CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2023
DateRun:	05/08/2023
Experimenters:	Dylan Labonte
ClientType:	Lab
ProjectNumber:	Project #6
Substrates:	Brass
PartType:	Coupon
Contaminants:	Greases
Cleaning Methods:	Vacuum Cycle Nucleation
Analytical Methods:	Gravimetric, Visual
Purpose:	To determine the efficacy of aqueous cleaners compared to water utilizing VCN equipment.
Experimental Procedure:	Eighteen pre weighed brass alloy 280 coupons were used, three per soil per cleaner. Half of the coupons were soiled by swabbing the bottom third of the coupons with J1 grease, while the other half of the coupons were soiled with J2 grease. The dirty weights of all coupons were then recorded and visual rankings according to the key shown below were recorded. The coupons were then subjected to a one-minute heated cycle at 140 degrees F in the VCN using Zymit 1% concentration, Micro 90 1% concentration, and Micro Green Clean 1% concentration. The coupons were then removed and left to air dry overnight. The next day the clean weights of the coupons were recorded and visual rankings were recorded.

Visual Rankings Key

1= 100% of soil removed

2= 75% of soil removed

3= 50% of soil removed

4= 25% of soil removed

5= 0% of soil removed

Results:

Cleaner	soil	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Zymit 1%	J1	0.4875	0.1124	76.94	77.17	58.22
		0.4930	0.1114	77.40		
		0.4509	0.1030	77.16		
	J2	0.6215	0.2774	55.37	39.27	
		0.4316	0.2821	34.64		
		0.3065	0.2213	27.80		
Micro 90 1%	J1	0.6826	0.0830	87.84	83.64	61.81
		0.5486	0.0947	82.74		
		0.3254	0.0640	80.33		
	J2	0.4444	0.2317	47.86	39.98	
		0.4363	0.2496	42.79		
		0.4156	0.2939	29.28		
Micro green Clean 1%	J1	0.3493	0.0997	71.46	76.44	69.73
		0.5914	0.1219	79.39		
		0.5119	0.1102	78.47		
	J2	0.7677	0.2258	70.59	63.02	
		0.7126	0.2653	62.77		
		0.6758	0.2993	55.71		

Cleaner	soil	Dirty Visual	Clean Visual	AVG Clean Visual	AVG Overall
Zymit 1%	J1	5	4	4.3	4.50
		5	4		
		5	5		
	J2	5	5	4.7	
		5	5		

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Micro 90 1%	J1	5	4	4.7	4.83
		5	5		
		5	5		
	J2	5	5	5	
		5	5		
		5	5		
Micro Green Clean 1%	J1	5	4	4	4.33
		5	4		
		5	4		
	J2	5	5	4.67	
		5	4		
		5	5		

Summary:

Substrates:	Brass
Contaminants:	Greases

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
International Products Corporation	Zymit	1	58.00	☐	
International Products Corporation	Micro 90 Conc.	1	62.00	☐	
International Products Corporation	Micro Green Clean	1	76.00	☐	

Conclusion:

Zymit 1% concentration is slightly effective in removing J1 soil from brass utilizing VCN methods, but not effective in removing J2 soil. Micro 90 1% concentration is effective in removing J1 soil from brass utilizing VCN methods, but not effective in removing J2 soil. Micro Green Clean 1% is slightly effective in removing J1 soil from brass utilizing VCN methods, but no effective in removing J2 soil.