

Antimicrobial Test Laboratories

Fast, Reliable Antimicrobial Efficacy Testing

EcoActive Surfaces Study #NG1511 - JIS Z 2801:2000 (Double Replicate, Interior Light)

Page 1 of 5

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Client Information

Company Name:	<u>EcoActive Surfaces</u>	Sponsor(s):	<u>Stewart Avarett</u>
Sponsor's Phone:	<u>(954) 788-1880</u>	E-mail(s):	<u>ecoactivesurfaces@bellsouth.net</u>

Test Information

Test(s) Performed:	<u>JIS Z 2801:2000 (double replicate, without cover film)</u>		
SOP Followed:	<u>Custom Protocol</u>	Performed by:	<u>B. Tanner and J. Williams</u>

Sample Information

Test Substance ID(s):	<u>OxiTitan VLR</u>	Batch/Lot #:	<u>N/A</u>
Sample (s) Received:	<u>6/13/2009</u>		

Parameters

Microorganism(s):	<u>MRSA ATCC 33591</u>	Exposure Temp.	<u>Ambient (21-24C)</u>
Subculture Number:	<u>1</u>	Type of Carrier:	<u>2 x 2 x 1/4 Inch Ceramic Coupon</u>
Growth Medium:	<u>TSB</u>	# of Test Carriers:	<u>16 Total: 8 Control, 8 Test</u>
Culture Age:	<u>24 Hours</u>	Target Inoculum:	<u>1.5 x 10⁵ cfu/coupon</u>
Diluent for Plating:	<u>D/E Broth (0.9 mL Blanks)</u>	Plating medium:	<u>Trypticase Soy Agar (Difco)</u>
Plate Incubation Time:	<u>24 Hours</u>	Plate Inc. Temp.:	<u>35.0 (+/- 1) C</u>

Controls

Neutralized:	<u>Passed, Agar Plates Positive (T=0)</u>	Growth Control:	<u>Passed, MRSA +</u>
Media Sterility:	<u>Passed, Control Plates Neg</u>		

Test Results

Test(s) Valid?:	<u>Yes, See Table, Page 2</u>	"Passed?"	<u>n/a</u>
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Notes: The study was conducted in accordance with JIS Z 2801:2000, but utilizing 2 replicates and without cover film. Test and control samples were analyzed just after addition of the inoculum and also after 0.25, 4, and 24 hr. room temperature incubation. The study suggests that OxiTitan VLR, when exposed to normal "office light" conditions, accelerates the die-off of MRSA on a surface. Interestingly, the greatest reduction relative to controls was seen at 24 hours, when the inoculum had completely dried onto the surface.

Tests Completed: 6/19/2009

Report Sent: 6/20/2009

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Page 2 of 5

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Data:

	Sample		CFU/Coupon
Control Surface (Light)	"Time Zero"	R1	4.50E+04
		R2	8.00E+04
	15 Minutes	R1	6.50E+04
		R2	1.00E+05
	4 Hours	R1	7.25E+04
		R2	6.30E+04
24 Hours	R1	8.90E+03	
	R2	5.40E+03	
OxiTitan VLR on Ceramic Coupon	"Time Zero"	R1	1.00E+05
		R2	8.50E+04
	15 Minutes	R1	7.50E+04
		R2	5.55E+04
	4 Hours	R1	2.80E+04
		R2	2.00E+04
	24 Hours	R1	4.25E+03
		R2	6.50E+02

Average Percent Reductions Relative to Control Surfaces:

	Sample	CFU MRSA/Coupon	Reduction vs Control at 24 h
Control Surface (Light)	"Time Zero"	6.25E+04	n/a
	15 Minutes	8.25E+04	n/a
	4 Hours	6.78E+04	n/a
	24 Hours	7.15E+03	n/a
OxiTitan VLR on Ceramic Coupon	"Time Zero"	9.25E+04	n/a
	15 Minutes	6.53E+04	20.9%
	4 Hours	2.40E+04	64.6%
	24 Hours	2.45E+03	65.7%

