

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1996  
 DateRun: 02/26/1996  
 Experimenters: Jay Jankauskas  
 ClientType: Electronics Manufacturer  
 ProjectNumber: Project #1  
 Substrates: Plastic, Electronics  
 PartType: Part  
 Contaminants: Fluxes  
 Cleaning Methods: Immersion/Soak  
 Analytical Methods: Visual, microscopic  
 Purpose: To replace the current Genesolve 2004

**Experimental Procedure:** The purpose of this trial is to find a replacement chemistry and/or process to replace the current Genesolve 2004 used by Electronics Manufacturer. All chemistries will be tested in a beaker with stir-bar agitation, and all chemistries except the Asashiklin will be tested in the Crest 40kHz Ultrasonic unit. After drying was complete, the parts were analyzed under a microscope for remaining flux, residual cleaning chemistry or detrimental effects to the parts. All parts were then sealed and shipped to David Norton of Electronics Manufacturer for further evaluation.  
 SUBSTRATE MATERIAL: Electronic Components  
 CONTAMINANTS: RMA flux  
 CONTAMINATING PROCESS USED: Received contaminated from Electronics Manufacturer

**Results:** Although the ultrasonics removed all of the flux for all four chemistries, pitting was noticed on the part's surface. The other three aqueous chemistries did not fare so well under stir-bar agitation.

Product	Concentration	Temperature	Effective
Detergent 8	4	68	No
Armakleen E 2002	4	68	Yes
Daraclean 282 GF	4	68	No
Amberclean SC 11	4	68	No
AK 225	100	68	No

**Summary:**

<b>Substrates:</b>	Plastic, Electronics				
<b>Contaminants:</b>	Fluxes				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
Alconox Inc	Detergent 8	4	0.00	<input type="checkbox"/>	
Church & Dwight Co Inc.	Armakleen E 2002	4	0.00	<input checked="" type="checkbox"/>	
Magnaflux	Daraclean 282 GF	4	0.00	<input type="checkbox"/>	
Innovative Organics Inc	Amberclean SC 11	4	0.00	<input type="checkbox"/>	
AGA Chemical	AK 225	100	0.00	<input type="checkbox"/>	

**Conclusion:** The Armakleen E-2002 did an excellent job of removing all flux with just stir-bar agitation in 15 minutes (appeared to perform as good if not better than Asahiklin).