



# Anti-Microbial Testing Report

Determination of antimicrobial activity at 24 hrs.

	Test microorganisms	
	<i>Escherichia coli</i> ATCC 25922	<i>Staphylococcus aureus</i> ATCC 6538
<b>Experimental control:</b> PPC Transparency Film pieces		
Number (CFU)	$7.93 \times 10^6$	$6.75 \times 10^6$
<b>Sample 1. POLYETHYLENE SHEET (Blank) - Control</b>		
Number (CFU)	$1.71 \times 10^7$	$1.03 \times 10^7$
Antimicrobial activity (absolute) <sup>a</sup>	UD	UD
% Reduction (absolute) <sup>b</sup>	UD	UD
<b>Sample 2. "DOS" SILVER NANO ON POLYETHYLENE SHEET</b>		
Number (CFU)	$\leq 1.00 \times 10^2$	$\leq 1.00 \times 10^2$
Antimicrobial activity (absolute)	4.90	4.83
% Reduction (absolute)	99.99	99.99
Antimicrobial activity (relative) <sup>c</sup>	5.23	5.01
% Reduction (relative) <sup>d</sup>	99.99	99.99

**Remark :** An antimicrobial product is judged to be effective when antimicrobial activity value is  $\geq 2$

Antimicrobial activity is calculated from a formula  $R = \log(B/C)$

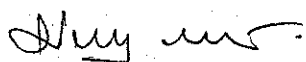
R = value of antimicrobial activity

B = average of the number of viable cells of bacteria on the untreated test piece after 24 hrs

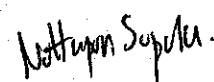
C = average of the number of viable cells of bacteria on the antimicrobial test piece after 24 hrs

- a Antimicrobial activity (absolute): calculated using experimental control after 24 hrs
- b % Reduction (absolute): calculated using experimental control after 24 hrs
- c Antimicrobial activity (relative): calculated using the untreated test piece after 24 hrs
- d % Reduction (relative): calculated using the untreated test piece after 24 hrs

**UD: Undetermined,** The control specimens already have antimicrobial activity against the test organism. Negative value means there is no antimicrobial activities in the sample



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**Tested by National Nanotechnology Center**

**Disclaimer**

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