
**Footwear and footwear components —
Quantitative challenge test method to
assess antifungal activity**

*Chaussures et composants de chaussure — Méthode de test d'épreuve
quantitatif pour évaluer l'activité antifongique*





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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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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 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 Technical Committee ISO/TC 216, *Footwear*.

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.

Footwear and footwear components — Quantitative challenge test method to assess antifungal activity

CAUTION — Test methods specified herein require the use of micro-fungi. These tests are only to be carried out in facilities with containment techniques for handling microorganisms and by persons with training and experience in the use of microbiological techniques.

1 Scope

This document specifies quantitative challenge test methods for evaluating the antifungal activity of footwear and footwear components.

This document is applicable only to footwear and components that claim to have antifungal (antimycotic) properties or antimicrobial properties.

Two methods can be applied. The choice of method depends on the material properties and test microorganisms. Dynamic challenge test method can be applied to all types of materials. For single absorbent materials, static challenge test method is recommended. Brief descriptions of each method are given in [11.2](#) and [11.3](#).

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

ISO 19952, *Footwear — Vocabulary*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in ISO 19952 and the following apply.

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

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

antifungal activity

antimycotic activity

efficacy of a material or finish used to prevent or mitigate the growth of micro-fungi, to reduce the number of micro-fungi or to kill micro-fungi

3.2

control specimen

material identical to the test material but without antifungal treatment

Note 1 to entry: If no control specimen is available, sterilized conical flask can be used as control specimen.