



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 11

Sample # 240631

Nitrogen Select PT Scheme

Labs Reporting: 11

32-0-0 UAN Solution

Statistical Summary

Issue Date : 07/31/2024

Method Code	Analyte & Method Sample # 240631	# 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 (%)	1		7.572									
001.99	Ammoniacal N, Other (%)	3	3	7.518	0.0825	7.518		0.0825	0.0595	1.10%		0.0233	2.95%
002.99	Nitrate N, Other (%)	1		8.005									
005.99	Urea N, Other (%)	2	2	17.61	0.0955								
007.20	Urea, HPLC,85%acetonitrilemobilephase (%)	1		15.75									
008.10	Biuret, Spectrophotometric (as Biuret) (%)	1		0.9500									
008.99	Biuret, Other (%)	1		0.3450									
010.60	Total N, Combustion (32%)	8	8	32.81	0.8261	32.59	0.8800	0.3059	0.1352	0.94%	0.81	0.2529	1.75%
010.99	Total N, Other (32%)	1		31.85									
060.99	Water (Free), Other (%)	1		7.810									
101.99	Acid Soluble Ca, Other (%)	1		18.07									

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.



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Method Precision Report

Issue Date : 07/31/2024

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
010.60	Total N, Combustion (32%)	8	7	32.53	0.2117	0.1460	0.2167	0.2613	0.45%	0.67%	0.80%	1.206

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



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Lab Values

Issue Date : 07/31/2024

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 (%)	0547	7.572	0.0350				1			0
001.99	Ammoniacal N, Other (%)	0220	7.435	0.0100	7.518	0.0825	0.0233	3	-1.01		0
001.99	Ammoniacal N, Other (%)	0405	7.520	0.0200	7.518	0.0825	0.0233	3	0.02		0
001.99	Ammoniacal N, Other (%)	0593	7.600	0.0400	7.518	0.0825	0.0233	3	0.99		0
002.99	Nitrate N, Other (%)	0547	8.005	0.0100				1			0
005.99	Urea N, Other (%)	0405	17.55	0.0700				2			0
005.99	Urea N, Other (%)	0547	17.68	0.0400				2			0
007.20	Urea, HPLC,85%acetonitrilemobilephase (%)	0220	15.75	0.0000				1			0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0405	0.9500	0.0200				1			0
008.99	Biuret, Other (%)	0220	0.3450	0.0100				1			0
010.60	Total N, Combustion (32%)	0494	32.21	0.5800	32.59	0.3059	0.2529	8	-1.14	OK	0
010.60	Total N, Combustion (32%)	0561	32.36	0.3400	32.59	0.3059	0.2529	8	-0.69	OK	0
010.60	Total N, Combustion (32%)	0055	32.43	0.4400	32.59	0.3059	0.2529	8	-0.49	OK	0
010.60	Total N, Combustion (32%)	0220	32.54	0.1000	32.59	0.3059	0.2529	8	-0.15	OK	0
010.60	Total N, Combustion (32%)	0405	32.59	0.0300	32.59	0.3059	0.2529	8	-0.02	OK	0
010.60	Total N, Combustion (32%)	0586	32.76	0.0300	32.59	0.3059	0.2529	8	0.49	OK	0
010.60	Total N, Combustion (32%)	0040	32.80	0.0000	32.59	0.3059	0.2529	8	0.63	OK	0
010.60	Total N, Combustion (32%)	0593	34.80	0.2500	32.59	0.3059	0.2529	8	6.59	High	0
010.99	Total N, Other (32%)	0615	31.85	0.3000				1			0
060.99	Water (Free), Other (%)	0586	7.810	0.3000				1			0
101.99	Acid Soluble Ca, Other (%)	0042	18.07	0.8900				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 ± 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