

The Body Doctor
Unit 7, Denby Dale Industrial Estate
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Order No:
Date Received: 10 DEC 18
Date Tested: 20 DEC 18
Date Reported: 12 FEB 19
Report No: 93M28A

- Certificate of Performance -

- Test:** Assessment of antibacterial finishes on materials (24-hour exposure time)
- Method:** Based on AATCC Test Method 100-2004 with modifications given below due to the sample type and test organisms required.
- Modifications:** The test material was cut into 45 × 45 mm test pieces. 200 µl of inoculum was the smallest volume required for saturation of each test piece. The test organisms were *Pseudomonas aeruginosa* and *Candida albicans*.
- Sample:** 'Sterileyes' fabric
- Test Organisms:** *Pseudomonas aeruginosa* ATCC 9027
Candida albicans ATCC 10231

Test of antibacterial finishes on materials:

Cultures of *P. aeruginosa* and *C. albicans* were diluted into 0.85% NaCl to yield inocula of approximately 5×10^5 CFU/ml. For enumeration of the inocula, appropriate dilutions (in peptone water) were plated using molten agar at <45°C; for *P. aeruginosa*, Tryptone Soya Agar (TSA), with plate incubation at 31°C ± 1°C for 7 days; for *C. albicans*, Sabauroid Dextrose Agar (SDA), with plate incubation at 24°C ± 1°C for 6 days.

Five replicate 45 × 45 mm test pieces were each inoculated with 200 µl of the *P. aeruginosa* inoculum or the *C. albicans* inoculum. In the absence of an untreated control being provided, such a control was simulated by applying 200 µl of inoculum into 6 cm² of Whatman No.1 filter paper. As a negative control a 45 × 45 mm test piece was inoculated with 200 µl of sterile 0.85% NaCl. The positive and negative controls were incubated and analysed in the same way as the test samples: they were held for 24 hours at 24°C ± 1°C and >95% humidity.

After the 24 hour exposure time the test pieces were aseptically removed to 9 ml diluent and shaken vigorously to resuspend the test organisms. The resulting suspension was plated in molten TSA + 0.3% Soya Lecithin + 3% Tween 80 (TSALT) at <45°C for *P. aeruginosa* or in molten SDA + 0.3% Soya Lecithin + 3% Tween 80 (SDALT) at <45°C for *C. albicans*. These plates were incubated for 6 days (TSALT plates at 31°C ± 1°C, SDALT plates at 24°C ± 1°C).

Results:

24 hour contact time at 24°C ± 1°C							
Sample:	Replicate	Recovery per test piece (CFU)		Log ₁₀ reductions		Log ₁₀ reduction of mean recovery	
		<i>P. aeruginosa</i> ATCC 9027	<i>C. albicans</i> ATCC 10231	<i>P. aeruginosa</i> ATCC 9027	<i>C. albicans</i> ATCC 10231	<i>P. aeruginosa</i> ATCC 9027	<i>C. albicans</i> ATCC 10231
Inoculum (zero time)	-	8.4×10 ⁴	1.3×10 ⁵	-	-	-	-
Negative control	-	3.0×10 ¹ †	<10	-	-	-	-
Untreated (positive) control (filter paper)	-	1.5×10 ³	>3×10 ⁵	1.74	0	1.74	0
'Sterileyes' fabric	1	<10	1.0×10 ¹	>3.92	4.11	>3.92	2.94
	2	<10	1.0×10 ²	>3.92	3.11		
	3	<10	1.5×10 ²	>3.92	2.93		
	4	<10	4.2×10 ²	>3.92	2.49		
	5	<10	6.0×10 ¹	>3.92	3.33		

†Presumptive Gram-positive rod-shaped bacteria. Not similar in morphology to the test organism.

Comments:

For the sample '**Sterileyes**' fabric a greater than 2 log₁₀ reduction in the numbers of *P. aeruginosa* and *C. albicans* (compared to untreated filter paper) was observed following a 24 hour exposure time under the conditions of the test.

The results apply only to the sample(s) tested.



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