CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2022

DateRun: 02/10/2022

Experimenters: Nicole Kebler, Tatyanna Moreland Junior

ClientType:

ProjectNumber: Project #3

Substrates: Ceramics, Plastic, Painted metal

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate the Big 3 Podsy all-purpose cleaner for the removal of Huckers Soil from Ceramic, Painted Metal, and Plastic.

Experimental Procedure: The Podsy solution was created by placing a solution pod into a given spray bottle and filling it with room temperature water till the fill line. This solution was allowed to sit for two minutes while the pod dissolved and then shaken to mix the solution together. Then, three coupons of each substrate (ceramic, plastic, painted metal) were collected and initial weights were taken. Hucker's Soil (Creamy Peanut Butter, Salted Butter, Wheat gluten, Egg Yolk, Evaporated milk, DI water, Printer's ink with boiled linseed oil, India Ink, Saline Solution) was applied to each coupon and allowed to air dry for two hours. After the two hour dry time, the weights of the newly contaminated coupons were measured. All coupons were placed into a Gardner-scrub Abrasion Tester machine (SLW). Wypall cleaning cloths were attached to each of the three cleaning blocks used for the test. Each Wypall cloth and all coupons received two sprays of the Podsy solution and 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: The Podsy all-purpose cleaner performed better than the Formula 409 product for ceramic, painted metal and plastic. Podsy had a 100% removal for ceramic, a 90% removal for painted metal and plastic. Formula 409 had about a 91% removal for ceramic, 88% for painted metal and 83% for plastic.

Cleaner	Substrate	Initial wt. of cont.	Final wt. of cont	Average	Combined Average
Podsy	Ceramic	0.0139	0.0016	88.49	100.05
		0.0093	0.0001	98.92	
		0.0259	-0.0033	112.74	
	Painted Metal	0.052	0.0037	92.88	90.36
		0.0278	0.003	89.21	
		0.0372	0.0041	88.98	
	Plastic	0.3631	0.0122	96.64	89.34
		0.0493	0.0087	82.35	
		0.0446	0.0049	89.01	
Formula 409	Ceramic	0.0288	0.003	89.58	91.36
		0.0288	0.0027	90.63	
		0.0441	0.0027	93.88	
	Painted Metal	0.0444	0.0057	87.16	87.88
		0.0288	0.0041	85.76	
		0.0582	0.0054	90.72	
	Plastic	0.043	0.0075	82.56	82.78
		0.0482	0.0093	80.71	
		0.0824	0.0123	85.07	

Summary:

Substrates:	Ceramics, Plastic, Painted metal				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Big 3 Packaging	Podsy Surface Cleaning System	RTU	100.00	☑	Podsy was effective at removing Huckers Soil from ceramic, painted metal and plastic.

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	Clorox Company	Formula 409 All Purpose Cleaner	RTu	90.00	☑	Formula 409 was effective at removing Hucker Soil from ceramic, painted metal, and plastic.

Conclusion: The Big 3 Packaging Podsy All-Purpose cleaner performed better than the competitor Formula 409 for all three substrates.