CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2026
DateRun:	10/26/2026
Experimenters:	Evan Hebert
ClientType:	Lab
ProjectNumber:	Project #17
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Xray fluoresence
Purpose:	To determine the efficacy of modified alcohol Metalnox M6386 chemistry in removing various soils without the assistance of vacuum vapor degreasing equipment
Experimental Procedure:	Three Aluminum coupons were used for testing. Each coupon was weighed using a gravimetric balance and had their initial weights recorded. Each coupon was then soiled with a pea sized amount of Mobil DTE Oil using a swab to spread it across the surface of the coupons. Each coupon was weighed again and had their dirty weights recorded. The coupons were then immersed in a beaker of the Metalnox M6386 modified alcohol with a stir bar set to 200rpm for 10 minutes. Upon removal from the beaker, the coupons were allowed to air dry for 20 minutes before being weighed and having their final weights recorded. Analysis: The recorded reflectance values of each coupon were used within an equation to generate a percentage representative of how close the clean reflectance value is to the initial reflectance value. It estimates how closely the coupons were returned to their original state after vacuum vapor degreasing. The equation is as follows $\%=(R_{clean}-R_{dirty}/R_{initial}-R_{dirty})X100$

Results:

Soil	Initial RFU	Dirty RFU	Clean RFU	%DET	AVG
Mobil DTE Oil	61.7	2790.2	189.6	95.31	94.49
	35.5	2790.7	161.6	95.42	
	27.7	2793.4	228.4	92.74	

Summary:

Conclusion: Metalnox M6386 was successful in removing Mobil DTE Oil from Aluminum.