CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2006
DateRun:	03/30/2006
Experimenters:	Jason Marshall
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic
PartType:	Coupon
Contaminants:	Dirt
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate two products for floor cleaning.
Experimental Procedure:	Two supplied cleaning product was diluted to vendor recommended concentrations for bathroom cleaning using DI water (1.56 and 2.34%). Water was used as well. Nine preweighed ceramic, G-10 plastic and plastic counter top coupons were coated with a 20 g per 100 ml mixture of Textile Innovators Corp Synthetic Carpet Soil AATCC Method 122 and water 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 5 cycles (~9 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 supplied products resulted in removing an average 85% of the soil from the three surface materials. However, Perma 180 removed over 85% on two of three substrates and Perma Top #127 removed over 85% on only one substrate. The plastic counter top was the most difficult surface to clean for the products. The Top #127 had the highest efficiency on the G-10 plastic coupons, removing just over 90% of the soil. The water removed just under 60% of the soil mix. The table below lists the amount of soil added, remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed	
Geo 180	0.0771	0.0055	92.87	Ceramic
	0.0442	0.0072	83.71	
	0.0545	0.0083	84.77	
Top 127	0.0497	0.0073	85.31	
	0.0706	0.0132	81.30	
	0.0947	0.0139	85.32	
Water	0.0514	0.0054	89.49	
	0.0564	0.0298	47.16	
	0.0420	0.0135	67.86	
Geo 180	0.0271	0.0026	90.41	Plastic
	0.0398	0.0059	85.18	
	0.0510	0.0091	82.16	
Top 127	0.0569	0.0037	93.50	
	0.0570	0.0071	87.54	
	0.0591	0.0037	93.74	
Water	0.0895	0.0155	82.68	
	0.0384	0.0083	78.39	
	0.0274	0.0061	77.74	
Geo 180	0.0440	0.0095	78.41	Plastic counter
	0.0628	0.0100	84.08	
	0.0713	0.0127	82.19	
Top 127	0.0328	0.0016	95.12	
	0.0343	0.0100	70.85	

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	0.0572	0.0167	70.80	
Water	0.0638	0.0372	41.69	
	0.0743	0.0454	38.90	
	0.0999	0.0841	15.82	

Summary:

Substrates:	Ceramics, Plastic				
Contaminants:	Dirt				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Perma Inc	Geo Clean 180	1.56	84.86	☑	
Perma Inc	Top Neutral Cleaner #127	2.34	84.83	☑	
Water	Water	100	59.97	☐	

Conclusion:

Both Perma products averaged an efficiency of 85% at the concentrations tested. Increasing the cleaning times and or the concentrations should further enhance the performance of these two products.