

Third edition
2004-06-15

AMENDMENT 1
2020-03-31

Corrected version 2
2020-08

**Microbiology of food and animal
feeding stuffs — Horizontal method
for the enumeration of presumptive
Bacillus cereus — Colony-count
technique at 30 °C**

**AMENDMENT 1: Inclusion of optional
tests**

*Microbiologie des aliments — Méthode horizontale pour le
dénombrement de Bacillus cereus présomptifs — Technique par
comptage des colonies à 30 °C*

AMENDEMENT 1: Ajout de tests optionnels

ISO 7932:2004/Amd 1:2020

<https://standards.iteh.ai/catalog/standards/iso/dec10c7a-065c-4b7e-b501-8c8c246c5c07/iso-7932-2004-amd-1-2020>



Reference number
ISO 7932:2004/Amd.1:2020(E)

© ISO 2020

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 7932:2004/Amd 1:2020

<https://standards.iteh.ai/catalog/standards/iso/dec10c7a-065c-4b7e-b501-8c8c246c5c07/iso-7932-2004-amd-1-2020>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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 of 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 www.iso.org/iso/foreword.html.

This document was prepared by ISO Technical Committee TC 34, *Food products*, Subcommittee SC 9, *Microbiology*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 463, *Microbiology of the food chain*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second corrected version of ISO 7932:2004/Amd.1:2020 incorporates the following corrections:

- Annexes A, B, C and D have been corrected to Annexes C, D, E and F, respectively (as per the first corrected version);
- in [Table D.2](#), the volume per reaction for EM1F and EM1R has been corrected from 2,5 to 5.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of presumptive *Bacillus cereus* — Colony-count technique at 30 °C

AMENDMENT 1: Inclusion of optional tests

In the Scope

Designate the existing NOTE as NOTE 1 and add the following new NOTE:

NOTE 2 The diversity within the *Bacillus cereus* group is large with 7 phylogenetic groups^{[21][22]} and a growing number of species.

After 9.4

Add the following new subclause 9.5:

9.5 Optional tests

9.5.1 General

All the tests mentioned below are optional and intended for complementary investigations (i.e. epidemiological) on isolated *Bacillus cereus* group strains obtained in 9.4.1, following the procedures described in [Annexes C](#) to [F](#).

In this amendment, the term "*B. cereus* group" is used instead of "presumptive *B. cereus*", as it is scientifically more precise, as explained in the EFSA scientific opinion published in 2016^[28].

9.5.2 Detection of *cytK-1* or *cytK-2* gene variants of the gene encoding Cytotoxin K

Some strains within the *B. cereus* group bacteria carry one of the two variants found for the gene encoding Cytotoxin K, *cytK-1* and *cytK-2*. The *cytK-1* gene is specific to *Bacillus cytotoxicus*^{[17][22]} and thus constitutes the possibility to rapidly identify *B. cytotoxicus*^[20]. The procedure in [Annex C](#) describes a validated PCR method that targets both *cytK* gene variants and, if present, indicates which of the two forms is present. It also allows confirmation of isolates as *B. cytotoxicus*.

9.5.3 Detection of *Bacillus cereus* group strains able to produce cereulide

Some strains within the *B. cereus* group bacteria are able to produce a heat-stable dodecadepsipeptide, named cereulide. This cereulide, when produced in food, can cause an emetic food poisoning syndrome.

NOTE The method for cereulide quantification is described in ISO 18465^[10].

A cereulide peptide synthetase (*ces*) gene is involved in the non-ribosomal synthesis of cereulide^[16]. The procedure in [Annex D](#) describes a rapid and validated PCR method that targets the *ces* gene.

9.5.4 Motility test for *B. anthracis* screening

The motility test described in [Annex E](#) allows for screening for presumptive *B. anthracis* among isolated *B. cereus* group bacteria.

NOTE This test has nevertheless strong limitations as indicated in [Annex E](#) (see [E.1](#) and [Table E.1](#)).