CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 07/27/2021

Experimenters: Ross Goding, Edward Judge, Anjali Bhagat

ClientType: Lab

ProjectNumber: Project #4

Substrates: Ceramics, Plastic, Chrome

PartType: Coupon

Contaminants: Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Visual

Purpose: To test the effectiveness of Baking Soda in the removal of Bathroom Soil from various substrates.

Experimental Procedure: Baking Soda and a spray bottle of water were gathered to begin testing. Then, 3 coupons of each substrate (ceramic, plastic, chrome) were collected and initial weights were taken. Bathroom Soil was applied to each coupon and allowed to air dry for 24 hours. After the 24 hour dry time, the weights of the newly contaminated coupons were measured. All coupons were placed into a Gardner-scrub Abrasion Tester machine. Wypall cleaning cloths were attached to each of the 3 cleaning blocks used for the test. Each Wypall cloth and all coupons received 2 sprays of water, and Baking Soda was sprinkled across each coupon. The Gardner-scrub Abrasion Tester was run for 20 repetitions, simulating 20 manual wipes. Once cleaning concluded, the cleaned coupons were allowed to air dry for 24 hours. After 24 hours, the weights of the cleaned coupons were measured.

Results:

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Baking Soda	Ceramic	0.0678	0.0541	20.21	10.93	33.99
		0.0821	0.0760	7.43		
		0.0724	0.0696	3.87		
	Plastic	0.1098	0.0964	12.20	34.77	
		0.0986	0.0552	44.02		
		0.1052	0.0546	48.10		
	Chrome	0.0813	0.0501	38.38	56.28	
		0.0900	0.0423	53.00		
		0.0919	0.0207	77.48		

Summary:

Substrates:	Ceramics, Plastic, Chrome				
Contaminants:	Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Arm & Hammer	Baking Soda	100%	33.99	☐	Baking Soda was not effective in the removal of Bathroom Soil from various substrates.

Conclusion: Baking Soda showed little success in the removal of Bathroom Soil from ceramic, plastic, and chrome substrates.