

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003
 DateRun: 03/21/2003
 Experimenters: Jason Marshall, Heidi Wilcox
 ClientType: Cleaner Manufacturer
 ProjectNumber: Project #1
 Substrates: Ceramics, Plastic, Steel
 PartType: Coupon
 Contaminants: Hucker's Soil
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric, Photography

Purpose: To evaluate supplied cleaner on third janitorial contaminant on three substrates.

Experimental Procedure: The supplied cleaning product was diluted with DI water 10% for all purpose cleaning. Three preweighed ceramic, three plastic G-10 and three 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 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 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 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 and a second set of photographs were taken. Efficiencies were calculated and recorded.

Results: The product was successful in removing the soil from the 2 of the three substrates. Then cleaner had difficulty in removing the soil from the steel coupons. The table below lists the amount of soil applied and removed from the coupons.

Table 1. Soil Removal

Cleaner	Initial wt	Final wt	% Removed
Ceramic-SSL3	0.014	0.0014	90.00
	0.0088	0.0015	82.95
	0.0047	0.0003	93.62
Plastic-SSL3	0.0437	-0.0015	103.43
	0.0566	0.0002	99.65
	0.0689	0.0014	97.97
Steel-SSL3	0.037	0.01	72.97
	0.0454	0.0094	79.30
	0.0467	0.0068	85.44

Summary:

Substrates:		Ceramics, Plastic, Steel			
Contaminants:		Hucker's Soil			
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Pollux Company	Force 9	10	88.86	☒	Ceramic
Pollux Company	Force 9	10	100.35	☒	Plastic
Pollux Company	Force 9	10	79.24	☐	Steel

Conclusion: The overall efficiency for the all purpose soil was 89.48, passing the cut off of 85% established for similar testing procedures for the State's EPP program. The product from vendor was successful in removing two types of soils, soap scum for bathroom and glass from the various substrates. The final soil (Hucker's soil) was removed from ceramics and plastic at a high rate.