CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2024
DateRun:	04/25/2024
Experimenters:	Amelia Wagner
ClientType:	Cleaner Manufacturer
ProjectNumber:	Project #1
Substrates:	Aluminum, Plastic, Stainless Steel
PartType:	Coupon
Contaminants:	Hucker's Soil
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	All-purpose test to determine the efficacy of the GeoPro X product in removing Hucker's soil from a variety of substrates compared to other janitorial and industrial degreasing products.
Experimental Procedure:	Three coupons of each substrate were used per cleaning product, for a total of 24 coupons. Each coupon was weighed using a gravimetric balance and had their weights recorded. Each coupon was then soiled with about 0.5 grams of Hucker's soil by using a swab to administer the contaminant down the center of the coupons. The contaminated coupons were then left to dry for 24 hours to allow the Hucker's soil to adhere to the coupons. After the 24 hour drying period, each coupon was weighed again, and had their 'dirty weights' recorded. The coupons were then cleaned with their respective cleaning product using the Straight Line Washability Unit (or SLW) to ensure a standard pressure is applied to each coupon while being manually wiped. Two sprays of the correct cleaner was applied to a wypall that is attached to the cleaning sled of the SLW to wipe the soil away and two sprays were applied directly to each coupon (meaning each coupon was cleaned with about 2.5 ml of cleaning chemisty). The SLW unit was run for 20 cycles (20 back and forth motions) for each coupon. Once cleaned, the coupons were allowed to air dry before having their final weights recorded.

Results:

Cleaner	Coupon Type	Initial wt of cont.	Final wt of cont.	%Cont Removed	AVG percent removal	AVG Overall Removal
GeoPro X 1.5%	Aluminum	0.3205	0.0210	93.45	96.10	97.46
		0.5684	0.0168	97.04		
		0.3523	0.0077	97.81		
	Fiberglass	0.3912	0.0087	97.78	98.29	
		0.6426	0.0048	99.25		
		0.5875	0.0127	97.84		
	Stainless Steel	0.4048	0.0092	97.73	97.99	
		0.5339	0.0128	97.60		
		0.4589	0.0062	98.65		
Formula 409 RTU	Aluminum	0.3384	0.0119	96.48	95.19	97.29
		0.5014	0.0168	96.65		
		0.6791	0.0513	92.45		
	Fiberglass	0.8338	0.0021	99.75	99.27	
		0.6109	0.0052	99.15		
		0.4089	0.0045	98.90		
	Stainless Steel	0.6517	0.0175	97.31	97.42	
		0.5607	0.0081	98.56		
		0.4837	0.0175	96.38		
Polychem Deox 007 1:7	Aluminum	0.6639	0.0318	95.21	94.65	96.82
		0.6009	0.0420	93.01		
		0.5662	0.0242	95.73		
	Fiberglass	0.7422	0.0071	99.04	98.13	
		0.9825	0.0282	97.13		
		0.6524	0.0117	98.21		
	Stainless Steel	0.5223	0.0057	98.91	97.68	
		0.6393	0.0058	99.09		
		0.5591	0.0277	95.05		

Summary:

Substrates:	Aluminum, Plastic, Stainless Steel

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Contaminants:	Hucker's Soil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AquOm Inc	GeoProX	1.5%	97.46	☑	
Clorox Company	Formula 409 All Purpose Cleaner	RTU	97.29	☑	
US Polychem Corporation	Polychem DEOX 007	12.5%	96.82	☑	

Conclusion: All products performed comparatively and are highly effective in removing Hucker's soil from Aluminum, Fiberglass, and Stainless Steel.