CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 25

DateRun: 12/07/2024

Experimenters: Tatyanna Moreland Junior, Cindy McClaughlin

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 two hours at room temperature (68°F). The contaminated coupons were weighed after two 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	0.5908	0.3704	37.31	38.66	34.87
		0.4632	0.2981	35.64		
		0.5323	0.3033	43.02		
	Plastic	0.5999	0.4049	32.51	31.67	
		0.5995	0.4541	24.25		
		0.5976	0.3690	38.25		
	Painted Metal	0.4278	0.2666	37.68	34.28	
		0.4217	0.3137	25.61		
		0.3024	0.1828	39.55		
7th Generation All Purpose	Ceramic	0.6817	0.4003	41.28	42.62	45.18
		0.7494	0.3322	55.67		
		0.5554	0.3838	30.90		
	Plastic	0.6718	0.2740	59.21	57.10	
		0.8260	0.3644	55.88		
		0.7381	0.3233	56.20		
	Painted Metal	0.6488	0.4008	38.22	35.83	
		0.4567	0.2892	36.68		
		0.5602	0.3776	32.60		

The comparative product, 7th Generation All-Purpose Cleaner, performed slightly better than MPlus on ceramic and plastic substrates, and both products removed roughly the same amount of soil from painted metal substrates.

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%	34.87	☐	
Seventh Generation	All-Purpose Natural Cleaner	100%	45.18	☐	

Conclusion: Both cleaning products were not effective on Hucker's Soil from ceramic, plastic, and painted metal.