CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2014
DateRun:	10/06/2014
Experimenters:	Loc Nguyen
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 supplied products for all purpose cleaning following GS 37 requirements
Experimental Procedure:	The two cleaning products were used at the provided ready to use concentration at room temperature. Preweighed ceramic, plastic and painted metal coupons were coated with Hucker's Soil Formulation (creamy peanut butter, salted butter, stone ground wheat flour, egg yolk, evaporated milk, distilled water, printer's ink with boiled linseed oil, saline solution) using a hand held swab and allowed to dry for 2 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 1-2 sprays of cleaning solutions. Each coupon was sprayed 1-2 times with the same cleaning solution. The cleaning unit was run for 20 cycles (~33 seconds). At the end of the cleaning, coupons were blotted once with a dry paper towel. Final weights were recorded, efficiencies were calculated and recorded. ChemistriesEvaluated: Pure Care Products All Purpose; Seventh Generation All Purpose;
Results:	The Pure Care product had the higher level of removal of the Hucker's soil from the three surfaces using manual wiping. It removed about 70% of the Hucker's soil. The Seventh Generation product removed about half of the soil under the laboratory conditions. The table lists the amount of soil added, the amount remaining after cleaning and the calculated efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Pure Care ceramic			
	0.5130	0.2679	47.78
	0.5166	0.1902	63.18
	0.5144	0.2536	50.70
Pure Care plastic			
	0.5978	0.1717	71.28
	0.6157	0.1561	74.65
	0.6078	0.1444	76.24
Pure Care painted metal			
	0.6130	0.0961	84.32
	0.6670	0.1018	84.74
	0.5874	0.1849	68.52
Seventh Gen ceramic			
	0.5554	0.2422	56.39
	0.5093	0.2697	47.04
	0.5251	0.2595	50.58
Seventh Gen plastic			
	0.5743	0.2479	56.83
	0.5400	0.2689	50.20
	0.5537	0.2330	57.92
Seventh Gen painted metal			
	0.5416	0.2560	52.73
	0.5239	0.0960	81.68
	0.5493	0.3995	27.27

Summary:

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Contaminants:	Hucker's Soil

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Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Seventh Generation	Free & Clear All Purpose	100	53.41	☐	
Pure Care	Pure Care All Purpose Cleaner	100	69.05	☑	

Conclusion: Pure Care Products was found to be more effective at removing the Hucker's soil from various surfaces using manual wiping as compared with the Seventh Generation product.