TEST REPORT

No. NA69060450

Applicant : Daiken Corporation

Specimen : details in the report

Test item : antibacterial efficacy (Hospi-tone treatment efficacy)

Test result by the specimens submitted to the laboratories on June 20, 1997 is in the attached report.

Japan Food Research Laboratories,
juridical foundation
July 16, 1997

Antibacterial Efficacy Test

1. Applicant ： Daiken Corporation

2. Specimens ： ① standard ceiling board sample

② antibacterial treatment (“Hospi-tone” coating) ceiling sample
③ not specimen but in laboratory dish

3. Test purpose ： antibacterial efficacy on antibacterial - treated (“Hospi-tone”) specimen

4. Test procedure ： put a few drops of bacteria on each specimen of ① and ②, and in each laboratory dish for Escherichia coli, Pseudomonas aeruginosa and MRSA, preserve or culture these bacteria under 36 ± 1℃, relative humidity over 90% and measure bacterial count after 5 and 24 hours respectively

5. Test result ： shown in Table 1

Table 1 test result of antibacterial efficacy

bacteria	condition	specimen	viable bacteria count
Escherichia coli	immediate check	specimen ③	3.6×10^4
	after 5 hours	specimen ①	6.4×10^3
		specimen ②	4.6×10^3
		specimen ③	7.3×10^4
	after 24 hours	specimen ①	1.1×10^2
		specimen ②	<10
		specimen ③	2.6×6
Pseudomonas aeruginosa	immediate check	specimen ③	4.5×10^4
	after 5 hours	specimen ①	2.3×10^3
		specimen ②	4.3×10^2
		specimen ③	2.3×10^4
	after 24 hours	specimen ①	7.8×10^6
		specimen ②	10
		specimen ③	2.2×10^6
MRSA	immediate check	specimen ③	3.8×10^4
	after 5 hours	specimen ①	1.0×10^3

	specimen ②	7.0×10^2
	specimen ③	2.3×10^4
after 24 hours	specimen ①	10
	specimen ②	<10
	specimen ③	1.2×10^6

＊ <10 means no bacteria was found.

6. Test method

1) test strain

Escherichia coli IFO 3972

Pseudomonas aeruginosa IFO 13275

Staphylococcus aureus IID 1677 (MRSA)

2) test culture media

NA culture media： general agar-agar by Eiken Kagaku Co. made.

1/200NB culture media： dilute by 200 times bouillon (soup stock) by Eiken Kagaku Co. added 0.2% meat extract and adjusted pH to 7.0±0.2

SCDLP agar culture media： SCDLP agar culture media by Nihon Seiyaku Co. Made

3) adjustment of bacterial liquid

① Escherichia coli and Pseudomonas aeruginosa ： culture test strain for 18～24 hours in NA cultural media at 35±1℃ and equalize the distribution of the test strain to adjust the bacteria count 5.0×10^4 ～5.0×10^5 level per millilitre.

② MRSA ： culture test strain for 18～24 hours in 1/200NB culture media at 35±1℃ and equalize the distribution of the test strain to adjust the bacteria count 5.0×10^4 ～ 5.0×10^5 level per millilitre

4) test specimen

Test specimen (5 x 5cm) should be wiped lightly with absorbent cotton immersed in 99.5% ethanol and then irradiated ultraviolet and soaked one night in phosphate buffer solution.

5) specimen conditions

put 0.5ML (millilitre) of each bacteria liquid on each specimen (25 cm2) and preserve or culture under 36 ± 1℃, relative humidity over 90%, also prepared laboratory dishes for comparison

6) measure bacterial count
preserved living bacteria on each specimen for 5 or 24 hours and took out by phosphate buffer solution and measured the bacterial count by the method of flat-panel agar culture (cultured 2 days at 35℃) using SCDLP agar and converted it into per specimen

as for immediate measure, use each bacterial without preservation taken out from laboratory dishes