CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 06/04/2002

Experimenters: Jason Marshall

ClientType: Optical Manufacturer

ProjectNumber: Project #1

Substrates: Plastic

PartType: Part

Contaminants: Inks

Cleaning Methods: Manual Wipe

Analytical Methods: Visual, Wipe

Purpose: To evaluate successful cleaners on supplied parts.

Experimental Procedure: The four products from the previous trial were used at full strength and heated to 130 F on a hot plate in 400 ml beakers. Using a soft paper towel soaked in each heated solution, lenses were wiped until the ink was removed. The time required to clean was recorded. A second evaluation with the products involved soaking the lenses in the solution for 5 minutes, making observations through out the soak. At the end, the lenses was wiped for a maximum of 10 seconds. The lenses were then rinsed in a tap water rinse at 120 F for 10 seconds and wiped dry.

Results: All products were able to remove all of the ink in less than 1 minute during the manual wipe cleaning. Loctite 7360 was the fastest, removing the ink within 17 seconds. None of the products dissolved the ink from the lenses within the 5 minute soak cleaning. The following table lists the observations made during each cleaning process.

Wipe Observations	Soak Observations	W ank +		S rank / 2	=	Overall Rank
24 seconds	No dissolving, wipe at end was easy	3	+	2	=	2.5
19 seconds	Wipe did not remove all the ink	2	+	4	=	3
17 seconds	Possible dissolving, easily wiped	1	+	1	=	1
48 seconds	Small amount of ink left	4	+	3	=	3.5

Summary:

Substrates:	Plastic				
Contaminants:	Inks				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Bio T Max	100	3.00	☑	Wipe Rank
National Diagnostic	Opti Clear	100	2.00	☑	Wipe Rank
Loctite Corporation	7360	100	1.00	☑	Wipe Rank
Twin Rivers Technologies	Methyl Ester 1618	100	4.00	☐	Wipe Rank
Bio Chem Systems	Bio T Max	100	2.00	☑	Soak Rank
National Diagnostic	Opti Clear	100	4.00	☐	Soak Rank
Loctite Corporation	7360	100	1.00	☑	Soak Rank
Twin Rivers Technologies	Methyl Ester 1618	100	3.00	☑	Soak Rank

Conclusion: A follow up test will be run on the top two products, Loctite 7360 and Bio T Max, to determine how long to soak the lenses to remove the ink with no wiping.