

Test Report for TM100-2019

Test Method for Antibacterial Finishes on Textile Materials

Client Details: Vivothreads
Client Contact Name: Avi Rosenzweig
Client Email: avi@vivothreads.com
PO Number: N/A
Date of Report: 29/08/2024

Sample Details

Melbec Reference Number: 79203
Manufacturer/ Supplier: Vivothreads
Name of Test Product: Active Fabric
Active Ingredient: N/A
Product Storage Condition: Ambient
Batch Number: N/A

Date Product Received: 12/08/2024
Date Test carried out: 22/08/2024

Experimental Conditions

Neutraliser: N1
Test temperature: 37°C ± 1°C
Contact time: 30 minutes and 3 hours.
Incubation temperature: 37°C ± 1°C Aerobic for *S. aureus* and *E. faecalis*

Appearance of product as supplied: Beige stretchy fabric
Appearance of control product: Cream stretchy fabric

Identification of Microbial Strains

Enterococcus faecalis VRE NCTC 12201
Staphylococcus aureus MRSA NCTC 10442

Requirements of the Standard:

A percentage reduction shall be reported.

Deviations:

All organisms tested are non-standard and have been requested by the client.
The test was scaled down due to insufficient sample provided.

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Results:

Test Organism	<i>Enterococcus faecalis</i> VRE NCTC 12201					
	Test Product			Control Product		
Timepoint	T=0h					
	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
CFU/sample	1.08 x 10 ⁵	1.26 x 10 ⁵	1.60 x 10 ⁵	1.01 x 10 ⁵	8.50 x 10 ⁴	9.98 x 10 ⁴
Mean	1.31 x 10 ⁵			9.53 x 10 ⁴		
Mean Log	5.12			4.98		
Timepoint	T=30 minutes					
	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
CFU/sample	5.85 x 10 ⁴	6.08 x 10 ⁴	5.10 x 10 ⁴	7.93 x 10 ⁴	6.50 x 10 ⁴	8.69 x 10 ⁴
Mean	5.68 x 10 ⁴			7.71 x 10 ⁴		
Mean Log	4.75			4.89		
Timepoint	T=3 hours					
	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
CFU/sample	2.25 x 10 ³	5.00 x 10 ²	3.75 x 10 ³	1.10 x 10 ⁶	1.58 x 10 ⁶	1.83 x 10 ⁶
Mean	2.17 x 10 ³			1.50 x 10 ⁶		
Mean Log	3.34			6.18		

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Test Organism	<i>Staphylococcus aureus</i> MRSA NCTC 10442					
	Test Product			Control Product		
Timepoint	T=0h					
	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
CFU/sample	2.33×10^5	1.12×10^5	1.58×10^5	1.30×10^5	1.29×10^5	1.35×10^5
Mean	1.68×10^5			1.31×10^5		
Mean Log	5.23			5.12		
Timepoint	T=30 minutes					
	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
CFU/sample	1.83×10^5	1.23×10^5	1.75×10^5	1.93×10^5	1.48×10^5	2.00×10^5
Mean	1.60×10^5			1.80×10^5		
Mean Log	5.20			5.26		
Timepoint	T=3 hours					
	Replicate 1	Replicate 2	Replicate 3	Replicate 1	Replicate 2	Replicate 3
CFU/sample	3.78×10^4	3.78×10^4	3.35×10^5	3.88×10^5	2.75×10^5	3.30×10^5
Mean	1.37×10^5			3.31×10^5		
Mean Log	5.14			5.52		

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Test Organism	Percentage Reduction (%)	
	30 minutes	3 hours
<i>Enterococcus faecalis</i> VRE NCTC 12201	26.33%	99.86%
<i>Staphylococcus aureus</i> MRSA NCTC 10442	11.11%	58.61%

Conclusion:

According to TM100-2019, the test fabric Active Fabric achieved a 99.86% reduction for *S. aureus*, and a 58.61% reduction for *S. aureus* within a 3 hour contact time. When tested within a 30 minute contact time, all organisms achieved <50% reduction.

Report Authorised By:



Liam Stephens

 Technical Manager

All samples are tested as received and the condition on receipt is deemed to be satisfactory for testing unless client is informed otherwise. If an unsatisfactory sample is received and tested on instruction from the client comments are included on the report detailing this information. Results given for this may be invalid.

Results detailed above relate only to the samples tested.

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****End of test report***