CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2006
DateRun:	07/13/2006
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 three supplied products for all purpose cleaning.
Experimental Procedure:	One supplied cleaning products were diluted with DI water to vendor recommended concentration for all purpose Cleaning (20:11) and the other two were used at full strength. Nine 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:	All three products worked well on the painted steel and fiberglass coupons. Only the Heavy Duty cleaner had moderate success on the ceramic coupons. 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	1.2408	0.0390	96.86
	0.8825	0.0409	95.37
	0.9002	0.0272	96.98
Heavy Duty Steel	0.3460	0.0166	95.20
	0.8724	0.0227	97.40
	0.8011	0.0196	97.55
Cogent Sodium hypochlorite Steel	0.7091	0.0226	96.81
	0.5136	0.0527	89.74
	0.7826	0.0415	94.70
Degreaser Plastic	0.8437	0.0083	99.02
	0.8274	0.0154	98.14
	0.3658	0.0116	96.83
Heavy Duty Plastic	0.6236	0.0585	90.62
	1.0084	0.0146	98.55
	0.8681	0.0378	95.65
Cogent Sodium hypochlorite Plastic	0.8569	0.0303	96.46
	1.0498	0.0299	97.15
	0.5279	0.0402	92.38
Degreaser Ceramic	0.4465	0.1783	60.07
	0.5850	0.1048	82.09
	1.2622	0.2015	84.04
Heavy Duty Ceramic	0.9430	0.2057	78.19
	1.1075	0.1195	89.21
	1.1374	0.1425	87.47
Cogent Sodium hypochlorite Ceramic	0.6902	0.1802	73.89
	0.9517	0.2429	74.48

CLEANING LABORATORY EVALUATION SUMMARY

	0.8444	0.2760	67.31

Summary:

Substrates:	Ceramics, Plastic, Steel
Contaminants:	Hucker's Soil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Cogent Environmental Solutions	DFC Degreaser	5	89.93	☑	
Cogent Environmental Solutions	DFC Heavy Duty Cleaner	100	92.20	☑	
Cogent Environmental Solutions	DFC Sodiumhypochlorite 0.02	100	86.99	☑	

Conclusion:

Despite having some trouble with the ceramic coupons, the three products all removed over 85% of the Hucker's soil.