

#### Syr, syrová kôra a tavený syr Stanovenie obsahu natamycínu Časť 2: Metóda vysokoúčinnej kvapalinovej chromatografie použiteľná na syr, syrovú kôru a tavený syr (ISO 9233-2: 2018)

STN EN ISO 9233-2

57 1105

Cheese, cheese rind and processed cheese - Determination of natamycin content - Part 2: High-performance liquid chromatographic method for cheese, cheese rind and processed cheese (ISO 9233-2:2018)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/18

Obsahuje: EN ISO 9233-2:2018, ISO 9233-2:2018

Oznámením tejto normy sa ruší STN EN ISO 9233-2 (57 1105) z októbra 2013

### EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

**EN ISO 9233-2** 

May 2018

ICS 67.100.30

Supersedes EN ISO 9233-2:2013

#### **English Version**

# Cheese, cheese rind and processed cheese - Determination of natamycin content - Part 2: High-performance liquid chromatographic method for cheese, cheese rind and processed cheese (ISO 9233-2:2018)

Fromage, croûte de fromage et fromages fondus -Détermination de la teneur en natamycine - Partie 2: Méthode par chromatographie liquide à haute performance pour fromage, croûte de fromage et fromages fondus (ISO 9233-2:2018) Käse, Käserinde und Schmelzkäse - Bestimmung des Natamycingehalts - Teil 2: Verfahren mit Hochleistungs-Flüssigchromatographie für Käse, Käserinde und Schmelzkäse (ISO 9233-2:2018)

This European Standard was approved by CEN on 4 April 2018.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

#### EN ISO 9233-2:2018 (E)

Contents	Page
European foreword	3

#### **European foreword**

This document (EN ISO 9233-2:2018) has been prepared by Technical Committee ISO/TC 34 "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 November 2018, and conflicting national standards shall be withdrawn at the latest by November 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9233-2:2013.

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

#### **Endorsement notice**

The text of ISO 9233-2:2018 has been approved by CEN as EN ISO 9233-2:2018 without any modification.

## INTERNATIONAL STANDARD

ISO 9233-2

> IDF 140-2

Second edition 2018-03

Cheese, cheese rind and processed cheese — Determination of natamycin content —

Part 2:

High-performance liquid chromatographic method for cheese, cheese rind and processed cheese

Fromage, croûte de fromage et fromages fondus — Détermination de la teneur en natamycine —

Partie 2: Méthode par chromatographie liquide à haute performance pour fromage, croûte de fromage et fromages fondus



STN EN ISO 9233-2: 2018

ISO 9233-2:2018(E) IDF 140-2:2018(E)



#### **COPYRIGHT PROTECTED DOCUMENT**

#### © ISO and IDF 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

International Dairy Federation Silver Building • Bd Auguste Reyers 70/B • B-1030 Brussels

Phone: +32 2 325 67 40 Fax: +32 2 325 67 41 Email: info@fil-idf.org Website: www.fil-idf.org

Contents			Page
Foreword		iv	
1	Scop	ne	1
2	Norn	native references	1
3	Terms and definitions		1
4	Principle		1
5		gents	
6	_	aratus	
7		pling	
8	_	Cheese interior and processed cheese	3 3
9	9.1 9.2 9.3	Test portion	4 4 4 4 4 5 5 5 5 5
10	Calcu 10.1 10.2 10.3 10.4	Ulation and expression of results  Calculation of natamycin mass fraction  Calculation of surface-area-related natamycin mass  Correction of results  Expression of results	<b>6</b> 6 7
11	Prec 11.1 11.2 11.3	ision Interlaboratory tests Repeatability Reproducibility	
12	Test	report	8
Ann	<b>ex A</b> (in	formative) Examples	9
Ann	ex B (in	formative) Results of interlaboratory trial	11
Bibl	iograph	ıv	12

ISO 9233-2:2018(E) IDF 140-2:2018(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document 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 9233-2 | IDF 140-2:2007), of which it constitutes a minor revision to incorporate the amendment ISO 9233-2:2007/Amd.1:2012.

A list of all parts in the ISO 9233 | IDF 140 series can be found on the ISO website.

ISO 9233-2:2018(E) IDF 140-2:2018(E)

**IDF (the International Dairy Federation)** is a non-profit private sector organization representing the interests of various stakeholders in dairying at the global level. IDF members are organized in National Committees, which are national associations composed of representatives of dairy-related national interest groups including dairy farmers, dairy processing industry, dairy suppliers, academics and governments/food control authorities.

ISO and IDF collaborate closely on all matters of standardization relating to methods of analysis and sampling for milk and milk products. Since 2001, ISO and IDF jointly publish their International Standards using the logos and reference numbers of both organizations.

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

This document was prepared by the IDF Standing Committee on *Analytical methods for additives and contaminants* and ISO Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 5, *Milk and milk products*. It is being published jointly by ISO and IDF.

The work was carried out by the Joint ISO/IDF Action Team on *Selected food additives and vitamins* of the Standing Committee on *Analytical methods for additives and contaminants* under the aegis of its project leader, Mr. M. Carl (DE).

ISO 9233-2:2018(E) IDF 140-2:2018(E)

### Cheese, cheese rind and processed cheese — Determination of natamycin content —

#### Part 2:

### High-performance liquid chromatographic method for cheese, cheese rind and processed cheese

#### 1 Scope

This document specifies a method for the determination of natamycin mass fraction in cheese, cheese rind and processed cheese of above 0,5 mg/kg and of the surface-area-related natamycin mass in cheese rind of above 0,03 mg/dm<sup>2</sup>.

#### 2 Normative references

There are no normative references in this document.