CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2021
DateRun:	11/09/2021
Experimenters:	Zoe Lawson, Nicole Kebler, Tatyanna Moreland Junior
ClientType:	Lab
ProjectNumber:	Project #5
Substrates:	Ceramics, Plastic, Painted metal
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate Ever Spring cleaner for the removal of Huckers soil on ceramic, painted metal, and plastic.
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 24 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 Ever Spring 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:	Visually all three substrates were clean after the 20 cycles of wipes. Cleaner was left on the ceramic substrate and a darkened streak dried on the center, resulting in lower percentage removal. Painted metal and plastic had less of a dried cleaner streak on the surface and had 85% removal for both.

Substrate	Initial wt. of cont.	Final wt. of cont	Average	Combined Average
Ceramic	0.1554	0.0764	50.84	71.26
	0.0929	0.0199	78.58	
	0.1260	0.0197	84.37	
Painted Metal	0.1214	0.0187	84.60	84.70
	0.1448	0.0195	86.53	
	0.1475	0.0251	82.98	
Plastic	0.0980	0.0102	89.59	85.03
	0.1050	0.0167	84.10	
	0.1291	0.0240	81.41	

Summary:

Conclusion: Ceramic would have done better with a final wipe from a less saturated wypall to remove excess cleaner from drying on the surface, but all hardened huckers soil was removed. Painted metal and plastic both had total removal of huckers soil with minimal cleaner dried on the surface resulting in higher percentage removals. Ever Spring was successful at removing aged huckers soil from all three substrates.