CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 05/31/2021

Experimenters: Ross Goding, Edward Judge

ClientType: Lab

ProjectNumber: Project #4

Substrates: Ceramics, Plastic, Painted metal

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Visual

Purpose: To test the effectiveness of Windex Glass Cleaner in the removal of Hucker's Soil from various substrates

Experimental Procedure: A Windex Glass Cleaner solution was gathered to begin testing. Then, 3 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 2 hours. After the 2 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 the Windex Glass Cleaner 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:

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Windex Glass Cleaner	Ceramic	0.0801	0.0015	98.13	86.49	87.07
		0.0866	0.0182	78.98		
		0.1423	0.0405	71.54		
	Plastic	0.3633	0.0098	97.30	95.21	
		0.2701	0.0084	96.89		
		0.0712	0.0061	91.43		
	Painted Metal	0.0926	0.0063	93.20	79.52	
		0.1138	0.0188	83.48		
		0.1133	0.0432	61.87		

Summary:

Substrates:	Ceramics, Plastic, Painted metal
Contaminants:	Hucker's Soil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
SC Johnson & Son Inc	Windex Glass & More Cleaner (Spray)	100%	87.07	☑	Windex Glass Cleaner was effective in the removal of Hucker's Soil from various substrates.

Conclusion: Windex Glass Cleaner was evaluated to determine its effectiveness in removing Hucker's Soil from ceramic, plastic, and painted metal substrates. Results showed that Windex Glass Cleaner was 86.49% effective in the removal of Hucker's Soil from ceramic, 95.21% effective in removing Hucker's Soil from plastic, and 79.52% effective in removing Hucker's Soil from painted metal. Overall, Windex Glass Cleaner was 87.07% effective in removing Hucker's Soil from all substrates used in testing.