CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2023
DateRun:	04/20/2023
Experimenters:	Amelia Wagner, Namrata Chauhan
ClientType:	Lab
ProjectNumber:	Project #6
Substrates:	Stainless Steel
PartType:	Coupon
Contaminants:	Greases
Cleaning Methods:	Vacuum Cycle Nucleation
Analytical Methods:	Gravimetric, Visual
Purpose:	To determine the efficacy of aqueous cleaners utilizing VCN methods.
Experimental Procedure:	Eighteen pre weighed stainless steel 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 and Micro 90 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	0.3911	0.0618	84.20	81.70	73.38
		0.2952	0.0712	75.88		
		0.2528	0.0379	85.01		
	J2	0.4859	0.2152	55.71	65.07	
		0.5946	0.1912	67.84		
		0.5054	0.1432	71.67		
Micro 90 1%	J1	0.2474	0.0377	84.76	90.29	69.24
		0.2963	0.0113	96.19		
		0.2866	0.0289	89.92		
	J2	0.4967	0.3226	35.05	48.20	
		0.4002	0.1925	51.90		
		0.5945	0.2518	57.65		

Cleaner	soil	Dirty Visual	Clean Visual	AVG Clean Visual	AVG Overall
Zymit 1%	J1	5	4	4.2	4.33
		5	4.5		
		5	4		
	J2	5	4	4.5	
		5	4.75		
		5	4.5		
Micro 90 1%	J1	5	2.25	2.2	3.33
		5	2.75		
		5	1.5		
	J2	5	4.5	4.5	
		5	4.5		
		5	4.5		

Summary:

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Substrates:	Stainless Steel				
Contaminants:	Greases				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
International Products Corporation	Zymit	1	73.00	☐	
International Products Corporation	Micro 90 Conc.	1	69.00	☐	

Conclusion: Both the Zymit 1% concentration and the Micro 90 1% concentration were only effective in removing J1 grease from stainless steel utilizing VCN methods. Neither were effective in removing J2 grease.