
**Butter — Determination of the refractive
index of the fat (Reference method)**

*Beurre — Détermination de l'indice de réfraction de la matière grasse
(Méthode de référence)*



Reference numbers
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IDF 7:2006(E)

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Foreword

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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.

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ISO 1739|IDF 7 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, and the International Dairy Federation (IDF). It is being published jointly by ISO and IDF.

This edition of ISO 1739|IDF 7 cancels and replaces ISO 1739:1975, of which it constitutes a minor revision.

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 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 IDF National Committees casting a vote.

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This edition of ISO 1739|IDF 7 cancels and replaces IDF 7A:1969, of which it constitutes a minor revision.

All work was carried out by the former Joint ISO/IDF/AOAC Group of Experts on *Fat* (E40-E301).

Butter — Determination of the refractive index of the fat (Reference method)

1 Scope

This International Standard specifies a reference method for the determination of the refractive index of the fat obtained by melting butter.

2 Normative references

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

ISO 1740, *Milkfat products and butter — Determination of fat acidity (Reference method)*

3 Terms and definitions

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

3.1

refractive index of the fat from butter

ratio, at 40 °C, of the velocity of light of a defined wavelength (the mean of D-lines of sodium) in air to its velocity in the fat

NOTE In theory, there are two D-lines of sodium and the ratio should be referred to the velocity of light in vacuum, not in air. In practice, sodium light may be considered monochromatic, and the ratio related to that in air.

4 Principle

The refractive index of the fat obtained by melting butter is measured by means of a suitable refractometer.

5 Apparatus

5.1 Refractometer, with a scale graduated in refractive index units to the third decimal place, and having prisms heated by means of a circulating liquid at 40 °C, the temperature being thermostatically controlled to within $\pm 0,1$ °C.

5.2 Light source, sodium vapour lamp.

White light may also be used if the refractometer is fitted with an achromatic compensating device.