CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2022
DateRun:	06/17/2022
Experimenters:	Tatyanna Moreland Junior, Alexander Symko
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #1
Substrates:	Ceramics, Vinyl Composite Tiles, Granite
PartType:	Coupon
Contaminants:	Food
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Visual
Purpose:	To test the efficiency of the Wash and Wipe Dish Cloth, the Kitchen Cloth, and the Kitchen Dynamo on various substrates.

Experimental Procedure:

Laminate, granite, and ceramic tiles were soiled with a mixture of melted, oily soils containing a small amount of carbon black. The tiles were dried for 24 hours at room temperature. The soaked product was used to scrub a portion of the soiled substrate using a straight-line washability apparatus. Three coupons were cleaned by each cleaning product being evaluated. Cleaning performance was observed visually and gravimetric analysis was conducted on all test panels by taking initial, soiled, and final clean weights. The amount of soil added was then compared to the amount removed (or remaining) to provide a percent removal.

Soil Preparation

A mixture of three cooking oils/greases was made. A melt blend of 33% vegetable shortening, 33% lard, 33% vegetable oil and 1% carbon lampblack was made up fresh for the testing. Care was taken in the application of the soil onto the coupons so that light and heavy areas were avoided. Allow the soiled tiles to dry for 24 hours at room temperature.

Cleaning Test

A soiled tile was placed in the tray of the abrasion tester such that the direction of the soiling is perpendicular to the direction of the sponge. The supplied cleaning product was wet and wrung out, and the desired side facing down was attached to the cleaning instrument. The cleaning was performed using Gardner Straightline washability unit and conducted for the prescribed 20 strokes.

Results:

Cleaning data has been calculated as percent of contaminant removed using the following equation:

%Cont Removed = ((Initial soil wt - Final Soil wt)/Initial Soil wt) *100

Initial Soil weight of contaminant = Contaminated wt - Baseline wt

Final wt of contaminant = Cleaned wt - Initial wt

Table 1: Cleaning Efficiency Results

Product	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	Average	Overall Average
Wash and Wipe Dish Cloth (10644)	Laminate	0.1624	0.0001	99.94	99.85	99.20
		0.2462	0.0007	99.72		
		0.2130	0.0002	99.91		
	Ceramic	0.1891	0.0008	99.58	99.42	
		0.3102	0.0022	99.29		
		0.1673	0.0010	99.40		
	Granite	0.3934	0.0060	98.47	98.33	
		0.2241	0.0048	97.86		
		0.4243	0.0057	98.66		
Kitchen Dynamo (10654)	Laminate	0.1338	0.0006	99.55	99.67	97.76
		0.0977	0.0004	99.59		
		0.2190	0.0003	99.86		
	Ceramic	0.3139	0.0090	97.13	97.51	
		0.2478	0.0075	96.97		
		0.3231	0.0051	98.42		
	Granite	0.2639	0.0098	96.29	96.10	
		0.2385	0.0112	95.30		

CLEANING LABORATORY EVALUATION SUMMARY

		0.3198	0.0105	96.72		
Kitchen Cloth (106015)	Laminate	0.1967	0.0027	98.63	98.84	98.83
		0.2262	0.0019	99.16		
		0.2608	0.0033	98.73		
	Ceramic	0.2118	0.0026	98.77	99.32	
		0.2755	0.0011	99.60		
		0.1942	0.0008	99.59		
	Granite	0.2859	0.0105	96.33	98.33	
		0.3471	0.0042	98.79		
		0.3175	0.0004	99.87		

The Wash and Wipe Dish Cloth, Kitchen Dynamo, and Kitchen Cloth were found to all be very effective at removing the DDC-17 soil from laminate, ceramic, and granite.

Summary:

Conclusion: All three products were found to be extremely effective at removing the contaminant from laminate, ceramic, and granite surfaces. The Wash and Wipe Dish Cloth was the most effective with an overall average percent removal of 99.20%. The Kitchen Cloth and Kitchen Dynamo followed with overall average percent removals of 98.83% and 97.76% respectively.