INTERNATIONAL STANDARD

ISO 662

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Animal and vegetable fats and oils — Determination of moisture and volatile matter content

Corps gras d'origines animale et végétale — Détermination de la teneur en eau et en matières volatiles

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 34, *Food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

This third edition cancels and replaces the second edition (ISO 662:1998), of which it constitutes a minor revision. A non-applicability statement for milk and milk products has been added to the Scope.

Annex A of this International Standard is for information only.

Animal and vegetable fats and oils — Determination of moisture and volatile matter content

1 Scope

This International Standard specifies two methods for the determination, by drying, of the moisture and volatile matter content of animal or vegetable fats and oils:

— method A, using a sand bath or hotplate;

— method B, using a drying oven.

Method A is applicable to all fats and oils.

Method B is applicable only to non-drying fats and oils with an acid value less than 4. Under no circumstances are lauric oils be analysed by this method.

Milk and milk products (or fat obtained from milk and milk products) are excluded from the Scope of this International Standard.

2 Normative reference

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 661, *Animal and vegetable fats and oils — Preparation of test sample*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
moisture and volatile matter content
loss in mass undergone by the product on heating at 103 °C ± 2 °C under the conditions specified in this International Standard

Note 1 to entry: It is expressed as a percentage by mass.

4 Principle

Heating a test portion at 103 °C ± 2 °C until moisture and volatile substances are completely eliminated, and determination of the loss in mass.

5 Sampling

Sampling is not part of the method specified in this International Standard. A recommended sampling method is given in ISO 5555.

It is important that the laboratory receives a sample which is truly representative and has not been damaged or changed during transport or storage.

6 Preparation of test sample

Prepare the test sample in accordance with ISO 661.

7 Method A

7.1 Apparatus

Usual laboratory apparatus and, in particular, the following.

7.1.1 Analytical balance, capable of weighing to the nearest 0,001 g.

7.1.2 Dish, made of porcelain or glass, 80 mm to 90 mm in diameter, about 30 mm deep, with a flat bottom.

7.1.3 Thermometer, graduated from about 80 °C to at least 110 °C, about 100 mm long, with a reinforced tip and with an expansion chamber at its upper end.

7.1.4 Sand bath or **electric hotplate**.

7.1.5 Desiccator, containing an efficient desiccant.

7.2 Procedure

7.2.1 Test portion

Weigh, to the nearest 0,001 g, approximately 20 g of the test sample (Clause 6) into the dish (7.1.2) which has been previously dried and then weighed together with the thermometer (7.1.3).

7.2.2 Determination

Heat the dish containing the test portion (7.2.1) on the sand bath or electric hotplate (7.1.4), allowing the temperature to rise at a rate of about 10 °C/min up to 90 °C, and stirring constantly with the thermometer.

Reduce the rate of heating, observing the rate at which bubbles rise from the bottom of the dish, and allow the temperature to rise to 103 °C ± 2 °C. Do not heat above 105 °C. Continue to stir, scraping the bottom of the dish until all evolution of bubbles has ceased.

To ensure the removal of all moisture, repeat the heating to 103 °C ± 2 °C several times, cooling to 95 °C between the heating periods. Then allow the dish and thermometer to cool in the desiccator (7.1.5) to room temperature and weigh to the nearest 0,001 g. Repeat this operation until the difference between the results of two successive weighings does not exceed 2 mg.

7.2.3 Number of determinations

Carry out two determinations on test portions taken from the same test sample (Clause 6).

8 Method B

8.1 Apparatus

Usual laboratory apparatus and, in particular, the following.