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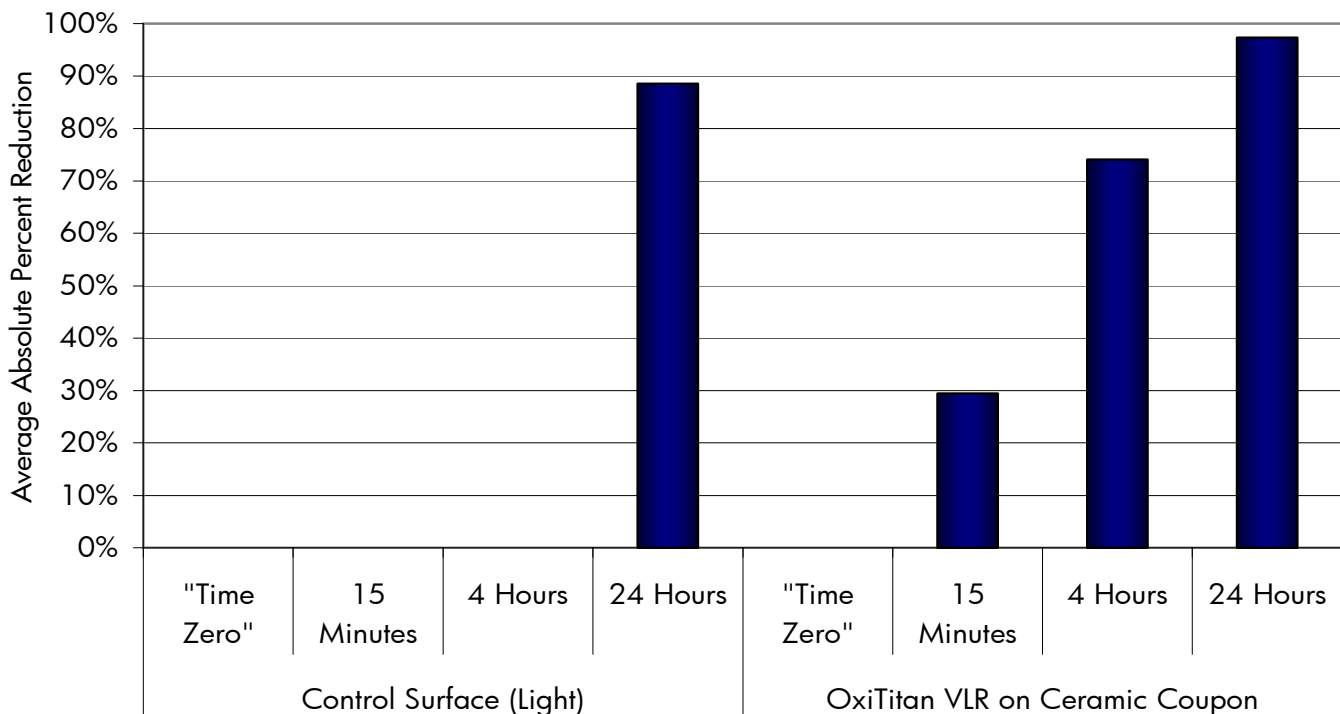
Page 3 of 5

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Average Absolute Reductions:

	Sample	Avg. Absolute Reduction (%)
Control Surface (Light)	"Time Zero"	0.00%
	15 Minutes	-32.00%
	4 Hours	-8.40%
	24 Hours	88.56%
OxiTitan VLR on Ceramic Coupon	"Time Zero"	0.00%
	15 Minutes	29.46%
	4 Hours	74.05%
	24 Hours	97.35%

