

3.3 Antibacterial Test Based on JIS Z 2801

Method

0.2ml of a 24 hour suspension of *Escherichia coli* was placed onto the surface of each test piece and covered with a sterile microscope coverslip. The samples were incubated for 24 hours at 30°C then rinsed with 10ml sterile physiological saline. The surviving bacteria in the rinse water were determined using a serial dilution counting technique in nutrient agar. As a blank control, 0.2ml of the suspension was placed directly onto the bottom of a sterile petri dish and covered with a sterile coverslip.

Repeat experiments were performed using *Staphylococcus aureus* NCTC 11940 (MRSA), and *Salmonella typhimurium* ATCC 14028, as the inocula.

Results

Sample	<i>E coli</i> recovered after 24 hours (cfu/ml) (duplicate)		Log ₁₀ Difference (to blank)	Comment on Efficacy
Internal Blank	4.1 x 10 ⁵	4.8 x 10 ⁵		Good bacterial survival
Tactite (ZOE)	<10	<10	1.9	no bacteria survived
Tactite (Blank)	<10	6.4 x 10 ⁴		poor duplication of results
Escenta (ZOE)	<10	<10	0.0	no bacteria survived
Escenta (Blank)	<10	<10		no bacteria survived
Perlata (ZOE)	<10	<10	0.0	no bacteria survived
Perlata (Blank)	<10	<10		no bacteria survived

Sample	<i>S aureus</i> recovered after 24 hours (cfu/ml) (duplicate)		Log ₁₀ Difference (to blank)	Comment on Efficacy
Internal Blank	1.1 x 10 ⁴	3.1 x 10 ⁴		Good bacterial survival
Tactite (ZOE)	<10	<10	1.7	no bacteria survived
Tactite (Blank)	8.1 x 10 ²	2.2 x 10 ²		very low bacterial survived
Escenta (ZOE)	<10	<10	0.5	no bacteria survived
Escenta (Blank)	<10	1.0 x 10 ²		very low bacterial survived
Perlata (ZOE)	<10	<10	0.4	no bacteria survived
Perlata (Blank)	<10	5.0 x 10 ¹		very low bacterial survived

Sample	<i>S.typhimurium</i> recovered after 24 hours (cfu/ml) (duplicate)		Log ₁₀ Difference (to blank)	Comment on Efficacy
Internal Blank	1.2 x 10 ⁶	4.6 x 10 ⁵		Good bacterial survival
Tactite (ZOE)	<10	<10	0.4	no bacteria survived
Tactite (Blank)	6.0 x 10 ¹	<10		Very low bacteria survival
Escenta (ZOE)	<10	<10	0.0	no bacteria survived
Escenta (Blank)	<10	<10		no bacteria survived
Perlata (ZOE)	<10	<10	0.0	no bacteria survived
Perlata (Blank)	<10	<10		no bacteria survived

Key

cfu/ml = colony forming units per millilitre

<10 = no bacteria detected (less than 10 bacteria is the limit of the test detection)