

Australian Standard™

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

Method 17: Determination of vibration in cleanrooms

1 SCOPE This Standard sets out the method for determining the vibration levels within a cleanroom with all integral mechanical and electrical systems in normal operation and with these systems at rest.

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, 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 Measurements of the vibration velocity are made at selected locations, both with and without all integral mechanical and electrical systems in normal operation. These measurements are made with a vibration meter to permit comparison of the vibration levels under these two conditions. Determination of the net vibration, i.e. that attributable to the airconditioning system and air-handling equipment alone, requires vibration frequency analysis.

5 APPARATUS A vibration meter as specified in AS 1807.0 is required.

6 PROCEDURE The procedure shall be as follows:

(a) Select testing positions.

NOTE: Testing positions should be selected in conjunction with the user.

(b) Ensure that the airflow is as specified.

(c) With all mechanical systems that are integral with the cleanroom in normal operation, measure the gross vibration velocity at each selected location in the vertical, longitudinal and transverse axes.

(d) With all cleanroom mechanical systems at rest, measure the ambient vibration velocity at each of the same points and axes.