CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2012
DateRun:	04/05/2012
Experimenters:	Jason Marshall, Johnny Le, Loc Nguyen
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 the supplied products for bathroom cleaning using manual cleaning
Experimental Procedure:	The supplied cleaning products were used at the recommended concentration (4.7Non-acid, 6.25% mild acid). 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 more than 85% of the bathroom soap scum soil from the surfaces using manual cleaning. The conventional products removed over 90%. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Horizon Gleam - ceramic			
	1.4889	0.0016	99.89
	1.0328	0.0011	99.89
	0.0404	0.0057	85.89
Horizon Gleam - polcarbonate			
	0.0202	0.0012	94.06
	0.0168	0.0009	94.64
	0.0260	0.0007	97.31
Horizon Gleam - chrome			
	0.0199	0.0002	98.99
	0.0225	0.0015	93.33
	0.0176	0.0008	95.45
Horizon Premier - ceramic			
	1.2827	0.0026	99.80
	0.0695	0.0101	85.47
	0.6038	0.2032	66.35
Horizon Premier - polycarbonate			
	0.0234	0.0001	99.57
	0.0298	0.0017	94.30
	0.0174	0.0001	99.43
Horizon Premier - chrome			
	0.0406	0.0020	95.07
	0.0164	0.0022	86.59

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	0.0212	0.0046	78.30
PC 115 - ceramic			
	0.0423	0.0054	87.23
	0.0498	0.0013	97.39
	0.0323	0.0034	89.47
PC 115 - poylcarbonate			
	0.0482	-0.0006	101.24
	0.0322	0.0003	99.07
	0.0302	0.0014	95.36
PC 115 - chrome			
	0.0416	0.0017	95.91
	0.0309	0.0014	95.47
	0.0171	0.0031	81.87
3M 19 - ceramic			
	0.0271	0.0008	97.05
	0.0422	0.0003	99.29
	0.1162	0.0027	97.68
3M 19 - poylcarbonate			
	0.0220	0.0004	98.18
	0.0187	0.0017	90.91
	0.0219	0.0003	98.63
3M 19 - chrome			
	0.0424	0.0026	93.87
	0.0194	0.0030	84.54
	0.0195	0.0007	96.41

Summary:

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
3M	Non-acid bathroom cleaner No 19	100	95.17	☑	Non acid
Next-Gen Supply Group	PC 115 Mild Acid Disinfectant Restroom & Shower Cleaner	2.3	93.67	☑	acid cleaner
U.N.X. Incorporated	Horizon Gleam	4.7	95.50	☑	non acid
U.N.X. Incorporated	Horizon Premier	6.25	89.43	☑	acid cleaner

Conclusion: The two products had an overall average efficiency greater than 85% and performed as well as the conventional cleaning products in their representative class.