CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 02/21/2008

Experimenters: Heidi Wilcox, Shweta Bansal

ClientType: Electronics Manufacturer

ProjectNumber: Project #1

Substrates: Copper

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Mechanical Agitation

Analytical Methods: Gravimetric

Purpose: To evaluate possible alternatives for solvent cleaning of oil

Experimental Procedure: Four new product samples of solvents used for hand dipping applications at room temperature were chosen for testing as a Possible substitute for the clients current cleaning solvent.

Twelve preweighed coupons were coated with Hangsterfer Laboratories Hard Cut 5418 cutting fluid using a handheld swab. The contaminated coupons were weighed a second time to determine the amount of soil added. Three coupons were immersed into each cleaning solution and manual raised and lowered in the cleaning solution to provide minimal mechanical agitation. After one minute of cleaning, the coupons were removed and dried for 30 seconds using compressed air at room temperature. Following air drying, the coupons were weighed a final time to determine the amount of soil remaining. Efficiency for each coupon was determined and average cleaning results for each product were calculated.

Results: All four products removed over 99% of the cutting fluid within one minute of mechanical agitation. The table below lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Dysol 104	0.0905	0.0000	100.00
	0.3772	0.0001	99.97
	0.1678	0.0000	100.00
Dysol 108	0.2693	0.0001	99.96
	0.1535	0.0000	100.00
	0.2320	0.0001	99.96
Dysol 144	0.2583	0.0000	100.00
	0.2907	0.0001	99.97
	0.2034	0.0000	100.00
Dysol 800	0.3171	0.0000	100.00
	0.2847	0.0000	100.00
	0.2142	0.0001	99.95

Summary:

Substrates:	Copper				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Dysol	DS 104 Wipe Solvent	100	99.99	☑	
Dysol	DS 108 Wipe Solvent	100	99.97	☑	
Dysol	DS 144S Wipe Solvent	100	99.99	☑	
Dysol	DS 800 Solvent	100	99.98	☑	

Conclusion: The four products will be used in further testing on client supplied parts.