CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 07/06/2004

Experimenters: Jason Marshall, Heidi Wilcox

ClientType: Chemical Company

ProjectNumber: Project #1

Substrates: Ceramics

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Photography

Purpose: To evaluate vendor product as an all purpose cleaner.

Experimental Procedure: The supplied cleaning product was used at the supplied concentration. A second product, selected by the lab, was diluted with DI water to vendor recommended dilution (128:1) for all purpose cleaning.
Six preweighed ceramic 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 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. Photographs of the dirty coupons were taken.

Three coupons were placed into a Gardner Straight Line Washability unit. A Professional Painter's Rag 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 cleaned coupons were photographed. Efficiencies were calculated and recorded.

Product Dilution Ratio
Castle Int. RTU
Super H2O2 128:1

Results: Both products were effective in removing the soil with a manual wiping action. The table lists the amount of soil initially added and the amount remaining after cleaning and the product efficiency for each coupon cleaned. Dirty and clean pictures are also provided below.

Cleaner	Initial wt	Final wt	% Removed
ion.a.clean	0.3623	0.0001	99.97
	0.7336	0.0006	99.92
	0.3627	-0.0003	100.08
Super H2O2	0.6469	0.0036	99.44
	0.7837	0.0044	99.44
	0.7604	-0.0010	100.13

Summary:

Substrates:	Ceramics				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Castle International	ion.a.Clean	100	99.99	☑	
Cleanline Products	H2O2 Super Citrus Concentrate	1	99.67	☑	

Conclusion: Initial testing of the supplied product was found to be comparable to one of the products previously tested by the lab for All Purpose cleaning applications.