CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	04/16/2008
Experimenters:	Shweta Bansal
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Fiberglass, Chrome
PartType:	Coupon
Contaminants:	Films, Soaps
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate two Do-It-Yourself formulation following kit instructions for bathroom cleaning.
Experimental Procedure:	The two supplied cleaning product was diluted to vendor recommended concentrations for bathroom cleaning. Two other household products were included for comparative purposes. Preweighed fiberglass, ceramic and 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 handheld swab and allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. Three coupons were placed into a Gardner Straight Line Washability unit. A Wypal reinforced wiper 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). Final weights were recorded, efficiencies were calculated and recorded.
Results:	The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Clorox Green Works All Purpose	0.3193	0.9279	-190.60
Ceramic	0.3055	0.2755	9.82
	0.4317	0.2821	34.65
	0.4124	0.1544	62.56
Fiberglass	0.3406	0.1455	57.28
	0.2036	0.0188	90.77
	0.3444	0.1761	48.87
Chrome	0.3959	0.1866	52.87
	1.2759	1.1345	11.08
Clorox Green Works Glass & Surface	0.5098	0.3217	36.90
Ceramic	0.3643	0.2061	43.43
	0.2205	0.0871	60.50
	0.2247	0.0344	84.69
Fiberglass	0.2374	-0.0313	113.18
	0.3724	0.0800	78.52
	0.2600	0.1185	54.42
Chrome	0.3452	0.1200	65.24
	0.3435	0.1557	54.67
EZ Clean Green Vinegar Cleaning Spray	0.6409	0.4645	27.52
Ceramic	0.4633	0.2885	37.73
	0.4757	0.2813	40.87
	0.4328	0.1622	62.52
Fiberglass	0.4775	0.1550	67.54
	0.4071	0.1762	56.72
	0.2802	0.1672	40.33
Chrome	0.3511	0.1552	55.80

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	0.3736	0.1290	65.47
EZ Clean Green Soft Scrub	0.4483	1.7947	-300.33
Ceramic	0.3972	1.6744	-321.55
	0.5570	1.8736	-236.37
	0.4605	1.5626	-239.33
Fiberglass	0.4856	1.2021	-147.55
	0.5427	1.5605	-187.54
	0.3428	1.5009	-337.84
Chrome	0.3678	1.4800	-302.39
	1.2533	2.2581	-80.17

Summary:

Substrates:	Ceramics, Fiberglass, Chrome
Contaminants:	Films, Soaps

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Clorox Company	Green Works Multi-Surface Cleaner	100	19.70	☐	
Clorox Company	Green Works Glass and Surface Cleaner	100	65.73	☐	
EZ Clean Green	Natural Vinegar Cleaning Spray	100	50.50	☐	
EZ Clean Green	Natural Soft Scrub	100	-239.00	☐	

Conclusion:

Results were inconsistent and many of the products had negative cleaning efficiencies. This may have been due to cleaner residue being left on the coupons, especially for the EZ Clean Green Soft Scrub. A follow up retest will be performed.