Footwear and footwear components - Qualitative test method to assess antifungal activity (growth test) (ISO 19574:2022)



#### EESTI STANDARDI EESSÕNA

#### NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 19574:2022 sisaldab Euroopa standardi EN ISO 19574:2022 ingliskeelset teksti.

This Estonian standard EVS-EN ISO 19574:2022 consists of the English text of the European standard EN ISO 19574:2022.

Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas

This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.

Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.02.2022.

Date of Availability of the European standard is 09.02.2022.

Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.

The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <u>standardiosakond@evs.ee</u>.

ICS 61.060

#### Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autoriõiguse kaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

#### The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about standards copyright protection, please contact the Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

### EUROPEAN STANDARD

## NORME EUROPÉENNE

#### **EUROPÄISCHE NORM**

February 2022

**EN ISO 19574** 

ICS 61.060

#### **English Version**

# Footwear and footwear components - Qualitative test method to assess antifungal activity (growth test) (ISO 19574:2022)

Chaussures et composants de chaussures - Méthode d'essai qualitative pour évaluer l'activité antifongique (essai de croissance) (ISO 19574:2022) Schuhe und Schuhbestandteile - Qualitatives Prüfverfahren zur Bestimmung der antimykotischen Wirksamkeit (Wachstumsprüfung) (ISO 19574:2022)

This European Standard was approved by CEN on 18 January 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

#### **European foreword**

This document (EN ISO 19574:2022) has been prepared by Technical Committee ISO/TC 216 "Footwear" in collaboration with Technical Committee CEN/TC 309 "Footwear" the secretariat of which is held by UNE.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2022, and conflicting national standards shall be withdrawn at the latest by August 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

#### **Endorsement notice**

The text of ISO 19574:2022 has been approved by CEN as EN ISO 19574:2022 without any modification.

Contents			Page
Fore	word		iv
1	Scop	oe	1
2	Norn	native references	1
3	Terms and definitions		1
4		ciple	
5	Safety		
6	Apparatus		
7		gents and culture medium	
	7.1	General	
	7.2	Water	
	7.3	Malt Extract Agar (MEA) medium	3
		7.3.1 Composition	
		7.3.2 Preparation	
	7.4	Physiological saline (sodium chloride solution)	
		7.4.1 Composition	
	7.5	7.4.2 Preparation Wetting agent (nonionic surfactant)	
	7.6	Buffer solution	
	7.0	7.6.1 Buffer stock	4
		7.6.2 Preparation of buffer stock	
		7.6.3 Preparation of buffer solution	4
8	Test	microorganisms	4
9	Prep	paration of test spore suspension	5
10	Pren	paration of test specimens	6
	10.1	General	6
	10.2		
	10.3	Pre-treatment of test and control specimens	6
11	Test	procedure	7
	11.1	Inoculation of solidified agar plates	7
	11.2	Arrangement of test and control specimens	7
	11.3	Inoculation of test and control specimens	7
	11.4	Incubation	7
	11.5 11.6	Viability control of the sporesAssessment of micro-fungal growth	7
12		ression of results	
12	_		
13		report	
Bibli	iograph	hy	10

#### **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 <a href="www.iso.org/directives">www.iso.org/directives</a>).

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 <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

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 <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by Technical Committee ISO/TC 216, *Footwear*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 309, *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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 <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

## Footwear and footwear components — Qualitative test method to assess antifungal activity (growth test)

CAUTION — Test methods specified herein require the use of micro-fungi. These tests shall only 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 a test method (growth test) for the qualitative evaluation of the antifungal activity of footwear and footwear components exposed to the action of filamentous micro-fungi.

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

#### 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 11133, Microbiology of food, animal feed and water — Preparation, production, storage and performance testing of culture media

ISO 16187, Footwear and footwear components — Test method to assess antibacterial activity

ISO 19952, Footwear — Vocabulary

#### 3 Terms and definitions

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

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

- ISO Online browsing platform: available at <a href="https://www.iso.org/obp">https://www.iso.org/obp</a>
- IEC Electropedia: available at <a href="https://www.electropedia.org/">https://www.electropedia.org/</a>

#### 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