CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 0

DateRun: 08/27/2026

Experimenters: Alexander Symko, Rachael Rososky, Evan Hebert

ClientType: Cleaner Manufacturer

ProjectNumber: Project #5

Substrates: Ceramics, Plastic, Stainless Steel

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To test the efficacy of New Dawn DX-50 green seal and ecologo formulations at removing Hucker's soil from stainless steel, polycarbonate plastic, and ceramic against Consume Nature's Way

Experimental Procedure: Thirty-six coupons, three per substrate for each cleaner, had initial weights taken and then were soiled with about 1 g of Hucker's Soil. Coupons dried at room temperature (68 F) for two hours before their dirty weights were recorded for the adjusted dry weight. The 3 cleaning dilutions were prepared beforehand. Three coupons of the same substrate were placed in a Single Line Washing Unit (SLW) with a Wypall X60 wipe attached to the cleaning sled. The Wypall and coupons were sprayed three times with the cleaner, and the SLW was then run for 20 cleaning cycles (30 seconds of manual cleaning). Coupons air-dried for 10 minutes at room temperature (68 F) before final weights were recorded.

Results:

Cleaner	Substrate	Coupon #	Initial wt of cont.	Final wt of cont.	%Cont Removed	Average % Removal	Average Cleaner %
Consume Nature's Way (1:20)	Stainless steel	2	0.6147	0.4947	19.52	11.49	58.38
		17	0.5951	0.5585	6.15		
		32	0.6648	0.6063	8.80		
	Polycarbonate	20	0.62	-0.0293	104.73	105.26	
		23	0.585	-0.0382	106.53		
		35	0.6293	-0.0285	104.53		
	Ceramic	1	0.582	0.5033	13.52	12.09	
		2	0.6023	0.5293	12.12		
		3	0.6523	0.583	10.62		
New Dawn DX-50 with ecologo (1:16)	Stainless steel	13	0.6279	0.5918	5.75	12.93	58.83
		18	0.601	0.462	23.13		
		33	0.6381	0.5749	9.90		
	Polycarbonate	30	0.6105	-0.0296	104.85	104.74	
		32	0.6072	-0.0276	104.54		
		33	0.5995	-0.029	104.84		
	Ceramic	4	0.611	0.5608	8.22	10.99	
		5	0.6294	0.5572	11.47		
		12	0.6198	0.5374	13.29		
New Dawn DX-50 with green seal (1:16)	Stainless steel	4	0.6232	0.3558	42.91	32.58	68.97
		20	0.6422	0.5673	11.66		
		23	0.6176	0.3509	43.18		
	Polycarbonate	9	0.548	-0.0326	105.95	105.35	
		24	0.596	-0.0267	104.47		
		34	0.6315	-0.0355	105.62		
	Ceramic	11	0.5929	0.4537	23.48	13.93	
		13	0.6117	0.5656	7.54		
		130	0.5455	0.4867	10.78		

CLEANING LABORATORY EVALUATION SUMMARY

Summary:

Conclusion: The most effective cleaner was the New Dawn DX-50 green seal formulation (69% efficacy), followed by the New Dawn DX-50 ecologo formulation (58.8% efficacy) and the Consume Nature's Way (58.4% efficacy).When looking substrate by substrate, all cleaners achieved a very high percent efficacy for the polycarbonate coupons, with all of them exceeding 100% cleanliness. This could be due to a variety of factors, including differences in masses within the degree of uncertainty for the analytical equipment, or the known phenomenon of static electricity accumulating on plastic coupons interfering with the reading of the analytical equipment making the coupons post-cleaning appear to be lighter than initial values. Lastly, although highly unlikely, this could be due to the chemicals in the cleaning chemistry attacking and degrading the actual substrate. This last explanation is highly unlikely, due to the fact that no changes indicative of a chemical reaction of this nature were observed. Overall, all 3 cleaners performed well on plastic but were unsuccessful at removing the soil from both stainless steel and ceramic.