CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2022
DateRun:	04/19/2022
Experimenters:	Zoe Lawson
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Painted metal
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate the effectiveness of Libman All-Purpose Cleaner against a comparative brand.
Experimental Procedure:	Nine pre-weighed coupons per cleaner, three of each substrate, were contaminated with Hucker's Soil Formulation (Jiff Creamy Peanut Butter 9.2%, Salted Butter 9.2%, Arrowhead Mills stone-ground wheat flour 9.2%, Egg Yolk 9.2%, Evaporated milk 13.8%, Distilled water 45.8%, Printer's ink with boiled linseed oil 0.9%, Shaws saline Solution 2.7%) using a handheld swab and dried for two hours at room temperature (68 F). The contaminated coupons were weighed before placing three coupons per cleaner of the same substrate into a Gardner Straight Line Washability (SLW) unit. A Kimberly-Clark Wypal reinforced paper towel was attached to the cleaning sled. The Wypal and each coupon were treated with three sprays and cleaned for 20 cycles (~30 seconds of cleaning). Clean coupons dried for 24 hours before final weights were taken.
Results:	Libman All-Purpose was more effective than Weiman Cooktop at removing Hucker's soil from ceramic, painted metal, and plastic. The overall percent removal average for Libman All Purpose was 97.63% while Weiman Cooktop Cleaner had an overall average of 94.85%.

Cleaner	Substrate	Initial Wt of Cont.	Final Wt. of Cont.	%Cont Removed	%Average	Overall %Average
Weiman Cooktop Cleaner	Ceramic	0.0737	0.0053	92.81	93.25	94.85
		0.0736	0.0060	91.85		
		0.0714	0.0035	95.10		
	Plastic	0.1825	0.0046	97.48	97.92	
		0.1052	0.0027	97.43		
		0.2682	0.0031	98.84		
	Painted metal	0.0882	0.0097	89.00	93.37	
		0.1156	0.0065	94.37		
		0.2011	0.0066	96.72		
Libman All-Purpose	Ceramic	0.0869	0.0023	97.35	96.92	97.63
		0.1122	0.0017	98.48		
		0.0511	0.0026	94.91		
	Plastic	0.2539	0.0007	99.72	98.70	
		0.2219	0.0005	99.77		
		0.1617	0.0055	96.60		
	Painted metal	0.1777	0.0070	96.06	97.28	
		0.2165	0.0048	97.78		
		0.1900	0.0038	98.00		

Summary:

Conclusion: Libman All-Purpose Cleaner was more effective than Weiman Cooktop Cleaner at removing Hucker's soil from ceramic, painted metal, and plastic.