

Antimicrobial Test Laboratories

Fast, Reliable Antimicrobial Efficacy Testing

Microbiology Study Report NG3347

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Client Information

Company Name:	<u>PurWorld / DrivePur</u>	Sponsor(s):	<u>Kyle Bettilyon</u>
Sponsor's Phone:	<u>(832) 659-9876</u>	E-mail(s):	<u>kyle@purworld.com</u>

Test Information

Test(s) Performed:	<u>Custom test based on JIS Z 2801 in Singlet (Study ID NG3347)</u>		
SOP Followed:	<u>Custom</u>	Performed by:	<u>N. Garcia</u>

Sample Information

Test Substance ID(s):	<u>8996 - Shök spray</u>	Sample(s) Received:	<u>25-Apr-2012</u>
	<u>8997 - Prëvnt Spray no polymer</u>		

Parameters

Microorganism(s):	<u><i>E.coli</i> ATCC 8739</u>	Test Sample Size:	<u>2" x 2" Plexi Glass Carrier</u>
Subculture Number:	<u>1</u>	# of Test Coupons:	<u>2</u>
Growth Medium:	<u>Trypticase Soy Broth</u>	Target Inoculum:	<u>2-4 x 10³ CFU/coupon (0.400 mL)</u>
Culture Age:	<u>18-24 hours</u>	Culture Supplement:	<u>0.1% Triton X-100</u>
Neutralizer:	<u>D/E Broth (10 mL)</u>	Exposure Temp.	<u>Ambient ~25°C</u>
Plate Incubation Time:	<u>18-24 hours</u>	Exposure Time:	<u>7 hours</u>
Plating medium:	<u>Trypticase Soy Agar (Difco)</u>	Light Exposure:	<u>UVA light, 4 inches from surface</u>
Film Used:	<u>40mm x 40mm Sterile Plastic</u>	Plate Inc. Temp.:	<u>36.0 ± 1°C</u>

Controls

Media Sterility:	<u>Passed</u>	Growth Control:	<u>Passed</u>
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Test Results

Test(s) Valid?:	<u>N/A</u>	"Passed?"	<u>N/A</u>
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Notes: Carriers were inoculated with 0.400 mL of test culture and dried at 36°C for 30 minutes. Prior to test, Shök and Prëvnt solutions were shaken and primed by spraying >20 pumps. Test carrier was treated first with Shök then Prëvnt by spraying with 3 pumps from a distance of 6 inches. Carriers were dried at room temperature in between treatments. Control carrier was treated similarly with sterile water. After final treatments, 0.400 mL of growth media (undilute Tryptic Soy Broth) was added and a plastic cover film was applied to facilitate media spreading. Carriers were placed under UV light and carefully administered 0.100 mL of growth media every hour. During the contact period, a precipitate formed on the surface of the treated test carrier. After the contact time, viable bacteria were harvested using 10 mL of D/E broth and enumerated using standard plating techniques.

Tests Completed:	<u>26-Apr-2012</u>	Report Sent:	<u>27-Apr-2012</u>
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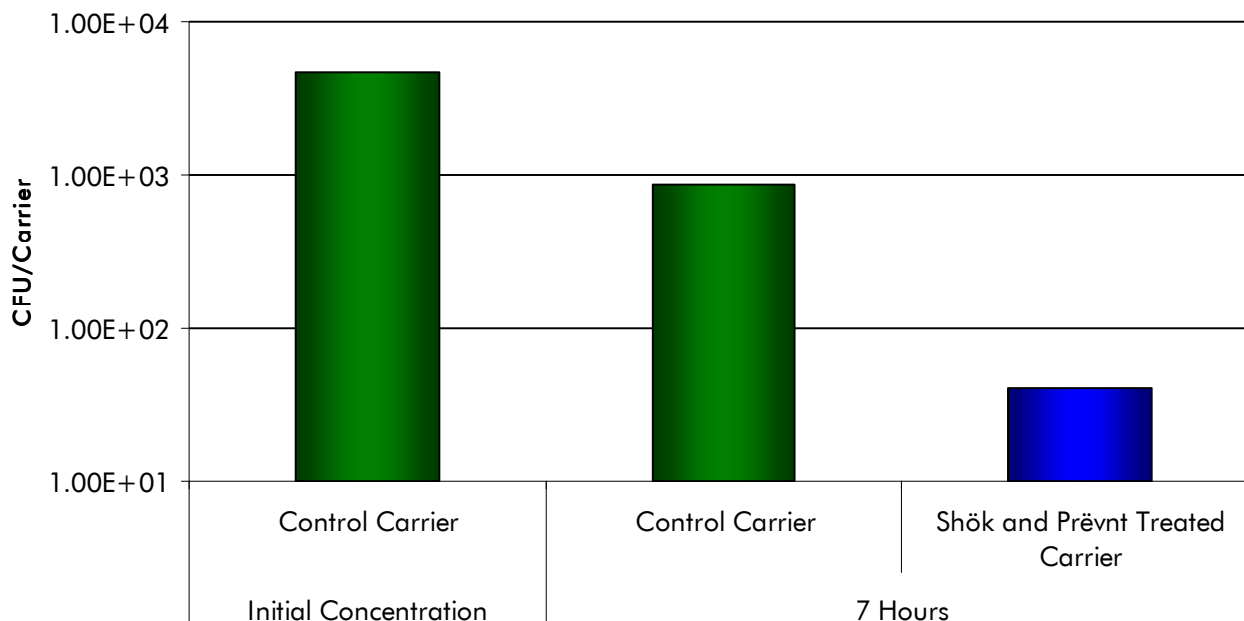
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Results

Microorganism	Contact Time	Sample	CFU/Carrier	R-Value Relative to Control at 7 hours	Percent Reduction Relative to Control at 7 hours
<i>E. coli</i> ATCC 8739	Initial Concentration	Control Carrier	4.75E+03	N/A	N/A
	7 Hours	Control Carrier	8.63E+02		
		Shök and Prävt Treated Carrier	4.00E+01	1.33	95.36%

Enumeration of colonies from Control Carrier Plates displayed variability between dilutions, therefore CFU/carrier determined by utilizing CFU from multiple dilutions.

E. coli ATCC 8739



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Calculations

Method of Calculation of Antimicrobial Activity:

R (Average Log Reduction) = $\text{Log}(B/C)$, where:

B = Average number of viable cells on the control samples after 24 hours.

C = Average number of viable cells on the test samples after 24 hours.

Method of Calculation of Percent Reduction:

Percent Reduction = $(B-C/B) \times 100$, where:

B = Average number of viable cells on the controls samples after 24 hours.

C = Average number of viable cells on the test samples after 24 hours.