Organic Application Note

Nitrogen/Protein in Meat Products

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

Sample Weight
0.2 to 0.4 g

Calibration Standard
502-092 EDTA, or other suitable standard

Furnace Temperature
950°C

Analysis Time
~3 minutes

Flow Profile
All High

Protein Factor
6.25

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 (using the 502-186 Tin Foil Cups) 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. After mixing the sample well, weigh ~0.25 g meat into a 502-186 Tin Foil Cup. Carefully seal the capsule with your fingernail to avoid losing sample, then gently roll the capsule between thumb and forefinger. Analyze.
5. Analyze a standard at end of set to verify calibration.

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Typical Results

Sample	Weight (g)		% Nitrogen	% Protein
Chopped Ham	0.2329		2.24	13.99
	0.2565		2.22	13.89
	0.2480		2.22	13.90
	Average	**=**	***2.23***	***13.92***
	Std. Dev.	**=**	***0.012***	***0.06***
Smoked Ham	0.2515		3.07	19.17
	0.2370		3.08	19.22
	0.2483		3.08	19.26
	0.2261		3.06	19.14
	Average	**=**	***3.07***	***19.20***
	Std. Dev.	**=**	***0.010***	***0.05***
Bologna	0.2755		1.93	12.08
	0.2644		1.89	11.80
	0.3436		1.90	11.89
	Average	**=**	***1.91***	***11.92***
	Std. Dev.	**=**	***0.021***	***0.14***

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