

# Antimicrobial Test Laboratories

## Fast, Reliable Antimicrobial Efficacy Testing

### JIS Z 2801:2000 Study Report NG2314

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#### Client Information

Company Name:	<u>EcoActive Surfaces</u>	Sponsor:	<u>Stewart Averett</u>
Sponsor's Phone:	<u>954.383.2383</u>	E-mail:	<u>ecoactivesurfaces@bellsouth.net</u>

#### Test Information

Test(s) Performed:	<u>JIS Z 2801:2000 Performed in Triplicate (Study ID NG2314)</u>		
SOP Followed:	<u>ATL SOP 039</u>	Performed by:	<u>B. Tanner &amp; J. Akins</u>

#### Test Substance Information

Test Substance ID(s):	<u>American Olean Control Surface</u> <u>Oxititan Treated "O" Surface</u>	Date Received:	<u>21-Oct-2010</u>
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#### Parameters

Microorganism(s):	<u><i>C. difficile</i> 43598 (Endospores)</u>	Exposure Temp.	<u>36.0 ± 1°C</u>
Growth Medium:	<u>N/A (CREM Endospore Preparation)</u>	Type of Carrier:	<u>Clay Tile</u>
Volume of Inoculum:	<u>0.100 mL spotted on surface</u>	Target Inoculum:	<u>1 x 10<sup>5</sup> CFU/Coupon</u>
Contact Time:	<u>24 Hours</u>	Plating Medium:	<u>Anaerobic Blood Agar Plates</u>
Diluent for Plating:	<u>D/E Broth (0.9ml Blanks)</u>	Plate Inc. Temp.:	<u>36.0 ± 1°C</u>
Ctrl Sample Size:	<u>~2 x 2 inches</u>	Plate Inc. Time:	<u>46-70 hours</u>
Test Sample Size:	<u>~2 x 2 inches</u>	Light Level:	<u>1516-1537 Lux</u>

#### Controls

Neutralized:	<u>Passed</u>	Growth Control:	<u>Passed</u>
Media Sterility:	<u>Passed, Control Plates Negative</u>	Leaching Control:	<u>N/A</u>

#### Test Results

Test(s) Valid?:	<u>Yes</u>	Observed Reduction:	<u>91.03%</u>
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**Notes:** Samples were incubated at 36.0 ± 1°C for 24 hours with full exposure to light source in incubator. Samples were neutralized and eluted with 10 mL of D/E broth (Dey/Engley) after 24 hour contact. "Time Zero" analyses were undertaken after drying of the inoculum spots, which took place approximately 20 minutes after inoculation.

Tests Completed:	<u>31-Oct-2010</u>	Report Sent:	<u>1-Nov-2010</u>
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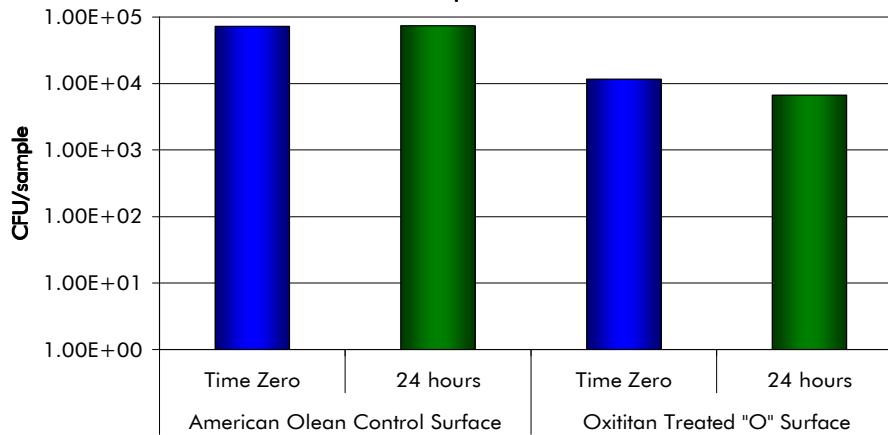
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### Results

#### *C. difficile* 43598

Sample	Contact Time	Average Replicate CFU/Coupon	Average Sample CFU/Coupon	Average Percent Reduction from Control	Average Log Reduction from Control
American Olean Control Surface	Time Zero	5.80E+04	7.22E+04	N/A	N/A
		6.85E+04			
		9.00E+04			
	24 hours	5.85E+04	7.43E+04		
		7.80E+04			
		8.65E+04			
Oxititan Treated "O" Surface	Time Zero	1.60E+04	1.17E+04	91.03%	1.05
		1.25E+04			
		6.50E+03			
	24 hours	5.50E+03	6.67E+03		
		1.10E+04			
		3.50E+03			

