CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2003
DateRun:	01/28/2003
Experimenters:	Jason Marshall
ClientType:	Manufactures parts for Semi-Conductor Industry
ProjectNumber:	Project #1
Substrates:	Ceramics
PartType:	Coupon
Contaminants:	Waxes
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To evaluate fourth client supplied wax.
Experimental Procedure:	One product was selected from the laboratories database of testing results based on client supplied data. Five other products were also selected based on success in previous trial. All six semi-aqueous products were used at full strength in 600 ml beakers. The products were heated to 130 F on a hot plate. Eighteen preweighed ceramic coupons were coated with client supplied Roger Reed 93114 wax. The wax was first melted using a Master Appliance heat gun in a beaker and applied to the coupons using a swab. The coupons were allowed to cool to room temperature before weighing a second time. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. Coupons were rinsed in tap water for 15 seconds at 120 F, followed by air blow off at room temperature. Once dry, coupons were weighed a final time and efficiencies for each cleaner were calculated.
Results:	Only one product, Opti Clear, removed over 90% of the wax in the five minutes. Four of the remaining five removed about half of the wax. These products may benefit from a longer cleaning time. One cleaner was very ineffective, removing only about 4% of the wax. The table below lists the amount of wax applied and removed. Table 1. Wax Removal

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Table 1. Wax Removal

Summary:

Substrates:	Ceramics				
Contaminants:	Waxes				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
National Diagnostic	Opti Clear	100	91.43	☑	
Pentone Corporation	Citrikleen XPC	100	55.12	☐	
Bio Chem Systems	Bio T 200 A	100	58.53	☐	
Gemtek Products	SC EZ Solv Safety Solvent	100	46.21	☐	
Transene Company, Inc.	D Greeze 500 LO	100	51.45	☐	
Gemtek Products	SC EZ Solv Safety Solvent	100	4.39	☐	
Florida Chemical Company	Citrus Burst 7	100	46.21	☐	

Conclusion: The one successful product and the four marginally successful products will be used in the next trial on the fifth supplied wax. An additional trial will be run on the four products at an extended time.