STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 5013.22—2004
Food microbiology—Meat and meat products—Enumeration of Brochothrix thermosphacta—
Colony-count technique

RECONFIRMATION NOTICE

Technical Committee FT-035 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 07 December 2015.

The following are represented on Technical Committee FT-035:

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Australian Institute of Food Science and Technology
Australian Society for Microbiology
CSIRO
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AS 5013.22—2004
ISO 13722:1996
Reconfirmed 2016

Australian Standard™

Food microbiology

Method 22: Meat and meat products—Enumeration of *Brochothrix thermosphacta*—Colony-count technique

AS 5013.22

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FT-004, Food Microbiology.

This Standard is identical with and reproduced from ISO 13722:1996, *Meat and meat products—Enumeration of Brochothrix thermosphacta—Colony-count technique*.

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee FT-004. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify a method for the enumeration of viable *Brochothrix thermosphacta* in all kinds of meat and meat products, including poultry, by means of a colony-count technique.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page, while the International Standard number appears only on the cover.

(b) In the source text, 'this International Standard' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

(d) Substitute 'mL' for the 'ml' wherever it appears.

References to International Standards should be replaced by references equivalent to Australian Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
6887	Microbiology of food and anima feeding stuffs—Preparation of test samples, initial suspension and decimal dilutions for microbiological examination	5013	Food microbiology
6887-1	Part 1: General rules for the preparation of the initial suspension and decimal dilutions	5013.11.1	Method 11.1: Microbiology of food and animal feeding stuff—Preparation of test sample, initial suspension and decimal dilutions for microbiological examination—General rules for the preparation of the initial suspension and decimal dilutions
7218	Microbiology—General guidance for microbiological examination	5013.14	Method 14: Microbiology of food and animal feeding stuffs—General rules for microbiological examination

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With the exception of the above ISO documents, which have been adopted as Australian Standards, the ISO documents listed as normative references in Clause 2 have not been adopted as Australian Standards.

The laboratory should have a clearly defined quality control system to ensure that the apparatus, culture media reagents and technique are suitable for the test. The use of positive controls is part of this system.

Addition of cycloheximide may be useful in the suppression of fungal growth in the medium. Removal of the toxic selective agent cycloheximide is recommended by the NMKL (Nordic Committee on Food Analysis: *Brochothrix thermosphacta*. Determination in Meat and Meat Products, No. 141, 1991). Supplement with or without cycloheximide is available commercially.

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1 Scope

This International Standard specifies a method for the enumeration of viable *Brochothrix thermosphacta* in all kinds of meat and meat products, including poultry, by means of a colony-count technique.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3100-2:1988, *Meat and meat products — Sampling and preparation of test samples — Part 2: Preparation of test samples for microbiological examination.*

ISO 6887:1993, *Microbiology — General guidance for the preparation of dilutions for microbiological examination.*

ISO 7218:1996, *Microbiology of food and animal feeding stuffs — General rules for microbiological examinations.*

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 ***Brochothrix thermosphacta***: Gram-positive bacteria which form characteristic oxidase-negative colonies on a solid selective medium [streptomycin sulfate/thallium acetate/actidione (STAA) agar] under the test conditions specified in this International Standard.

4 Principle

4.1 Surface plating, on a solid selective culture medium contained in Petri dishes, of a specified quantity of the test sample if the initial product is liquid, or of a specified quantity of the initial suspension in the case of other products.

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Preparation of other plates, under the same conditions, using decimal dilutions of the test sample or of the initial suspension.

4.2 Incubation of the plates between 22 °C and 25 °C for 48 h ± 4 h.

4.3 Subjection of the colonies to a confirmation test.

4.4 From the number of colonies confirmed, calculation of the number of *Brochothrix thermosphacta* per millilitre or per gram of sample from colonies obtained on plates at dilution levels chosen so as to give the most reliable result (see 9.3).

5 Dilution fluid, culture media and reagents

5.1 General

For current laboratory practice, see ISO 7218.

5.2 Dilution fluid

For the preparation of dilutions, see ISO 6887.

5.3 Solid selective medium: Streptomycin sulfate/thallium acetate/actidione (STAA) agar (see reference [2])

5.3.1 Base medium

5.3.1.1 Composition

Peptone	20,0 g
Yeast extract	2,0 g
Glycerol	15,0 g
Dipotassium hydrogen phosphate (K_2HPO_4)	1,0 g
Magnesium sulfate heptahydrate ($MgSO_4 \cdot 7H_2O$)	1,0 g
Agar	9 g to 18 g[1)]
Water	900 ml

1) Depending on the gel strength of the agar.

5.3.1.2 Preparation

Dissolve the components or the dehydrated complete medium in the water by boiling. Adjust the pH so that after sterilization it is 7,0 at 25 °C.

Sterilize for 15 min in an autoclave (6.1) set at 121 °C.

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