

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004  
 DateRun: 04/14/2004  
 Experimenters: Jason Marshall, Heidi Wilcox  
 ClientType: Cleaner Manufacturer  
 ProjectNumber: Project #1  
 Substrates: Glass/Quartz  
 PartType: Coupon  
 Contaminants: Films, Soaps  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric, Photography  
 Purpose: To evaluate the requested cleaners on SSL Soil 2

**Experimental Procedure:** The requested cleaning products were diluted to client listed concentration for glass cleaning (0.2%, 10% and 25%). The products were diluted with DI water. Nine preweighed glass coupons were coated with SSL Soil 2 (Glass soap scum: Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) by pump spraying the mix. The soil was allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. Photographs were taken.

Three coupons were placed into a Gardner Straight Line Washability unit. A Professional Painter's Rag was attached to the cleaning sled and soaked with 5-7 sprays of cleaning solutions. Each coupon was sprayed 7-10 times with the same cleaning solution. The cleaning unit was run for 5 cycles (~9 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded and a second set of photographs were taken. Efficiencies were calculated and recorded.

**Results:** Two products removed over 85% of the soil during the wipe application. The third product removed just under 85%. The table below lists the amount of soil applied and removed from the coupons.

Cleaner	Initial wt	Final wt	% Removed
Bi-O-Kleen AP	0.0500	0.0003	99.40
	0.0460	0.0021	95.43
	0.0416	0.0029	93.03
Bi-O-Kleen Glass	0.0398	0.0046	88.44
	0.0153	0.0046	69.93
	0.0546	0.0058	89.38
Clean Env N-13	0.0550	0.0040	92.73
	0.0647	0.0093	85.63
	0.0443	0.0073	83.52

**Summary:**

<b>Substrates:</b>	Glass/Quartz				
<b>Contaminants:</b>	Films, Soaps				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
Bi-O-Kleen Industries	Bi-O-Kleen Cleaner & Degreaser	0	95.95	<input checked="" type="checkbox"/>	
Bi-O-Kleen Industries	Bi-O-Kleen Glass Cleaner	10	82.58	<input type="checkbox"/>	
The Clean Environment Co	Glass and Hard Surface Cleaner	25	87.29	<input checked="" type="checkbox"/>	

**Conclusion:** A fourth and fifth product will be tested under the same conditions when it arrives at the laboratory.