CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2014
DateRun:	09/28/2014
Experimenters:	Loc Nguyen, George Liang
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #4
Substrates:	Ceramics, Plastic, Steel
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate three supplied products for all purpose cleaning following GS 37 requirements
Experimental Procedure:	Preweighed ceramic, plastic G-10 and painted steel coupons were coated with Hucker's Soil Formulation (Jif Creamy Peanut Butter,Salted Butter, Arrowhead Mills stone ground wheat flour, Egg Yolk, Evaporated milk, distilled water, Printer's ink with boiled linseed oil, Shaws saline solution) 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 Wypal reinforced paper towel was attached to the cleaning sled and soaked with 1 spray of cleaning solution. Each coupon was sprayed once with the same cleaning solution. The cleaning unit was run for 20 cycles (~33 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded, efficiencies were calculated and recorded. Chemistries Evaluated: Multi-Purpose; Neutral- Floor

Results:

Cleaner	Initial wt	Final wt	% Removed
Multi-Purpose_ceramic	0.5242	0.1545	70.53
Multi-Purpose_ceramic	0.5819	0.3295	43.38
Multi-Purpose_ceramic	0.3727	0.0240	93.56
Multi-Purpose_plastic	0.6053	0.1188	80.37
Multi-Purpose_plastic	0.5680	0.0450	92.08
Multi-Purpose_plastic	0.5782	0.0861	85.11
Multi-Purpose_painted steel	0.5714	0.2980	47.85
Multi-Purpose_painted steel	0.4935	0.1084	78.03
Multi-Purpose_painted steel	0.5691	0.2024	64.44
Neutral-Floor_ceramic	0.5688	0.2157	62.08
Neutral-Floor_ceramic	0.6087	0.1053	82.70
Neutral-Floor_ceramic	0.5931	0.3034	48.85
Neutral-Floor _plastic	0.7239	0.1645	77.28
Neutral-Floor _plastic	0.6341	0.1438	77.32
Neutral-Floor _plastic	0.7558	0.1583	79.06
	0.7009	0.1951	72.16

CLEANING LABORATORY EVALUATION SUMMARY

Neutral-Floor_painted steel			
Neutral-Floor_painted steel	0.6560	0.1165	82.24
Neutral-Floor_painted steel	0.6053	0.2583	57.33

Summary:

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

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
EnvirOx LLC	Multi-Purpose Hyper	100	0.00	☐	
EnvirOx LLC	Green Certified Neutral Floor Cleaner Hyper Concentrated	100	0.00	☐	

Conclusion:

A cleaning product is considered effective when the efficiency of the product removes 85% of the soil and above. Neither Multi-Purpose nor Neutral-Floor was effective at removing the Hucker soil with efficiency close to 70%. However Multi-Purpose is slightly more effective at removing Hucker soil than Neutral-Floor.