CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 08/07/2002

Experimenters: Jason Marshall

ClientType: Electronics Manufacturer

ProjectNumber: Project #2

Substrates: Aluminum

PartType: Coupon

Contaminants: Fluxes, Resins/Rosins, Solder

Cleaning Methods: Ultrasonics

Analytical Methods: Gravimetric

Purpose: Evaluation of successful products using ultrasonics

Experimental Procedure: Five products were selected from the previous trial based on their high efficiencies. The solutions were used at 68 F. The three semi-aqueous products were used at full strength and the two aqueous based products were diluted to 10% in 600 ml beakers using DI water.
Fifteen preweighed coupons were coated with Alpha Metals 615 Flux (67-63-0, 8052-41-3, 8050-09-7) using a handheld swab and allowed to dry. Coupons were then reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation, then rinsed in tap water at 68 F for 15 seconds followed by an air knife drying for 30 seconds. Once dry, final weights were recorded and efficiencies were calculated.

Results: All five products were very effective using ultrasonics for two minutes. Table 1 lists the efficiencies for each coupon cleaned.

Table 1. Cleaning Efficiencies

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed
Bio T Max	0.0414	-0.0003	100.72
	0.1571	-0.0003	100.19
	0.1283	0.0004	99.69
DS 108	0.1235	0.0026	97.89
	0.0982	0.0003	99.69
	0.1142	-0.0005	100.44
Ionox HC 2	0.1354	-0.0001	100.07
	0.1060	-0.0003	100.28
	0.1274	-0.0008	100.63
SWR One	0.0916	-0.0002	100.22
	0.1154	-0.0009	100.78
	0.0942	-0.0006	100.64
Beyond 2005	0.0949	0.0061	93.57
	0.1050	0.0002	99.81
	0.1306	0.0015	98.85

Summary:

Substrates:	Aluminum				
Contaminants:	Fluxes, Resins/Rosins, Solder				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Bio T Max	100	100.20	☑	
Dysol	DS 108 Wipe Solvent	100	99.34	☑	
Kyzen Corporation	Ionox HC 2	100	100.33	☑	
SWR Corporation	SWR One	10	100.55	☑	
Today & Beyond	Beyond 2005	10	97.41	☑	

Conclusion: These five products will be used on supplied parts from client.