

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.