

Crude and total fat in feed samples with E-800 HE

UniversalExtractor E-800 HE: Crude and total fat determination in feed samples

1. Introduction

The crude fat and total fat content of different feed samples were determined with the UniversalExtractor E-800 HE. The samples were extracted with a hot extraction method using petroleum ether. This Short Note follows official method EC No. 152/2009 [1].

2. Experimental

Equipment: HydrolEx H-506, UniversalExtractor E-800 HE

Samples: Chicken meal (23 %), salmon meal (38.2 %), duck meal (44.6 %), shrimp cubes (18.4 %). The samples were purchased at a local supermarket.

Total fat: the homogeneous samples were hydrolyzed using the HydrolEx H-506. The glass samples tubes were dried in a drying oven or microwave oven and cooled down to ambient temperatures in a desiccator.

Crude fat: the homogeneous samples were weighed into an extraction thimble.

Extraction: the glass sample tubes or extraction thimbles were placed into the beakers of UniversalExtractor E-800 HE. The hot extractions were carried out with the UniversalExtractor E-800 HE using the parameters specified in Table 1.

Table 1: Hot Extraction with UniversalExtractor E-800 HE

Step	Value
Extraction method	Hot extraction
Solvent	Petroleum ether
Extraction step	5 min (heating level 5)
Rinse step	30 min (heating level 5)
Number of drains	3
Dry step	3 min (heating level 3)
Solvent volume	50 mL

3. Results

Table 2 shows the results of the crude and total fat determinations of different feed samples

Table 2: Results of crude and total fat determination using UniversalExtractor E-800 HE (n =3).

Sample	Crude fat [%] (rsd in %)	Total fat [%] (rsd in %)
Duck meal	28.43 (0.48)	30.45 (1.10)
Shrimp meal	3.91 (0.25)	5.84 (1.60)
Salmon meal	33.96 (0.96)	35.81 (0.59)
Chicken meal	27.95 (0.48)	28.98 (0.64)

4. Conclusion

The determination of crude and total fat in different feed products using the UniversalExtractor E-800 HE provides reliable and reproducible results with low relative standard deviations (rsd).

5. References

[1] Commission Regulation (EC) No 152/2009 of January 2009 laying down the methods of sampling and analysis for the official control of feed. [EUR-Lex — Access to European Union law — choose your language \(europa.eu\)](https://eur-lex.europa.eu/eli/reg/2009/152/oj)

For more information, please refer to Application Note 854/2024.

