



BSI Standards Publication

Fume cupboards

Part 3: Type test methods

This is a preview of "BS EN 14175-3:2019". [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 14175-3:2019. It supersedes BS EN 14175-3:2003, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee LBI/1/1, Laboratory furniture and fittings.

A list of organizations represented on this committee can be obtained on request to its secretary.

The UK committee advises that prior to purchasing a fume cupboard, a risk assessment should be performed to assess the risks associated with the substances that are to be manipulated. This would ensure that the fume cupboard is suitable for its intended purpose and that current exposure limits for toxic substances are not exceeded. It is suggested, therefore, that users may need to draw up a specification appropriate to their particular requirements, within the overall permissible limits of this standard and the information on installation included in the national annex. For users with little experience of purchasing fume cupboards, it may be helpful for trade associations, employers' bodies or other organizations associated with a particular activity to give guidance on a suitable specification. An example would be CLEAPSS Guide G9, *Fume Cupboards in Schools* (<http://science.cleapss.org.uk/Resource-Info/G9-Fume-Cupboards-in-Schools.aspx>), which replaces DfE Guide BB88.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Amendments/corrigenda issued since publication

Date	Text affected
30 June 2019	Inclusion of additional national foreword text and a national annex

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English Version

Fume cupboards - Part 3: Type test methods

Sorbonnes - Partie 3 : Méthodes d'essai de type

Abzüge - Teil 3: Baumusterprüfverfahren

This European Standard was approved by CEN on 15 March 2019.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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European foreword

This document (EN 14175-3:2019) 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 November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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 supersedes EN 14175-3:2003.

In comparison with the previous edition, the following technical modifications have been made:

- introduction was deleted;
- scope clarified and reference to EN 14175-4 and EN 14175-6 was added;
- inclusion of new terms 3.4 and 3.5 with definitions;
- information testing on walk-in fume cupboards clarified;
- limitation of usage of SF_6 as trace gas according to national legislation;
- revision of data analysis and result in 5.3.6 and 5.4.5;
- inclusion of Annex B "A-deviations".

EN 14175 consists of the following parts, under the general title *Fume cupboards*:

- *Part 1: Vocabulary*
- *Part 2: Safety and performance requirements*
- *Part 3: Type test methods*
- *Part 4: On-site test methods*
- *Part 5: Recommendations for installation and maintenance* (Technical Specification)
- *Part 6: Variable air volume fume cupboards*
- *Part 7: Fume cupboards for high heat and acidic load*

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1 Scope

This document specifies type test methods for the assessment of safety and performance of fume cupboards connected to an exhaust air system. Relevant requirements are specified in EN 14175-2.

For terms and their definitions, EN 14175-1 applies. For safety and performance requirements of fume cupboards, EN 14175-2 applies. For on-site test methods of fume cupboards, EN 14175-4 applies. For the type testing and on-site testing of variable air volume (VAV) fume cupboards, EN 14175-6 applies in addition to this standard. For fume cupboards for high heat and acidic load, EN 14175-7 applies.

For the testing of recirculation filtration fume cupboards, EN 17242:—¹ applies.

For the testing of microbiological safety cabinets, EN 12469 applies.

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 12665, *Light and lighting — Basic terms and criteria for specifying lighting requirements*

EN 14175-1:2003, *Fume cupboards — Part 1: Vocabulary*

EN 14175-2:2003, *Fume cupboards — Part 2: Safety and performance requirements*

EN 14175-6, *Fume cupboards — Part 6: Variable air volume fume cupboards*

EN ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements (ISO 5167-1)*

EN ISO 12569, *Thermal performance of buildings and materials — Determination of specific airflow rate in buildings — Tracer gas dilution method (ISO 12569)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14175-1:2003 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

plane of sash

plane in the middle between the innermost and the outermost screen surfaces of that part of the sash forming the upper boundary of the test sash opening

[SOURCE: EN 14175-1:2003, 5.4, modification — plane is defined in more detail]

¹ Under preparation. Stage at the time of publication: prEN 17242:2018.