CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	1999
DateRun:	09/13/1999
Experimenters:	Jason Marshall
ClientType:	Consultant
ProjectNumber:	Project #1
Substrates:	Liquid
PartType:	Coupon
Contaminants:	Alcohol
Cleaning Methods:	
Analytical Methods:	Colorimeter
Purpose:	To determine if the addition of bleach would effect the chlorine readings.
Experimental Procedure:	Two methods were used to verify the effects of bleach. The first method used Micro 90 at 2% and Evanol at 5% by volume solutions. Six 80 ml beakers were filled with the cleaner and contaminant solution. Different amounts of bleach were added to each solution. Colorimeter readings were made and compared to the each other. The volumes of bleach used were: 0 ml, 3 drops, 1 ml, 2 ml, 3 ml, 8 ml. The other method used varying amounts of Evanol mixed with the Micro 90. Initial colorimeter readings were made and recorded. Bleach was added to these standards 1 ml at a time. After each addition of bleach, colorimeter readings were made. The amount of Evanol used were: 5%, 10% and 15%. SUBSTRATE MATERIAL: Liquid CONTAMINANTS: DuPont Evanol (Vinyl Alcohol Polymers & Copolymers CAS#s: 9002-89-5, 25213-24-5, 54626-91-4; Methanol Bulk/Packaged CAS #: 67-56-1; Sodium Acetate CAS#: 127-09-3) CONTAMINATING PROCESS USED: DI water added to known amounts of the contaminant
Results:	Both tests showed that the addition of the bleach did not effect the chlorine readings for the Cleaner/ Contaminant mix. Table 1 lists the results from the constant Evanol samples and Table 2 lists the results of the different standards.

Table 1. Evanol 5% with Bleach

Bleach Vol	3 drops	1 mL	2 mL	3mL	8mL
Chlorine Level	0.02	0.02	0.02	0.02	0.02

Table 2. Multiple Evanol Percents with Bleach

	Bleach Vol			
Evanol %	0 mL	1 mL	2 mL	3mL
0	0	NT	NT	NT
5	0.05	0.05	0.03	0.05
10	0.09	0.11	0.1	0.1
15	0.13	0.14	0.14	0.14

Summary:	
Conclusion:	The addition of bleach to the sample solutions did not effect the chlorine readings made with the colorimeter.