CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	08/10/2008
Experimenters:	Jason Marshall, 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 supplied products against an industry standard product for all purpose cleaning following GS 37 guidelines.
Experimental Procedure:	The three supplied cleaning products were used at full strength and a fourth industry standard product was diluted to vendor recommended concentration for all purpose cleaning (6.25%). Preweighed ceramic, plastic G-10 and 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 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. A Kimberly-Clark Wypal reinforced paper towel 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:	Two of the three supplied products removed over 85% of the Hucker's soil using manual wiping. All three products performed comparably to the selected industry standard product. The table lists the substrate cleaned, the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner/Substrate

Cleaner	Initial wt	Final wt	% Removed
Janitors Ceramic	0.0685	0.0032	95.33
	0.1876	0.0053	97.17
	0.1559	0.0045	97.11
Heavy Ceramic	0.2752	0.0143	94.80
	0.0527	0.0139	73.62
	0.1599	0.0346	78.36
CleanGreen Ceramic	0.0834	0.0131	84.29
	0.1878	0.0483	74.28
	0.2195	0.0224	89.79
Tough Job Ceramic	0.0697	0.0106	84.79
	0.1744	0.0296	83.03
	0.2226	0.0424	80.95
Janitors Painted Steel	0.1465	0.0262	82.12
	0.1212	0.0476	60.73
	0.0964	0.0134	86.10
Heavy Painted Steel	0.0966	0.0184	80.95
	0.1730	0.0365	78.90
	0.0995	0.0351	64.72
CleanGreen Painted Steel	0.1189	0.0207	82.59
	0.1296	0.0157	87.89
	0.0819	0.0120	85.35

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Tough Job Painted steel	0.0774	0.0100	87.08
	0.0697	0.0180	74.18
	0.0979	0.0099	89.89
Janitors Plastic	0.0195	0.0018	90.77
	0.0350	0.0064	81.71
	0.0798	0.0201	74.81
Heavy Plastic	0.0774	0.0076	90.18
	0.0851	0.0057	93.30
	0.0858	0.0059	93.12
CleanGreen Plastic	0.1595	0.0077	95.17
	0.0709	0.0090	87.31
	0.0696	0.0109	84.34
Tough Job Plastic	0.0985	0.0025	97.46
	0.0521	0.0057	89.06
	0.0809	0.0065	91.97

Summary:

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

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Environmental Care and Share	Janitors Answer	100	85.09	☑	
Environmental Care and Share	Heavy Duty Cleaner Answer	100	83.11	☐	
Environmental Care and Share	Clean-N-Green	100	85.67	☑	
Rochester Midland Corporation	EnviroCare Tough Job	6.25	86.49	☑	

Conclusion:

Two products had overall average efficiencies greater than 85% and would be considered effective based on the SSL testing methodology. The third product removed on average more than 80% of the soil from the various coupons.