AS 2252.4—2010

Australian Standard®

Controlled environments

Part 4: Biological safety cabinets Classes I and II—Installation and use (BS 5726:2005, MOD)

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- Airconditioning & Refrigeration Equipment Manufacturers Association of Australia
- Association of Accredited Certification Bodies
- Auckland Regional Chambers of Commerce
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Institute of Refrigeration Air Conditioning and Heating
- Australian Society for Microbiology
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- Commonwealth Department of Health and Ageing
- Engineers Australia
- Human Factors and Ergonomics Society of Australia
- International Society for Pharmaceutical Engineering
- NSW Health Department
- National Association of Testing Authorities Australia
- Office of the Gene Technology Regulator

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-060, Controlled Environment to supersede AS/NZS 2647:2000, *Biological safety cabinets—Installation and use*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard is Part 4 of a series on biological safety cabinets.

The objective of this Standard is to give recommendations and guidance in regard to procedures for installation and use of biological safety cabinets.

This Standard is an adoption with national modifications and has been reproduced from BS 5726:2005, *Microbiological safety cabinets—Information to be supplied by the purchaser to the vendor and to the installer, and siting and use of cabinets—Recommendations and guidance*. Additional requirements are set out in Appendix ZZ.

Compliance with an Australian Standard does not of itself confer immunity from legal obligations.

The term 'normative' has been used in this Standard to define the application of the annex or appendix to which it applies. A 'normative' annex or appendix is an integral part of a Standard.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its title appears only on the cover page.

(b) In the source text, 'this British Standard' should read 'this Australian Standard'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

The normative reference listed in Clause 2 has not been adopted as an Australian or an Australian/New Zealand Standard.

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APPENDIX

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FOREWORD TO BS 5726

This British Standard has been prepared by Technical Committee CH/101. It supersedes BS 5726-2:1992 and BS 5726-4:1992, which are withdrawn.
BS 5726-1:1992 and BS 5726-3:1992 were superseded by BS EN 12469:2000 and were withdrawn in July 2000.
This revision gives recommendations and guidance on the information to be supplied by the purchaser to the vendor and to the installer and recommendations on the siting and use of microbiological safety cabinets specified in BS EN 12469.
The Technical Committee identified the following differences, in what they considered to be important safety related areas, between BS EN 12469:2000 and BS 5726-1:1992 and BS 5726-3:1992.
— The mandatory part of the standard includes a type test for operator protection. However, this is only optional at installation and is not specifically required at routine maintenance.
— Some other important items that were mandatory in BS 5726-1 and BS 5726-2, such as airflows and dimensions are included in BS EN 12469 only as informative annexes.
— The option of potassium iodide or bacterial challenge testing for operator protection remain, but the methods for bacterial testing have been brought into line with those specified by the National Sanitation Foundation (USA) in NSF/ANSI 49 for Class II microbiological safety cabinets, and the results are expressed in absolute values rather than as a ratio.
— Requirements for installation and commissioning remain open.
Attention is drawn to the Health and Safety Commission publication *The management, design and operation of microbiological containment laboratories* [1], which covers essential safety requirements for microbiological safety cabinets.
It has been assumed in the drafting of this standard that the execution of its provisions will be entrusted to suitably qualified and experienced people, for whose use it has been produced.
This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.
Compliance with a British Standard does not of itself confer immunity from legal obligations.
In particular attention is drawn to the Control of Substances Hazardous to Health Regulations 2002 [2], the Building Regulations 2000 [3], the Building Standards (Scotland) Regulations 1990 [4] and the Building Regulations (Northern Ireland) 2000 [5].

AUSTRALIAN STANDARD

Controlled environments

Part 4:

Biological safety cabinets Classes I and II—Installation and use (BS 5726:2005, MOD)

1 Scope

This British Standard gives recommendations and guidance on information to be supplied by the purchaser to the vendor and to the installer, on siting, and on use, for microbiological safety cabinets as specified in BS EN 12469.

2 Normative references

The following referenced documents are indispensable for the application 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.

BS EN 12469:2000, *Biotechnology — Performance criteria for microbiological safety cabinets*

3 Terms and definitions

For the purposes of this British Standard the terms and definitions given in BS EN 12469:2000 apply.

4 Information to be supplied by the purchaser

4.1 General

It is strongly recommended that for safety cabinets conforming to BS EN 12469 the information given in **4.2** and **4.3** be supplied by the purchaser to the vendor and to the installer.

4.2 Information to be supplied by the purchaser to the vendor

The following information should be supplied by the purchaser to the vendor:

a) any specific requirements which are evident from consideration by the purchaser of the guidance given in Clause **5** and Clause **6**;

b) cabinet size and/or vendor's reference number;

c) services to be fitted;

d) dimensions available for access to the building.

4.3 Information to be supplied by the purchaser to the installer

The following information should be supplied by the purchaser to the installer:

NOTE 1 The installer may be the same party as the vendor.

a) the following details of the siting of the safety cabinet(s):

1) details of the building in which the safety cabinet is to be installed which might adversely affect the performance of the cabinet, the location of the laboratory and the intended siting of the safety cabinet(s) within the laboratory;

2) the location of doors, windows, fume cupboards, other safety cabinets, other laboratory furniture, laboratory equipment that might generate draughts (e.g. large centrifuges), ventilation grills, and diffusers or other air moving equipment;

3) any features listed in item 2) which are planned but have not yet been installed;

NOTE 2 A site survey might be appropriate.

4) details of the intended method of supplying ventilation make-up air and of the existing room ventilation;

c) the environmental requirements of the laboratory including the following:

1) maximum overall noise levels in the laboratory, particularly if more than one cabinet is required either in the same room or other rooms in the same building;

2) effects of any other cabinets and/or extraction units, air conditioning and ventilation systems, and equipment (e.g. large centrifuges), that might generate draughts or contribute to adverse air movements;

3) room air volume flow rate and any pressure differences with respect to the outside atmosphere;