

Australian Standard™

Food microbiology

Method 16: Microbiology of food and animal feeding stuffs—Horizontal method for enumeration of *Clostridium perfringens*—Colony-count technique

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee FT-004, Food Microbiology, to supersede AS 1766.2.8:1991, *Food microbiology, Method 2.8: Examination of specific organisms—Clostridium perfringens*.

This Standard is identical with and reproduced from ISO 7937:1997, *Microbiology of food and animal feeding stuffs—Horizontal method for enumeration of Clostridium perfringens—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 describe a horizontal method for the enumeration of viable *Clostridium perfringens* in products intended for human consumption or the feeding of animals.

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

- In the source text, 'this International Standard' should read 'this Australian Standard'.
- A full point substitutes for a comma when referring to a decimal marker.
- Substitute 'mL' for 'ml' wherever it appears.

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

Reference International Standard		Australian Standard	
ISO		AS	
6887	Microbiology—General guidance for the preparation of dilutions for microbiological examination	5013 5013.11.1	Food microbiology 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
7228	Microbiology of food and animal feeding stuffs—General rules for microbiological examinations	5013.14	Method 14: Microbiology of food and animal feeding stuffs—General rules for microbiological examinations

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

INTRODUCTION

Because of the large variety of food and feed products, this horizontal method may not be appropriate in every detail for certain products for which it may be necessary to use different methods. Nevertheless, in all cases, every attempt should be made to apply this horizontal method as far as possible and deviations from this should only be made if absolutely necessary for technical reasons.

When this International Standard is next reviewed, account will be taken of all information then available regarding the extent to which this horizontal method has been followed and the reasons for deviations from it 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 this horizontal method. It is hoped that when such standards are reviewed they will be changed to comply with this International Standard so that eventually the only remaining departures from this horizontal method will be those necessary for well-established technical reasons.

1 Scope

This International Standard describes a horizontal method for the enumeration of viable *Clostridium perfringens* in products intended for human consumption or the feeding of animals.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of the 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 6887:1983, *Microbiology — General guidance for the preparation of antibiotics for microbiological examination*.

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

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 *Clostridium perfringens*: Bacteria that form characteristic colonies (surrounded by a black halo) in the specified selective medium and which give positive confirmatory reactions when the test is carried out by the method specified in this International Standard.

NOTE — For practical reasons, this definition of *Clostridium perfringens* does not exclusively describe strains of *C. perfringens*. In particular, the confirmatory tests are inadequate to distinguish between *C. perfringens* and other closely related human commonly encountered *Clostridium* species such as *C. paraperfringens* and *C. absonum*.

3.2 enumeration of *C. perfringens*: Determination of the number of viable and confirmed *Clostridium perfringens* bacteria per millilitre or per gram of sample when the test is carried out by the method specified in this International Standard.

4 Principle

4.1 Inoculation of Petri dishes with a specified quantity of the test sample if the initial product is liquid, or a specified quantity of the initial suspension in the case of other products.