CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2010
DateRun:	08/12/2010
Experimenters:	Jason Marshall, Timothy Weil
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 three supplied products for all purpose cleaning using manual cleaning.
Experimental Procedure:	The supplied cleaning products were used at the vendor recommended concentration for all purpose cleaning. Preweighed ceramic, plastic G-10 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-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:	All three products were effective on the four surfaces tested using manual cleaning. The two supplied products worked as well as the conventional product for all purpose soil removal. The table below lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Formula 409 - ceramic			
	0.0785	0.0020	97.45
	0.0586	0.0045	92.32
	0.0885	0.0037	95.82
Formula 409 - painted steel			
	0.0471	0.0088	81.32
	0.0710	0.0072	89.86
	0.1346	0.0098	92.72
Formula 409 - plastic			
	0.0596	0.0031	94.80
	0.0499	0.0044	91.18
	0.0469	0.0036	92.32
Formula 409 - porcelain			
	0.0584	0.0031	94.69
	0.0364	0.0030	91.76
	0.0544	0.0042	92.28
New Leaf All Purpose - ceramic			
	0.0618	0.0013	97.90
	0.0894	0.0020	97.76
	0.0776	0.0048	93.81
New Leaf All Purpose - painted steel			
	0.0449	0.0040	91.09

CLEANING LABORATORY EVALUATION SUMMARY

	0.0390	0.0036	90.77
	0.0450	0.0032	92.89
New Leaf All Purpose - plastic			
	0.0363	0.0047	87.05
	0.0327	0.0025	92.35
	0.0509	0.0021	95.87
New Leaf All Purpose - porcelain			
	0.0449	0.0036	91.98
	0.0312	0.0052	83.33
	0.0514	0.0061	88.13
New Leaf Granite - ceramic			
	0.0820	0.0011	98.66
	0.0808	0.0032	96.04
	0.0963	0.0014	98.55
New Leaf Granite - painted steel			
	0.0508	0.0105	79.33
	0.0452	0.0073	83.85
	0.0437	0.0080	81.69
New Leaf Granite - plastic			
	0.0392	0.0053	86.48
	0.0458	0.0044	90.39
	0.0615	0.0053	91.38
New Leaf Granite - porcelain			
	0.0443	0.0043	90.29
	0.0590	0.0036	93.90
	0.0378	0.0035	90.74

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Clorox Company	Clorox Kitchen Cleaner	100	92.21	☑	
New Leaf Clean LLC	New Leaf All Purpose Cleaner	100	91.91	☑	
New Leaf Clean LLC	New Leaf Granite Cleaner	100	90.11	☑	

Conclusion:

The supplied products were found to be effective for removing the Hucker’s soil from various surfaces using manual wiping removing more than 85% of the soil. It compared well to the conventional cleaning product.