CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 02/13/2003

Experimenters: Jason Marshall, Heidi Wilcox

ClientType: State Agency

ProjectNumber: Project #2

Substrates: Fiberglass

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Photography

Purpose: To evaluate supplied cleaners for bathroom soil removal on fiberglass.

Experimental Procedure: Four supplied cleaning products were diluted to vendor recommended concentrations for bathroom cleaning. Each product was diluted with DI water. Twelve preweighed fiberglass coupons were coated with SSL Soil 1 (Bathroom soap scum: Vaseline Dry Skin Lotion 21.4%, Dial Clean Rinsing Body Wash 14.3%, Market Basket Shampoo & Conditioner (Pert) 28.6%, Soft Soap Natural Liquid hand soap 21.4%, Coast Deodorant bar soap 7.2% and Water 7.1%) using a hand held swab and 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 20 cycles (~33 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 1 from fiberglass coupons. Table 1 lists the amount of soil applied and removed.

Table 1. Soil Application and Removal

Cleaner	Initial wt	Final wt	% Removed
H2Orange2	0.2003	-0.0008	100.40
	0.2647	0.0127	95.20
	0.2242	0.0029	98.71
Super H2O2	0.2186	0.0194	91.13
	0.1534	0.0003	99.80
	0.1932	0.0227	88.25
Free Fall	0.1998	0.0014	99.30
	0.2558	0.0050	98.05
	0.1778	0.0031	98.26
Ecogent	0.2681	0.0054	97.99
	0.2316	0.0235	89.85
	0.2104	0.0272	87.07

Summary:

Substrates:	Fiberglass
Contaminants:	Films, Soaps

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
EnvirOx LLC	H2Orange2	8	98.10	☑	
Cleanline Products	H2O2 Super Citrus Concentrate	5	93.06	☑	
Ramsey Company	Free Fall	12	98.53	☑	
Cogent Environmental Solutions	Ecogent General All Purpose Cleaner	6	91.64	☑	

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