CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2009
DateRun:	01/26/2009
Experimenters:	Jason Marshall, Junhee Cho
ClientType:	Community Group
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Steel
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaulate supplied recipes for all purpose cleaning
Experimental Procedure:	The supplied cleaning products were made following the supplied recipe. A fourth product, selected by the lab, was selected by the lab and used at full strength for all purpose cleaning. Preweighed ceramic, painted steel and plastic coupons were coated with Hucker's Soil Formulation (Jif Creamy Peanut Butter 9.2%, Salted Butter 9.2%, Arrowhead Mills stone ground wheat flour 9.2%, Egg Yolk 9.2%, Evaporated milk 13.8%, Distilled water 45.8%, Printer's ink with boiled linseed oil 0.9%, Shaws saline solution 2.7%) 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 using a water-soaked paper towel to rinse any cleaner residue (if necessary and then wiped once with a dry paper towel. Final weights were measured, and efficiencies were calculated and recorded.
Results:	The supplied products and industry product were effective in removing the Hucker's Soil with a manual wiping action. The table lists the amount of soil initially added and the amount remaining after cleaning and the product efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
BWG Fantastic - ceramic	0.1856	0.0355	80.87
	0.3117	0.0353	88.68
	0.2453	0.0402	83.61
BWG Fantastic - painted steel	0.1303	0.0182	86.03
	0.2120	0.0118	94.43
	0.2250	0.0207	90.80
BWG Fantastic - plastic	0.2821	0.0280	90.07
	0.1742	0.0300	82.78
	0.0438	-0.0481	209.82
BWG Magic - ceramic	0.0865	0.0161	81.39
	0.2554	0.0171	93.30
	0.0881	0.0195	77.87
BWG Magic - painted steel	0.1057	0.0196	81.46
	0.1115	0.0223	80.00
	0.5981	0.0316	94.72
BWG Magic - plastic	0.2272	0.0040	98.24
	0.0380	-0.0047	112.37
	0.0224	-0.1141	609.38
BWG Fabulous - ceramic	0.1214	0.0155	87.23
	0.1747	0.0326	81.34

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	0.1589	0.0223	85.97
BWG Fabulous - painted steel	0.1628	0.0193	88.14
	0.1543	0.0155	89.95
	0.2495	0.0214	91.42
BWG Fabulous - plastic	0.2322	-0.0141	106.07
	0.1486	0.0064	95.69
	0.1990	0.0171	91.41
Clorox Formula 409 AP - ceramic	0.4108	0.0248	93.96
	0.1033	0.0397	61.57
	0.3659	0.0353	90.35

Summary:

Substrates:	Ceramics, Plastic, Steel
Contaminants:	Hucker's Soil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Brazilian Womens Group	Fantastico Multi-Uso	100	0.00	☐	
Brazilian Womens Group	Sabao Magico	100	0.00	☐	
Brazilian Womens Group	Sensacional Limpa Piso	100	0.00	☐	
Clorox Company	Formula 409 All Purpose Cleaner	100	0.00	☐	

Conclusion:

The supplied product had an overall average efficiency greater than 85% and would be considered effective based on the SSL testing methodology for all purpose cleaning and for Green Seal GS 37 requirements.