

INTERNATIONAL
STANDARD

ISO
1740

IDF
6

Third edition
2004-12-01

**Milkfat products and butter —
Determination of fat acidity (Reference
method)**

*Produits à matière grasse laitière et beurre — Détermination de l'acidité
de la matière grasse (Méthode de référence)*



Reference numbers
ISO 1740:2004(E)
IDF 6:2004(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 1740|IDF 6 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF), in collaboration with AOAC International. It is being published jointly by ISO and IDF and separately by AOAC International.

This edition of ISO 1740|IDF 6 cancels and replaces ISO 1740:1991, of which it constitutes a minor revision. Only editorial changes have been made.

Foreword

IDF (the International Dairy Federation) is a worldwide federation of the dairy sector with a National Committee in every member country. Every National Committee has the right to be represented on the IDF Standing Committees carrying out the technical work. IDF collaborates with ISO and AOAC International in the development of standard methods of analysis and sampling for milk and milk products.

Draft International Standards adopted by the Action Teams and Standing Committees are circulated to the National Committees for voting. Publication as an International Standard requires approval by at least 50 % of the National Committees casting a vote.

ISO 1740|IDF 6 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF), in collaboration with AOAC International. It is being published jointly by ISO and IDF and separately by AOAC International.

All work was carried out by the Joint ISO/IDF/AOAC Group of Experts, *Free fatty acids (E39)*, under the aegis of its project leader, Mr A. Jellema (NL).

This edition of ISO 1740|IDF 6 cancels and replaces IDF 6B:1989. Only editorial changes have been made.

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Milkfat products and butter — Determination of fat acidity (Reference method)

1 Scope

This International Standard specifies a method for the determination of the acidity of the fat contained in milkfat products¹⁾ and in butter.

2 Terms and definitions

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

2.1

fat acidity of a milkfat product or butter

amount of alkali required to neutralize the free fatty acids in the test portion, as determined using the method specified in this International Standard, divided by the mass of the test portion

NOTE 1 The fat acidity is expressed in millimoles per 100 g of fat.

NOTE 2 The following alternative methods of expression of fat acidity have been used in the past but they are no longer recommended:

- a) the number of milligrams of potassium hydroxide required to neutralize the free acids contained in 1 g of fat (equal to the acid value);
- b) the number of grams of oleic acid per 100 g of fat (equal to the percentage of free fatty acids).

3 Principle

In the particular case of butter, the fat is first separated from the melted butter by centrifuging.

In an oven, the melted milkfat product or fat from butter is filtered through a filter paper.

The filtrate is dissolved in a mixture of propan-2-ol and light petroleum, then titrated with tetra-*n*-butylammonium hydroxide standard solution using thymol blue as indicator.

4 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified, and distilled or demineralized water or water of equivalent purity.

1) As defined in FAO/WHO Standard A-2, Section A for anhydrous milkfat and anhydrous butter oil, and Section B for ghee.