



KLQMS/FF/R-20

KULKARNI LABORATORY & QUALITY MANAGEMENT SERVICES



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Ref No : KLQMS/C/0394	TEST REPORT	Report Date: 20/07/2021
Customer Name & Address: SM Adhesives, Block No. B -82, LoteParshuram MIDC, Ratnangiri 415722. Kind Attn:- Mr. Atul Awade. 9322237077	Sample Name : SMAC Nanoshield Sample Given by : Customer Quantity of sample received : 250 ml Sample Received Date : 03/07/2021 Duration of analysis : 06/07/2021 to 12/07/2021 Sample received in good condition.	

MEASUREMENT OF ANTIBACTERIAL ACTIVITY OF SMAC NANOSHIELD TO SPECIFICATION - ISO 22196:2007

TEST REPORT

Type of Material	SMAC NANOSHIELD
Specimen Size	50 mm X 50 mm
Covering Film	40 mm X 40 mm
Bacterial Strains	1. <i>Escherichia coli</i> ATCC25922 2. <i>Staphylococcus aureus</i> ATCC25293 3. <i>Pseudomonas aeruginosa</i>
Volume of Inoculum	0.4 ml
Reference specimen	Uncoated Panel

RESULTS

<i>Escherichia coli</i>			
Inoculum density (cfu/ml)	cell count, time 0 untreated specimens (cfu/cm ²)	cell count after 24 h untreated specimens (cfu/cm ²)	cell count after 24 h treated specimens (cfu/cm ²)
5 X 10 ⁵	4.2 X 10 ⁵ log=Uo=5.419	4 X 10 ⁵ log=Ut=5.398	1.8 X 10 ¹ log=At= 1.051
Antibacterial activity=R= (Ut-Uo)-(At-Uo) =4.35			
Percentage reduction = 99.99%			



<i>Staphylococcus aureus</i>			
Inoculum density (cfu/ml)	cell count, time 0 untreated specimens (cfu/cm ²)	cell count after 24 h untreated specimens (cfu/cm ²)	cell count after 24 h treated specimens (cfu/cm ²)
4.5 X 10 ⁵	5.3 X 10 ³ log=Uo=3.520	4.1 X 10 ³ log=Ut=3.503	10 log=At=0.766
Antibacterial activity=R= (Ut-Uo)-(At-Uo) =2.71			
Percent reduction = 99.99%			

<i>Pseudomonas aeruginosa</i>			
Inoculum density (cfu/ml)	cell count, time 0 untreated specimens (cfu/cm ²)	cell count after 24 h untreated specimens (cfu/cm ²)	cell count after 24 h treated specimens (cfu/cm ²)
2.5 X 10 ⁴	2.1 X 10 ⁴ log=Uo=4.118	1.8 X 10 ⁴ log=Ut=4.051	4.2 X 10 ² log=At=2.415
Antibacterial activity=R= (Ut-Uo)-(At-Uo) =1.63			
Percent reduction = 95.60%			

Note :-

1. Test results pertained to the sample received in lab.
2. Reports should not be reproduced partially without the permission of lab.
3. This report, in full or in part, shall not be used to make any misleading claims or for any legal purposes.

Reviewed By: Dr. Smita Nilakhe

Authorized Signatory

Smita Nilakhe

Dr. Smita Nilakhe

End of Report

