CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2022
DateRun:	08/24/2022
Experimenters:	Tatyanna Moreland Junior, Alexander Symko
ClientType:	Chemical Company
ProjectNumber:	Project #1
Substrates:	Vinyl Composite Tiles
PartType:	Coupon
Contaminants:	Carbon Deposits, Greases, Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Gloss-Color Meter
Purpose:	Testing the Efficacy of supplied Cloth and Bristle products
Experimental Procedure:	Floor cleaning for the supplied product was tested using the CSPA DCC 17 - Greasy Soil Test Method for Evaluating Spray-and-Wipe Cleaners Used On Hard, Non-Glossy Surfaces standard. A few minor deviations from the standard were incorporated into the test conducted. The Greasy Soil Test Method is a standard method that evaluates the cleaning performance of products intended for use on washable walls or other hard, non-glossy surfaces. This method provides instructions for soil application, cleaning and evaluation of spray-and-wipe cleaners under controlled cleaning conditions. This method can be used to assess product performance for cleaning a fabricated greasy soil blend applied to painted wallboard tiles. It is not inclusive of all soil or substrates typically encountered by a consumer while using these products. Latex painted vinyl composite tiles were substituted for masonite wallboard tiles. These tiles were soiled with a mixture of melted, oily soils containing a small amount of carbon black. The tiles were dried overnight at room temperature. A measured amount of spray-and-wipe cleaner is applied to a reinforced paper towel was used in place of the sponge. The soaked towels were used to scrub a portion of the soiled substrate using a straight-line washability apparatus. Separate soiled coupons were cleaned with the other products being evaluated instead of using the same soiled coupon as another product. This was done to eliminate any possible cross contamination of the cleaning process. Three coupons were cleaned by each cleaning product being evaluated. Cleaning performance was taken as a linear function of reflectance value, as well as the amount of soil removed averaged over the 3 coupons for each cleaning product. Masses of the coupons were taken prior to soiling, after soiling and drying, and after cleaning. This was also done for reflectance values taken using a color spectrometer, taken before soiling, after soiling and drying, and after cleaning. Cloth and Bristle Household Cleaner. (A) Cloth and Bristle All the Things (B) Dial Soft Scrub Lemmon (C)
Results:	Table 1

Cleaner	Coupon #	Initial wt of cont.	Final wt of cont.	%Cont Removed	Average % Removal
A	16	0.2653	0.0388	85.38	84.95
	7	0.2818	0.0426	84.88	
	18	0.2376	0.0366	84.60	
B	6	0.2861	0.0274	90.42	90.92
	10	0.3072	0.0331	89.23	
	8	0.2943	0.0203	93.10	
C	13	0.6425	0.1726	73.14	
	17	0.5741	0.2495	56.54	65.90
	18	0.8544	0.2733	68.01	

Table 2

The % detergency was calculated with the formula:% det. = (L-clean - L-Dirty)/(L-initial - L-Dirty) * 10

Cleaner	Coupon #	Initial L	Dirty L	Clean L	%det	Overall Average
A	16	88.41	85.66	86.18	18.91	45.36
	7	88.99	81.62	85.72	55.63	
	18	88.07	79.75	84.87	61.54	
B	6	88.73	84.04	84.58	11.51	53.15

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	10	87.69	80.69	84.62	56.14	
	8	86.28	80.92	85.84	91.79	
C	82	88.11	82.74	85.79	56.80	48.75
	3	88.60	84.45	86.02	37.83	
	17	86.83	82.20	84.59	51.62	

Table 3

Summary:

Substrates:	Vinyl Composite Tiles				
Contaminants:	Carbon Deposits, Greases, Food				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Cloth and Bristle	Cloth+Bristle Household Cleaner	100	84.95	☑	
Cloth and Bristle	Cloth+Bristle All The Things	100	90.92	☑	
Dial Professional	Soft Scrub Lemon	100	65.90	☐	

Conclusion:

Cloth and Bristle All the Things outperformed both the Dial Soft-Scrub Lemmon and Cloth and Bristle Household Cleaner in terms of percent soil removed at 90.92 compared to 65.90 and 84.95 respectively. Cloth and Bristle All the Things also outperformed the other 2 products in % detergency as well, with a average of 53.15 compared to an average of 45.36 for Cloth and Bristle household cleaner and 48.75 for Dial Soft-scrub Lemmon.