

ANTIMICROBIAL TEST LABORATORIES

Microbiology Study Report NG4323

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Client Information

Company Name:

Sponsor:

Sponsor's Phone:

E-mail:

Test Information

Test(s) Performed:

Modified Surface Time Kill

Protocol Followed:

Custom (Mod. ASTM E1153)

Performed by:

B. Grosse-Siestrup, PhD

Sample Information

Test Device ID:

Air Knight IPG, Air Knight TopTech Remo

Parameters

Microorganism(s):

S. aureus ATCC 33592 (MRSA), *S. pyogenes* ATCC 19615

Type of Carrier:

1x3 inch glass slides

Contact Time:

24 hours

Subculture Number:

1

of Replicates:

2

Growth Medium:

Tryptic Soy Broth (TSB)

Incubation Temp:

36 ± 1°C

Exposure Temperature:

Ambient (-22-24°C)

Incubation Time:

24 ± 6 hours

Soil Load:

N/A

Neutralizer Used:

20 ml D/E Broth

Controls

Growth Control:

Passed

Agar Sterility:

Passed

Broth Sterility:

Passed

Neutralization:

N/A

Test Results

Controls Performance:

Normal

Test(s) Valid?:

Yes

Notes

Devices were placed in a closed chamber (23x46x29 inches) with a fan blowing through the openings to distribute the air. Carriers were prepared by spreading 0.02 ml of an overnight culture in a 1 by 1 inch square onto the carriers. After drying the carriers for 20 minutes at 56°C, they were placed approximately 2 feet away from the device (see photographs). After 24 hours, the carriers were harvested. Following treatment, carriers were enumerated using standard dilution and pour plating techniques.

Tests Completed:

03JUL2013

Report Sent:

03JUL2013

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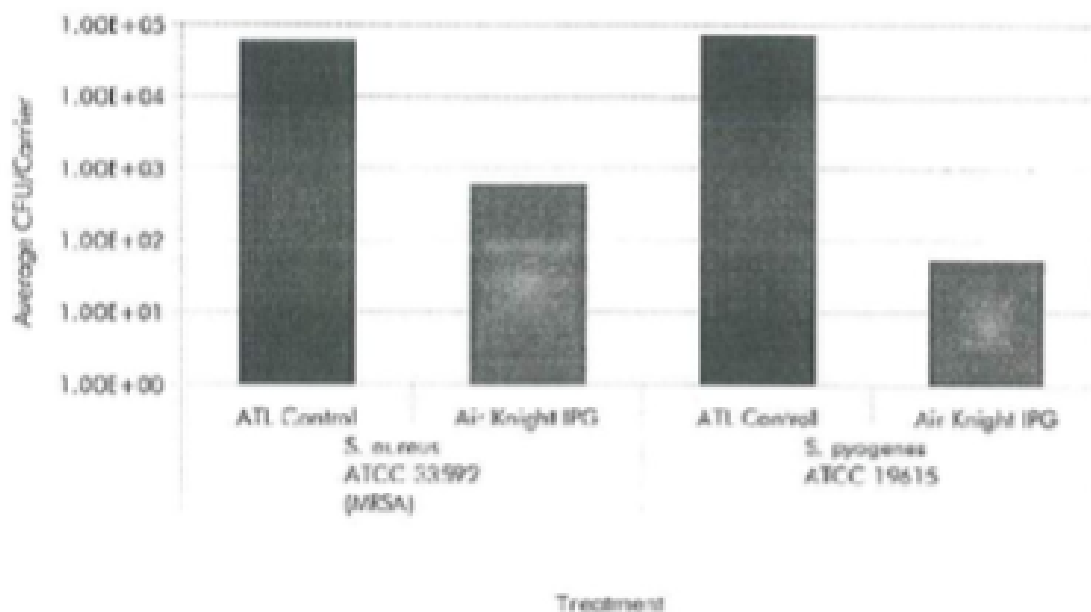
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Results (Air Knight IPG)

Microorganism	Contact Time	Treatment	Replicate	CFU/Carrier	Average CFU/Carrier	Percent Reduction vs. 24 hour Control	Log Reduction vs. 24 Hour Control
<i>S. aureus</i> ATCC 33592 (MRSA)	24 hours	ATL Control	1	4.80E+04	6.10E+04	N/A	
			2	7.40E+04			
		Air Knight IPG	1	5.10E+02	6.30E+02	98.97%	1.99
			2	7.50E+02			
<i>S. pyogenes</i> ATCC 19615	24 hours	ATL Control	1	6.60E+04	7.35E+04	N/A	
			2	8.10E+04			
		Air Knight IPG	1	7.00E+01	5.50E+01	99.93%	3.13
			2	4.00E+01			



