CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 07/10/2006

Experimenters: Jason Marshall

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 two supplied products for all purpose cleaning.

Experimental Procedure: The supplied cleaning products were diluted with DI water to vendor recommended concentration for all purpose Cleaning (30:1 and 10:1).

Six preweighed ceramic, nine plastic G-10 and nine 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.

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, efficiencies were calculated and recorded.

Results: Both products performed well on the painted steel. The DFC Degreaser worked well on the plastic coupons as well. The table lists the amount of soil added, the amount remaining and the percent removed for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Degreaser Steel	0.8443	0.0383	95.46
	0.4892	0.0309	93.68
	0.3379	0.0301	91.09
Heavy Duty Steel	0.3551	0.0074	97.92
	0.4036	0.0101	97.50
	0.3675	0.0093	97.47
Degreaser Plastic	0.7741	0.0468	93.95
	0.8812	0.0662	92.49
	0.7610	0.0530	93.04
Heavy Duty Plastic	1.1863	0.3612	69.55
	0.3662	0.1005	72.56
	0.6274	0.1256	79.98
Degreaser Ceramic	0.3877	0.1063	72.58
	0.6423	0.1940	69.80
	0.2760	0.0654	76.30
Heavy Duty Ceramic	0.5731	0.1817	68.30
	0.2485	0.0733	70.50
	0.6185	0.1933	68.75

Summary:

Substrates:	Ceramics, Plastic, Steel				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Cogent Environmental Solutions	DFC Degreaser	3.33	86.49	☑	

CLEANING LABORATORY EVALUATION SUMMARY

Cogent Environmental Solutions	DFC Heavy Duty Cleaner	10	80.28	☐	

Conclusion: The DFC Degreaser on average removed over 86% of the soil from the three substrates. The DFC Heavy Duty cleaner only removed 80%.