CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023

DateRun: 09/06/2023

Experimenters: Tatyanna Moreland Junior

ClientType: Lab

ProjectNumber: Project #8

Substrates: Brass

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of SB-22 (79% Ektapro EEP 14% t-butyl acetate 7% propylene carbonate) and SB-24 (92% Ektapro EEP 8% t-butyl acetate) in removing J-2 oil from brass coupons as a potential replacement for TCE unheated immersion cleaning method.

Experimental Procedure: Nine brass coupons were used for each cleaner being tested for a total of 18 coupons. The initial weights of each coupon were recorded. The bottom third of every coupon was soiled by applying the soil with a swab. The dirty weights of each coupon were then recorded. The coupons were then subjected unheated immersion in SB-22 and SB-24 with the stir bar at 240rpm for 15 mins. After the coupons were cleaned they were left to air dry over night. The next morning, the clean weights of each coupon were taken.

Results:

Cleaner	Initial weight	Final weight	Percent Removed	Average Percent Removed
SB-22	0.2659	0.0058	97.82	97.91
	0.2795	0.0052	98.14	
	0.2686	0.0060	97.77	
	0.2370	0.0079	96.67	96.54
	0.2456	0.0108	95.6	
	0.2179	0.0058	97.34	
	0.2734	0.0039	98.57	98.29
	0.3094	0.0077	97.51	
	0.2698	0.0033	98.78	
SB-24	0.3037	0.0035	98.85	98.15
	0.3388	0.0060	98.22	
	0.2616	0.0069	97.36	
	0.3479	0.0061	98.25	98.01
	0.3106	0.0060	98.07	
	0.2700	0.0062	97.70	
	0.2574	0.0046	98.21	97.74
	0.3063	0.0057	98.14	
	0.1884	0.0059	96.87	

Summary:

Substrates:	Brass
Contaminants:	Oil

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
TURI Cleaning lab	SB-22	79% Ektapro EEP 14% t-butyl acetate 7% propylene carbonate	97.00	☑	Left a greasy residue after air drying
TURI Cleaning lab	SB-24	92% Ektapro EEP 8% t-butyl acetate	98.00	☑	

Conclusion: Both cleaners proved to be as effective as TCE but the coupons immersed in SB-22 had a greasy residue after the 24 hour air dry.