CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2024
DateRun:	04/19/2024
Experimenters:	Tatyanna Moreland Junior, Amelia Wagner
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Painted metal
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	All purpose janitorial test to determine the efficacy of the company's product in comparison to other all purpose cleaners in removing Hucker's soil from multiple surface types.
Experimental Procedure:	Three coupons of each substrate were used per cleaning product, for a total of 24 coupons. Each coupon was weighed using a gravimetric balance and had their weights recorded. Each coupon was then soiled with about 0.5 grams of Hucker's soil by using a swab to administer the contaminant down the center of the coupons. The contaminated coupons were then left to dry for 24 hours to allow the Hucker's soil to adhere to the coupons. After the 24 hour drying period, each coupon was weighed again, and had their 'dirty weights' recorded. The coupons were then cleaned with their respective cleaning product using the Straight Line Washability Unit (or SLW) to ensure a standard pressure is applied to each coupon while being manually wiped. Two sprays of the correct cleaner was applied to a wypall that is attached to the cleaning sled of the SLW to wipe the soil away and two sprays were applied directly to each coupon (meaning each coupon was cleaned with about 2.5 ml of cleaning chemisty). The SLW unit was run for 20 cycles (20 back and forth motions) for each coupon. Once cleaned, the coupons were allowed to air dry before having their final weights recorded.

Results:

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	Average % Removal	Average Cleaner Removal
Bubbl	Ceramic	0.274	0.0087	96.82	97.66	84.33
		0.1258	0.0028	97.77		
		0.3192	0.0052	98.37		
	Plastic	1.021	0.1228	87.97	63.53	
		0.4788	0.0058	98.79		
		0.8335	0.8017	3.81		
	Painted Metal	1.1777	0.0425	96.39	91.81	
		0.418	0.0773	81.50		
		0.4192	0.0104	97.51		
Formula 409	Ceramic	0.3858	0.0006	99.84	97.82	99.03
		0.2619	0.0018	99.31		
		0.1566	0.0089	94.31		
	Plastic	0.4288	-0.0078	101.81	99.73	
		0.812	-0.0008	100.10		
		0.1907	0.0052	97.27		
	Painted Metal	0.5296	0.0015	99.72	99.52	
		0.4362	0.0058	98.67		
		0.3277	-0.0006	100.18		
Meyers Everyday Probiotic Shower Spray	Ceramic	0.2443	0.0069	97.18	98.45	96.71
		0.2649	0.0036	98.64		
		0.3537	0.0016	99.55		
	Plastic	1.3689	0.0206	98.50	94.42	
		0.9186	0.0532	94.21		
		0.2667	0.0252	90.55		
	Painted Metal	0.2005	0.015	92.52	97.26	
		0.3485	0.0017	99.51		
		1.1094	0.0029	99.74		

There is an outlier that is important to note:

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Bubbl + plastic: Due to the outlier of a removal of 3.81%, the overall efficacy of the Bubble product on plastic surface is not accurate. If redone, the percentage of soil removed would likely be much higher than what is currently shown. This would also increase the average cleaner removal for the Bubble product, making it much more comparative to the two other products.

Summary:

Conclusion: Because of the outlier in the plastic coupons cleaned with the Bubble all purpose cleaner the data suggests that the Bubbl product, while reasonably effective, is somewhat less effective than the two comparative products. This section of the test will be redone to get a more accurate idea of performance. It is likely that when this is done, the testing will show that all products perform comparatively.