CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2010
DateRun:	01/13/2010
Experimenters:	Jason Marshall
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 supplied products for GS 37 bathroom cleaner performance.
Experimental Procedure:	The supplied cleaning products were used at the requested concentration and a third product (conventional) was used at full strength as recommended by the vendor for bathroom cleaning. Preweighed ceramic, chrome 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 Kimberly Clark Reinforced paper towel 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. Efficiencies were calculated and recorded.
Results:	The two supplied products removed over 85% of the bathroom soap scum soil from all surfaces except one (One of the two products removed 80% from the chrome surface). The supplied conventional product removed less than 50% of the soil from the surfaces. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
DFC Restroom Ceramic			
	0.2518	0.0254	89.91
	0.2647	0.0105	96.03
	0.2939	0.0224	92.38
DFC Restroom Chrome			
	0.2400	0.0545	77.29
	0.2567	0.0325	87.34
	0.2143	0.0465	78.30
DFC Restroom Fiberglass			
	0.1850	0.0202	89.08
	0.2799	0.0138	95.07
	0.1992	0.0162	91.87
DFC Clacium Lime Rust Ceramic			
	0.3295	0.0071	97.85
	0.3184	0.0163	94.88
	0.3656	0.0223	93.90
DFC Calcium Lime Rust Chrome			
	0.1534	0.0056	96.35
	0.1394	0.0027	98.06
	0.1067	0.0060	94.38

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DFC Calcium Lime Rust Fiberglass			
	0.1857	0.0091	95.10
	0.2639	0.0121	95.41
	0.2325	0.0036	98.45
Soft Scrub Ceramic			
	0.1819	0.0558	69.32
	0.0961	0.0886	7.80
	0.3835	0.1673	56.38
Soft Scrub Chrome			
	0.0523	0.0233	55.45
	0.1020	0.0878	13.92
	0.1225	0.0761	37.88
Soft Scrub Fiberglass			
	0.1468	0.0798	45.64
	0.3632	0.1078	70.32
	0.1415	0.0261	81.55

Summary:

Substrates:	Ceramics, Fiberglass, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Chemspec	DFC Restroom	9.4	88.59	☑	
Chemspec	DFC Calcium, Lime & Rust Cleaner	2.3	96.04	☑	
Henkel Corporation	Soft Scrub with Bleach	100	48.70	☐	

Conclusion:

The DFC Restroom and Calcium, Lime & Rust cleaners removed over 85% of the SSL Bathroom soap scum using manual cleaning. Both outperformed the supplied conventional product on the same soil.