



May 02, 2011

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Stay Dry Systems Ltd.
6790 Greig Court
Victoria, BC
V8M 2G4

Quantitative Assessment of One Polyester Fabric Sample

2708725

One polyester fabric sample, treated with Ultra-Fresh DW-56 by Shanghai ShuHua International Trading Co. Ltd., was received from Stay Dry Systems Ltd., on April 19, 2011. At Thomson Research Associates Inc., the sample was tested for antibacterial activity using a quantitative test method.

PROCEDURE

Quantitative Antibacterial Assessment:

ISO 22196:2007 was used to quantitatively test the specimen for antibacterial activity. In brief:

1. The sample was placed into a container with a lid.
2. A 0.3 mL inoculum of *Staphylococcus aureus* (ATCC #6538), or *Klebsiella pneumoniae* (ATCC #6275), or Methicillin resistant *Staphylococcus aureus* (ATCC#33591) was placed, in microdroplets, on the surface of the samples. Sterile films were placed over the inoculum to encourage good contact.
3. The specimen was incubated 24 hours at 37C.
4. 20 mL of Lethen broth was added to the container and shook. The liquid was plated using dilution techniques.
5. The “Value of Antimicrobial Activity” was carried out using the formula

$$R = [\log (B/C)]$$

Where:

R= value of antimicrobial activity

B = Average of the number of viable cells of bacteria on the untreated test piece after 24 hours

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C = Average of the number of viable cells of bacteria on the antimicrobial


RESULTS

Quantitative Assessment of Activity - ISO 22196:2007					
<i>S. aureus</i>					
Concentration of starting inoculum			1.01 x 10 ⁶ CFU/mL		
Sample Description		No. Bacteria Recovered	Log Value	R = [log(B/C)]	% Reduction
1	Polyester Fabric	<2.00 x 10 ¹	<1.3	>4.3	>99.9%
Inoculum control		4.39 x 10 ⁵	5.6	---	---

Quantitative Assessment of Activity - ISO 22196:2007					
<i>MRSA</i>					
Concentration of starting inoculum			1.74 x 10 ⁶ CFU/mL		
Sample Description		No. Bacteria Recovered	Log Value	R = [log(B/C)]	% Reduction
1	Polyester Fabric	<2.00 x 10 ¹	<1.3	>3.7	>99.9%
Inoculum control		9.60 x 10 ⁴	5.0	---	---

Quantitative Assessment of Activity - ISO 22196:2007					
<i>E. coli</i>					
Concentration of starting inoculum			1.60 x 10 ⁵ CFU/mL		
Sample Description		No. Bacteria Recovered	Log Value	R = [log(B/C)]	% Reduction
1	Polyester Fabric	2.19 x 10 ²	2.3	4.6	>99.9%
Inoculum control		7.66 x 10 ⁶	6.9	---	---

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