Australian Standard™

Cleanrooms, workstations, safety cabinets and pharmaceutical isolators—Methods of test

Method 8: Particle counting in work zone by automatic particle counter

1 SCOPE This Standard sets out the method for determining the number of airborne particles in the work zone(s) of a cleanroom, workstation, laminar flow safety cabinet or pharmaceutical isolator.

NOTE: This method of test may be suitable also for testing the integrity of HEPA filter installation in other situations.

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

AS
1386 Cleanrooms and clean workstations
1386.1 Part 1: Principles of clean space control
1807 Cleanrooms, workstations, safety cabinets and pharmaceutical isolators—Methods of test
1807.0 Part 0: List of methods and apparatus

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

4 PRINCIPLE Air in the work zone(s) is submitted to particle counts at selected locations and at a known flow rate. Particles contained in the sampled air are passed through an illuminated sensing zone in the optical chamber of the instrument. Light scattered by individual particles is received by a photodetector which converts the light pulses into electrical current pulses. An electronic system relates the pulse height to particle size, and counts the pulses so that the number of particles in relation to particle size is registered or displayed. The results are recorded and evaluated.

5 APPARATUS An automatic particle counter as specified in AS 1807.0 is required.

6 SAMPLES

6.1 General Samples of air shall be taken at selected sample locations in accordance with Clause 6.2. However, the total number of sample locations within the work zone(s) shall be not less than the numerical value of half the floor area of the work zone(s) (in square metres).

At least two samples shall be taken at each sample location and a total of at least five samples shall be taken. The sample volume for each sample shall be not less than the relevant minimum volume per sample in accordance with Clause 6.3.

