

Australian Standard®

Cleanrooms, workstations, and safety cabinets—Methods of test

Method 22: Determination of air barrier containment of laminar flow safety cabinets

1 SCOPE. This Standard sets out the method for determining the containment by the air barrier as indicated by the integrity of the air barrier and the velocity of the exhaust air in a laminar flow safety cabinet (laminar flow biological safety cabinet (Class II) or cytotoxic drug safety cabinet).

NOTE: This Standard is based on Appendix D of AS 2252.2 and Appendix D of AS 2567 and is intended to replace these Appendices at a later stage.

2 REFERENCED DOCUMENTS. The following documents are referred to in this Standard:

AS	
1386	Cleanrooms and clean workstations
1386.1	Part 1: Principles of clean space control
1807	Cleanrooms, workstations, and safety cabinets—Methods of test
1807.0	Part 0: List of methods and apparatus
1807.1	Method 1: Determination of air velocity and uniformity of air velocity in clean workstations and laminar flow safety cabinets
1807.6	Method 6: Determination of integrity of terminally mounted HEPA filter installations
2252	Biological safety cabinets
2252.2	Part 2: Laminar flow biological safety cabinets (Class II) for personnel and product protection
2567	Cytotoxic drug safety cabinets

3 DEFINITIONS. For the purpose of this Standard the definitions given in AS 1386.1 and AS 1807.0 apply.

4 PRINCIPLE. A polydispersed aerosol is released at specified test positions and the integrity of the barrier air at the work access opening is determined by measuring the outward penetration of aerosol at the test positions.

5 APPARATUS. The following apparatus as specified in AS 1807.0 is required:

- Anemometer.
- Cold DOP aerosol generator with aerosol delivery hose and barrier test fitting.
- Aerosol photometer.

6 PROCEDURE. The procedure shall be as follows:

NOTE: The test operator should avoid inhalation of and exposure to heavy concentration of the test aerosol. It is recommended that a suitable mask or respirator be worn for the duration of this test.

- Set the cabinet in operation. Measure initial pressure drops across all HEPA filters and record the values.
- Set the aerosol photometer to the identical sensitivity level previously used to determine the filter and filter installation integrity (see AS 1807.6).

NOTE: This should not be commenced until the background aerosol concentrations in the room have reached a steady state.