CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2003
DateRun:	09/18/2003
Experimenters:	Jason Marshall
ClientType:	Lab
ProjectNumber:	Project #1
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Fluxes
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.

Five products were used at full strength, heated to 120 F on a hot plate. Fifteen preweighed coupons were coated with Kester Solder Flux 1544 (64-17-5, 78-92-2, 8050-09-7) and allowed to dry for two hours and reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar-agitation, rinsed in a tap water bath for 15 seconds at 120 F and dried using air blow off for 30 seconds at 68 F. Coupons were allowed to dry overnight and then reweighed a final time. Efficiencies were calculated.

Note: Bio T Foam Plus was sprayed onto coupons at room temperature and allowed to sit for 5 minutes. The cleaner was then rinsed.

Results:

Two products removed over 85% of the flux. Two others removed over 80% and the final product removed just over 70%. Many of the products could be improved with higher pressure drying to remove cleaner residue from the coupons.

Summary:

Substrates:	Aluminum				
Contaminants:	Fluxes				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AW Chesterton	278 Super Solv	100	83.01	☐	
Bio Chem Systems	Bio T Foam Plus	100	73.74	☐	
Invista S.a.r.l	Flexisolv DBE Ester	100	88.20	☑	
Invista S.a.r.l	Flexisolv DBE 3 ester	100	86.68	☑	
Gemtek Products	SC EZ Solv Safety Solvent	100	83.68	☐	

Conclusion:

Two products, both dibasic esters, were effective in removing the flux from the coupons within five minutes.