

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2021																								
DateRun:	09/07/2021																								
Experimenters:	Aditi Patel																								
ClientType:	Cleaning Company																								
ProjectNumber:	Project #2																								
Substrates:	Textile																								
PartType:	Coupon																								
Contaminants:	Candida Albicans																								
Cleaning Methods:	Steam																								
Analytical Methods:	Organism count																								
Purpose:	To test the disinfection efficacy of NuSteam on cotton fabric to disinfect Candida albicans (C.albicans) after 15 seconds of contact time.																								
Experimental Procedure:	<p>Spread Plating Method</p> <p>Twenty-four hours prior to the test, C.albicans was sub-cultured into three milliliters of tryptic soy broth (TSB) screw-cap tubes and incubated at 37°C (98.6°F). Four glass Petri dishes, each containing a single 2" x 1" swatch of clean cotton fabric, were autoclaved. After autoclaving, the four glass Petri dishes were marked using a black sharpie to designate the positive (P+), negative (N-), Test 1 (T1), and Test 2 (T2).</p> <p>The biosafety cabinet (BSC) was sprayed with 70% v/v isopropyl alcohol using a paper towel before spraying all items going into the BSC after 15 minutes of BSC airflow stabilization. Ten microliters of the organism were pipetted onto the P+, T1, and T2 fabric swatches and air-dried for 15 minutes in the Petri dishes. A motorized pipette with 10ml tips was used to pipet 15 ml of D/E neutralizing broth into four separate 50ml conical tubes labeled P+, N-, T1, and T2. Once C.albicans was air-dried, the P+ swatch was placed into the conical tube. The N-, T1 and T2 swatches were treated with the NuSteam.</p> <p>The supplied NuSteam cleaning disc was attached when testing, and three provided pads were autoclaved before spot testing. The pads were directly placed onto the N-, T1, and T2 swatches for 15 seconds of direct contact without movement before placing them into each of the respective D/E broth conical tubes with autoclaved forceps. The conical tubes were placed on the shaker for 10 minutes.</p> <p>Using the 1000µl pipette, 900µl of 1X PBS was pipetted into autoclaved dilution tubes, and serial dilutions were made for P+, T1, and T2 up to 10<sup>-4</sup> using 100µl of the shaken D/E broth. The stock and serial dilution solutions were plated and spread evenly over the surface of the solid tryptic soy agar (TSA) using a metal spreader. Finished plates were placed into a clean labeled zip lock bag and incubated at 37°C overnight. Isolated colonies were counted the following day to calculate log reduction and percent removal.</p>																								
Results:	<table border="1"> <thead> <tr> <th>Product</th> <th>Log of Positive Swatch</th> <th>Log Reduction</th> <th>% Reduction</th> </tr> </thead> <tbody> <tr> <td>NuSteam</td> <td>5.19</td> <td>5.19</td> <td>100%</td> </tr> </tbody> </table>	Product	Log of Positive Swatch	Log Reduction	% Reduction	NuSteam	5.19	5.19	100%																
Product	Log of Positive Swatch	Log Reduction	% Reduction																						
NuSteam	5.19	5.19	100%																						
Summary:	<table border="1"> <tr> <td colspan="2"><b>Substrates:</b></td> <td colspan="4">Textile</td> </tr> <tr> <td colspan="2"><b>Contaminants:</b></td> <td colspan="4">Candida Albicans</td> </tr> <tr> <td><b>Company Name:</b></td> <td><b>Product Name:</b></td> <td><b>Conc.:</b></td> <td><b>Efficiency:</b></td> <td><b>Effective:</b></td> <td><b>Observations:</b></td> </tr> <tr> <td>Bespoke Marketing Inc</td> <td>NuSteam</td> <td></td> <td>100.00</td> <td><input checked="" type="checkbox"/></td> <td></td> </tr> </table>	<b>Substrates:</b>		Textile				<b>Contaminants:</b>		Candida Albicans				<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>	Bespoke Marketing Inc	NuSteam		100.00	<input checked="" type="checkbox"/>	
<b>Substrates:</b>		Textile																							
<b>Contaminants:</b>		Candida Albicans																							
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>																				
Bespoke Marketing Inc	NuSteam		100.00	<input checked="" type="checkbox"/>																					
Conclusion:	NuSteam was effective at disinfecting C.albicans with a 5.19 Log Reduction within 15 seconds of direct contact on cotton fabric.																								