CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	04/29/2008
Experimenters:	Heidi Wilcox, Shweta Bansal
ClientType:	Electronics Manufacturer
ProjectNumber:	Project #1
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Cutting/Tapping Fluids
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate new product on the two supplied cutting fluids.
Experimental Procedure:	One new product was tested at room temperature to use as a possible substitute for the clients current cleaning solvent. Three preweighed coupons were coated with Hangsterfer Laboratories Hard Cut 5418 cutting fluid and three were coated with Master Chemical Corporation Trim Sol SF (8002-05-9, 61789-85-3, 68410-99-1, 68991-48-0, 68603-15-6) 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:	Cleaning was more effective for the Hard Cut 5418 than the Trim Sol Sf. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon. Biodiesel Cleaner

Contaminant	Initial wt	Final wt	%Removed
Trim SOC	0.0927	0.0136	85.33
	0.1446	0.017	88.24
	0.1061	0.019	82.09
Hardcut	0.2985	0.0165	94.47
	0.3406	0.0202	94.07
	0.4776	0.0191	96.00

Summary:

Substrates:	Aluminum				
Contaminants:	Cutting/Tapping Fluids				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Newport Biodiesel	Biodiesel	100	90.04	☑	

Conclusion: The biodiesel solvent worked well on both cutting fluids.