TOIDU JA LOOMASÖÖTADE MIKROBIOLOOGIA
Pindadelt kontaktplaatide ja tampoonidega proovivõtu horisontaalmeetodid

Microbiology of food and animal feeding stuffs
Horizontal methods for sampling techniques from surfaces using contact plates and swabs
(ISO 18593:2004)

EESTI STANDARDIKESKUS
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Käesolev Eesti standard EVS-ISO 18593:2010 “Toidu ja loomasöötade mikrobioloogia. Pindadelt kontaktplaatide ja tampoonidega proovivõtu horisontaalmeetodid” sisaldab rahvusvahelise standardi ISO 18593:2004 “Microbiology of food and animal feeding stuffs - Horizontal methods for sampling techniques from surfaces using contact plates and swabs” identset ingliskeelset teksti.

Standard EVS-ISO 18593:2010 on kinnitatud Eesti Standardikeskuse 07.09.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti Standardikeskusest.

NATIONAL FOREWORD

This Estonian Standard EVS-ISO 18593:2010 consists of the identical English text of the International Standard ISO 18593:2004 “Microbiology of food and animal feeding stuffs - Horizontal methods for sampling techniques from surfaces using contact plates and swabs".

This standard is ratified with the order of Estonian Centre for Standardisation dated 07.09.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian Centre for Standardisation.

Käsitlusala

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ICS 07.100.30 Toiduainete mikrobioloogia

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Introduction

It can be important to determine the presence of, or the number of, viable microbes on the surfaces of utensils, work surfaces and other equipment in contact with food to estimate the level of contamination during production, or the effectiveness of cleaning and disinfecting protocols.

The horizontal methods described in this International Standard include a surface contact method using contact plates and a swab method. The contact plate method is only applicable to flat surfaces, whereas the swab method can be used for all types of surfaces. For the sampling of large surfaces (> 100 cm^2), sterile cloths or sponges can be used. This alternative method is useful for the estimation of the microbial load of surfaces. Results are often presented as hygiene scores based on the number of colony-forming units (CFU) per square centimetre present on a test surface.

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Microbiology of food and animal feeding stuffs — Horizontal methods for sampling techniques from surfaces using contact plates and swabs

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1 Scope

This International Standard specifies horizontal methods for sampling techniques using contact plates or swabs on surfaces in the food industry environment (and food processing plants), with a view of detecting or enumerating viable microorganisms.

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, operators.

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 6887-1, *Microbiology of food and animal feeding stuffs — 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 7218, *Microbiology of food and animal feeding stuffs — General rules for microbiological examinations*

3 Principle

3.1 Because these methods are not quantitatively reliable or reproducible, results should only be used in a "trend analysis".

3.2 A contact plate (or dipslide) filled with a suitable agar medium is pressed against the surface to be tested. After incubation, an estimate of the surface contamination is obtained by counting the number of developed colonies.

3.3 Using the swab method, a specified area of the surface to be examined is marked (e.g. using a template) and then wiped. The swab sticks are broken into a tube or bottle containing a sterile dilution fluid or neutralizing fluid and mixed by hand.

If the surface is wiped with a sterile (damp) cloth or sponge, the sampling device is stored in a known volume of dilution liquid (e.g. 100 ml for 100 cm^2).

In the laboratory the initial suspension and, if necessary, further decimal dilutions are used to determine the number of microorganisms using the procedures described in the methods for the enumeration of the (groups of) microorganisms to be investigated.

NOTE The incubation time and temperature depend on the type of microorganisms to be detected.

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