CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 11/17/2021

Experimenters: Nicole Kebler, Tatyanna Moreland Junior

ClientType: Lab

ProjectNumber: Project #5

Substrates: Ceramics, Plastic, Painted metal

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods:

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate the effectiveness for the removal of Huckers soil from ceramic, painted metal, and plastic using Earth Essentials cleaner.

Experimental Procedure: Three coupons of each substrate (ceramic, painted metal, and plastic) were collected and initial weights were taken. Huckers soil was applied to each coupon and allowed to air dry for 24 hours. After the 2 hour dry time, the weights of the newly contaminated coupons were measured. All coupons were placed into a Straight-Line Washability (SLW) machine. A KC Wypall cleaning cloth was attached to the cleaning block used for the test. The Wypall cloth and all coupons received 2 sprays of the Earth Essentials Cleaner and the SLW machine 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: Earth Essentials performed best on ceramic with a removal average of 85%. Both painted metal and plastic had a removal average of 82%. There was minimal soil left on the surface of the coupons.

Substrate	Initial wt. of cont.	Final wt. of cont	Average	Combined Average
Ceramic	0.0734	0.0107	85.42	84.89
	0.0751	0.0107	85.75	
	0.0685	0.0113	83.50	
Painted Metal	0.0753	0.0162	78.49	82.13
	0.0801	0.0163	79.65	
	0.1216	0.0143	88.24	
Plastic	0.1008	0.0159	84.23	82.24
	0.0761	0.0157	79.37	
	0.0682	0.0115	83.14	

Summary:

Conclusion: Earth essentials was effective at removing Huckers soil from ceramic substrate and left minimal soil on painted metal and plastic.