
International Standard



6887

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Microbiology — General guidance for the preparation of dilutions for microbiological examination

Microbiologie — Directives générales pour la préparation des dilutions en vue de l'examen microbiologique

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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 developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6887 was developed by Technical Committee ISO/TC 34, *Agricultural food products*, and was circulated to the member bodies in November 1981.

It has been approved by the member bodies of the following countries:

Australia	Iraq	South Africa, Rep. of
Brazil	Israel	Sri Lanka
Canada	Italy	Tanzania
Chile	Mexico	Thailand
Czechoslovakia	Netherlands	United Kingdom
Egypt, Arab Rep. of	New Zealand	USSR
Ethiopia	Philippines	Venezuela
France	Poland	Yugoslavia
Germany, F.R.	Portugal	
India	Romania	

No member body expressed disapproval of the document.

Microbiology — General guidance for the preparation of dilutions for microbiological examination

0 Introduction

This International Standard is intended to provide general guidance for the preparation of dilutions for microbiological examination of products not dealt with by existing International Standards and for the consideration of bodies preparing reference microbiological methods of test for application to food products or to animal feeding stuffs. In view of the large variety of products within this field of application, these guidelines may not be appropriate for some products in every detail, and for some other products it may be necessary to use different methods. Nevertheless, it is hoped that, in all cases, every attempt will be made to apply these guidelines as far as possible and that deviations from them will 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 concerning the extent to which the guidelines have been followed and the reasons which necessitated deviation from them 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, that do not comply with these guidelines, may already exist. In cases where International Standards already exist for the product to be tested, they should be followed, but it is hoped that, when they are reviewed, they will be aligned with this International Standard so that, eventually, the only remaining departures from these guidelines will be those necessary for well established technical reasons.

1 Scope and field of application

This International Standard lays down general guidelines for the preparation of dilutions for aerobic microbiological examinations of products intended for human or animal consumption. (At present, the guidelines should be used in conjunction with the methods described in ISO 4831, ISO 4832, ISO 4833 and ISO 6579.)

This International Standard is applicable to the products mentioned, provided that the appropriate subclauses of clause 9 are respected.

2 References

ISO 4831, *Microbiology — General guidance for the enumeration of coliforms — Most probable number technique at 30 °C.*

ISO 4832, *Microbiology — General guidance for the enumeration of coliforms — Colony count technique at 30 °C.*

ISO 4833, *Microbiology — General guidance for the enumeration of micro-organisms — Colony count technique at 30 °C.*

ISO 6579, *Microbiology — General guidance on methods for the detection of Salmonella.*

3 Definitions

For the purpose of this International Standard, the following definitions apply:

3.1 initial suspension (primary dilution): The suspension, solution or emulsion obtained after a weighed or measured quantity of the product under examination (or of a test sample prepared from the product) has been mixed, if necessary using a blender and observing appropriate precautions (see the note to clause 9), with a ninefold quantity of dilution fluid (diluent, see clause 5), allowing large particles, if present, to settle.

NOTE — It may be necessary, in certain cases, particularly for products giving an initial 1 + 9 suspension, which is too viscous or too thick, to add more diluent. This should be taken into account for subsequent operations and/or in the expression of results.

3.2 further decimal dilutions: The suspensions or solutions obtained by mixing a determined volume of the initial suspension (3.1) with a ninefold volume of diluent (see the note to 3.1), and by repeating this operation with every dilution thus prepared, until a decimal dilution series, suitable for the inoculation of culture media, is obtained.

3.3 specific standard: An International Standard or guidance document describing the examination of a specific product (or group of products) for the detection or enumeration of a specific micro-organism (or group of micro-organisms) and/or describing the general characteristics of sampling and/or the preparation of test samples.

4 Principle

Preparation of the initial suspension (3.1) in such a way as to obtain as uniform a distribution as possible of the micro-organisms contained in the test portion.