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**Milk — Determination of fat content —  
Gerber butyrometers**

*Lait — Détermination de la teneur en matière grasse — Butyromètres  
Gerber*



Reference numbers  
ISO 488:2008(E)  
IDF 105:2008(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 488|IDF 105 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 488:1983), of which it constitutes a minor revision.

## 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.

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.

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 488|IDF 105 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 E40-E301 which is now part of the Joint ISO-IDF Action Team on *Fat* of the Standing Committee on *Main components in milk*.

ISO 488|IDF 105:2008 cancels and replaces IDF 105:1981, of which it constitutes a minor revision.

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# Milk — Determination of fat content — Gerber butyrometers

## 1 Scope

This International Standard specifies the characteristics of seven types of butyrometer for use in the determination of the fat content of whole milk, partly skimmed milk and skimmed milk by the Gerber method specified in ISO 2446.

Recommended stoppers for the butyrometers are described in Annex A and a recommended method of determining the scale errors of the butyrometers is described in Annex B.

## 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)*

## 3 Types of butyrometer

Seven types of butyrometer are specified, as follows:

- a) a butyrometer with a scale range of 0 % to 0,5 % fat, the smallest scale division of which is 0,02 %; this is a “double-quantity” butyrometer suitable for skimmed milk;
- b) a butyrometer with a scale range of 0 % to 4 % fat, the smallest scale division of which is 0,05 %; this is a “precision” butyrometer suitable for whole milk of standardized fat content and partly skimmed milk;
- c) butyrometers with scale ranges of 0 % to 5 %, 0 % to 6 %, 0 % to 7 % and 0 % to 8 % fat, respectively, the smallest scale divisions of which are 0,1 %; these are “general-purpose” butyrometers suitable for whole milk;
- d) a butyrometer with a scale range of 0 % to 10 % fat, the smallest scale division of which is 0,2 %; this is suitable for whole milk of high fat content, for example sheep's milk.

NOTE 1 The 0 % to 0,5 % and 0 % to 4 % butyrometers are also suitable for whey and buttermilk, but this usage is not yet described in ISO 2446.

NOTE 2 For the meaning of “% fat” in relation to scale range, see ISO 2446.