

AS 5013.26:2020



# Food microbiology

**Method 26: Microbiology of food and animal feeding stuffs —  
Horizontal method for the detection of *Escherichia coli* O157 (ISO  
16654:2001/Amd.1:2017, MOD)**



AS 5013.26:2020

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Australian Institute of Food Science and Technology  
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Department of Agriculture, Water and the Environment  
Department of Health and Human Services, Tas.  
Meat and Livestock Australia  
National Association of Testing Authorities Australia  
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# Food microbiology

## Method 26: Microbiology of food and animal feeding stuffs — Horizontal method for the detection of *Escherichia coli* O157 (ISO 16654:2001/Amd.1:2017, MOD)

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## Preface

This Standard was prepared by the Standards Australia Committee FT-035, Food Microbiology, to supersede AS 5013.26—2009, *Food microbiology, Method 26: Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Escherichia coli O157 (ISO 16654:2001, MOD)*.

The objective of this Standard is to specify a horizontal method for the detection of *Escherichia coli* serogroup O157.

This Standard is an adoption with national modifications, and has been reproduced from, ISO 16654:2001, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Escherichia coli O157* and its Amendment 1 (2017), which has been added at the end of the source text.

[Appendix ZZ](#) lists the variations to ISO 16654:2001 for the application of this Standard in Australia.

As this document has been reproduced from an International Standard, the following applies:

- (a) In the source text “this International Standard” should read “this Australian Standard”.
- (b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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## 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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 16654 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 9, *Microbiology*.

[Annex A](#) forms a normative part of this International Standard.

## Introduction

Because of the large variety of food and feed products, this horizontal method may not be appropriate in every detail for certain products. In this case, different methods specific to these products may be used if absolutely necessary for justified technical reasons. Nevertheless, every attempt should be made to apply this horizontal method as far as possible.

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 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 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.

## NOTES

# Australian Standard®

## Food microbiology

### Method 26: Microbiology of food and animal feeding stuffs — Horizontal method for the detection of *Escherichia coli* O157 (ISO 16654:2001/Amd.1:2017, MOD)

**WARNING — *Escherichia coli* O157 can cause severe life-threatening illness and has a low infective dose. Laboratory-acquired infections have been reported.**

**In order to safeguard the health of laboratory personnel, it is essential that the whole of this method be carried out only by skilled personnel using good laboratory practices and preferably working in a containment facility. Relevant national Health and Safety Regulations relating to this organism must be adhered to.**

**Care must be taken in the disposal of all infectious materials.**

## 1 Scope

This International Standard specifies a horizontal method for the detection of *Escherichia coli* serogroup O157.

Subject to the limitations discussed in the introduction, this International Standard is applicable to products intended for human consumption or for animal feeding stuffs.

## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6887-1, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and decimal dilutions.*

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

## 3 Term and definition

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

### 3.1

#### ***Escherichia coli* O157 *E. coli* O157**

microorganisms which form typical colonies on the surface of the plating-out medium used in this International Standard, and which produce indole and agglutinate specifically with antiserum against the O157 antigen

Note 1 to entry: Sorbitol-positive *E. coli* O157 strains are not detected on CT-SMAC (5.2) media.

Note 2 to entry: Some indole-negative mutations have been found.