

CLEANING LABORATORY EVALUATION SUMMARY

SCL #:

2024

DateRun:

02/14/2024

Experimenters:

Amelia Wagner

ClientType:

University

ProjectNumber:

Project #1

Substrates:

Aluminum

PartType:

Coupon

Contaminants:

Inks

Cleaning Methods:

Manual Wipe

Analytical Methods:

Visual

Purpose:

To evaluate the efficacy of previously identified solvents and mixture in removing sharpie ink from aluminum panels via manual wipe

Experimental Procedure:

Three aluminum coupons were used per cleaner for a total of 9 coupons. The coupons soiled with sharpie ink by drawing a squiggle along the bottom third of the coupon. The dirty visual rankings were then recorded. The coupons were then cleaned with their respective cleaners by manually wiping a paper towel wet with the cleaner on the coupons for a total of 5 seconds. The cleaned visual rankings were then recorded.

Visual Rankings Key:

1: 100% soil removed

2: 75% soil removed

3: 50% soil removed

4: 25% soil removed

5: 0% soil removed

Results:

Cleaner	Dirty Visual	Clean Visual	AVG Clean Visual
Dimethyl Carbonate	5	1	1.2
	5	1.5	
	5	1	
Ethyl Acetate	5	1	1.0
	5	1	
	5	1	
62% Dimethyl Carbonate + 38% Ethyl Acetate	5	1	1.0
	5	1	
	5	1	

Summary:

Conclusion:

Dimethyl Carbonate, Ethyl Acetate, and the mixture of 62% Ethyl Acetate + 38% Dimethyl Carbonate were all able to effectively remove sharpie ink from aluminum coupons within 5 seconds via manual wiping.