Organic Application Note

Nitrogen/Protein in Cereals and Cereal Products

Accessories
502-186 Tin Foil Cups, 501-614 Spatula

Sample Weight
0.15 to 0.2 g

Calibration Standard
502-092 EDTA, 502-211 Glycine, or other suitable standard

Furnace Temperature
950°C

Flow Profile
All High

Atmospheric Blank (N)
~0.04

Protein Factor
~5.7 (6.25 may be used for some types of cereals and cereal products)

Crucible Changing Interval
200 to 300 analyses (using 614-961-110 Porous Crucible)

Analysis Time
~160 seconds

Procedure
1. Prepare the instrument by following the procedure as outlined in the operator's instruction manual (i.e. check gas supplies, perform any required maintenance, perform leak checks, etc.).
2. Analyze blanks (gas) until a plateau is reached. Analyze three to five additional blanks and set blank using these data.
3. Analyze five EDTA standards at 0.2 g and drift correct (if using the PC option). *NOTE: Each method on PC requires prior calibration with multiple weights of EDTA (0.035 to 0.4 g). If PC is not installed, analyze five EDTA standards and calibrate using the DSP screen menu.*
4. Weigh samples into a 502-186 Tin Foil Cup, seal tin foil to avoid trapping air, and analyze.
5. Analyze a standard at end of set to verify calibration.

FP-528

Typical Results

Sample	Weight (g)	% Nitrogen	% Protein	Sample	Weight (g)	% Nitrogen	% Protein
Hard Wheat	0.1859	2.516	14.34	Soft Wheat	0.1917	1.560	8.89
Flour	0.1648	2.508	14.30	Flour	0.1686	1.560	8.89
	0.1862	2.498	14.24		0.1686	1.570	8.95
	0.1726	2.496	14.23		0.1820	1.552	8.85
	0.1750	2.505	14.28		0.1730	1.565	8.92
	0.1838	2.520	14.36		0.1700	1.560	8.89
		Average =	**14.29**			**Average =**	**8.90**
		Std. Dev. =	**0.05**			**Std. Dev. =**	**0.03**

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