CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1998

DateRun: 12/08/1998

Experimenters: Jason Marshall

ClientType: Name Plate Mfg-Etching

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Part

Contaminants: Abrasive, Paints, Dirt, Soaps

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To determine cleaning efficiencies for various soil loadings.

Experimental Procedure: Preweighed coupons were covered with the D-Greeze 500 spent cleaning solution and dried under an IR heat lamp. After the name plate coupons cooled, a second weighing was performed. Eight 300 mL Pyrex beakers were filled with a Soy Gold and D-Greeze mixture. The beakers were heated to 130 F on a hot plate. Two coupons were cleaned in each solution mixture for 2 minutes using stir bar agitation. Coupons were rinsed under a hot water tap for 30 seconds and then air dried. Final weights were recorded and cleaning efficiencies were calculated. The concentrations of the Soy Gold/D-Greeze solutions used were (%):
0.0, 2.5, 5.0, 7.5, 10.0, 20.0, 30.0, 50.0

SUBSTRATE MATERIAL: Aluminum Name Plate
CONTAMINANTS: Dirty cleaning solution, Solvent Kleen D-Greeze 500 w/ residual paint chips and pumice sludge
CONTAMINATING PROCESS USED: Added known volume to Cleaning Solution. Applied contaminant to using hand held swab.

Results: All of the cleaning solutions were determined to be effective in removing all of the applied contaminant. Table 1 list the individual cleaning efficiencies for each soil loading mixture.

Table 1. Soil Loading Cleaning Efficiency

Soil Load	0%	2.50%	5%	7.50%	10%	20%	30%	50%
	105.9	84.1	95.8	97.4	100.7	102.0	101.5	101.3
	100.6	94.2	99.0	89.9	100.7	101.1	100.7	101.0
Average	103.3	89.2	97.4	93.9	100.7	101.7	101.3	101.4
Std Dev	3.8	7.1	2.3	5.3	0.0	0.6	0.6	0.2

Summary:

Substrates:	Aluminum				
Contaminants:	Abrasive, Paints, Dirt, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AG Environmental Products	Soy Gold 2000		0.00	☑	
Transene Company, Inc.	D Greeze 500 LO		0.00	☑	

Conclusion: The cleaning efficiencies were all 90% or better. The higher the soil loading, the more effective the cleaning became. This could be do to the make up of the contaminant and the diluted cleaning solution (both contain D-Greeze 500). The D-Greeze in the cleaning solution was helping in removing the D-Greeze from the coupons.