CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003

DateRun: 01/27/2003

Experimenters: Jason Marshall, Heidi Wilcox

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 reevaluate cleaners on fourth wax using longer cleaning time

Experimental Procedure: Five cleaners from the previous trial were used at full strength at 130 F in 600 ml beakers. Fifteen coupons from the previous trial were immersed into each beaker for 15 minutes. Coupons were then rinsed in tap water at 120 F for 15 seconds and dried using air blow off. A second final weight was recorded and efficiency at the extended cleaning times were calculated.

Results: The five cleaners all removed over 95% of the wax after the additional 15 minutes of soaking. The table below lists the amount of wax remaining after the first 5 minutes as well as how much was left after the 15 minutes of additional cleaning.

Table 1. Wax Removal

Cleaner	Initial wt	Final wt	% Removed
Opti Clear	0.0113	-0.0002	101.77
	0.0390	-0.0011	102.82
	0.0322	0.0014	95.65
Citrikleen XPC	0.1136	0.0022	98.06
	0.1422	0.0076	94.66
	0.1773	0.0018	98.98
Bio T 200 A	0.1876	0.0049	97.39
	0.2119	0.0044	97.92
	0.1432	0.0076	94.69
Citrus Burst 7	0.2523	0.0657	73.96
	0.1922	0.0013	99.32
	0.1982	0.0022	98.89
D-Greeze 500 Lo	0.1760	-0.0007	100.40
	0.2098	0.0135	93.57
	0.2326	0.0038	98.37

Summary:

Substrates:	Ceramics
Contaminants:	Waxes

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
National Diagnostic	Opti Clear	100	100.08	☑	
Pentone Corporation	Citrikleen XPC	100	97.23	☑	
Bio Chem Systems	Bio T 200 A	100	96.67	☑	
Florida Chemical Company	Citrus Burst 7	100	90.72	☑	
Transene Company, Inc.	D Greeze 500 LO	100	97.44	☑	

Conclusion: The extra cleaning time revealed that all five cleaners were capable of removing the wax. All five will be used on the fifth supplied wax.