

JIS

JAPANESE INDUSTRIAL STANDARD

**Testing methods for
determining bacterial retention
of membrane filters**

JIS K 3835—1990

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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Testing methods for determining bacterial
retention of membrane filters

K 3835-1990

1. Scope

This Japanese Industrial Standard specifies the testing methods for determining bacterial retention of filter disc, filter cartridge, and disposable filter of microfiltration membrane used for filtering air or liquid using *Pseudomonas diminuta* as the challenge organism.

Remarks 1. The applicable standards to this Standard are shown in Attached Table 1.

2. The units and numerical values given in { } in this Standard are based on the traditional units and are currently the criteria in force.

2. Definitions of Terms

For the main terms used in this Standard the definitions in JIS K 3802 apply, and the rest of the terms shall be as follows:

- (1) bacterial retention The value defined in the following formula that is used for evaluating element and module of microfiltration membrane.

$$M = \log_{10} \frac{A}{B}$$

where, M : bacterial retention ⁽¹⁾ (no dimension)

A : total number of organisms in the challenge on microfiltration membrane.

B : number of organisms retained on the analysis filter for test

Note ⁽¹⁾ This can be represented as the logarithm reduction value or LRV (Log Reduction Value).

- (2) filter disc Sheet-type filter element.
- (3) filter cartridge Pleat-type or cylinder-type filter element.
- (4) disposable filter Throwaway-type filter assembly.
- (5) filter assembly Housing or holder installed with a filter element.
- (6) holder Container for keeping a filter disc.

3. Organisms, Reagents and Culture Media

3.1 Organisms Organisms shall be *Pseudomonas diminuta* ATCC 19146 or IFO 14213.