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Anhydrous milk fat — Determination of sterol composition by gas liquid chromatography (Routine method)

Matière grasse anhydre du lait — Détermination de la composition stérolique par chromatographie liquide en phase gazeuse (Méthode de routine)

Reference numbers
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IDF 200:2006(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 18252 | IDF 200 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.

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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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ISO 18252 | IDF 200 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 Action Team on *Fat*, of the Standing Committee on *Main components in milk*, under the aegis of its project leaders, Mrs. M. Juarez (ES) and Mrs. G. Contarini (IT).

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Anhydrous milk fat — Determination of sterol composition by gas liquid chromatography (Routine method)

WARNING — The use of this International Standard may involve hazardous materials, operations and equipment. This standard does not purport to address all the safety problems associated with its use. It is the responsibility of the user of this standard to establish safety and health practices and determine the applicability of regulatory limitations prior to use.

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1 Scope

This International Standard specifies a routine gas liquid chromatographic method for the determination of the sterol composition in anhydrous milk fat extracted from dairy products directly on the unsaponifiable matter, without purification and derivatization.

The first goal of this International Standard is the quantitative evaluation of cholesterol, which represents about 98 % of the sterol fraction of pure milk fat. Moreover, in the case of analysis of milk fat in a mixture of vegetable fats, the specified procedure allows the evaluation of the most important phytosterols. The procedure has been validated on milk fat samples containing approximately 28 % to 32 % of vegetable fat.

Due to the absence of the purification step, which allows the complete removal of interfering compounds from the unsaponifiable matter, particular care should be taken when applying this method to the verification of the purity of milk fat of unknown origin. In the case of suspicious results, the reference method described in ISO 12078 | IDF 159 can be used.

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 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 14156 | IDF 172, *Milk and milk products — Extraction methods for lipids and liposoluble compounds*

3 Terms and definitions

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

3.1
sterol composition
mass fraction of substances determined by the procedure specified in this International Standard

NOTE The sterol composition can be expressed either as milligrams per 100 g of fat, or as percent of total sterol content.

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