CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 04/10/2002

Experimenters: Jason Marshall, Purav Dave

ClientType: Cleaning Equipment Mfr

ProjectNumber: Project #2

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Resins/Rosins

Cleaning Methods: Ultrasonics

Analytical Methods:

Purpose: 6th contaminant cleaning

Experimental Procedure: Thirteen preweighed coupons were coated with Solutia Gelva 2895 (50862-46-9; 141-78-6; 142-82-5; 67-63-0; 64-17-5; 108-05-4) with a hand held swab. Coupons were reweighed. Five coupons were clipped to wire racks and immersed into the Flow-Matic machine and cleaned for 1 minutes using ultrasonics at 92 F, removed and rinsed in a tap water spray and re-immersed into the ultrasonics for an additional 1 minute followed by a second 5 second rinse. The coupons were then dried using an air knife for 15 seconds. A second set of five coupons followed the same cleaning cycle except they were hung on a wire stand and immersed into a Crest 40 kHz ultrasonic tank. The final three coupons were cleaned in water using stir-bar agitation, rinsed with the spray and dried with air knives.

Results: Comparison of the two processes revealed that both system were ineffective at removing the resin from the stainless steel coupons.

Table 1. Cleaning Efficiencies

Process	Flow-Matic	Traditional
	13.35	10.72
	11.87	14.07
	13.03	10.22
	10.87	14.31
	13.80	15.48
Average	12.59	12.96
Std Dev	1.20	2.34

Water in the immersion cleaning removed the same amount of resin as the ultrasonic systems.
Gelva
13.66
10.61
13.57
12.61 Average
1.737 Std Dev

Summary:

Substrates:	Stainless Steel				
Contaminants:	Resins/Rosins				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Water	Water	100	12.96	☐	Traditional system
Water	Water	100	12.59	☐	Flow-Matic System
Water	Water	100	12.61	☐	Immersion sytstem

Conclusion: Neither system was effective in cleaning the resin.