

ANTIMICROBIAL TEST LABORATORIES

Microbiology Study Report NG4279-A1

Page 1 of 4

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Client Information

Company Name:	NanoTouch	Sponsor:	Dennis Hackemeyer
Phone Number:	434-258-4188	E-mail:	dennis@nanotouchmaterials.com

Test Information

Test(s) Performed:	Modified ISO 22196 (Study ID NG4279-A1)		
SOP Followed:	Testing Facility Operation 018.0	Performed by:	J. Williams

Test Substance Information

Test Substances:	NanoSeptic 1-Adhesive		
Date Received:	24 MAY 2013	Number Received:	1

Parameters

Microorganism(s) :	<i>E. coli</i> ATCC 8739		
# of Replicates:	3	Carrier Size:	2" x 2"
Subculture #:	1	Exposure Temp.:	Ambient Temperature (23 ± 2°C)
Growth Medium:	Tryptic Soy Broth (TSB)	Contact Time:	5, 20, 60 and 120 Minutes
Culture Dilution Medium:	1:500 Nutrient Broth (NTB)	Neutralizer Used:	Dey/Engley (D/E) Broth, 10 mL
Inoculation Method:	Swab (13 Passes per Sample)	Plate Inc. Time:	24 Hours
LUX (Reading) Reading:	1558 & 1553	Plate Incubation:	36.0 ± 1°C

Controls

Sterility Controls:	Passed	Growth Control:	Passed
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Test Results

Test(s) Valid?:	Yes, See Results	Confirmation:	Morphology on TSA
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Notes: An overnight culture was diluted in sterile 1:500 Nutrient Broth. A sterile swab was dipped into the prepared test inoculum and used to inoculate each carrier via 13 passes (left to right = 1 pass). Inoculated carriers were allowed to dry for 5 minutes followed by initiation of the contact time. Carriers were harvested after 5, 20, 60 and 120 minutes, vortexed to elute viable bacteria and enumerated using standard dilution and pour plate techniques.

Tests Completed:	10 JUN 2013	Report Sent:	21 JUN 2013
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ANTIMICROBIAL TEST LABORATORIES

Microbiology Study Report NG4279-A1

Page 2 of 4

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Modified ISO 22196 Results

Test Microorganism	Contact Time	Sample	Replicate	CFU/Sample	Average CFU/ml	Percent Reduction Compared to Time Zero Control
<i>E. coli</i> ATCC 8739	Time Zero		1	3.80E+04	2.07E+04	N/A
			2	3.00E+03		
			3	2.10E+04		
	5 Minutes	NanoSeptic 1 (Adhesive)	1	6.10E+03	8.53E+03	58.78%
			2	1.34E+04		
			3	6.10E+03		
	20 Minutes	NanoSeptic 1 (Adhesive)	1	6.30E+02	1.80E+03	91.29%
			2	8.30E+02		
			3	3.95E+03		
	1 Hour	NanoSeptic 1 (Adhesive)	1	2.50E+01	7.67E+01	99.63%
			2	1.70E+02		
			3	3.50E+01		
	2 Hours	NanoSeptic 1 (Adhesive)	1	5.00E+00	1.83E+01	99.91%
			2	4.00E+01		
			3	1.00E+01		

