CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2011

DateRun: 02/07/2011

Experimenters: Junhee Cho

ClientType: Chemical Company

ProjectNumber: Project #1

Substrates: Ceramics, Porcelain

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate the cleaning ability of supplied products for toilet cleaning

Experimental Procedure: Pre-weighed ceramic, porcelain coupons were coated with Hucker's Soil Formulation (Jiffy 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 hand held 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 5-7 sprays of cleaning solutions. Each coupon was sprayed 7-10 times 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.

Results: The supplied Purac cleaner removed 85% of the Hucker's soil on ceramic coupon but only 81% from the porcelain. The table lists the amount of soil added, the amount remaining after cleaning and the calculated efficiency for each of the ceramic and porcelain coupons cleaned.

Cleaner	Initial wt	Final wt	% Removed	AVG
Purac Toilet Cleaner				
Ceramic				
	0.2699	0.0198	92.66	85.50
	0.0715	0.0094	86.85	
	0.1534	0.0353	76.99	
Porcelain				
	0.0922	0.0060	93.49	81.59
	0.0606	0.0117	80.68	
	0.0435	0.0128	70.57	
Comet Bathroom Cleaner				
Ceramic				
	0.1510	0.0244	83.84	87.19
	0.1497	0.0119	92.05	
	0.1249	0.0179	85.67	
Porcelain				
	0.0634	0.0104	83.60	84.48
	0.0915	0.0069	92.46	
	0.0274	0.0062	77.37	

Summary:

Substrates:	Ceramics, Porcelain				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Prestige Brands Inc	Comet Bathroom Cleaner	100	85.83	☑	
Purac Biochem	Purac Toilet Cleaner	100	83.55	☑	

Conclusion: The supplied Purac product did not average more than 85% removal of the Hucker's soil from both surfaces. However, based on gravimetric analysis, the Purac Toilet Cleaner was as effective as the conventional cleaner, Comet Bathroom cleaner.