AATCC TEST METHOD
100 – 2012

Antibacterial Finishes on Textile Materials:
Assessment of

FINAL REPORT: R2018-82

Prepared for:
DryWired, LLC
9606 S. Santa Monica Blvd, 4th Floor
Beverly Hills, CA 90210

Accredited Testing Provided by:
The MicroStar Lab
130 Erick Street
Crystal Lake, IL 60014
815.526.0954
TESTING CERT: #2832.01

Testing Initiated: February 20, 2018
Testing Completed: February 23, 2018
Report Issued: February 28, 2018

Performed By: Marcy Aaron
Title: Staff Scientist

Approved By: Debbie Koester
Title: Quality Manager
**Objective:**
To provide a quantitative evaluation of the antibacterial activity in one sample as demonstrated by AATCC Test Method 100-2012.

**Test Sample Identification:**
1. Blue NB Fabric Sample w/LumActiv – AD

**Test Procedure Summary:**
Sample swatches were stacked and placed into sterile containers. The number of swatches to be tested was determined by the number of swatches that could absorb 1.0 ± 0.1 mL of inoculum without leaving any free liquid. One (1.0) mL of the 10^5 CFU/mL inoculum was placed onto the top swatch and allowed to wick through the sample stack. The inoculated swatches were incubated for a specified contact time. At the appropriate contact time, neutralizing broth was added to each container and the containers were shaken for 1 minute to release the inoculum from the test swatches and into the neutralizing broth. Serial dilutions were made, and the plates incubated. After incubation, colonies of recovered bacteria are counted and used to determine percent reductions.

**Test Variables**

| Test Organism:   | Staphylococcus aureus ATCC#6538  
<table>
<thead>
<tr>
<th></th>
<th>Klebsiella pneumoniae ATCC#4352</th>
</tr>
</thead>
</table>
| Dilution Medium Used: | S. aureus: 1:500 Tryptic Soy Broth/Phosphate Buffered Saline with 0.05% Triton X-100  
|                   | K. pneumoniae: Phosphate Buffered Saline with 0.05% Triton X-100 |
| Neutralizing Broth Used: | 100mL D/E Neutralizing Broth |
| Method of Sterilization /Pre-Cleaning: | None |
| Sample Description: | 4.8cm diameter disc cut from larger submitted samples |
| Number of Swatches per Sample: | One |
| Untreated Control: | Untreated Fabric Control - ISO 105-F02 Adjacent Cotton |
| Contact Time: | 24 Hours |
| Deviations from Standard Test Method: | None, testing performed per AATCC 100 without deviation. |
**Test Results:**

The results below pertain only to samples tested.

Percent reductions were determined by comparing each test sample after the contact time to the untreated fabric control immediately after inoculation.

**Percent reduction of bacteria per sample against**

*Staphylococcus aureus ATCC#6538*

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recovered Bacteria After Contact Time = 24 Hours (CFU/Sample)</th>
<th>Percent Reduction Compared to Untreated Fabric Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue NB Fabric Sample w/LumActiv – AD</td>
<td>&lt; 1.0 x 10²</td>
<td>99.97</td>
</tr>
</tbody>
</table>

The average number of *Staphylococcus aureus ATCC#6538* recovered from the untreated fabric control immediately after inoculation was 3.0 x 10⁵ CFU/sample.

**Percent reduction of bacteria per sample against**

*Klebsiella pneumoniae ATCC#4352*

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recovered Bacteria After Contact Time = 24 Hours (CFU/Sample)</th>
<th>Percent Reduction Compared to Untreated Fabric Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue NB Fabric Sample w/LumActiv – AD</td>
<td>&lt; 1.0 x 10²</td>
<td>99.96</td>
</tr>
</tbody>
</table>

The average number of *Klebsiella pneumoniae ATCC#4352* recovered from the untreated fabric control immediately after inoculation was 2.3 x 10⁵ CFU/sample.

Percent reduction is translated into log reduction by the following:

- 90% reduction = 1 log reduction; i.e. 1,000,000 reduced to 100,000 is a 1 log reduction
- 99% reduction = 2 log reduction; i.e. 1,000,000 reduced to 10,000 is a 2 log reduction
- 99.9% reduction = 3 log reduction; i.e. 1,000,000 reduced to 1,000 is a 3 log reduction
- 99.99% reduction = 4 log reduction; i.e. 1,000,000 reduced to 100 is a 4 log reduction

< 1.0 x 10² means there were no test organisms found on the lowest dilution plate. The detection limit on this test is 1.0 x 10² due to the 100x dilution that occurs with the addition of the neutralizing broth. When no bacterial colonies are found on the lowest dilution, the results are reported as < 1.0 x 10² CFU/Sample, which means less than 100 Colony Forming Units per Sample.