

KASTUS Glass ISO 27447

99.99% results calculation



ISO 27447:2009 Results explanation

Section 4.2 of the test report shows test result as an **Antibacterial activity R value**.

Antibacterial activity R_L is calculated as the Log value of colony counts division from Table 4.1.

Kastus coated colony count after 24h contact time = 1

Uncoated colony count after 24h contact time = 1.16E+04

$$R_L: \text{Log}(1.16\text{E}+04/1)=4.06$$

The kill rate in % is calculated by equation: $(1 - 10^{-R_L}) * 100$

Kill rate = 99.99%

Table 4.1: Summary of Results for *Staphylococcus aureus*

Sample	Sample Exposure	Contact Time	
		0 Hrs	24 Hrs
Kastus Coated	UV 0.25mW/cm ²	1.22 x 10 ⁵	1.00
Kastus Coated	Dark	1.22 x 10 ⁵	5.07 x 10 ¹
Uncoated Control	UV 0.25mW/cm ²	1.22 x 10 ⁵	1.16 x 10 ⁴
Uncoated Control	Dark	1.22 x 10 ⁵	6.73 x 10 ⁴

4.2. Photocatalytic antibacterial activity results – R_L and ΔR

The log values from the Table 4.1 were used to calculate R_L and ΔR

Photocatalytic antibacterial activity $R_L = 4.06$

Photocatalytic antibacterial activity including any effect in the dark $\Delta R = 0.94$