CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2012

DateRun: 02/06/2012

Experimenters: Jason Marshall, Junhee Cho

ClientType: Optical Manufacturer

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Lubricating/Lapping Oils

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of cleaning with Sol safe 245 for two soils

Experimental Procedure: One product was selected from previous trial based on effectiveness. The product was used at full strength in a 400 ml beaker and was evaluated at room temperature. Three pre-weighed aluminum coupons were coated with each soil. All coupons were cleaned in the cleaner for 10 minutes using no agitation and then were manually wiped with a Kimberly-Clark reinforced paper towel for 5 seconds. At the end of cleaning, the coupons were allowed to air dry at room temperature overnight. Final weights were recorded, and efficiencies were calculated.

Results: The product worked very well with one soil (Antiseize) but was not as effective with Molydry Film Lube based on 10 minutes immersion cleaning and manual wipe. The table lists the amount of soil added, the amount reaming and the efficacy of the product for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Solsafe 245_Antisieze			
	0.0572	0.0018	96.85
	0.1103	0.0052	95.29
	0.0985	0.0058	94.11
Solsafe 245_Molydry Flim Lube			
	0.0160	0.0040	75.00
	0.0164	0.0024	85.37
	0.0126	0.0031	75.40

Summary:

Substrates:	Aluminum				
Contaminants:	Lubricating/Lapping Oils				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Solsafe 245	100	95.42	☑	Antiseize
Bio Chem Systems	Solsafe 245	100	78.59	☐	Molydry Flim Lube

Conclusion: The increased time improved the effectiveness of Solsafe 245 on both soils. However, the molydry film lube removal was still under 80%. Additional testing, we will be conducted on other possible cleaners to find one that works well on all five soils.