**Average Absolute Reduction (Double Replicate JIS Z 2801)
MRSA ATCC 33591
Office Light (230-250 Lux)**



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Page 4 of 5

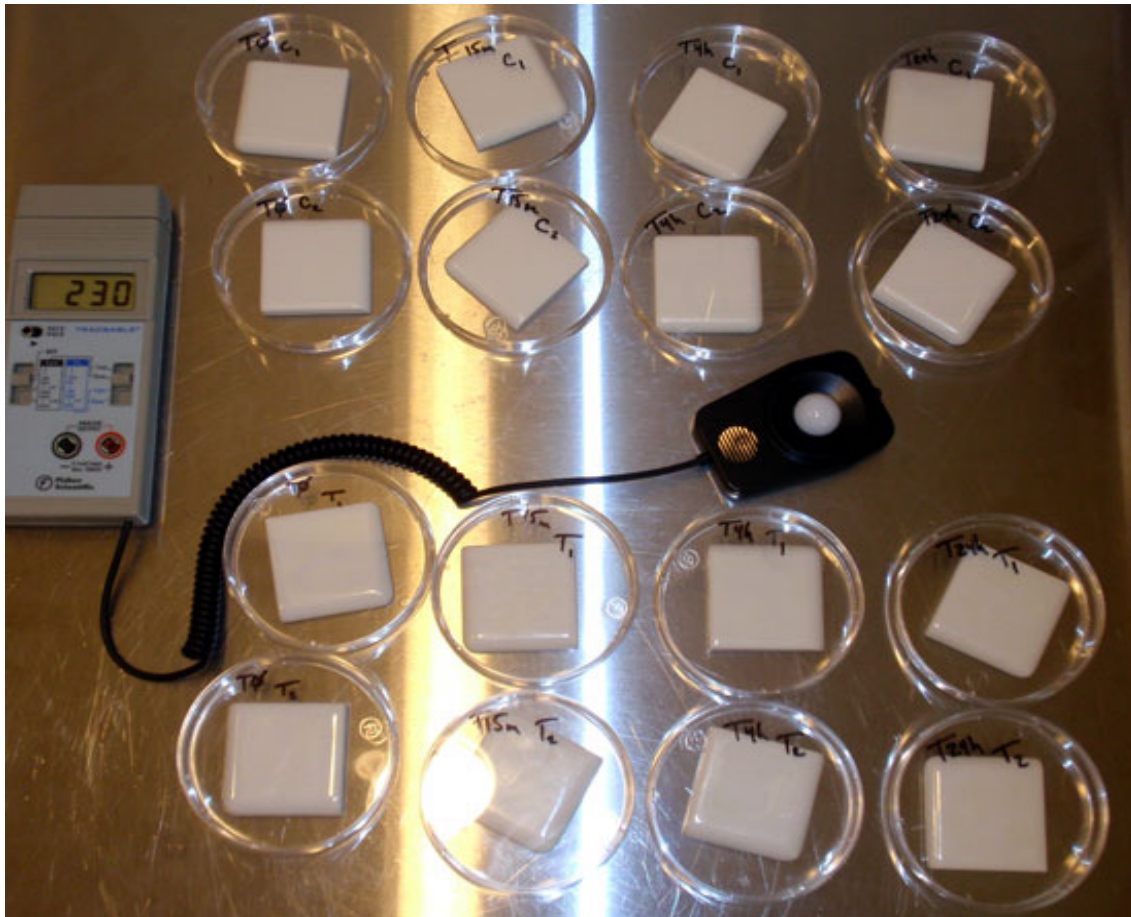
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Photo(s)

Light Source (~6 ft Above Study):



Experimental Setup (pre-inoculation) with Luminometer:



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Page 5 of 5

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Photo(s)

Note: This photo was taken of the laboratory benchtop, on which samples were placed for the 24 hour incubation period under normal "office" lighting conditions. There were two fluorescent 25 watt overhead lights, approximately 6 feet above the samples, spaced approximately 6 feet apart from one another. The "time zero" samples with purple liquid have been eluted & neutralized in preparation for enumeration.

