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Milk and milk products — Extraction methods for lipids and liposoluble compounds

Lait et produits laitiers — Méthodes d'extraction des lipides et des composés liposolubles

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Foreword

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This document 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 second edition cancels and replaces the first edition (ISO 14156 | IDF 172:2001), which has been technically revised. It also incorporates the Amendment ISO 14156:2001/Amd 1:2007.

The main changes are as follows:

— the inclusion of ISO 14156:2001/Amd 1:2007.

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IDF (the International Dairy Federation) is a non-profit private sector organization representing the interests of various stakeholders in dairying at the global level. IDF members are organized in National Committees, which are national associations composed of representatives of dairy-related national interest groups including dairy farmers, dairy processing industry, dairy suppliers, academics and governments/ food control authorities.

ISO and IDF collaborate closely on all matters of standardization relating to methods of analysis and sampling for milk and milk products. Since 2001, ISO and IDF jointly publish their International Standards using the logos and reference numbers of both organizations.

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Milk and milk products — Extraction methods for lipids and liposoluble compounds

1 Scope

This document specifies methods for the extraction or separation of a representative part of the fat, containing lipids and liposoluble compounds, from milk and milk products.

The method is applicable to the methods described in ISO 12078 | IDF 159, ISO 15884 | IDF 182, ISO 15885 | IDF 184 and ISO 18252 | IDF 200.

NOTE Free fatty acids are not part of extracted fat as described in methods for the fat determination in milk, condensed milk, dried milk products, cream and fermented milk.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
lipids and liposoluble compound
substance extracted or separated by various procedures

Note 1 to entry: The procedures are specified in this document.

4 Principle

The lipids and liposoluble compounds of milk and various milk products are extracted or separated for further analysis. In the case of butter and other high-fat products, the lipid fraction is physically separated. For other products, the lipids and related compounds are extracted with solvents after suitable preparation of the sample.

5 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified.

5.1 Ammonia solution, $c(NH_3)$ = 14 mol/l (ρ_{20} = 919 g/l).

5.2 Ethanol (C_2H_5OH), containing a volume fraction of 96 % ± 2 %.

5.3 Diethyl ether ($C_2H_5OC_2H_5$), free from peroxides.

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