CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2011
DateRun:	02/14/2011
Experimenters:	Junhee Cho, Timothy Weil, Johnny Le, Kathleen Tenaglia
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 test Alpha Blue Care for all purpose cleaning
Experimental Procedure:	The supplied cleaning product was diluted with DI water at room temperature to vendor recommended concentration for all purpose cleaning (2 oz per gallon or 1.56%). A comparative product was used at a standard 2% dilution rate. 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 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 product was more effective at removing the Hucker’s soil from the three surfaces using manual wiping than the non-green comparative product, removing more than 85% of the Hucker’s soil. 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	Product Ave	Overall Ave
Alpha Blue Care (Ceramic)	0.0742	0.0226	69.54	78.99	85.58
	0.0605	0.0124	79.50		
	0.0787	0.0095	87.93		
Alpha Blue Care (Plastic)	0.0901	0.0119	86.79	93.46	
	0.0782	0.0073	90.66		
	0.0479	-0.0014	102.92		
Alpha Blue Care (Painted Steel)	0.0493	0.0088	82.15	84.30	
	0.0362	0.0066	81.77		
	0.0454	0.0050	88.99		
MD Stetson 3R (Ceramic)	0.0305	0.0118	61.31	51.98	76.85
	0.0568	0.0355	37.50		
	0.0723	0.0310	57.12		
MD Stetson 3R (Plastic)	0.0299	0.0050	83.28	88.79	
	0.0302	0.0027	91.06		
	0.0314	0.0025	92.04		

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MD Stetson 3R (Painted Steel)	0.0535	0.0040	92.52	89.79	
	0.0306	0.0035	88.56		
	0.0923	0.0108	88.30		

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Next-Gen Supply Group	3R All Purpose Cleaner	2	76.85	☐	

Conclusion: Alpha Chemical Services Alpha Blue Care was more effective than the non-green comparative product.