CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	04/16/2008
Experimenters:	Shweta Bansal
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 Do-It-Yourself formulation following kit instructions for all purpose cleaning
Experimental Procedure:	The supplied cleaning products were used at the recommended concentration. Two products were included for comparison and used at its ready to use concentration. Preweighed ceramic, plastic and 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 handheld 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. AA Wypall X60 reinforced wipe 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). Final weights were recorded, and efficiencies were calculated and recorded.
Results:	The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Clorox Green Works All Purpose	0.2485	11.3316	-4460.00
Steel	0.2312	10.1057	-4270.98
	0.2532	-66.2288	26256.71
	-0.0013	49.7681	3828415.38
Plastic	0.1948	49.1130	-25112.01
	0.1948	48.7056	-24902.87
	0.3703	-61.2876	16650.80
Ceramic	0.1704	-57.5792	33890.61
	0.2776	-61.7541	22345.71
Clorox Green Works Glass & Surface	0.3268	0.4536	-38.80
Steel	0.2069	-0.2323	212.28
	0.2254	-0.7152	417.30
	0.2409	-0.1776	173.72
Plastic	0.2220	-0.0605	127.25
	0.2657	-0.1677	163.12
	0.6176	5.7989	-838.94
Ceramic	0.2903	3.8990	-1243.09
	0.2061	5.0259	-2338.57
EZ Clean Green Vinegar Cleaning Spray	0.2898	0.1074	62.94
Steel	0.2343	0.0818	65.09
	0.1632	0.2179	-33.52
	0.1591	0.0843	47.01
Plastic	0.1878	-0.1531	181.52

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	0.2111	-0.1985	194.03
	0.4565	-1.3103	387.03
Ceramic	0.2154	-10.8201	5123.26
	0.2228	-6.6022	3063.29
EZ Clean Green Soft Scrub	-0.3492	-1.2067	-245.56
Steel	0.2804	-0.1460	152.07
	0.2278	0.2671	-17.25
	0.2904	0.0815	71.94
Plastic	0.2341	0.2663	-13.75
	0.2396	0.4168	-73.96
	0.2102	-3.6910	1855.95
Ceramic	0.5317	5.2555	-888.43
	0.2106	6.0967	-2794.92

Summary:

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

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Clorox Company	Green Works Multi-Surface Cleaner	100	0.00	☐	
Clorox Company	Green Works Glass and Surface Cleaner	100	0.00	☐	
EZ Clean Green	Natural Vinegar Cleaning Spray	100	0.00	☐	
EZ Clean Green	Natural Soft Scrub	100	0.00	☐	

Conclusion: As in the bathroom soil cleaning trial, gravimetric results were inconsistent with visual observations. Follow trial will be conducted to address issues with results.