

TOIDU JA LOOMASÖÖTADE MIKROBIOLOOGIA
Pärmide ja hallituste loendamise horisontaalmeetod
Osa 2: Kolooniade loendamise tehnika toodetes, mille
veeaktiivsus on väiksem või võrdne 0,95

Microbiology of food and animal feeding stuffs
Horizontal method for the enumeration of yeasts and
moulds
Part 2: Colony count technique in products with water
activity less than or equal to 0,95
(ISO 21527-2:2008)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-ISO 21527-2:2009 "Toidu ja loomasöödade mikrobioloogia. Pärmide ja hallituste loendamise horisontaalmeetod. Osa 2: Kolooniate loendamise tehnika toodetes, mille veeaktiivsus on suurem kui 0,95" sisaldab rahvusvahelise standardi ISO 21527-2:2008 "Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds - Part 2: Colony count technique in products with water activity less than or equal to 0,95" identset ingliskeelset teksti.

Standard EVS-ISO 21527-2:2009 on kinnitatud Eesti Standardikeskuse 07.04.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti Standardikeskusest.

This Estonian Standard EVS-ISO 21527-2:2009 consists of the identical English text of the International Standard ISO 21527-2:2008 "Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds - Part 2: Colony count technique in products with water activity less than or equal to 0,95".

This standard is ratified with the order of Estonian Centre for Standardisation dated 07.04.2009 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

Standardi ISO 21527 käesolev osa määratleb horisontaalse meetodi elujõuliste osmofiilsete pärmide ja kserofiilsete hallitusseente loendamiseks toidus ja loomasöödas, milles veeaktiivsus on väiksem või võrdne 0,95-ga (kuivatatud puuviljad, koogid, moosid, kuivatatud liha, soolatud kala, teraviljad ja teraviljatooted, jahud, pähkliid, vürtsid ja maitseained jne [lisa A]), 25 °C ± 1 °C juures kasvatatud kolooniate loendamise tehnikaga (viide [3]).

Standardi ISO 21527 käesolev osa ei kohaldu dehüdreeritud (kuivatatud) toodetele, mille veeaktiivsus on väiksem või võrdne 0,60-ga (kuivatatud teravili, õlitooted, vürtsid, liblikõielised taimed, seemned, joogipulbrid, koduloomade kuivtoidud jms) ja ei võimalda hallitusseente eoste loendamist (viide [3]). Standardi ISO 21527 käesoleva osa käsitlusalasse ei jää ka seenfloora identifitseerimine ega ka mükotoksiinide uurimine toidus. Standardi ISO 21527 käesolevas osas määratletud meetod ei sobi halofiilsete kserofiilsete seente (nt *Polypaecilum pisce*, *Basipetospora halophila*) loendamiseks, mida võib leida kuivatatud kalas.

ICS 07.100.30 Toiduainete mikrobioloogia

Standardite reprodutseerimis- ja levitamisoigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute 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 permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

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 21527-2 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 9, *Microbiology*.

ISO 21527 consists of the following parts, under the general title *Microbiology of food and animal feedings stuffs — Horizontal method for the enumeration of yeasts and moulds*:

- *Part 1: Colony count technique in products with water activity greater than 0,95*
- *Part 2: Colony count technique in products with water activity less than or equal to 0,95*

This part of ISO 21527, together with ISO 21527-1, cancel and replace ISO 7698:1990, ISO 7954:1987 and ISO 13681:1995.

Introduction

Because of the large variety of food and feed products, the applications of the horizontal method specified in ISO 21527 (all parts) may not be appropriate for certain products. In this case, different methods, which are specific to these products, may be used if absolutely necessary for justified technical reasons. Nevertheless, every attempt shall be made to apply the horizontal method as specified in ISO 21527 (all parts) as far as possible.

When ISO 21527 (all parts) is next reviewed, account will be taken of all information then available regarding the extent to which the horizontal method has been followed and the reasons for deviations from this method in the case of particular products.

The harmonization of test methods cannot be immediate, and for certain groups of products International Standards and/or national standards may already exist that do not comply with the horizontal method as specified in ISO 21527 (all parts). It is hoped that when such standards are reviewed they will be changed to comply with ISO 21527 (all parts) so that eventually the only remaining departures from this horizontal method will be those necessary for well-established technical reasons.

Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds —

Part 2:

Colony count technique in products with water activity less than or equal to 0,95

WARNING — It is essential that enumeration of moulds is carried out with the greatest care to protect the operator and to prevent contamination of the atmosphere with mould spores.

1 Scope

This part of ISO 21527 specifies a horizontal method for the enumeration of viable osmophilic yeasts and xerophilic moulds in products intended for human consumption or feeding of animals that have a water activity less than or equal to 0,95 (dry fruits, cakes, jams, dried meat, salted fish, grains, cereals and cereal products, flours, nuts, spices and condiments, etc. [Annex A]), by means of the colony count technique at $25\text{ °C} \pm 1\text{ °C}$ (Reference [3]).

This part of ISO 21527 does not apply to dehydrated products with water activity less than or equal to 0,60 (dehydrated cereals, oleaginous products, spices, leguminous plants, seeds, powders for instant drinks, dry products for domestic animals, etc.) and does not allow the enumeration of mould spores (Reference [3]). Neither the identification of fungal flora nor the examination of foods for mycotoxins lie within the scope of this part of ISO 21527. The method specified in this part of ISO 21527 is not suitable for enumeration of halophilic xerophilic fungi (i.e. *Polypaecilum pisce*, *Basipetospora halophila*) such as may be found in dried fish.

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 (all parts), *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination*

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

ISO 8261, *Milk and milk products — General guidance for the preparation of test samples, initial suspensions and decimal dilutions for microbiological examination*

ISO/TS 11133 (all parts), *Microbiology of food and animal feeding stuffs — Guidelines on preparation and production of culture media*

ISO 21527-1, *Microbiology of food and animal feedings stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0,95*