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.