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Milk — Determination of fat content — Gravimetric method (Reference method)

AS ISO 1211:2021

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Milk — Determination of fat content — Gravimetric method (Reference method)

First published as AS ISO 1211:2021.

Preface

This Standard was prepared by the Standards Australia Committee FT-024, Food Products.

The objective of this document is to specify the reference method for the determination of the fat content of milk of good physicochemical quality.

The method is applicable to raw cow milk, raw sheep milk, raw goat milk, reduced fat milk, skimmed milk, chemically preserved milk, and processed liquid milk.

It is not applicable when greater accuracy is required for skimmed milk, e.g. to establish the operating efficiency of cream separators.

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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 1211|IDF 1 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 third edition of ISO 1211|IDF 1 cancels and replaces the second edition (ISO 1211:1999), which has been technically revised.

Foreword

IDF (the International Dairy Federation) is a non-profit organization representing the dairy sector worldwide. IDF membership comprises National Committees in every member country as well as regional dairy associations having signed a formal agreement on cooperation with IDF. All members of IDF have 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.

The main task of Standing Committees is to prepare International Standards. Draft International Standards adopted by the Standing Committees are circulated to the National Committees for endorsement prior to publication as an International Standard. Publication as an International Standard requires approval by at least 50 % of the IDF National Committees casting a vote.

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

ISO 1211|IDF 1 was prepared by the International Dairy Federation (IDF) and Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*. It is being published jointly by IDF and ISO.

All work was carried out by the Joint ISO-IDF Project Group on *Fat in milk* of the Standing Committee on *Analytical methods for composition* under the aegis of its project leader, Mrs. S. Orlandini (IT).

This edition of ISO 1211|IDF 1 cancels and replaces IDF 1D:1999, which has been technically revised.

NOTES

Australian Standard®

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WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This International Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

1 Scope

This International Standard specifies the reference method for the determination of the fat content of milk of good physicochemical quality.

The method is applicable to raw cow milk, raw sheep milk, raw goat milk, reduced fat milk, skimmed milk, chemically preserved milk, and processed liquid milk.

It is not applicable when greater accuracy is required for skimmed milk, e.g. to establish the operating efficiency of cream separators.

NOTE ISO 7208[7] specifies a special method for skimmed milk products.

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 3889|IDF 219, *Milk and milk products — Specification of Mojonnier-type fat extraction flasks*

3 Terms and definitions

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

3.1
fat content of milk
mass fraction of substances determined by the procedure specified in this International Standard

Note 1 to entry: The fat content is expressed as a percentage mass fraction.

4 Principle

An ammoniacal ethanolic solution of a test sample is extracted with diethyl ether and light petroleum. The solvents are removed by distillation or evaporation. The mass of the substances extracted is determined.

NOTE This is usually known as the Röse-Gottlieb principle.

5 Reagents

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

The reagents shall leave no appreciable residue when the determination is carried out by the method specified (see 9.3.2).