Australian Standard®

Cleanrooms, workstations, and safety cabinets—Methods of test

Method 19: Sizing and counting of particulate contaminants in and on cleanroom garments

CONTENTS

METHOD

1 SCOPE. This Standard sets out methods for determining the size and number of detachable particulate matter of 5 µm diameter and larger in and on cleanroom garments. Different sampling methods are specified for high and low permeable fabrics.

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
1807.9 Method 9: Particle counting in cleanrooms by microscopic sizing and counting

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

3.1 Permeability—the ability of a fabric to allow air to pass through its structure.

3.2 Low permeable fabric—a fabric with a permeability which is so low that, with the apparatus specified in Clause 5, samples of air cannot be drawn through the fabric at the nominated flow rate of approximately 28 L/min (0.47 L/s).

3.3 Permeable fabric—a fabric with a permeability which is high enough that, with the apparatus specified in Clause 5, samples of air can be drawn through the fabric at the nominated flow rate of approximately 28 L/min (0.47 L/s).

4 PRINCIPLE. For permeable fabrics, filtered air is drawn through a number of designated areas of a single thickness of the garment fabric at a specified rate. For fabrics with low permeability, the fabric is placed over a screen and vacuumed at a specified pressure. The sampled air is filtered through a membrane filter impinging particles on the filter for analysis by microscopic techniques.