

This document is a preview generated by EVS

Milk and milk products - Determination of nitrogen content - Routine method using combustion according to the Dumas principle

Milk and milk products - Determination of nitrogen content - Routine method using combustion according to the Dumas principle

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 14891:2002 sisaldab Euroopa standardi EN ISO 14891:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 06.08.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 14891:2002 consists of the English text of the European standard EN ISO 14891:2002.</p> <p>This document is endorsed on 06.08.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala: This International Standard specifies a routine method for the determination of the total nitrogen content of milk and milk products.</p>	<p>Scope: This International Standard specifies a routine method for the determination of the total nitrogen content of milk and milk products.</p>
--	--

ICS 67.100.01

Võtmesõnad: agricultural products, chemical analysis and testing, chemical analysis and testing, content, dairy analysis, definitions, determination of content, dumas, food inspection, food products, foodstuff, laboratory tests, methods, milk, milk products, nitrogen

English version

Milk and milk products

Determination of nitrogen content – Routine method using combustion
according to the Dumas principle
(ISO 14891 : 2002)

Lait et produits laitiers –
Détermination de la teneur en azote –
Méthode pratique par combustion
selon le principe de Dumas
(ISO 14891 : 2002)

Milch und Milchprodukte –
Bestimmung des Stickstoffgehaltes –
Verbrennungsverfahren nach Dumas
(Routineverfahren)
(ISO 14891 : 2002)

This European Standard was approved by CEN on 2002-03-01.

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 Management Centre or to any CEN member.

The European Standards exist 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Management Centre: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 14891 : 2002 Milk and milk products – Determination of nitrogen content – Routine method using combustion according to the Dumas principle,

which was prepared by ISO/TC 34 'Agricultural food products' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 302 'Milk and milk products – Methods of sampling and analysis', the Secretariat of which is held by NEN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by September 2002 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 14891 : 2002 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

This document is a preview generated by EVS

Contents

Page

1	Scope	4
2	Normative reference	4
3	Term and definition	4
4	Principle	4
5	Reagents	4
6	Apparatus	5
7	Sampling	6
8	Preparation of test sample	6
8.1	General	6
8.2	Liquid test samples	6
9	Procedure	7
9.1	General	7
9.2	Test portion	7
9.3	Control of oxygen demand	7
9.4	Calibration	7
9.5	Determination	7
9.6	Detection and integration	8
10	Calculation and expression of results	8
10.1	Calculation	8
10.2	Expression of results	8
11	Precision	9
11.1	Interlaboratory test	9
11.2	Repeatability	9
11.3	Reproducibility	10
12	Test report	10
	Annex A (informative) Flowchart for the basic design of a Dumas apparatus	11
	Annex B (informative) Schemes of suitable types of Dumas apparatus	12
	Annex C (informative) Equipment calibration	14
	Annex D (informative) Comparison of results using the Dumas method with those obtained by the Kjeldahl method	16
	Bibliography	17

This document is a preview generated by EVS

1 Scope

This International Standard specifies a routine method for the determination of the total nitrogen content of milk and milk products.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document 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, *Milk — Determination of nitrogen content — Part 1: Kjeldahl method*

3 Term and definition

For the purposes of this International Standard, the following term and definition apply.

3.1 nitrogen content

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

NOTE The nitrogen content is expressed as a percentage by mass.

4 Principle

A test portion is heated to destruction in a combustion tube at high temperature (900 °C to 1 200 °C) in an oxygen atmosphere according to the Dumas principle. All interfering components are removed from the resulting gas mixture. The nitrogen compounds in the test portion are converted to molecular nitrogen, followed by quantitative determination using a thermal conductivity detector. The nitrogen content is calculated using a microprocessor.

5 Reagents

Use only reagents of recognized analytical grade, or reagents of equivalent purity as specified by instrument manufacturers.

5.1 **Carrier gases:** use one of the following.