CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 05/26/2004

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Sterling/Silver

PartType: Coupon

Contaminants: Cutting/Tapping Fluids

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Each product was used at full strength in a 250 ml beaker and heated to 96 F on a hot plate. Nine preweighed silver plated copper coupons were coated with the Houghton Chemical Cut-Max 135 (64742-52-5, 64741-96-4) using a handheld swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. After cleaning parts were weighed a final time and efficiencies were calculated.

Results:

Cleaner	Initial wt	Final wt	% Removed
Vertrel MCA	0.10830	0.0086	92.06
	0.15790	0.0062	96.07
	0.15120	0.0080	94.71
Heavy Duty Degreaser C	0.08780	0.0063	92.82
	0.12900	0.0063	95.12
	0.12270	0.0085	93.07
Flux Remover C	0.16710	0.0194	88.39
	0.18970	0.0318	83.24
	0.33620	0.0224	93.34

Summary:

Substrates:	Sterling/Silver				
Contaminants:	Cutting/Tapping Fluids				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
DuPont	Vertrel MCA	100	94.28	☑	
Micro Care	Heavy Duty Degreaser C	100	93.67	☑	
Micro Care	Flux Remover C	100	88.32	☑	

Conclusion: All three products removed over 85%.