

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2014

DateRun: 02/13/2014

Experimenters: Johnny Le, Loc Nguyen, Anni Geng

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Ceramics, Plastic, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate supplied products for bathroom cleaning using manual cleaning

Experimental Procedure: The supplied cleaning products, Scrub Bathroom Cleaner and All-purpose Clorox Cleaner, were used at the recommended dilutions (one tablet per 16 oz of water and RTU). Pre-weighed chrome, ceramic and plastic, 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). Final weights were measured and efficiencies were calculated and recorded.

Chemistries Evaluated: Scrubs Organic product; All Purpose Clorox;

Results: Both cleaners were effective at removing bathroom soap scum from ceramic, Plastic and chrome plated coupons. Scrubs organic cleaner removed on average 94% of the bathroom soil. Clorox removed 95% on average.

Cleaner	Initial wt	Final wt	% Removed
Scrubs - Ceramic			
	0.0510	0.0019	96.27
	0.0656	0.0107	83.69
	0.0716	0.0052	92.74
Scrubs - Plastic			
	0.0651	0.0014	97.85
	0.0572	0.0023	95.98
	0.0425	0.0008	98.12
Scrubs - Chrome			
	0.0451	0.0027	94.01
	0.0646	0.0037	94.27
	0.0665	0.0020	96.99
Clorox - Ceramic			
	0.0763	0.0018	97.64
	0.1352	0.0021	98.45
	0.0604	0.0014	97.68
Clorox - Plastic			
	0.0547	0.0035	93.60
	0.0451	0.0007	98.45
	0.0406	0.0006	98.52
Clorox - Chrome			
	0.0566	0.0091	83.92
	0.0903	0.0042	95.35
	0.0967	0.0051	94.73

Summary:

<b>Substrates:</b>	Ceramics, Plastic, Chrome
<b>Contaminants:</b>	Films, Soaps

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Scrubs Organics	Scrubs Bathroom Cleaner	100	94.44	<input checked="" type="checkbox"/>	
Clorox Company	Disinfecting Bathroom Cleaner	100	95.37	<input checked="" type="checkbox"/>	

Conclusion:

Both Scrubs and All-purpose Clorox cleaner was effective at removing Bathroom soil from ceramic, plastic, and chrome coupons.