CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2017

DateRun: 12/19/2017

Experimenters: Alicia McCarthy, Hayley Byra

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Ceramics, Plastic, Painted metal

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To compare the effectiveness of removing Hucker's soil from a variety of surfaces using the supplied cleaning products.

Experimental Procedure: Eighteen preweighed coupons, three for each substrate, were soiled with 0.5g of Hucker's soil (44.2% Distilled water, 13.5% evaporated milk, 8.8% creamy peanut butter, 8.8% salted butter, 8.8% stone ground wheat flour, 8.8% egg yolks, 0.9% printer's ink with boiled linseed oil, 2.7% saline solution, 3.5% India ink) using a swab. Coupons air dried at room temperature (68 F) for two hours before recording dirty weights. A sponge, provided by EcoEgg, was used to manually clean with both the supplied and comparative product. The sponge was saturated once with deionized water before rubbing it into the EcoEgg hard surface cleaner in a circular motion for five seconds. The coupons were cleaned one at a time for 30 seconds in a circular motion with a reapplication of the cleaner between each coupon. A dime sized drop of the comparative product was applied directly to the coupons one at a time and cleaned with a wet sponge for 30 sections in a circular motion. The coupons were dried by wiping once with a microfiber towel before taking clean weights and final observations.

Results:

Cleaner	Substrate	Initial wt	Final wt	% Removed	Average % Removal	Overall % Removal
Eco Egg	Ceramic	0.4451	0.0052	98.83	95.22	94.70
		0.4455	0.0367	91.76		
		0.5484	0.0270	95.08		
	Plastic	0.5266	0.0682	87.05	95.64	
		0.4149	0.0001	99.98		
		0.3504	0.0004	99.89		
	Painted Metal	0.2850	0.0182	93.61	93.24	
		0.3615	0.0228	93.69		
		0.3522	0.0267	92.42		
Soft Scrub	Ceramic	0.4475	0.0065	98.55	96.32	98.00
		0.6066	0.0391	93.55		
		0.5825	0.0183	96.86		
	Plastic	0.7252	0.0133	98.17	99.09	
		0.6827	0.0024	99.65		
		0.6842	0.0038	99.44		
	Painted Metal	0.4059	0.0032	99.21	98.61	
		0.2784	0.0039	98.60		
		0.3207	0.0064	98.00		

Observations:

EcoEgg's product left behind some residue after cleaning the coupons, but it looks like it could be easily removed if a wet sponge was applied to the surface. Both products easily removed the soil.

Summary:

Substrates:	Ceramics, Plastic, Painted metal				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Eco Egg	Hard Surface Cleaner Citrus	100	94.70	☑	
Dial Professional	Soft Scrub Lemon	100	98.00	☑	

Conclusion:

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EcoEgg’s Hard Surface Cleaner Citrus Burst is as effective as the comparative product at removing Hucker’s Soil from ceramic, plastic, and painted metal substrates.