CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2022

DateRun: 06/30/2022

Experimenters: Zoe Lawson, Tatyanna Moreland Junior, Alexander Symko

ClientType:

ProjectNumber: Project #5

Substrates: Ceramics, Plastic, Chrome

PartType: Coupon

Contaminants: SSL Soil 1 Bathroom Soap Scum

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate the efficiency of the 2.45g Podsy Bathroom Cleaner.

Experimental Procedure: Eighteen pre-weighed coupons, three of each substrate per cleaner, were each contaminated with bathroom soil (28.6% All-in-one shampoo and conditioner, 21.4% Dry skin lotion, 21.4% Liquid Hand Soap, 14.3% Liquid body wash, 7.2% Deodorant bar soap, 7.1% Water). The coupons were dried for 24 hours at room temperature (68 F). Once dried, the dirty weights of the coupons were recorded. The Podsy solution was then created by placing a 2.45g solution pod into a 16oz spray bottle and filling it with cold water (~50^{o}F). The solution was allowed to sit for 2 minutes and then was shaken to mix the solution parts together. Three coupons of the same substrate were then aligned into a Single Line Washing Unit (SLW) with a Wypall X60 attached to the cleaning sled. Each Wypall X60 cloth and coupon received three sprays of the Podsy solution. The Single Line Washing Unit (SLW) was then activated for 20 repetitions, simulating 20 manual wipes. This was repeated for each substrate until all of the coupons were cleaned. The clean coupons were then allowed to dry overnight at room temperature before the final weights were recorded. The same process was repeated for the comparative product at the same time.

Results: Cleaning Efficiency Results:

Product	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	Average	Overall Average
Podsy Bathroom Cleaner	Chrome	0.0653	0.0000	100.00	99.86	99.12
		0.0702	0.0002	99.72		
		0.0686	0.0001	99.85		
	Ceramic	0.0717	0.0001	99.86	97.74	
		0.0866	0.0017	98.04		
		0.1004	0.0047	95.32		
	Plastic	0.1023	0.0000	100.00	99.78	
		0.0828	0.0004	99.52		
		0.0552	0.0001	99.82		
Clorox Bathroom Cleaner	Chrome	0.0859	0.0001	99.88	99.65	95.86
		0.0908	0.0001	99.89		
		0.0597	0.0005	99.16		
	Ceramic	0.0789	0.0013	98.35	98.28	
		0.0960	0.0022	97.71		
		0.0740	0.0009	98.78		
	Plastic	0.0605	0.0009	98.51	89.65	
		0.0788	0.0106	86.55		
		0.0769	0.0124	83.88		

Summary:

Substrates:	Ceramics, Plastic, Chrome				
Contaminants:	SSL Soil 1 Bathroom Soap Scum				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Big 3 Packaging	Podsy Bathroom Cleaning System	2.45g:16oz	99.12	☑	
Clorox Company	Clorox Bathroom Cleaner	RTU	95.86	☑	

Conclusion: The Podsy 2.45g Bathroom Cleaner was slightly more effective than Clorox Bathroom Cleaner at removing bathroom soil from chrome, ceramic, and plastic substrates. Overall, the Podsy Cleaner was 99.12% effective at removing contaminant while the Clorox Bathroom Cleaner was only 95.86% effective.