International Standard

ISO 16000-43

First edition
2025-02

Indoor air —

Part 43: Standard method for assessing the reduction rate of culturable airborne fungi by air purifiers using a test chamber

Air intérieur —

Partie 43: Méthode normalisée d'évaluation du taux d'abattement de champignons cultivables aéroportés par des purificateurs d'air en chambre d'essai

Reference number
ISO 16000-43:2025(en)

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Published in Switzerland

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Foreword

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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 document 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 146, *Air quality*, Subcommittee SC 6, *Indoor air*.

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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.

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Introduction

An indoor microbial environment is important to the health of occupants, particularly with regard to increased time spent indoors.

Air purifiers are used to reduce the concentration of microorganisms in indoor air.

The efficiency of such air purifiers to reduce airborne microorganisms can be investigated in test chambers at constant temperature and relative air humidity.

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Indoor air —

Part 43:
Standard method for assessing the reduction rate of culturable airborne fungi by air purifiers using a test chamber

WARNING — The test given in this document shall be performed by persons who are familiar with techniques in connection with microorganisms. The test fungus *Penicillium roqueforti* is a common mould widespread in nature. It has been used for cheese making for a long time. However, it produces spores which can cause an allergic response in people who are sensitive to mould spores. Users of this document shall be aware of national and international safety procedures for working with allergic mould spores, to prevent any exposure in the test environment. The examination and preparation of the cultures should be carried out in a Class II Biological Safety Cabinet.

1 Scope

This document specifies a standard method to evaluate the capacity of air purifiers to reduce the concentration of airborne fungi and clean the air in the indoor environment.

The test is applicable to air purifiers which are commonly used in single room space.

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 16000-9:2024, *Indoor air — Part 9: Determination of the emission of volatile organic compounds from samples of building products and furnishing — Emission test chamber method*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

— IEC Electropedia: available at https://www.electropedia.org/

3.1
air purifier
electrically-powered device that is basically built of a fan and a set of components possessing the ability to capture and/or (partially or totally) destroy air pollutants

3.2
colony forming unit
cfu
unit by which the number of culturable fungi is expressed

[SOURCE: ISO 16000-36:2018, 3.2, modified — “Bacteria” was changed to “fungi”.]

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