

Japanese Industrial Standard (JIS Z 2801:2000)

Antimicrobial products test for antimicrobial activity and efficacy

1. This standard specifies the testing methods to evaluate antimicrobial activity and antimicrobial efficacy on bacteria on the surface of antimicrobial products (including intermediate products)
2. This testing method is applicable to products, such as Plastic products, metal products, and ceramic products.

Material and Method

Culture medium

1. Nutrient broth (NB)
2. Nutrient agar (NA)
3. Place count agar (PCA)
4. SCDLP broth

Buffer

1. Phosphate buffer solution
2. Phosphate buffer physiological saline

Cleaning of the surface

Wipe the whole surface of the test piece lightly with gauze or absorbent cotton immersed in ethanol 2 or 3 times and dry it completely.

Preparation of test inoculum

The number of bacteria is $2.5 - 10 \times 10^5$ and use as the test inoculum.

Washing out the test bacteria inoculated

Add 10ml of the SCDLP broth with pipet and massage the test piece and the covering film sufficiently with hand or extractor (Such as stomacher) for the microbial test to wash out the test bacteria proceed immediately to count viable cell of bacteria in the washing.

Viable cell count of bacteria

By the agar plate culture method and calculation of the number of viable cells of bacteria according to the formula.

$$N = C D V$$

Where:

- N = number of viable cells of bacteria (per test piece)
 C = number of colonies (average of the number of colonies in two petri dishes adopted)
 D = dilution ratio (dilution ratio of the diluted solution dispensed into the petri dishes adopted)
 V = volume (ml) of the SCDLP broth use for washing out

Calculation of the value of antimicrobial activity

$$R = \log (B/A)$$

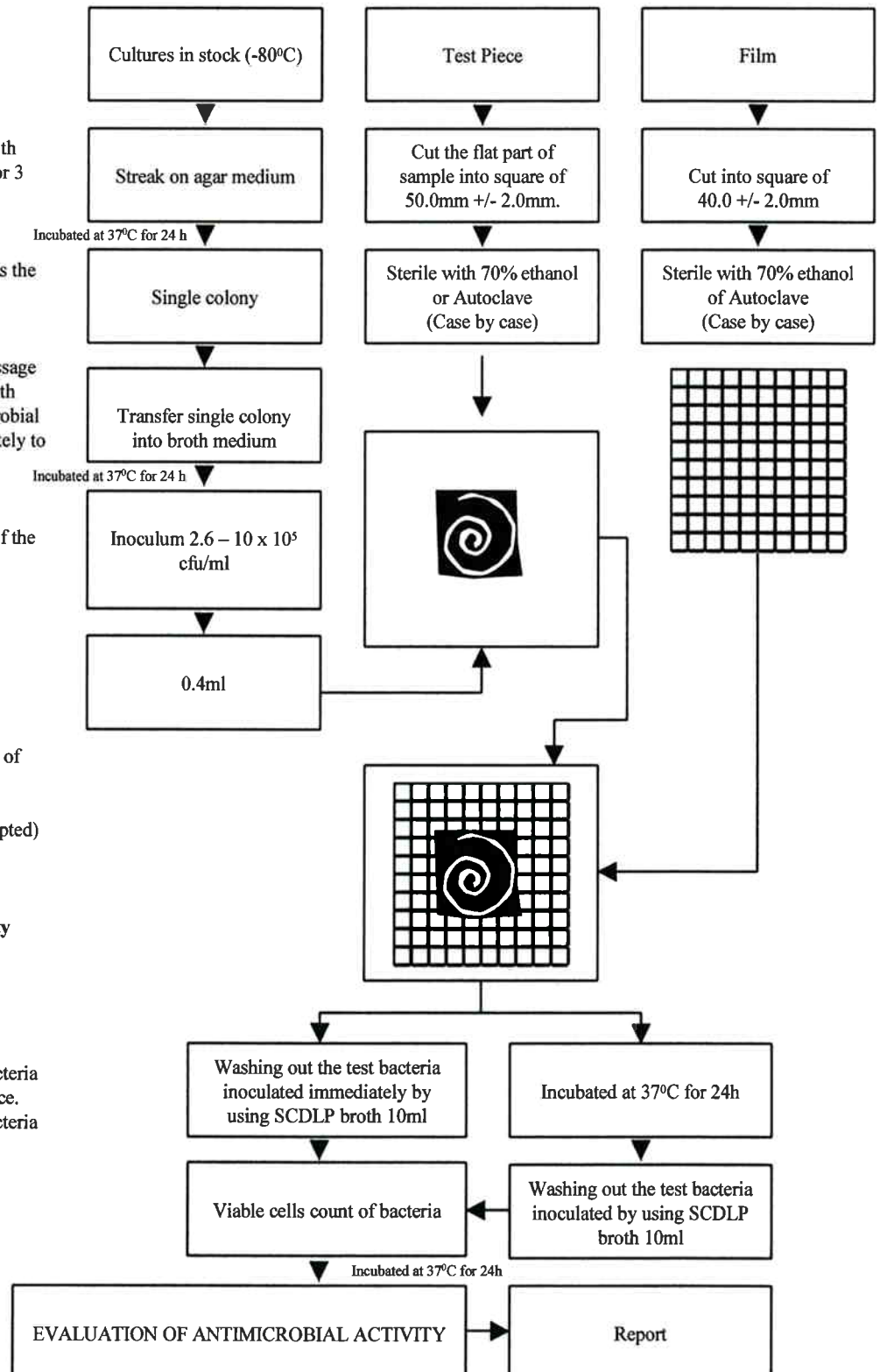
Where:

- R = value of antimicrobial activity
 A = average of the number of viable cells of bacteria after 24 h inoculation of the treated test piece.
 B = average of the number of viable cells of bacteria on the untreated test piece after 24 h

Record of test results

The type, size, shape, and thickness of antimicrobial and untreated test piece, the type, size, shape, and thickness of film, species of test bacteria, strain number of bacteria, volume of test inoculum inoculated, number of viable cells of bacteria in the test inoculum, the values of values of A, B and C in the formula:

$R = (\log B/A)$ and the value of antimicrobial activity shall be recorded.



Client: Microban (Asia) Limited
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Job Ref: 05E1328
Sample Ref No.: LSN 26/75295
Date Received: 17/05/2005
Date Reported: 22/03/2006

CERTIFICATE OF ANALYSIS

BlueScope Steel CRP Permagard White

Meth. Desc **JIS Z 2801/AATCC 100**

Reference **MBA005705**

Test	Result	Unit	Est
Staphylococcus aureus	90.0	%	Reduction After 24 Hours
Escherichia coli 0157	91.8	%	Reduction After 24 Hours
Pseudomonas aeruginosa	96.4	%	Reduction After 24 Hours

Comment: **Microbiological results acceptable**

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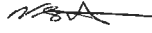
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