

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2001  
DateRun: 08/08/2001  
Experimenters: Jason Marshall  
ClientType: Electronics Manufacturer  
ProjectNumber: Project #1  
Substrates: Ceramics, Glass/Quartz  
PartType: Part  
Contaminants: Waxes  
Cleaning Methods: Immersion/Soak  
Analytical Methods: Visual

Purpose: To clean supplied parts using two successful cleaners.

Experimental Procedure: The two successful products from the previous trial, Bio T Max and D-Greeze 500 LO, were poured into two petri dishes at full strength. The two glass slides with the ceramic pieces were immersed into the solutions and allowed to soak for 30 minutes at room temperature. After soaking, the glass/ceramic parts were observed to determine the extent of the wax removal. If the wax was completely removed, the parts were rinsed in DI water at room temperature and dried using air blow off. If the wax was still on the parts, an additional soak was performed in the solution. The parts would be observed every 5 minutes until the wax was removed. The total time would be recorded and cleaned parts would be rinsed and dried

Results: The Bio T Max started removing the wax within the first 30 minutes. Some of the ceramic became dislodged from the glass base. After an additional 20 minutes more pieces came off, but the majority of the ceramic pieces remained. The glass slide was then submersed in a beaker with Bio T Max and cleaned for 10 minutes in an a Crest Ultrasonic 40 kHz tank at room temperature. At the end of the ten minutes, all of the ceramic had been removed from the glass.  
The D-Greeze 500 LO started removing some of the wax during the initial 30 minute cleaning. After the additional 20 minutes of soaking, the glass was still stuck to the second material. There was no visible wax remaining on the top of the part. An ultrasonic cleaning was performed for 10 minutes. The two pieces were still attached after the cleaning.

Summary:

<b>Substrates:</b>		Ceramics, Glass/Quartz			
<b>Contaminants:</b>		Waxes			
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
Bio Chem Systems	Bio T Max	100		<input checked="" type="checkbox"/>	
Transene Company, Inc.	D Greeze 500 LO	100		<input type="checkbox"/>	

Conclusion: Bio T Max in conjunction with ultrasonic energy (40kHz) was successful in removing the wax from the glass and ceramic pieces. The D-Greeze 500 LO was not as successful but did show good signs of removing the wax.