

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2024
 DateRun: 06/17/2024
 Experimenters: Alexander Symko, Nasser Anise
 ClientType: Lab
 ProjectNumber: Project #8
 Substrates: Stainless Steel
 PartType: Coupon
 Contaminants: Waxes
 Cleaning Methods: Ultrasonics
 Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of Micro-90 (2% cleaner, 98% water), BG-Clean 402 (10% cleaner, 90% water), Simple Green (10% cleaner, 90% water), and 1400 GD Detergent and Degreaser (10% cleaner, 90% water) in removing wax from stainless steel coupons as a preliminary test for Precision Fabricators

Experimental Procedure: three stainless steel coupons were used for each of the four cleaners for a total of 12 coupons. The initial weight of each coupon was recorded before applying the wax. The bottom third of each coupon was soiled by adding Meguiar's Cleaner Wax using a swab. The dirty weights of all coupons were then recorded. The coupons were then put into heated ultrasonics at 120F in Micro-90 (2% dilution with water), BG-Clean 402 (10% dilution with water), Simple Green (10% cleaner, 90% water), and 1400 GD Detergent and Degreaser (10% cleaner, 90% water) for 15 minutes. After the coupons were cleaned, they were left to air dry overnight. The next morning, the clean weights of all of the coupons were recorded.

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed	Average % Removal
1400 GD	0.2082	0.0476	77.14	83
	0.0875	0.0187	78.63	
	0.1095	0.0069	93.70	
Micro-90	0.1269	0.0078	93.85	99
	0.046	-0.0069	115.00	
	0.1486	0.0187	87.412	
BG -Clean 402	0.1114	0.0121	89.14	92
	0.1847	0.0176	90.47	
	0.1763	0.0084	95.24	
Simple Green	0.1791	0.0198	88.94	81
	0.1699	0.0298	82.46	
	0.2259	0.0651	71.18	

Summary:

Substrates:	Stainless Steel				
Contaminants:	Waxes				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
International Products Corporation	Micro 90 Conc.	2% cleaner, 90% water	99.00	<input checked="" type="checkbox"/>	On Meguiar's Cleaning Wax
Amiran BioChemicals	BG-Clean 402	10% cleaner, 90% water	92.00	<input checked="" type="checkbox"/>	On Meguiar's Cleaning Wax
Brulin Corporation	1400GD Degreaser	10% cleaner, 90% water	83.00	<input type="checkbox"/>	On Meguiar's Cleaning Wax
Simple Green	Simple Green Clean Building All Purpose Cleaner Concentrate - General Purpose Cleaners	10% cleaner, 90% water	81.00	<input type="checkbox"/>	On Meguiar's Cleaning Wax

Conclusion: Coupon 5 appears to be an outlier, as more than 100% of contaminants were removed. This could be caused by the coupon not being completely clean, therefore more than what was applied was removed. Overall, Micro-90 and BG-Clean 402 were effective in cleaning wax from stainless steel. 1400 GD and Simple Green were ineffective in cleaning wax from stainless steel.