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## Cheese — Determination of fat content — Van Gulik method

*Fromages — Détermination de la teneur en matière grasse — Méthode  
Van Gulik*



Reference numbers  
ISO 3433:2008(E)  
IDF 222:2008(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 3433|IDF 222 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 of ISO 3433|IDF 222 cancels and replaces the first edition (ISO 3433:1975), of which it constitutes a minor revision.

This corrected version of ISO 3433|IDF 222:2008 incorporates the following corrections:

- a) in Clause 4, 5.2 (20 occurrences), 6.4, and 8.3.5, "amyl alcohol" has been deleted, and "*iso*-amyl alcohol" inserted;
- b) in 5.2.1, "98 %" has been deleted, and "99 %" inserted;
- c) in 5.2.1, the common name "*iso*-amyl alcohol" is now associated with the systematic name "3-methylbutan-1-ol", whereas "amyl alcohol", with a footnote about the various amyl isomers, was formerly associated with "pentan-1-ol".

## 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 at 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 3433|IDF 222 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 former Joint ISO-IDF-AOAC Group of Experts (E31-E301) which is now part of the Joint ISO-IDF Action Team on *Fat*, of the Standing Committee on *Main components in milk*.

# Cheese — Determination of fat content — Van Gulik method

## 1 Scope

This International Standard specifies the Van Gulik method for the determination of the fat content, as a mass fraction, of cheese.

This method is applicable to all types of cheese. However, it may not give completely satisfactory results when applied to cheeses with an internal mould (blue-veined cheeses).

NOTE For blue-veined cheeses, see Note to 8.3.11.

## 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 2446, *Milk — Determination of fat content (Routine method)*

ISO 3432|IDF 221:2007, *Cheese — Determination of fat content — Butyrometer for Van Gulik method*

## 3 Terms and definitions

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

### 3.1

#### Van Gulik method

an empirical procedure which, when applied to a cheese, gives a value for fat content, expressed in grams per 100 g of cheese, that is equivalent to that obtained by the reference method (ISO 1735|IDF 5 [2])

### 3.2

#### fat content of cheese

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

NOTE The fat content is expressed in grams per 100 g, numerically equivalent to a percentage mass fraction.

## 4 Principle

The protein is dissolved in sulfuric acid, then the fat of the cheese is separated in a Van Gulik butyrometer by centrifuging, the separation being assisted by the addition of a small quantity of *iso*-amyl alcohol.

The fat content is then read directly from the butyrometer scale.