



SLOVENSKI STANDARD
SIST EN ISO 14673-3:2004

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Milk and milk products - Determination of nitrate and nitrite contents - Part 3: Method using cadmium reduction and flow injection analysis with in-line dialysis (Routine method) (ISO 14673-3:2004)

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Milch und Milchprodukte - Bestimmung des Nitrat- und Nitritgehaltes - Teil 3: Verfahren mit Cadmiumreduktion und Fließinjektionsanalyse mit In-line-Dialyse (Routineverfahren) (ISO14673-3:2004)

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Lait et produits laitiers - Détermination des teneurs en nitrates et en nitrites - Partie 3: Méthode par réduction au cadmium et d'analyse par injection de flux avec dialyse en ligne (Méthode de routine) (ISO 14673-3:2004)

Ta slovenski standard je istoveten z: EN ISO 14673-3:2004

ICS:

67.100.01 T | ^ \ [Á Á | ^ } Æ | [ã ç [å Æ æ Milk and milk products in
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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English version

Milk and milk products - Determination of nitrate and nitrite contents - Part 3: Method using cadmium reduction and flow injection analysis with in-line dialysis (Routine method) (ISO 14673-3:2004)

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Milch und Milchprodukte - Bestimmung des Nitrat- und Nitritgehaltes - Teil 3: Verfahren mit Cadmiumreduktion und Fließinjektionsanalyse mit In-line-Dialyse (Routineverfahren) (ISO14673-3:2004)

This European Standard was approved by CEN on 2 February 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EN ISO 14673-3:2004 (E)

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Foreword

This document (EN ISO 14673-3:2004) has been prepared by Technical Committee ISO/TC 34 "Agricultural food products" in collaboration with Technical Committee CEN/TC 302 "Milk and milk products - Methods of sampling and analysis", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by August 2004.

This document supersedes EN ISO 14673-3:2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

iTeh **Endorsement notice** STANDARD PREVIEW

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INTERNATIONAL
STANDARD

ISO
14673-3

IDF
189-3

Second edition
2004-02-01

**Milk and milk products — Determination
of nitrate and nitrite contents —**

**Part 3:
Method using cadmium reduction and
flow injection analysis with in-line
dialysis (Routine method)**

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*Lait et produits laitiers — Détermination des teneurs en nitrates et en
nitrites —*

*Partie 3: Méthode par réduction au cadmium et d'analyse par injection
de flux avec dialyse en ligne (Méthode de routine)*



Reference numbers
ISO 14673-3:2004(E)
IDF 189-3:2004(E)

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IDF 189-3:2004(E)**PDF disclaimer**

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ISO 14673-3:2004(E)
IDF 189-3:2004(E)

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 14673-3|IDF 189-3 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.

This second edition cancels and replaces the first edition (ISO 14673-3|IDF 189-3:2001), of which it constitutes a minor revision.

ISO 14673|IDF 189 consists of the following parts, under the general title *Milk and milk products — Determination of nitrate and nitrite contents*:

- *Part 1: Method using cadmium reduction and spectrometry*
- *Part 2: Method using segmented flow analysis (Routine method)*
- *Part 3: Method using cadmium reduction and flow injection analysis with in-line dialysis (Routine method)*

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 the National Committees casting a vote.

ISO 14673-3|IDF 189-3 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, *Minerals and minor compounds*, of the Standing Committee on *Minor components characterization of physical properties*, under the aegis of its project leader, Mr G. Bråthen (NO).

This second edition, together with ISO 14673-1|IDF 189-1 and ISO 14673-2|IDF 189-2, cancels and replaces IDF 84A:1984, IDF 95A:1982, IDF 96A:1987, IDF 97A:1985 and IDF 120:1984, which have been technically revised.

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Milk and milk products — Determination of nitrate and nitrite contents —

Part 3:

Method using cadmium reduction and flow injection analysis with in-line dialysis (Routine method)

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

1 Scope

This part of ISO 14673|IDF 189 specifies a routine method for the determination of the nitrate and nitrite contents of milk and milk products by cadmium reduction and flow injection analysis (FIA). The method is applicable to hard, semi-hard and soft cheeses of various ages, and processed cheese. The detection limits of the method are 0,5 mg of nitrate ions per kilogram and 1,0 mg of nitrite ions per kilogram.

The method is also applicable to whey powder, milk powder and milk-based infant food.

NOTE 1 The method closely resembles the FIA method described in reference [2] for the determination of nitrate and nitrite in milk and fluid dairy products. Adaptations were made to allow for the analysis of cheese and to obtain sufficient sensitivity for the determination of low levels of nitrite in cheese and milk-based infant foods.

NOTE 2 For determination of nitrite and nitrate following cadmium reduction, use is made of the same colour reaction as described in ISO 14673-1|IDF 189-1.

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 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 14673-1|IDF 189-1, *Milk and milk products — Determination of nitrate and nitrite contents — Part 1: Method using cadmium reduction and spectrometry*

3 Terms and definitions

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

3.1

nitrate content

mass fraction of nitrate determined by the procedure specified in this part of ISO 14673|IDF 189

NOTE The nitrate content is expressed as the mass in milligrams of nitrate ions (NO_3^-) per kilogram of product.