

Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 9

Sample # 230631

Nitrogen Select PT Scheme

Labs Reporting: 12

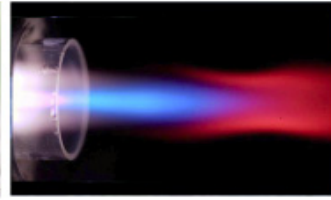
Granular Urea 46-0-0

Statistical Summary

Issue Date : 07/31/2023

Method Code	Analyte & Method Sample # 230631	# 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
005.99	Urea N, Other (%)	1		46.05									
008.10	Biuret, Spectrophotometric (as Biuret) (%)	4	4	1.015	0.0743	1.015		0.0743	0.0464	7.32%		0.0113	3.99%
008.99	Biuret, Other (%)	1		0.8660									
010.10	Total N, Reduced Iron (46%)	1		46.11									
010.60	Total N, Combustion (46%)	8	7	332.9	810.3	46.41	0.8800	0.3451	0.1630	0.74%	0.91	0.2306	1.47%
010.99	Total N, Other (46%)	3	3	46.61	0.3585	46.61	0.8800	0.3585	0.2587	0.77%	0.95	0.0933	1.46%
060.00	Water (Free), Vacuum Oven (%)	2	2	0.1950	0.1061								
060.20	Water (Free), Karl Fischer (%)	3	3	0.2265	0.0103	0.2265		0.0103	0.0075	4.56%		0.0137	5.00%
060.99	Water (Free), Other (%)	1		0.0700									

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.



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Sample # 230631

Nitrogen Select PT Scheme

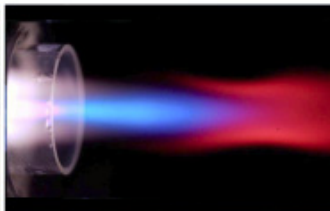
Granular Urea 46-0-0

Method Precision Report

Issue Date : 07/31/2023

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 (46%)	8	7	46.41	0.3043	0.2482	0.2490	0.3516	0.53%	0.54%	0.76%	1.412

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



Method PT For All Labs

Magruder Fertilizer Proficiency Testing Program

Methods: 9

Sample # 230631

Nitrogen Select PT Scheme

Labs Reporting: 12

Granular Urea 46-0-0

Lab Values

Issue Date : 07/31/2023

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	R-bar				
005.99	Urea N, Other (%)	0626	46.05	0.0000				1			0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0626	0.9085	0.0050	1.015	0.0743	0.0113	4	-1.43		0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0371	1.020	0.0200	1.015	0.0743	0.0113	4	0.07		0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0513	1.055	0.0100	1.015	0.0743	0.0113	4	0.54		0
008.10	Biuret, Spectrophotometric (as Biuret) (%)	0405	1.075	0.0100	1.015	0.0743	0.0113	4	0.81		0
008.99	Biuret, Other (%)	0626	0.8660	0.0260				1			0
010.10	Total N, Reduced Iron (46%)	0626	46.11	0.0200				1			0
010.60	Total N, Combustion (46%)	0086	45.94	0.7560	46.41	0.3451	0.2306	7	-1.22	OK	0
010.60	Total N, Combustion (46%)	0561	46.11	0.0500	46.41	0.3451	0.2306	7	-0.80	OK	0
010.60	Total N, Combustion (46%)	0405	46.36	0.0200	46.41	0.3451	0.2306	7	-0.13	OK	0
010.60	Total N, Combustion (46%)	0494	46.52	0.4200	46.41	0.3451	0.2306	7	0.29	OK	0
010.60	Total N, Combustion (46%)	0371	46.53	0.1500	46.41	0.3451	0.2306	7	0.30	OK	0
010.60	Total N, Combustion (46%)	0586	46.57	0.0700	46.41	0.3451	0.2306	7	0.41	OK	0
010.60	Total N, Combustion (46%)	0040	46.85	0.3000	46.41	0.3451	0.2306	7	1.15	OK	0
010.60	Total N, Combustion (46%)	0042	2,338	4,584	46.41	0.3451	0.2306	7	6004.72	High	1
010.99	Total N, Other (46%)	0513	46.37	0.0600	46.61	0.3585	0.0933	3	-0.68		0
010.99	Total N, Other (46%)	0220	46.45	0.0100	46.61	0.3585	0.0933	3	-0.47		0
010.99	Total N, Other (46%)	0615	47.03	0.2100	46.61	0.3585	0.0933	3	1.15		0
060.00	Water (Free), Vacuum Oven (%)	0405	0.1200	0.0000				2			0
060.00	Water (Free), Vacuum Oven (%)	0561	0.2700	0.0000				2			0
060.20	Water (Free), Karl Fischer (%)	0371	0.2150	0.0100	0.2265	0.0103	0.0137	3	-1.11		0
060.20	Water (Free), Karl Fischer (%)	0513	0.2295	0.0010	0.2265	0.0103	0.0137	3	0.29		0
060.20	Water (Free), Karl Fischer (%)	0626	0.2350	0.0300	0.2265	0.0103	0.0137	3	0.82		0
060.99	Water (Free), Other (%)	0586	0.0700	0.0200				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. 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

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	R-bar				

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.