CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	12/05/2008
Experimenters:	Jason Marshall, Junhee Cho
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Steel
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate the two supplied product for all purpose cleaning a using manual cleaning.
Experimental Procedure:	The supplied cleaning products were used at the delivered concentrations. Preweighed ceramic, plastic and painted steel 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 Klark 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 table lists the amount of soil added and the amount remaining after cleaning and the product efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
PC122 HD Bio-Clean Ceramic			
	0.1131	0.0095	91.60
	0.1728	0.0127	92.65
	0.0658	0.0227	65.50
PC122 HD Bio-Clean Painted Steel			
	0.1155	0.0090	92.21
	0.1167	0.0041	96.49
	0.0330	0.0089	73.03
PC122 HD Bio-Clean Plastic			
	0.1694	0.0027	98.41
	0.0775	0.0028	96.39
	0.2539	0.0053	97.91
PC117 Winter Ceramic			
	0.1622	0.0099	93.90
	0.1824	0.0097	94.68
	0.1438	0.0073	94.92
PC117 Winter Painted Steel			
	0.0792	0.0062	92.17
	0.0527	0.0329	37.57
	0.1209	0.0035	97.11
PC117 Winter Plastic			
	0.0910	0.0069	92.42
	0.0792	0.0067	91.54

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	0.0936	0.0081	91.35

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Next-Gen Supply Group	PC 122 HD Bio-Clean	100	89.35	☑	
Next-Gen Supply Group	PC 117 Winterclean	100	87.29	☑	

Conclusion: Both of the products had an overall average efficiency over 85% and would be considered effective based on the TURI lab testing protocol for GS 37.