

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2019
 DateRun: 09/24/2019
 Experimenters: Aditi Patel, Rimsha Paneru
 ClientType: Cleaning Equipment Mfr
 ProjectNumber: Project #1
 Substrates: Ceramics, Chrome
 PartType: Coupon
 Contaminants: Hucker's Soil
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric
 Purpose: To evaluate the effectiveness of Shine Toilet Bowl Cleaner and comparative products for removing Hucker's Soil on Ceramic and Chrome coupons.

Experimental Procedure: Six pre-weighed coupons, three of each substrate per cleaner, were soiled with Hucker's Soil (Evaporated milk 26.5%, Creamy Peanut Butter 17%, Salted Butter 17%, Stone ground wheat flour 17%, Linseed oil 2.25%, Saline solution 5.25%, India Ink 6.8%, Lemon Juice 8.2%) and aged for 24 hours at room temperature (68°F). Dirty weights recorded before placing three coupons of the same substrate onto the Straight Line Washability (SLW) unit. The cleaner wipe was attached to the SLW sled and cleaned for 20 cycles (equivalent of 30 seconds of manual cleaning). Coupons air dried at room temperature (68 F) overnight before final weights were recorded.

Cleaner	Substrate	Initial of cont. wt.	Final of cont. wt.	% Removal	Average	Overall Removal
1	Ceramic	0.0651	0.0036	94.47	90.11	92.11
		0.0393	0.0086	78.12		
		0.0312	0.0007	97.76		
	Chrome	0.0301	0.0030	90.03	94.11	
		0.0589	0.0021	96.43		
		0.0628	0.0026	95.86		
2	Ceramic	0.0258	0.0029	88.76	93.58	92.06
		0.0413	0.0028	93.22		
		0.1125	0.0014	98.76		
	Chrome	0.0409	0.0085	79.22	90.54	
		0.0495	0.0003	99.39		
		0.0400	0.0028	93.00		
3	Ceramic	0.0449	0.0051	88.64	81.57	74.65
		0.1004	0.0149	85.16		
		0.0368	0.0107	70.92		
	Chrome	0.0288	0.0012	95.83	67.72	
		0.0414	0.0057	86.23		
		0.0597	0.0471	21.11		

1) Shine Bathroom, (2) 409 Cleaner (3) Clorox

Summary:	Substrates:	Ceramics, Chrome				
	Contaminants:	Hucker's Soil				
	Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
	Shine Bathroom	Shine Bathroom system		92.11	<input checked="" type="checkbox"/>	
	Clorox Company	Formula 409 All Purpose Cleaner	100	92.06	<input checked="" type="checkbox"/>	
	Clorox Company	Clorox Bathroom Cleaner	100	74.65	<input type="checkbox"/>	

Conclusion: Shine was more slightly more effective at removing Hucker's soil from ceramic and chrome compared to 409 Cleaner.