CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2023
DateRun:	07/13/2023
Experimenters:	Alexander Symko, Amelia Wagner
ClientType:	Tool Manufacturer
ProjectNumber:	Project #2
Substrates:	Steel
PartType:	Coupon
Contaminants:	Adhesive, Resins/Rosins
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric
Purpose:	To find an effective aqueous cleaner to remove varnish from provided steel coupons;
Experimental Procedure:	Three steel coupons were used for each cleaner tested, for a total of six coupons. Initial weights of coupons were taken. The varnish was heated to 350 F on a hot plate. Each coupon was placed on the hot plate for a total of 30 seconds. The varnish was then applied to the heated coupons with a metal scraper in order to achieve a thin layer of varnish on the bottom third of the coupons. Once the varnish had solidified, dirty weights of each coupon were taken. Coupons were then manually wiped with the corresponding cleaner in order to see if the cleaners' chemistry would have any effect on the varnish. Coupons were wiped for up to 2 and a half minutes. Afterwards, clean weights of coupons were taken.

Results:

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG	% Overall
Emerald ICP 1	1.3388	1.3388	0.00	0.00	0.00
	0.6210	0.6210	0.00		
	1.1873	1.1873	0.00		
SC Aircraft and Metal Cleaner	1.7162	1.7162	0.00	0.00	
	1.2863	1.2863	0.00		
	0.9876	0.9876	0.00		

No Change

Summary:

Conclusion: Emerald ICP 1 and SC Aircraft and Metal Cleaner were not effective in removing varnish from steel coupons using manual wipe, and show no promise using other methods.