
INTERNATIONAL STANDARD



1443

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Meat and meat products — Determination of total fat content

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, International Standard ISO 1443 replaces ISO Recommendation R 1443-1970 drawn up by Technical Committee ISO/TC 34, *Agricultural food products*.

The Member Bodies of the following countries approved the Recommendation :

Australia	Hungary	Poland
Bulgaria	India	Portugal
Chile	Iran	Romania
Czechoslovakia	Israel	Spain
Egypt, Arab Rep. of	Korea, Rep. of	Thailand
France	Netherlands	Turkey
Germany	Norway	United Kingdom

The Member Body of the following country expressed disapproval of the Recommendation on technical grounds :

New Zealand

Meat and meat products – Determination of total fat content

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a reference method for the determination of the total fat content of meat and meat products¹⁾.

2 REFERENCE

ISO . . . , *Meat and meat products – Sampling*.²⁾

3 DEFINITION

total fat of meat and meat products: The fat extracted under the operating conditions described.

The total fat content is expressed as a percentage by mass.

4 PRINCIPLE

Boiling of the test portion with dilute hydrochloric acid to free the occluded and bound lipid fractions, filtration of the resulting mass, drying, and extraction with *n*-hexane or light petroleum, of the fat retained on the filter.

5 REAGENTS

All reagents shall be of a recognized analytical quality. Water shall be distilled water or water of at least equivalent purity.

5.1 Extraction solvent, *n*-hexane or, alternatively, light petroleum distilling between 40 and 60 °C, and having a bromine value less than 1. For either solvent, the residue on complete evaporation shall not exceed 0,002 g per 100 ml.

5.2 Hydrochloric acid, approximately 4 N solution.

Dilute 100 ml of concentrated hydrochloric acid ($\rho_{20} = 1,19$ g/ml) with 200 ml of water and mix.

5.3 Blue litmus paper.

5.4 Boiling chips.

6 APPARATUS

Usual laboratory equipment not otherwise specified, and the following items:

6.1 Mechanical meat mincer, laboratory size, fitted with a plate with holes of diameter not exceeding 4 mm.

6.2 Conical flask, capacity 250 ml.

6.3 Clock glass or **Petri dish**, diameter not less than 80 mm.

6.4 Extraction thimble, made of filter paper and defatted.

6.5 Cotton wool, defatted.

6.6 Extraction apparatus, continuous or semi-continuous, for example the Soxhlet type, with an extraction flask of about 150 ml capacity.

6.7 Sand bath or **water bath**, electrically heated or similar suitable apparatus.

6.8 Drying oven, electrically heated, capable of being controlled at 103 ± 2 °C.

6.9 Desiccator, containing an efficient desiccant.

6.10 Analytical balance.

6.11 Fluted filter paper, qualitative, of medium speed.

7 SAMPLE

7.1 Start from a representative sample of at least 200 g taken according to ISO

7.2 Store the sample in such a way that deterioration and change in composition are prevented.

1) The fat obtained cannot be used for the determination of the characteristics of the fat.

2) In preparation.