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## **Milk — Determination of nitrogen content —**

### **Part 4: Determination of non-protein-nitrogen content**

*Lait — Détermination de la teneur en azote —*

*Partie 4: Détermination de la teneur en azote non protéique*



Reference numbers  
ISO 8968-4:2001(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 3.

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 part of ISO 8968 | IDF 20 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 8968-4 | IDF 20-4 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 AOAC International. It is being published jointly by ISO and IDF and separately by AOAC International.

ISO 8968 | IDF 20 consists of the following parts, under the general title *Milk — Determination of nitrogen content*:

- *Part 1: Kjeldahl method*
- *Part 2: Block-digestion method (Macro method)*
- *Part 3: Block-digestion method (Semi-micro rapid routine method)*
- *Part 4: Determination of the non-protein-nitrogen content*
- *Part 5: Determination of the protein-nitrogen content*

## 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 and AOAC International 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 National Committees casting a vote.

International Standard ISO 8968-4 | IDF 20-4 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 AOAC International. It is being published jointly by ISO and IDF and separately by AOAC International.

All work was carried out by the Joint ISO/IDF/AOAC Action Team, *Nitrogen compounds*, under the aegis of its project leader, Mr D.M. Barbano (US).

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# Milk — Determination of nitrogen content —

## Part 4:

## Determination of non-protein-nitrogen content

**WARNING** — The use of this part of ISO 8968|IDF 20 may involve the use of hazardous materials, operations, and equipment. This standard does not purport to address all the safety risks associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and healthy practices and determine the applicability of local regulatory limitations prior to use.

### 1 Scope

This part of ISO 8968|IDF 20 specifies a method for the determination of the non-protein nitrogen content of liquid milk, whole or skimmed.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 8968|IDF 20. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 8968|IDF 20 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 8968-1|IDF 20-1:2001, *Milk — Determination of nitrogen content — Part 1: Kjeldahl method*

ISO 8968-2|IDF 20-2:2001, *Milk — Determination of nitrogen content — Part 2: Block-digestion method (Macro method)*

### 3 Term and definition

For the purposes of this part of ISO 8968|IDF 20, the following term and definition apply.

#### 3.1

#### **non-protein-nitrogen content**

mass fraction of substances determined by the procedure specified in this part of ISO 8968|IDF 20

**NOTE** The non-protein-nitrogen content is expressed as a percentage by mass.

### 4 Principle

Protein is precipitated from a test portion by the addition of trichloroacetic acid solution such that the final concentration of trichloroacetic acid in the mixture is approximately 12 %. The precipitated milk protein is removed by filtration, and the remaining filtrate contains the non-protein-nitrogen components. The nitrogen content of the filtrate is determined by the procedure described either in part 1 or part 2 of ISO 8968|IDF 20.