

Instrument: FP528

Nitrogen/Protein in Meat Products

LECO Corporation; Saint Joseph, Michigan USA

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*

**Protein factor was obtained from the United States Department of Agriculture, Circular No. 183. The choice of protein factor to be used for determining protein content in different materials is the subject of some debate. As a result, if being used for commerce, the value of this conversion factor should be part of the contractual agreement between buyer and seller.*

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.

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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