CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 02/19/2003

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 for bathroom soil removal on chrome coupons.

Experimental Procedure: Four supplied cleaning products were diluted to vendor recommended concentrations for bathroom cleaning. Each product was diluted with DI water. Twelve preweighed chrome 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 chrome coupons. Table 1 lists the amount of soil applied and removed.

Table 1. Soil Application and Removal

Cleaner	Initial wt	Final wt	% Removed
H2Orange2	0.1021	0.0020	98.04
	0.0669	0.0028	95.81
	0.0913	0.0025	97.26
Super H2O2	0.0624	0.0062	90.06
	0.1198	0.0118	90.15
	0.0540	0.0039	92.78
Free Fall	0.0819	0.0022	97.31
	0.0685	0.0041	94.01
	0.0543	0.0028	94.84
Ecogent	0.0524	0.0033	93.70
	0.0565	0.0033	94.16
	0.0747	0.0030	95.98

Summary:

Substrates:	Chrome
Contaminants:	Films, Soaps

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
EnvirOx LLC	H2Orange2	8	97.04	☑	
Cleanline Products	H2O2 Super Citrus Concentrate	5	91.00	☑	
Ramsey Company	Free Fall	12	95.39	☑	
Cogent Environmental Solutions	Ecogent General All Purpose Cleaner	6	94.62	☑	

Conclusion: The same four product concentrations will be used on a third substrate, glazed ceramic, with the same soil.