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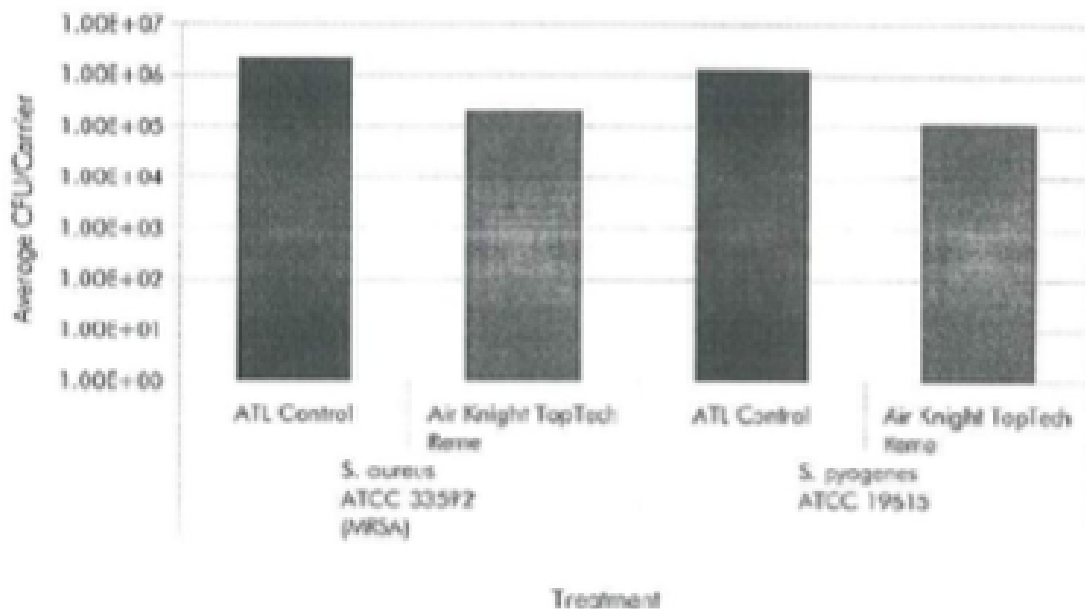
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Results (Air Knight TopTech Remo)

Microorganism	Contact Time	Treatment	Replicate	CFU/Carrier	Average CFU/Carrier	Percent Reduction vs. 24 hour Control	Log Reduction vs. 24 Hour Control
<i>S. aureus</i> ATCC 33592 (MRSA)	24 hours	ATL Control	1	1.55E+06	2.27E+06	N/A	
			2	2.98E+06			
		Air Knight TopTech Remo	1	1.82E+05	2.39E+05	90.79%	1.04
			2	2.34E+05			
<i>S. pyogenes</i> ATCC 19615	24 hours	ATL Control	1	1.08E+06	1.33E+06	N/A	
			2	1.57E+06			
		Air Knight TopTech Remo	1	9.72E+04	1.19E+05	91.06%	1.05
			2	1.40E+05			



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Calculations

$$\text{Percent Reduction} = \frac{\text{Average CFU of control survivors} - \text{average CFU of test survivors}}{\text{Average CFU of control survivors}} \times 100$$

Pictures of the Study

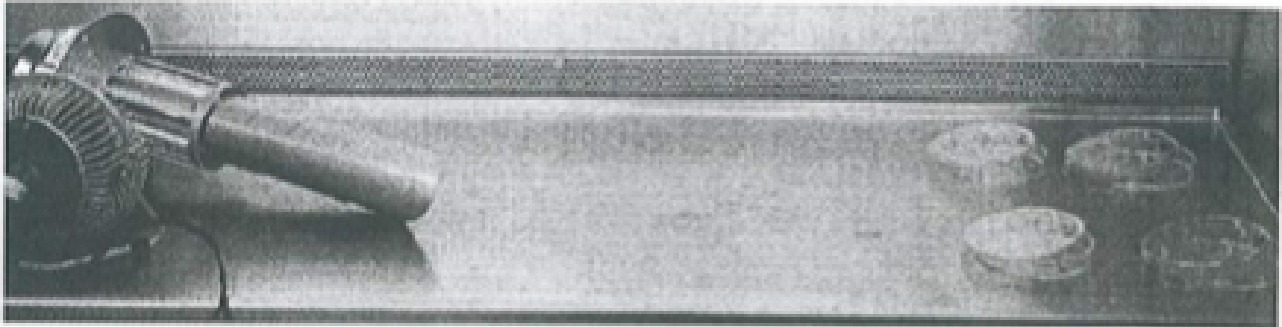


Photo 1: Test Setup with the AirKnight TopTech Remo on the left side and the inoculated carriers on the right side.

