CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2025
DateRun:	01/08/2025
Experimenters:	Alicia McCarthy, Rachael Rososky
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:	Testing the efficacy of MPlus to 7th Generation All Purpose for removing Hucker's Soil from ceramic, plastic, and painted metal.
Experimental Procedure:	Nine pre-weighed coupons per cleaner (three ceramic, three plastic, and three painted metal) were soiled with 0.5 grams of Hucker's Soil using a handheld swab and air-dried for 24 hours at room temperature (68°F). The contaminated coupons were weighed after 24 hours to determine the contaminated (cont.) weight. Three coupons of the same substrate were placed onto the Straight Line Washing (SLW) Unit with Wypall X60 attached to the cleaning sled. The Wypall X60 reinforced wipe and each coupon on the SLW unit were treated with three sprays each before running the SLW unit for 20 cycles (30 seconds). At the end of the cleaning cycle, the coupons were air-dried overnight before the final weights were recorded.

Results:

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	% Cont. Removed	Average % Removal	Overall Cleaner Average % Removal
MPlus	Ceramic	0.2768	0.0796	71.24	74.56	80.33
		0.3069	0.0724	76.41		
		0.2583	0.0619	76.04		
	Plastic	0.2509	0.0261	89.60	94.29	
		0.2728	0.0178	93.48		
		0.2589	0.0005	99.81		
	Painted Metal	0.2662	0.0791	70.29	72.15	
		0.2620	0.0536	79.54		
		0.2444	0.0816	66.61		
7th Generation All Purpose	Ceramic	0.2537	0.0504	80.13	84.02	86.33
		0.2717	0.0281	89.66		
		0.2446	0.0434	82.26		
	Plastic	0.2728	0.0201	92.63	97.07	
		0.2677	0.0024	99.10		
		0.2807	0.0015	99.47		
	Painted Metal	0.2580	0.0653	74.69	77.90	
		0.2782	0.0307	88.96		
		0.2673	0.0801	70.03		

Summary:

Substrates:	Ceramics, Plastic, Painted metal				
Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
M Plus Inc	MPlus All Purpose	100%	80.00	☑	
Seventh Generation	All-Purpose Natural Cleaner	100%	86.00	☑	

Conclusion: MPlus was effective overall at removing Hucker's Soil from various substrates and performed similarly to 7th Generation All Purpose cleaner.