Biological safety cabinets - Part 1: Classes and basic requirements

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12469-1:2025 sisaldab Euroopa standardi EN 12469-1:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 12469-1:2025 consists of the English text of the European standard EN 12469-1:2025.
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 19.11.2025.	Date of Availability of the European standard is 19.11.2025.
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 standardiosakond@evs.ee.

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Biological safety cabinets - Part 1: Classes and basic requirements

Postes de sécurité microbiologique - Partie 1: Types et exigences fondamentales

Biologische Sicherheitswerkbänke - Teil 1: Klassen und grundlegende Anforderungen

This European Standard was approved by CEN on 5 October 2025.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 12469-1:2025) has been prepared by Technical Committee CEN/TC 332 “Laboratory Equipment”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by May 2026, and conflicting national standards shall be withdrawn at the latest by May 2026.

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.

This document, together with EN 12469-2:2025, prEN 12469-3:—[1] prEN 12469-4:—[2] and EN 12469-5:2025, will partially supersede EN 12469:2000.

EN 12469-1:2025 includes the following significant technical changes with respect to EN 12469:2000:

— the structure has been changed to emphasize different classes of biological safety cabinets (BSC);

— the text of the entire document has been revised and references have been updated.

EN 12469 consists of the following parts, under the general title *Biological safety cabinets*:

— Part 1: Classes and basic requirements

— Part 2: BSC class II

— Part 3: BSC class III

— Part 4: BSC class I

— Part 5: Installation, commissioning and routine testing

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

[1] Under preparation.
[2] Under preparation.

Introduction

Biological safety cabinets (BSC) are designed to protect the operator and the environment against the risks associated with the handling of biological agents. Depending on the classes, a BSC can additionally protect the product.

Each BSC class has its own design and performance criteria. The choice of a BSC class depends on the type of protection required and the assessment of the risk to be controlled.

EN 12469 describes the BSC classes, their design, correct usage, and testing principles.

This document is a product standard. Occupational health and safety assessments methods are not included.

1 Scope

This document specifies the minimum requirements for BSC with respect to design, construction, safety and hygiene and gives general test methods for their verification.

The requirements for the different classes are given in the respective parts of EN 12469.

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.

EN 842, *Safety of machinery – Visual danger signals – General requirements, design and testing*

EN 1822-1, *High efficiency air filters (EPA, HEPA and ULPA) - Part 1: Classification, performance testing, marking*

EN 12600, *Glass in building - Pendulum test - Impact test method and classification for flat glass*

EN 13792, *Colour coding of taps and valves for use in laboratories*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN 61010-1, *Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements (IEC 61010-1)*

EN 61672-1, *Electroacoustics - Sound level meters - Part 1: Specifications (IEC 61672-1)*

EN ISO 5349-2, *Mechanical vibration - Measurement and evaluation of human exposure to hand-transmitted vibration - Part 2: Practical guidance for measurement at the workplace (ISO 5349-2)*

EN ISO 7731, *Ergonomics - Danger signals for public and work areas - Auditory danger signals (ISO 7731)*

EN ISO 8041-1, *Human response to vibration - Measuring instrumentation - Part 1: General purpose vibration meters (ISO 8041-1)*

EN ISO 11201:2010, *Acoustics - Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201:2010)*

EN ISO 14644-3, *Cleanrooms and associated controlled environments - Part 3: Test methods (ISO 14644-3)*

EN ISO 14738, *Safety of machinery - Anthropometric requirements for the design of workstations at machinery (ISO 14738)*

EN IEC/IEEE 82079-1, *Preparation of instructions for use - Structuring, content and presentation - Part 1: General principles and detailed requirements*

ISO 6706, *Plastics laboratory ware — Graduated measuring cylinders*

ISO/CIE 19476, *Characterization of the performance of illuminance meters and luminance meters*