0.1274	0.0120	3	0.41	311.99	0
311	Sodium (%)	0561	1.315	0.0100	1.222	0.1274	0.0120	3	0.73	311.99	0
321	Acid Soluble Zn (%)	0405	< 0.0003					0		321.32	5

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. 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.