#### *C. difficile* 43598 Endospores



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### Additional Information

#### Method of Calculation of Antimicrobial Activity:

$R$  (Average Log Reduction) =  $\log(B/C)$ , where:

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

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

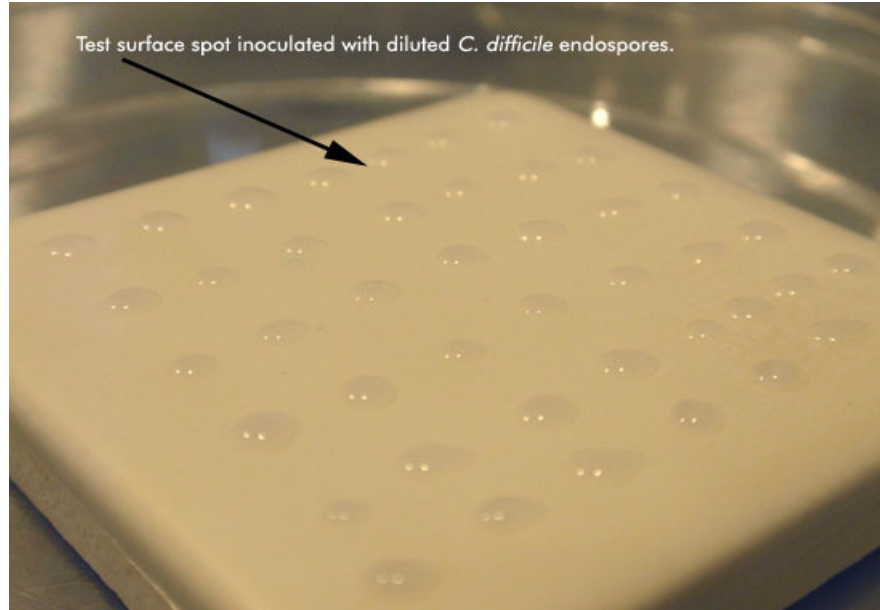
#### Method of Calculation of % Reduction:

% Reduction =  $1 - (C/B)$

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

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

### Photographs From Study



(1)

(1) Photograph 1 illustrates the spot inoculation of the test surfaces.

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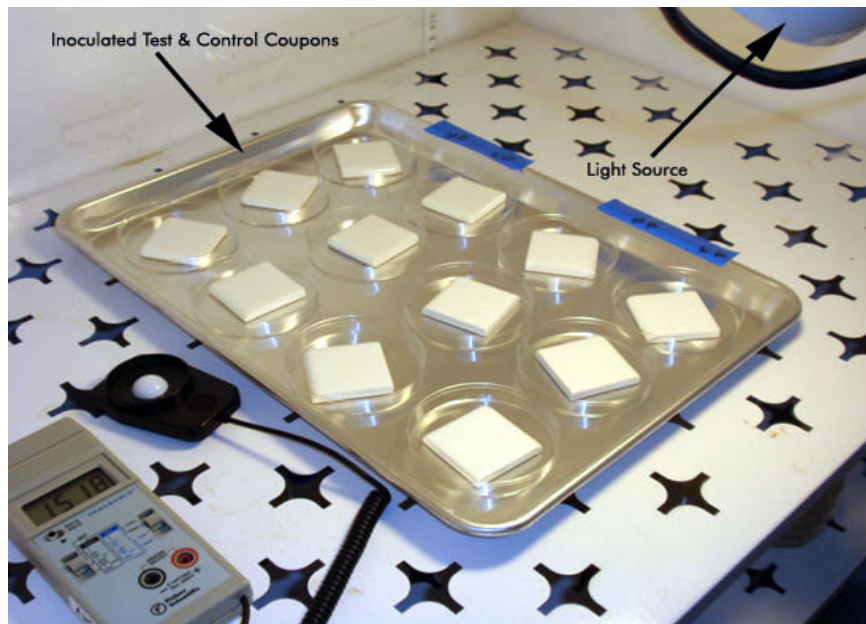
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### Additional Information Photographs From Study



(2)

(2) Photograph 2 shows the incubator set up with a light source for incubation in light.



(3)

(3) Photograph 3 pictures the test coupons in the incubator during the incubation period. On the left is the luminosity meter.