

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003  
 DateRun: 02/20/2003  
 Experimenters: Jason Marshall, Heidi Wilcox  
 ClientType: State Agency  
 ProjectNumber: Project #2  
 Substrates: Chrome  
 PartType: Coupon  
 Contaminants: Films, Soaps  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric, Photography

Purpose: To evaluate supplied cleaners on second soil mixture on chrome coupons.

Experimental Procedure: Four supplied cleaning products were diluted to vendor recommended concentrations for glass cleaning. Each product was diluted with DI water. Twelve preweighed chrome 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: All four products were successful in removing SSL Soil 2 from chrome coupons. The table below lists the amount of soil added and removed.

Table 1. Soil Application and Removal

Cleaner	Initial wt	Final wt	% Removed
H2Orange2	0.0261	0.0004	98.47
	0.0234	-0.0004	101.71
	0.0274	0.0002	99.27
Super H2O2	0.0288	0.0022	92.36
	0.0255	0.0027	89.41
	0.0174	0.004	77.01
Free Fall	0.0217	0.0024	88.94
	0.0235	0.0017	92.77
	0.0233	0.0014	93.99
Ecogent	0.0229	0.0018	92.14
	0.0303	0.003	90.10
	0.0188	0.0029	84.57

Summary:

<b>Substrates:</b>		Chrome				
<b>Contaminants:</b>		Films, Soaps				
Company Name:		Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Envirox LLC		H2Orange2	1	99.82	<input checked="" type="checkbox"/>	
Cleanline Products		H2O2 Super Citrus Concentrate	0	86.26	<input checked="" type="checkbox"/>	
Ramsey Company		Free Fall	2	91.90	<input checked="" type="checkbox"/>	
Cogent Environmental Solutions		Ecogent General All Purpose Cleaner	2	88.94	<input checked="" type="checkbox"/>	

Conclusion: The same four product concentrations will be used on a second substrate, mirror glass, with the same soil.