
**Cork stoppers — Characterization
of a low-in-germs stopper, through
the enumeration of colony-forming
units of yeasts, moulds and bacteria,
capable of both being extracted and
growing in alcoholic medium**

*Bouchons en liège — Caractérisation d'un bouchon pauvre en
germes par dénombrement des unités formant colonie de levures, de
moisissures et de bactéries, extraites en milieu alcoolique et capables
de s'y développer*

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 87, *Cork*.

This third edition cancels and replaces the second edition (ISO 10718:2002), which has been technically revised.

Cork stoppers — Characterization of a low-in-germs stopper, through the enumeration of colony-forming units of yeasts, moulds and bacteria, capable of both being extracted and growing in alcoholic medium

1 Scope

This International Standard specifies a method to enumerate the colony-forming units of yeasts, moulds and bacteria which can exist on cork stoppers and in an alcoholic solution, and which, under certain conditions, can be extracted during the 3 months following delivery.

This International Standard applies to all types of ready-to-use cork stoppers, submitted to a sanitation process and packaged in properly aseptic and hermetic conditions.

This International Standard specifies the limit values of the colony-forming units of yeasts, moulds and bacteria which can be found on cork stoppers submitted to the test procedures included in this standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 17727, *Cork — Cork stoppers for still wine — Sampling plan for the quality control of cork stoppers*

3 Low-in-germs stoppers

Cork stoppers submitted to test methods specified in this International Standard are designated as low-in-germs stoppers when the following results are obtained:

< 10 cfu bacteria per stopper (see [13.1](#))

< 10 cfu yeast and moulds per stopper (see [13.2](#))

4 Principle

Direct counting of colonies of living microorganisms (yeasts, moulds and bacteria) by incubation in a specific cultural medium after extraction with an alcoholic solution with added tartaric acid and followed by a membrane filtration procedure.

5 Reagents and cultural media

5.1 Physiological solution (0,85 % NaCl)¹⁾ or **Ringer's solution** (1/4 X)¹⁾ with the following composition:

1) This product is commercially available.