

Australian Standard®

Food microbiology

Method 13: Microbiology of the food chain— Horizontal method for the detection of *Cronobacter* spp. (ISO 22964:2017, MOD)

AS 5013.13:2018

PREFACE

This Standard was prepared by the Standards Australia Committee FT-035, Food Microbiology, to supersede AS 5013.13(Int)—2010, *Food microbiology, Method 13: Milk and milk products—Detection of Enterobacter sakazakii*.

This Standard is an adoption with national modifications and has been reproduced from ISO 22964:2017, *Microbiology of the food chain — Horizontal method for the detection of Cronobacter spp* and has been varied as indicated to take account of Australian conditions. The modifications are specified in Appendix ZZ.

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.

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

- (a) A full point substitutes for a comma when referring to a decimal marker.
- (b) Substitute 'ml' for 'mL' wherever it appears.

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/275, *Food Analysis — Horizontal methods*, in collaboration with ISO Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 9, *Microbiology*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition cancels and replaces ISO/TS 22964:2006, which has been technically revised with the following changes:

- the scope has been extended to *Cronobacter* spp. detection in food products for humans and feeding animals and environmental samples and the title changed accordingly;
- the enrichment broth, modified lauryl sulfate tryptose broth (mLST), has been replaced by *Cronobacter* selective broth (CSB);
- the isolation agar, *Enterobacter sakazakii* isolation agar (ESIA) has been replaced by chromogenic *Cronobacter* isolation (CCI) agar;
- several confirmation tests have been replaced by other tests according to [Table 1](#) of this document.

Introduction

This document describes a horizontal method for the detection of *Cronobacter* spp. in food, in animal feed and in environmental samples. The main changes, listed in the foreword, introduced in this document compared to ISO/TS 22964:2006 are considered as major (see ISO 17468^[2]).

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, which are 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 document 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 document so that eventually the only remaining departures from this horizontal method will be those necessary for well-established technical reasons.

1 Scope

This document specifies a horizontal method for the detection of *Cronobacter* spp.

Subject to the limitations discussed in the introduction, this document is applicable to

- food products and ingredients intended for human consumption and the feeding of animals, and
- environmental samples in the area of food production and food handling.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 the food chain — 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.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

***Cronobacter* spp.**

microorganisms which form typical colonies on chromogenic *Cronobacter* isolation (CCI) agar^[10] and which display the biochemical characteristics described, when tests are carried out in accordance with this document

3.2

detection of *Cronobacter* spp.

determination of *Cronobacter* spp. (3.1) in a particular mass or volume of product or surface area when tests are carried out in accordance with this document