CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	08/10/2015
Experimenters:	Loc Nguyen, George Liang
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #9
Substrates:	Ceramics, Plastic, Steel
PartType:	Coupon
Contaminants:	Greases, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate supplied products for all purpose cleaning using manual cleaning.
Experimental Procedure:	Soil Preparation: A mixture of three cooking oils/greases was made. A melt blend of 33% vegetable shortening, 33% lard, 33% vegetable oil and 1% carbon lampblack was made up fresh for the testing. Preweighed ceramic, painted steel and plastic coupons were coated with DCC17 soil using a hand held swab and were 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 1 spray of cleaner. Each coupon was sprayed with 1 spray of cleaner. The solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for 20 cycles (~30 seconds). An additional wipe cycle was done with one spray of water on each coupon and new Wypall for rinsing purposes. Coupons were let to dry 24 hours before reweighing and efficiency was calculated. Cleaners Evaluated: Easy Scrub Liquid with Bleach and Soft Scrub with bleach.

Results:

Cleaner	Initial wt	Final wt	% Removed	% Average Removal
Easy Scrub Liquid w/ bleach_Ceramic				
	0.5178	0.0258	95.02	
	0.5230	0.0620	88.15	
	0.5016	0.0358	92.86	92.01
Easy Scrub Liquid w/ bleach_Plastic				
	0.5114	0.0330	93.55	
	0.4966	0.0110	97.78	
	0.5113	0.0223	95.64	95.66
Easy Scrub Liquid w/ bleach_Painted Steel				
	0.5139	0.0211	95.89	
	0.5023	0.0220	95.62	
	0.5038	0.0181	96.41	95.97
Softscrub w/ bleach_Ceramic				
	0.5066	0.0368	92.74	
	0.5107	0.0524	89.74	
	0.5136	0.0249	95.15	92.54
Softscrub w/ bleach_Plastic				
	0.5140	0.0183	96.44	
	0.5040	0.0162	96.79	
	0.5011	0.0155	96.91	96.71

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Softscrub w/ bleach_Painted Steel				
	0.5062	0.0324	93.60	
	0.5038	0.0338	93.29	
	0.5068	0.0185	96.35	94.41

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Greases, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Purex Ind. (Bab-o)	Easy Scrub Liquid Cleanser With Bleach	100	94.56	☑	
Henkel Corporation	Soft Scrub with Bleach	100	94.56	☑	

Conclusion:

Soft Scrub with bleach and Easy Scrub Liquid with bleach both were effective at soil removal from tested surfaces. Both cleaners resulted with very close removal efficiencies with Soft Scrub averaging at 94.56% and Easy Scrub at 94.55%. With very little difference, Soft Scrub was slightly more effective at removal of soil from ceramic and plastic surfaces and Easy Scrub was more effective at removal of soil from painted steel surfaces.