CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2010
DateRun:	03/16/2010
Experimenters:	Jason Marshall, Junhee Cho
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 the supplied products for bathroom cleaning using manual cleaning
Experimental Procedure:	The supplied cleaning product were used at the recommended concentration (2%, 2% and 1.5%). Preweighed chrome, ceramic and fiberglass, coupons were coated with SSL Soil 1 (Bathroom soap scum: All-in-one shampoo and conditioner 28.6%, Dry skin lotion 21.4%, Liquid hand soap 21.4%, Liquid body wash 14.3%, 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 Wypall X60 reinforced wipe 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 solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit 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 efficiencies were calculated and recorded.
Results:	The two supplied products both removed over 85% of the bathroom soap scum soil from the surfaces using manual cleaning. The conventional product removed 75%. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
PC 108(1:48)_Ceramic			
	0.3057	0.0155	94.93
	0.1234	0.0079	93.6
	0.026	0.0025	90.38
PC 108(1:48)_Chrome			
	0.0115	0.0019	83.48
	0.0273	0.0024	91.21
	0.0117	0.0038	67.52
PC 108(1:48)_Fiberglass			
	0.0216	0.002	90.74
	0.0221	0.0029	86.88
	0.0154	0.0015	90.26
PC 220(1:128)_Ceramic			
	0.2548	0.0458	82.03
	0.5427	0.1034	80.95
	0.2379	0.0441	81.46
PC 220(1:128)_Chrome			
	0.2916	0.0441	84.88
	0.2952	0.0265	91.02
	0.4028	0.0352	91.26
PC 220(1:128)_Fiberglass			
	0.3183	0.0511	83.95
	0.2855	0.023	91.94

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	0.3232	0.0514	84.1
3M Non acid Bathroom cleaner -Ceramic			
	0.3325	0.084	74.74
	0.6008	0.2322	61.35
	0.3427	0.0912	73.39
3M Non acid Bathroom cleaner -Chrome			
	0.3184	0.0768	75.88
	0.3851	0.0733	80.97
	0.1951	0.0429	78.01
3M Non acid Bathroom cleaner -Fiberglass			
	0.6121	0.1472	75.95
	0.3844	0.0833	78.33
	0.4439	0.0881	80.15

Summary:

Substrates:	Ceramics, Fiberglass, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Next-Gen Supply Group	PC 108 Spray & Wipe Cleaner	2.1	87.67	☑	
Next-Gen Supply Group	PC 220 Peroxide Multipurpose Cleaner	0.78	85.73	☑	
3M	Non-acid bathroom cleaner No 19	0.78	75.42	☐	

Conclusion: The two products had an overall average efficiency over 85% and performed better than the conventional cleaning product.