CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2015
DateRun:	08/23/2015
Experimenters:	Loc Nguyen, George Liang, Luis Raudales
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 one gram of DCC17 soil on each coupon by 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. In addition to that each coupon was sprayed with 1 spray of cleaner. The solution was allowed to penetrate for 30 seconds and followed by 20 cycles (~30 seconds) of cleaning in the SLW unit. An additional wipe cycle was done with one spray of water on each coupon and a new Wypall X60 reinforced wipe for rinsing purposes. Coupons were let to dry 24 hours before reweighing and efficiency was calculated. Cleaners Evaluated: Soft Scrub All Purpose, Easy Scrub With Lemon

Results:

Cleaner	Initial wt	Final wt	% Removed	% Avg. Removed
Soft Scrub All Purpose _ Ceramic				
	0.4758	0.0066	98.61	
	0.4894	0.0400	91.83	
	0.5385	0.0106	98.03	96.16
Soft Scrub All Purpose _ Plastic				
	0.5000	0.0568	88.64	
	0.5169	0.0469	90.93	
	0.5072	0.0253	95.01	91.53
Soft Scrub All Purpose _ Painted Steel				
	0.4751	0.0031	99.35	
	0.5124	0.0035	99.32	
	0.4817	0.0020	99.58	99.42
Easy Scrub With Lemon _ Ceramic				
	0.5546	0.0430	92.25	
	0.4785	0.1190	75.13	
	0.5222	0.1043	80.03	82.47
Easy Scrub With Lemon _ Plastic				

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	0.5397	0.0446	91.74	
	0.5172	0.0411	92.05	
	0.6057	0.0439	92.75	92.18
Easy Scrub With Lemon _ Painted Steel				
	0.4659	0.1419	69.54	
	0.4741	0.0066	98.61	
	0.5211	0.0104	98.00	88.72

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Greases, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Dial Professional	Soft Scrub Lemon	100	95.70	☑	
Purex Ind. (Bab-o)	Cleaning Gel With Bleach	100	87.79	☑	

Conclusion:

Both cleaning agents were effective at removing the contaminants from the surface. However Soft Scrub All Purpose had a higher efficiency than Easy Scrub With Lemon by 7.91%.