

Australian Standard®

AS 5013.5:2016

Food microbiology

Method 5: Microbiology of the food chain— Horizontal method for the enumeration of microorganisms—Colony count at 30°C by the pour plate technique

PREFACE

This Standard was prepared by the Standards Australia Committee F1 035, Food Microbiology, to supersede AS 5013.5—2004, *Food microbiology, Method 5: Microbiology of food and animal feeding stuffs—Horizontal method for the enumeration of microorganisms—Colony count technique at 30°C*.

This Standard is identical with, and has been reproduced from ISO 4833-1:2013, *Microbiology of the food chain—Horizontal method for the enumeration of microorganisms, Part 1: Colony count at 30 °C by the pour plate technique*.

The objectives of this revision are—

- (a) to specify a horizontal method for the enumeration of microorganisms, by counting the colonies growing in a solid medium after aerobic incubation at 30°C; and
- (b) to adopt the current edition of ISO 4833-1.

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

- (i) In the source text ‘this part of ISO 4833’ should read ‘this Australian Standard’.
- (ii) A full point substitutes for a comma when referring to a decimal marker.
- (iii) Substitute ‘mL’ for ‘ml’ wherever it appears.

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

Reference to International Standard	Australian Standard
ISO 6887-6:2013* Microbiology of food and animal feeding stuffs— Preparation of test samples, initial suspension and decimal dilutions for microbiological examination	AS 5013 Food microbiology

* ISO 6887-6:2013, *Microbiology of food and animal feed—Preparation of test samples, initial suspension and decimal dilutions for microbiological examination, Part 6: Specific rules for the preparation of samples taken at the primary production stage*, has not been adopted as an Australian Standard.

ISO		AS
6887-1	Part 1: Preparation of test samples, initial suspension and decimal dilutions	5013.11.1 Method 11.1: Microbiology of food and animal feeding stuffs— Preparation of test samples, initial suspension and decimal dilutions for microbiological examination— General rules for the preparation of the initial suspension and decimal dilutions
6887-2	Part 2: Specific rules for the preparation of meat and meat products	5013.11.2 Method 11.2: Microbiology of food and animal feeding stuffs— Preparation of test samples, initial suspension and decimal dilutions for microbiological examination— Specific rules for the preparation of meat and meat products
6887-3	Part 3: Specific rules for the preparation of fish and fish products	5013.11.3 Method 11.3: Microbiology of food and animal feeding stuffs— Preparation of test samples, initial suspension and decimal dilutions for microbiological examination— Specific rules for the preparation of fish and fish products (ISO 6887-3:2003, MOD)
6887-4	Part 4: Specific rules for the preparation of products other than milk and milk products, meat and meat products and fish and fishery products	5013.11.4 Method 11.4: Microbiology of food and animal feeding stuffs— Preparation of test samples, initial suspension and decimal dilutions for microbiological examination— Specific rules for the preparation of products other than milk and milk products, meat and meat products and fish and fishery products
6887-5	Part 5: Specific rules for the preparation of milk and milk products	5013.11.5 Method 11.5: Microbiology of food and animal feeding stuffs— Preparation of test samples, initial suspension and decimal dilutions for microbiological examination— Specific rules for the preparation of milk and milk products (ISO 6887-5:2010, MOD)
7218	Microbiology of food and animal feeding stuffs— General requirements and guidance for microbiological examinations	5013.14.1 Method 14.1: Microbiology of food and animal feeding stuffs—General requirements and guidance for microbiological examinations (ISO 7218:2007, MOD)
11133	Microbiology of food, animal feed and water—Preparation, production, storage and performance testing of culture media	5140* Microbiology of food, animal feed and water—Preparation, production, storage and performance testing of culture media (ISO 11133:2014, MOD)

* Under preparation.

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

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

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METHOD

1 Scope

This part of ISO 4833 specifies a horizontal method for enumeration of microorganisms that are able to grow and form colonies in a solid medium after aerobic incubation at 30 °C. The method is applicable to:

- a) products intended for human consumption and for animal feed;
- b) environmental samples in the area of food and feed production and handling.

This part of ISO 4833 is applicable to:

- 1) products that require a reliable count when a low limit of detection is specified (below 10^2 /g or 10^2 /ml for liquid samples or below 10^3 /g for solid samples);
- 2) products expected to contain spreading colonies that obscure colonies of other organisms, e.g. milk and milk products likely to contain spreading *Bacillus* spp.

The applicability of this part of ISO 4833 to the examination of certain fermented food and animal feeds is limited and other media or incubation conditions can be more appropriate. However, this method can be applied to such products even though it is possible that the predominant microorganisms in those products are not detected effectively.

For some matrices, the method specified in this part of ISO 4833 can give different results to those obtained using the method specified in ISO 4833-2.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 11133, *Microbiology of food, animal feed and water — Preparation, production, storage and performance testing of culture media*

3 Terms and definitions

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