CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2024

DateRun: 01/01/1970

Experimenters: Tatyanna Moreland Junior

ClientType: Lab

ProjectNumber: Project #8

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Lubricating/Lapping Oils, Oil

Cleaning Methods: Ultrasonics

Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of SB-27 (t-Butyl Acetate 70% (CAS No: 540-88-5) + Benzyl Alcohol 30% (CAS No: 100-51-6)) in removing different soils from stainless steel coupons with a heated ultrasonic cleaning method as a potential replacement of TCE.

Experimental Procedure: Three stainless steel coupons were used for each cleaner and soil combination, making a total of fifteen coupons. The initial weights of each coupon were recorded. A thin layer of each contaminant was added to the bottom third of the coupon with a swab, and the dirty weights of each coupon were recorded. The coupons were then subjected to heated ultrasonics in the cleaner for 15 minutes at a temperature of 120 °F. After the coupons were cleaned, they were left to air dry overnight, and clean weights of each coupon were taken the following day.

Results:

Contaminant	Initial weight of content	Final weight of content	Percent Content Removed	Average Percent Removal
Mobil DTE Light Oil	0.0144	0.0048	66.67	66
	0.0127	0.0049	61.42	
	0.0142	0.0043	69.72	
Strawman Cutting Oil	0.0212	0.0046	78.30	74
	0.016	0.0048	70	
	0.0171	0.0042	75.44	
Lenox Synthetic Lubricant	0.0062	0.0007	88.71	75
	0.0201	0.0052	74.13	
	0.0135	0.0052	61.48	
Maintenance Soil	0.0147	0.0039	73.47	68
	0.0178	0.0063	64.61	
	0.0124	0.0044	64.52	
Drawell Thin Oil	0.0173	0.0067	61.27	67
	0.0177	0.005	71.75	
	0.0143	0.0047	67.13	

Summary:

Substrates:	Stainless Steel				
Contaminants:	Lubricating/Lapping Oils, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
TURI Cleaning lab	SB-27			☐	Could be efficient at cleaning extremely thin contaminants.

Conclusion: The cleaner was not able to remove any of the contaminants. The one coupon that had less than 0.01g of soil did well, which could mean that SB-27 can remove extremely thin coatings of soil.