

## TEST REPORT

Requested by : NON Co., Ltd.

Test samples : Described in test report

Test item : Anti-bacterial test

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## Anti-bacterial test

### 1. Purpose

The test was conducted to estimate the anti-bacterial activity of the sample.

### 2. Test samples

DR.CLO PP10731SR (Antimicrobial 1.0%)

### 3. Test bacteria

<i>Staphylococcus aureus</i>	NBRC 13276
<i>Escherichia coli</i>	NBRC 3972
<i>Salmonella enterica</i>	NBRC 100797
<i>Klebsiella pneumoniae</i>	NBRC 13276

### 4. Test Method

The submitted samples were tested in accordance with Fig.1.

### 5. Test Results

The results of the anti-bacterial test of the samples were shown in table 1~4 and the results of concentrations of chlorine dioxide were shown in table 5.

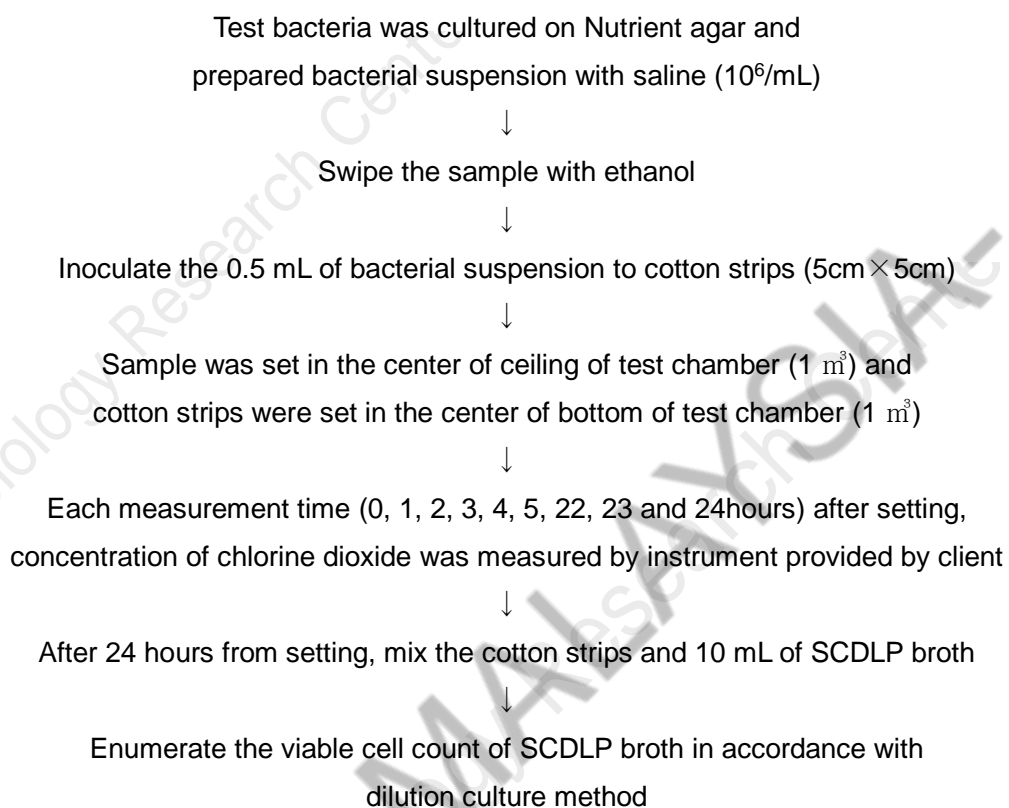


Fig.1. Test procedure

Table 1. Results of anti-bacterial test against *Staphylococcus aureus*

Test samples	Viable cell (CFU/ strips)	
	Initial	After incubation
DR.CLO	$1.7 \times 10^6$	$7.0 \times 10^2$ (99.96%)
Control	$1.7 \times 10^6$	$6.2 \times 10^3$

The viable cell count described in table is average of n3.

The percentage in parentheses is the rate of decrease comparing test samples from controls.

Table 2. Results of anti-bacterial test against *Escherichia coli*

Test samples	Viable cell (CFU/ strips)	
	Initial	After incubation
DR.CLO	$2.7 \times 10^6$	— (>99.99%)
Control	$2.7 \times 10^6$	$6.7 \times 10^3$

The viable cell count described in table is average of n3.

The percentage in parentheses is the rate of decrease comparing test samples from controls.

—: Not detected by incubating (<100 CFU/ strips)

Table 3. Results of anti-bacterial test against *Salmonella enterica*

Test samples	Viable cell (CFU/strips)	
	Initial	After incubation
DR.CLO	$2.7 \times 10^6$	— (>99.99%)
Control	$2.7 \times 10^6$	$2.3 \times 10^4$

The viable cell count described in table is average of n3.

The percentage in parentheses is the rate of decrease comparing test samples from controls.

—: Not detected by incubating (<100 CFU/strips)

Table 4. Results of anti-bacterial test against *Klebsiella pneumoniae*

Test samples	Viable cell (CFU/strips)	
	Initial	After incubation
DR.CLO	$1.0 \times 10^6$	— (>99.99%)
Control	$1.0 \times 10^6$	$7.0 \times 10^2$

The viable cell count described in table is average of n3.

The percentage in parentheses is the rate of decrease comparing test samples from controls.

—: Not detected by incubating (<100 CFU/strips)

Table 5. Results of concentration of chlorine dioxide

Measurement time (hours)	Concentration of chlorine dioxide (ppm)
0	—
1	—
2	—
3	—
4	—
5	—
22	—
23	—
24	—

— : Below detection limit