

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023  
 DateRun: 10/04/2023  
 Experimenters: Amelia Wagner  
 ClientType: Cleaner Manufacturer  
 ProjectNumber: Project #5  
 Substrates: Ceramics, Plastic, Painted metal  
 PartType: Coupon  
 Contaminants: Hucker's Soil  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric  
 Purpose: To test the efficacy of Pathosan's all purpose cleaner compared to another all purpose cleaner on the market.

Experimental Procedure: Eighteen pre-weighed coupons, three of each substrate for each cleaner, were contaminated with Hucker's Soil Formulation (Jiff Creamy Peanut Butter 9.2%, Salted Butter 9.2%, Arrowhead Mills stone-ground wheat flour 9.2%, Egg Yolk 9.2%, Evaporated milk 13.8%, Distilled water 45.8%, Printer's ink with boiled linseed oil 0.9%, Shaws saline Solution 2.7%) using a handheld swab and dried for two hours at room temperature (68 F). The contaminated coupons were weighed 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.

**Results:**

Cleaner	Coupon	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Pathosan's ECA Cleaner Formula	Ceramic	0.0665	0.0009	98.65	92.05	79.53
		0.0163	0.0017	89.57		
		0.0141	0.0017	87.94		
	Painted Metal	0.0216	0.0029	86.57	71.23	
		0.0054	0.0031	42.59		
		0.0194	0.0030	84.54		
	Plastic	0.0630	0.0125	80.16	75.32	
		0.0545	0.0190	65.14		
		0.0993	0.0192	80.66		
Simple Green	Ceramic	0.1165	0.0018	98.45	97.83	75.70
		0.2048	0.0021	98.97		
		0.0557	0.0022	96.05		
	Painted Metal	0.0226	0.0091	59.73	68.60	
		0.0414	0.0110	73.43		
		0.0976	0.0267	72.64		
	Plastic	0.3683	0.0572	84.47	60.68	
		0.1908	0.0388	79.66		
		0.0681	0.0559	17.91		

**Summary:**

Conclusion: Pathosan's ECA Cleaner is an effective all purpose cleaner. Both the ECA cleaner and Simple Green were very effective in removing soil from ceramic. Both cleaners had less effective performance in removing soil from painted metal and plastic, however the ECA cleaner performed better than Simple Green on these two substrates.