

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023

DateRun: 10/12/2023

Experimenters: Amelia Wagner

Client Name: Green Mountain Amenities

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Ceramics, Vinyl Composite Tiles, Laminate

PartType: Coupon

Contaminants: Dirt

Cleaning Methods: Manual Wipe

Analytical Methods:

Purpose: To evaluate the effectiveness of Four Green Mountain Amenities floor care products in comparison to two floor care products already on the market.

Experimental Procedure: Eighteen coupons per cleaner, three of each substrate, were used. The initial weights of each coupon were taken. The initial L value (measure of fluorescence) was also taken with the colorimeter. The coupons were contaminated with synthetic dirt using a handheld swab and dried overnight. The contaminated coupons were weighed and the dirty L value was measured before placing three coupons per cleaner of the same substrate into a Gardner Straight Line Washability (SLW) unit. A Kimberly-Clark Wypal reinforced paper towel was attached to the cleaning sled. The Wypal and each coupon were treated with three sprays and cleaned for 20 cycles (~30 seconds of cleaning). Clean coupons dried for 24 hours before final weights were taken to assess the amount of soil removed. The final L value was taken in order to assess the amount of staining left behind by the soil.

Cleaner	Soil	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
GMA Citric Acid and Washing Soda 50%	Vinyl	0.0232	0.0000	100.00	99.28	96.04
		0.0092	0.0002	97.83		
		0.0066	0.0000			
	Ceramic	0.0149	0.0012	100.00	91.99	91.80
		0.0133	0.0003	97.74		
		0.0049	0.0007	85.71		
	Laminate	0.0091	0.0000	100.00	97.04	
		0.0084	0.0005	94.05		
		0.0102	0.0003	97.06		
	Vinyl	0.0055	0.0004	92.73	88.73	89.34
		0.0059	0.0009	84.75		
		0.0062	0.0007	88.71		
Murphy Oil Soap 50%	Ceramic	0.0081	0.0003	96.30	96.43	
		0.0212	0.0007	96.70		
		0.0108	0.0004	96.30		
	Laminate	0.0101	0.0014	86.14	82.86	
		0.0257	0.0031	87.94		
		0.0051	0.0013	74.51		
	Vinyl	0.0097	0.0005	94.85	96.86	97.09
		0.0183	0.0004	97.81		
		0.0240	0.0005	97.92		
	Ceramic	0.0152	0.0001	99.34	96.29	
		0.0164	0.0004	97.56		
		0.0187	0.0015	91.98		
Fabuloso 50%	Laminate	0.0055	0.0000	100.00	98.12	
		0.0107	0.0003	97.20		
		0.0177	0.0005	97.18		

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Gravimetric

Cleaner	Soil	Initial L	Dirty L	Clean L	% AVG	% Overall
GMA Citric Acid and Washing Soda 50	Vinyl	80.23	56.77	63.24	52.19%	70.54%
		79.34	58.71	68.78		
		77.73	59.41	74.1		
	Ceramic	90.21	73.75	89.73	95.22%	
		90.77	69.23	89.91		
		90.68	74.68	89.49		
	Laminate	62.47	43.8	57.96	64.21%	
		64.35	47.91	58.04		
		61.47	43.33	53.34		
Murphy Oil Soap 50%	Vinyl	79.07	53.42	61.57	31.00%	44.73%
		79.52	60.47	62.74		
		79.67	51.62	65.45		
	Ceramic	90.57	75.86	86.88	90.35%	
		90.41	64.11	90.04		
		89.91	68.66	89.39		
	Laminate	55.51	45.99	48.25	12.82%	
		59.92	40.21	48.56		
		59.83	51	48.56		
Fabuloso 50%	Vinyl	81.89	52.88	62.99	23.40%	40.87%
		80.08	55.53	59.61		
		79.69	52.71	57.76		
	Ceramic	90.38	65.68	89.65	90.69%	
		90.14	61.28	89.73		
		90.17	70.55	85.55		
	Laminate	62	48.13	48.95	8.51%	
		63.52	46.33	47.23		
		64.63	48.71	51		

The GMA Citric Acid and Washing Soda performed the best out of all the GMA products and performed better than one of the comparative products, Murphy Oil Soap.

Looking at the effectiveness of removing staining, only the GMA Citric Acid and Washing Soda was effective. All other products tested were not effective. It should be noted however, that all products tested were able to remove a significant amount of staining from the ceramic coupons specifically.

Summary:

Conclusion: