CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 02/23/2003

Experimenters: Jason Marshall, Heidi Wilcox

ClientType: State Agency

ProjectNumber: Project #2

Substrates: Glass/Quartz

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Photography

Purpose: To evaluate supplied cleaners on second soil mixture on glass 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 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: All four products were successful in removing SSL Soil 2 from glass 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	0.0194	0.0010	94.85
	0.0213	0.0017	92.02
	0.0224	0.0001	99.55
Super H2O2	0.0304	0.0006	98.03
	0.0291	-0.0006	102.06
	0.0273	0.0007	97.44
Free Fall	0.0271	-0.0005	101.85
	0.0208	-0.0002	100.96
	0.0221	-0.0003	101.36
Ecogent	0.0272	-0.0004	101.47
	0.0227	-0.0002	100.88
	0.0183	0.0012	93.44

Summary:

Substrates:	Glass/Quartz
Contaminants:	Films, Soaps

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
EnvirOx LLC	H2Orange2	1	95.47	☑	
Cleanline Products	H2O2 Super Citrus Concentrate	0	99.17	☑	
Ramsey Company	Free Fall	2	101.39	☑	
Cogent Environmental Solutions	Ecogent General All Purpose Cleaner	2	98.60	☑	

Conclusion: All four products were successful in removing SSL Soil 2 from both substrates:

SSL Soil 1	Glass	Chrome	Overall Efficiency
H2Orange2	95.47	99.82	97.64
Super H2O2	99.17	86.26	92.72
Free Fall	101.39	91.90	96.64

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Ecogent	98.60	88.94	93.77