
**Cheese and processed cheese
products, caseins and caseinates —
Determination of fat content —
Gravimetric method**

*Fromages et fromages fondus, caséines et caséinates —
Détermination de la teneur en matière grasse — Méthode
gravimétrique*



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Contents

Page

Forewords	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Reagents	2
6 Apparatus	2
7 Sampling	4
8 Preparation of test sample	4
8.1 Cheese	4
8.2 Caseins and caseinates	4
9 Procedure	5
9.1 Test portion	5
9.2 Blank test	5
9.3 Preparation of a fat-collecting vessel	5
9.4 Determination	5
10 Calculation and expression of results	8
11 Precision	9
11.1 Interlaboratory test	9
11.2 Repeatability	9
11.3 Reproducibility	9
11.4 Test report	9
Annex A (informative) Additional procedures	11
Annex B (informative) Fat-extraction tube model with siphon or wash-bottle fittings	13
Annex C (informative) Interlaboratory test for cheeses	14
Annex D (informative) Interlaboratory test for caseins and caseinates	15
Bibliography	16

Forewords

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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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), in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 302, *Milk and milk products - Methods of sampling and analysis*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement). It is being published jointly by ISO and IDF.

This first edition cancels and replaces ISO 1735 | IDF 5:2004 and ISO 5543 | IDF 127:2004, which have been merged and technically revised.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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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This document was prepared by the IDF *Standing Committee on Analytical Methods for Composition* and ISO Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 302, *Milk and milk products - Methods of sampling and analysis*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement). It is being published jointly by ISO and IDF.

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Cheese and processed cheese products, caseins and caseinates — Determination of fat content — Gravimetric method

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

1 Scope

This document specifies a method for the determination of the fat content of all types of cheese and processed cheese products containing lactose of below 5 % (mass fraction) of non-fat solids, and all types of caseins and caseinates.

The method is not applicable to fresh cheese types containing, for example, fruits, syrup or muesli. For such products, the Schmid-Bondzynski-Ratzlaff (SBR) principle is not applicable due to high concentrations of sugars. For these products, the method using the Weibull-Berntrop principle (see ISO 8262-3 | IDF 124-3^[4]) is appropriate.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

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.

ISO and IEC maintain terminological 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

fat content

mass fraction of substances determined by the procedure specified in this document

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

4 Principle

A test portion is digested with hydrochloric acid, then ethanol is added. The acid-ethanolic solution is subsequently extracted with diethyl ether and light petroleum. The solvents are removed by