CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	03/12/2008
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:	Two new product samples of solvents recently received were tested at room temperature to use as a possible substitute for the clients current cleaning solvent. Six 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 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:	Metalnox M6381 removed over 99% of the cutting fluid within one minute. The M6310 removed over 85% of the cutting fluid within one minute. The table below lists the amount of oil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Metalnox M6381	0.3170	0.0017	99.46
	0.3319	0.0000	100.00
	0.3769	0.0006	99.84
Metalnox M6310	0.2933	0.0520	82.27
	0.3380	0.0510	84.91
	0.5223	0.0542	89.62

Summary:

Substrates:	Copper
Contaminants:	Oil

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Kyzen Corporation	Metalnox M6381	100	99.77	☑	
Kyzen Corporation	Metalnox M6310 (For Comparison Only)	100	85.60	☑	

Conclusion: The two products may be used in further testing on client supplied parts.