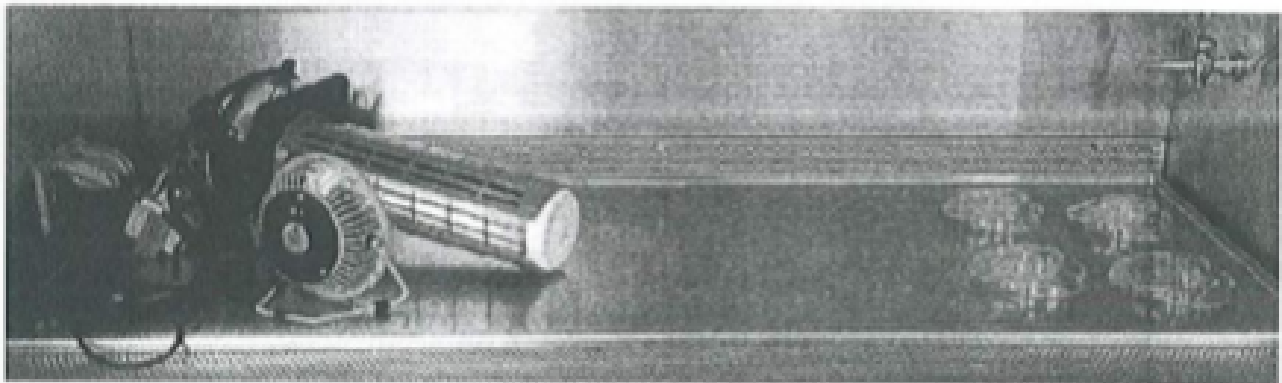


Photo 2: Test Setup with the AirKnight IPG on the left side and the inoculated carriers on the right side.

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Client Information

Company Name:

Sponsor:

Sponsor's Phone:

E-mail:

Test Information

Test(s) Performed:

Modified Surface Time Kill (Study ID NG4204)

Protocol Followed:

Culture (Mod. ASTM E1153)

Performed by:

B. Grosse-Sestrup, PhD

Sample Information

Test Device ID:

Air Knight IPG, Air Knight PXS

Parameters

Microorganism(s):

Streptococcus pyogenes ATCC 19615

Type of Carrier:

1x3 inch glass slides

Contact Time:

24 hours

Subculture Number:

1

of Replicates:

2

Growth Medium:

Tryptic Soy Broth (TSB)

Incubation Temp.:

36±1°C

Exposure Temperature:

Ambient (~22-24°C)

Incubation Time:

24±6 hours

Soil Load:

N/A

Neutralizer Used:

20 ml D/E Broth

Controls

Growth Control:

Passed

Agar Sterility:

Passed

Broth Sterility:

Passed

Neutralization:

N/A

Test Results

Controls Performance:

Normal

Test(s) Valid?:

Yes

Notes

Devices were placed in a closed chamber (23x46x29 inches) with a fan blowing through the openings to distribute the air. Carriers were prepared by spreading 0.02 ml of an overnight culture in a 1 by 1 inch square onto the carriers. After drying the carriers for 20 minutes at 36°C, they were placed approximately 2 feet away from the device. After 24 hours, the carriers were harvested. Following treatment, carriers were enumerated using standard dilution and pour plating techniques.

Tests Completed:

06 JUN 2013

Report Sent:

