CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2018
DateRun:	09/05/2018
Experimenters:	Abigail Giarrosso, Sabrina Apel
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #1
Substrates:	Ceramics, Plastic, Painted metal
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To evaluate three all-purpose cleaner products for Hucker's soil removal from various surfaces.
Experimental Procedure:	Nine pre-weighed coupons per cleaner (three Ceramic, three Plastic, and three Painted Metal) were coated with a 0.5g of Hucker's Soil at room temperature (68 F) using a handheld swab. The contaminated coupons were air dried for two hours at room temperature and weighed again to determine the amount of soil added. Three coupons of each substrate were placed in the Straight-Line Washability (SLW) unit, and a KC Wypal reinforced paper towel was attached to the cleaning sled and treated with two sprays of cleaning solution; each coupon was sprayed twice with the same cleaning solution. The SLW unit ran for 20 cycles (equivalent of 30 seconds of cleaning). Coupons were air dried after cleaning before recording final weights.
Results:	Crest All Purpose and Formula 409 left some dirty areas and contained streaks due to the brush from the manual abrasion equipment, and 7th Gen All Purpose Natural left soap residue on the coupons after cleaning.

Cleaner	Substrate	Initial wt of cont.	Final wt of cont.	%Cont Removed	% Average	% Overall Cleaner
Crest All Purpose	Ceramic	0.1759	0.0058	96.70	91.01	92.49
		0.1760	0.0164	90.68		
		0.1545	0.0222	85.63		
	Plastic	0.2334	0.0152	93.49	95.31	
		0.2340	0.0093	96.03		
		0.2696	0.0097	96.40		
	Painted Metal	0.1872	0.0078	95.83	91.17	
		0.1866	0.0287	84.62		
		0.2031	0.0141	93.06		
7th Gen All Purpose Natural	Ceramic	0.1614	0.0036	97.77	97.54	96.74
		0.1654	0.0036	97.82		
		0.1858	0.0055	97.04		
	Plastic	0.3027	0.0146	95.18	95.30	
		0.2968	0.0081	97.27		
		0.2593	0.0170	93.44		
	Painted Metal	0.1514	0.0025	98.35	97.39	
		0.1458	0.0034	97.67		
		0.1636	0.0063	96.15		
Formula 409	Ceramic	0.1611	0.0645	59.96	74.16	85.15
		0.1418	0.0014	99.01		
		0.1471	0.0537	63.49		
	Plastic	0.2675	0.0088	96.71	93.81	
		0.2044	0.0181	91.14		
		0.2661	0.0171	93.57		
	Painted Metal	0.1526	0.0212	86.11	87.49	
		0.1480	0.0101	93.18		
		0.1450	0.0244	83.17		

Summary:

Substrates:	Ceramics, Plastic, Painted metal

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Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Crest Ultrasonics	Crest All Purpose Cleaner	100	92.49	☑	
Seventh Generation	All Purpose Morning Meadow	100	96.74	☑	
Clorox Company	Formula 409 All Purpose Cleaner	100	85.15	☑	

Conclusion:

Crest All Purpose was as effective as 7th Generation All Purpose Natural and Formula 409 when it came to removing Hucker’s soil on ceramic, plastic, and painted metal.