

TOIDUAHELA MIKROBIOLOOGIA. PINNAPROOVIDE
VÕTMISE HORIZONTAALMEETODID

Microbiology of the food chain - Horizontal methods for
surface sampling (ISO 18593:2018)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 18593:2018 sisaldab Euroopa standardi EN ISO 18593:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 18593:2018 consists of the English text of the European standard EN ISO 18593:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.07.2018.	Date of Availability of the European standard is 18.07.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 07.100.30

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN ISO 18593

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2018

ICS 07.100.30

English Version

Microbiology of the food chain - Horizontal methods for surface sampling (ISO 18593:2018)

Microbiologie de la chaîne alimentaire - Méthodes horizontales pour les prélèvements de surface (ISO 18593:2018)

Mikrobiologie der Lebensmittelkette - Horizontales Verfahren für Probenahmetechniken von Oberflächen mittels Abklatschplatten und Tupfer (ISO 18593:2018)

This European Standard was approved by CEN on 30 May 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

European foreword

This document (EN ISO 18593:2018) has been prepared by Technical Committee ISO/TC 34 "Food products" in collaboration with Technical Committee CEN/TC 275 "Food analysis - Horizontal methods" the secretariat of which is held by DIN.

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 January 2019, and conflicting national standards shall be withdrawn at the latest by January 2019.

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.

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 18593:2018 has been approved by CEN as EN ISO 18593:2018 without any modification.

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Culture media and reagents	2
6 Equipment and consumables	3
7 Sampling procedure	3
7.1 General.....	3
7.2 Sampling location.....	3
7.3 Sampling area.....	4
7.4 Time of sampling and frequency.....	4
7.5 Sampling techniques.....	4
7.5.1 General.....	4
7.5.2 Contact plate method.....	5
7.5.3 Stick swab method.....	5
7.5.4 Sponge/cloth method.....	5
8 Storage and transport	6
8.1 Contact plate.....	6
8.2 Stick swab, sponge/cloth.....	6
9 Microbiological analysis of samples	6
9.1 Contact plate method.....	6
9.2 Stick swab/cloth/sponge method.....	6
10 Expression of results and calculation	7
10.1 General.....	7
10.2 Contact plate method.....	7
10.3 Method using stick swab, cloth or sponge.....	7
11 Test report	7
Annex A (informative) Neutralizers	9
Bibliography	11

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 www.iso.org/directives).

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 www.iso.org/patents).

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: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 9, *Microbiology*.

This second edition cancels and replaces the first edition (ISO 18593:2004), which has been technically revised. The main changes are as follows:

- recommendations on sampling procedure have been added, including information on sampling location, area and sampling time;
- examples of neutralizers have been added as [Annex A](#).

Introduction

It can be important to determine the presence of, or the number of microbes on, the surfaces of utensils, work surfaces and other equipment in the food chain environment in order to estimate the level of contamination in the food chain environment.

This document describes horizontal methods for surface sampling.

Microbiology of the food chain — Horizontal methods for surface sampling

1 Scope

This document specifies horizontal methods for sampling techniques using contact plates, stick swabs, sponges and cloths on surfaces in the food chain environment in order to detect and enumerate culturable microorganisms such as pathogenic or non-pathogenic bacteria or yeasts and moulds.

NOTE The term “environment” means any item in contact with the food product or likely to represent a contamination or recontamination source; for example, material, premises or operators.

This document does not apply to the validation of cleaning and disinfection procedures.

This document does not apply to sampling techniques for primary production samples, which are covered by ISO 13307. Sampling techniques for carcasses are covered by ISO 17604. Sampling techniques for analysis of noroviruses and hepatitis A viruses are covered by ISO 15216-1.

This document does not give advice on sampling frequency, the number of sampling points, or the need to rotate sampling points, as these are chosen on a case-by-case basis.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 6887-1, *Microbiology of the food chain — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and decimal dilutions*

ISO 6887-5, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 5: Specific rules for the preparation of milk and milk products*

ISO 7218, *Microbiology of food and animal feeding stuffs — General requirements and guidance for microbiological examinations*

ISO 11133, *Microbiology of food, animal feed and water — Preparation, production, storage and performance testing of culture media*

ISO 16140-2, *Microbiology of the food chain — Method validation — Part 2: Protocol for the validation of alternative (proprietary) methods against a reference method*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>