TOIDU JA LOOMASÖÖTADE MIKROBIOLOOGIA
Pärmide ja hallituste loendamise horisontaalmeetod
Osa 1: Kolooniate loendamise tehnika toodetes, mille veeaktiivsus on suurem kui 0,95

Microbiology of food and animal feeding stuffs
Horizontal method for the enumeration of yeasts and moulds
Part 1: Colony count technique in products with water activity greater than 0,95
(ISO 21527-1:2008)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

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Käesolev Eesti standard EVS-ISO 21527-1:2009 "Toidu ja loomasöötade mikrobioloogia. Pärmide ja hallituste loendamise horisontaalmeetod. Osa 1: Kolooniate loendamise tehnika toodetes, mille veeaktiivsus on suurem kui 0,95" sisaldab rahvusvahelise standardi ISO 21527-1:2008 "Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds - Part 1: Colony count technique in products with water activity greater than 0,95" identset ingliskeelset teksti.

Standard EVS-ISO 21527-1:2009 on kinnitatud Eesti Standardikeskuse 07.04.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti Standardikeskusest.

NATIONAL FOREWORD

This Estonian Standard EVS-ISO 21527-1:2009 consists of the identical English text of the International Standard ISO 21527-1:2008 "Microbiology of food and animal feeding stuffs - Horizontal method for the enumeration of yeasts and moulds - Part 1: Colony count technique in products with water activity greater than 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 horisontaalmeetodi elujõuliste pärmide ja hallitusseente loendamiseks toidus ja loomasöötades, mille veeaktiivsus on suurem kui 0,95 [munad, liha, piimatooted (välja arvatud piimapulber), puuviljad, köögiviljad, värsked taimad jms] 25 °C ± 1 °C juures (viited [1], [2]) kasvatatud kolooniate loendamise tehnikaga.

Standardi ISO 21527 käesolev osa ei võimalda loendada hallitusseente eoseid. Standardi ISO 21527 käesoleva osa käsitlusalasse ei jää ka seenfloora identifitseerimine ega ka mükotoksiinide uurimine toidus. Standardi ISO 21527 käesolev osa ei sobi termoresistentsete seente (nagu *Byssochlamys fulva* või *Byssochlamys nivea*) loendamiseks konserveeritud või pudelisse villitud puu- ja köögiviljades.

ICS 07.100.30 Toiduainete mikrobioloogia

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 21527-1 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 21527-2, 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 1:
Colony count technique in products with water activity greater than 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 yeasts and moulds in products intended for human consumption or feeding of animals that have a water activity greater than 0,95 [eggs, meat, dairy products (except milk powder), fruits, vegetables, fresh pastes, etc.], by means of the colony count technique at 25 °C ± 1 °C (References [1], [2]).

This part of ISO 21527 does not allow the enumeration of mould spores. 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 heat-resistant fungi, such as *Byssochlamys fulva* or *Byssochlamys nivea*, in canned or bottled fruit and vegetables.

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*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE There are some intermediate forms and the distinction between a **yeast** (3.1) and a **mould** (3.2) can be arbitrary.