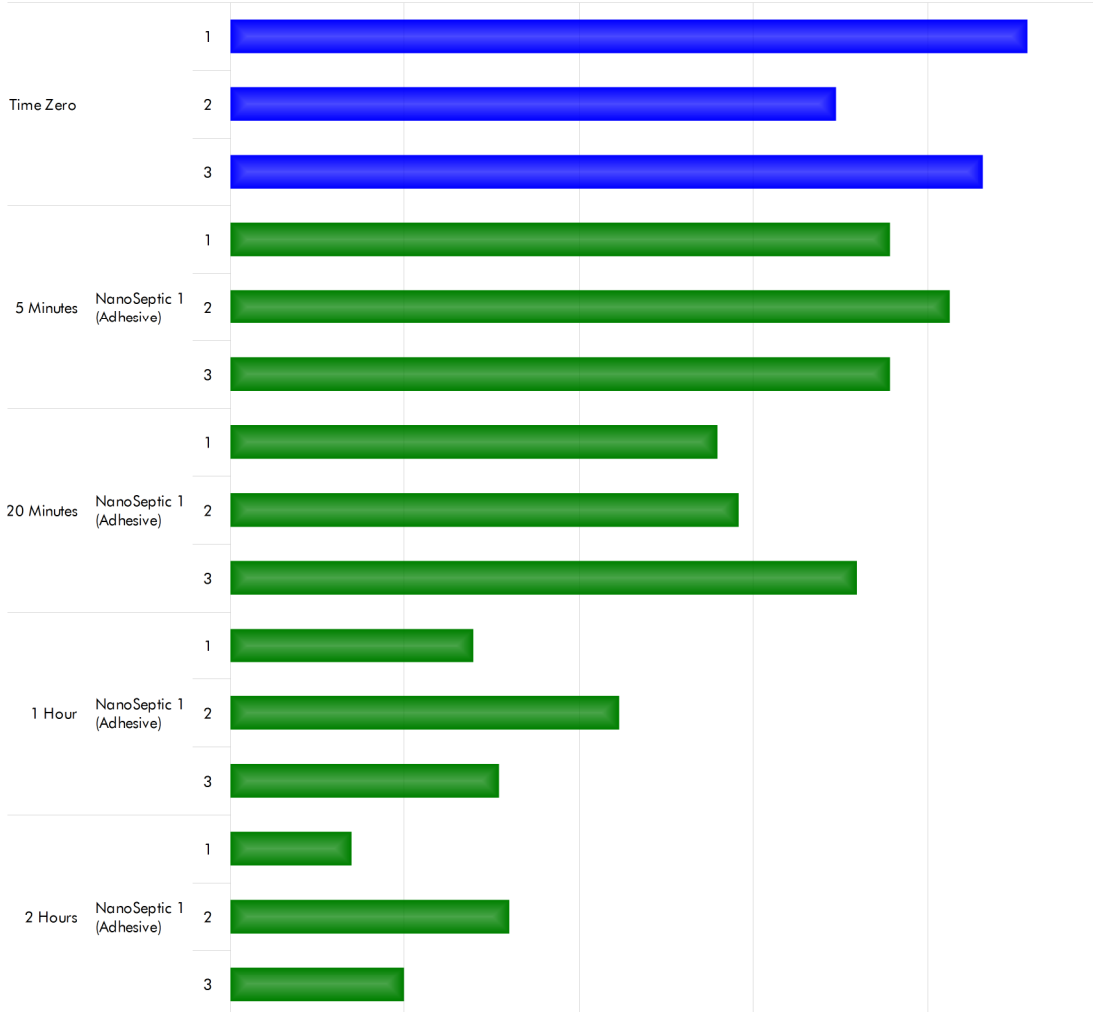
ANTIMICROBIAL TEST LABORATORIES

Microbiology Study Report NG4279-A1

Page 3 of 4

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Modified ISO 22196 Results



ANTIMICROBIAL TEST LABORATORIES

Microbiology Study Report NG4279-A1

Page 4 of 4

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Additional Information

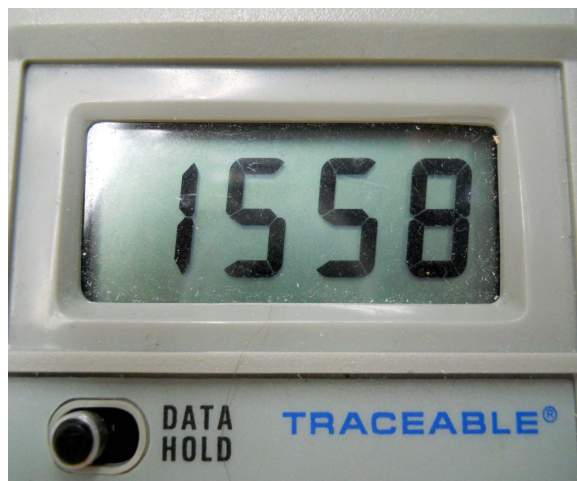
Sample Calculations

$$\% \text{ Reduction} = 100 \times (C-A)/C$$

Where:

A = Number of bacteria on the test carriers after the contact time

C = Number of bacteria on the control at time zero



Photograph of Luminometer prior to study initiation.