06 JUN 2013

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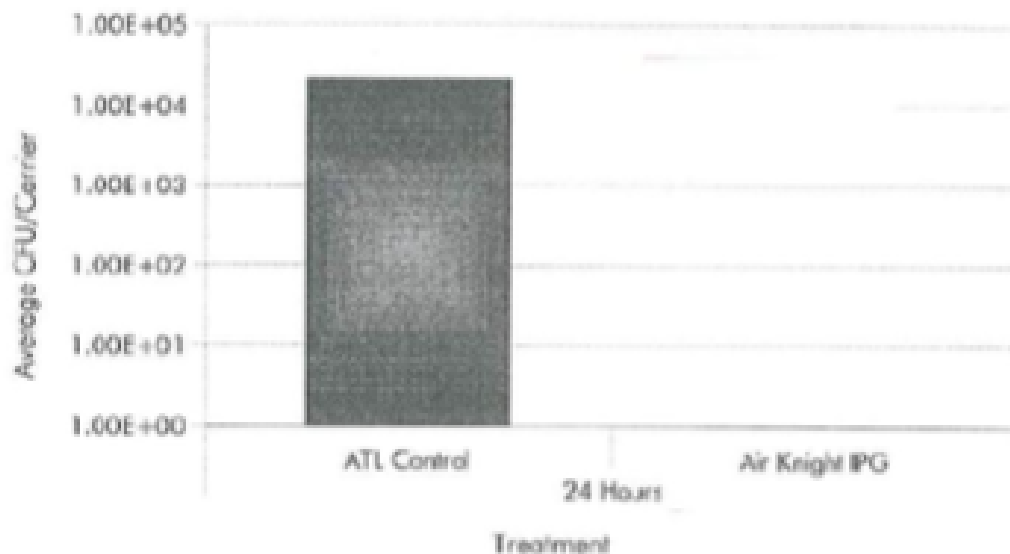
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Results (Air Knight IPG)

Microorganism	Contact Time	Treatment	Replicate	CFU/Carrier	Average CFU/Carrier	Percent Reduction vs. 24 hour Control	Log Reduction vs. 24 Hour Control
<i>S. pyogenes</i> ATCC 19615	24 Hours	ATL Control	1	2.40E+04	2.15E+04	N/A	
			2	1.90E+04			
		Air Knight IPG	1	<1.00E+01	<1.00E+01	>99.97	>3.63
			2	1.00E+01			

The limit of detection for this study was 10 CFU/Carrier. Numbers below the limit of detection are shown as <1.00E+01 on the table.



The limit of detection for this study was 10 CFU/Carrier. Numbers below the limit of detection are shown as 0 in the chart.

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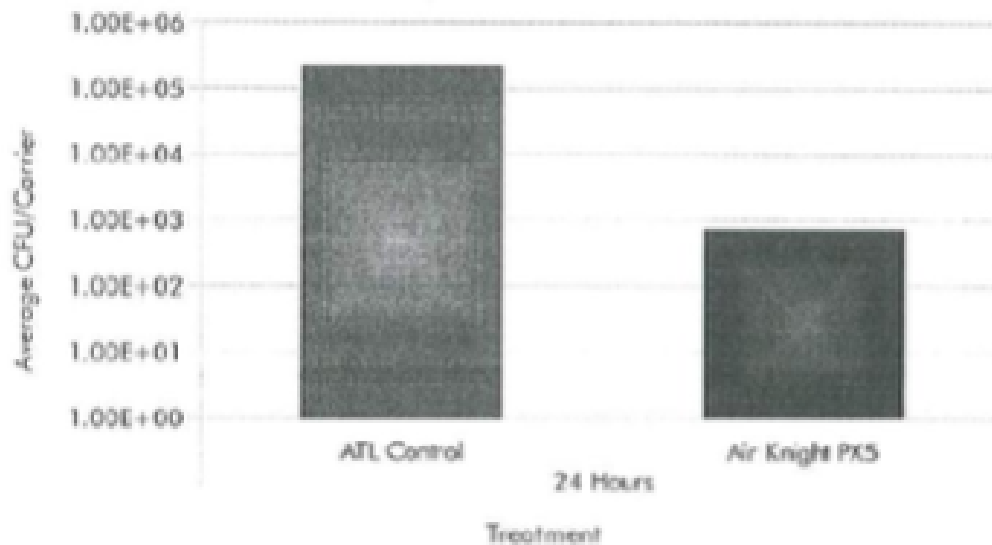
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Results (Air Knight PX5)

Microorganism	Contact Time	Treatment	Replicate	CFU/Carrier	Average CFU/Carrier	Percent Reduction vs. 24 hour Control	Log Reduction vs. 24 Hour Control
<i>S. pyogenes</i> ATCC 19615	24 Hours	ATL Control	1	2.41E+05	2.19E+05	N/A	
			2	1.96E+05			
		Air Knight PX5	1	8.00E+02	7.40E+02	99.66%	2.470
			2	6.00E+02			



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Calculations

$$\text{Percent Reduction} = \frac{\text{Average CFU of control survivors} - \text{average CFU of test survivors}}{\text{Average CFU of control survivors}} \times 100$$