CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 04/08/2002

Experimenters: Jason Marshall, Purav Dave

ClientType: Cleaning Equipment Mfr

ProjectNumber: Project #2

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Cutting/Tapping Fluids

Cleaning Methods: Ultrasonics

Analytical Methods:

Purpose: 3rd contaminant cleaning

Experimental Procedure: Eighteen preweighed coupons were coated with C.A. Wood C-Eblis Cutting Fluid (64742-53-6, 64742-52-5), using a hand held swab. Coupons were reweighed. Nine 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-imbursed into the ultrasonics for an additional 1 minute followed by a second 5 second rinse. The nine coupons were then dried using an air knife for 15 seconds. The second set of nine coupons followed the same cleaning cycle except they were hung on a wire stand and immersed into a Crest 40 kHz ultrasonic tank.

Results: Comparison of the two processes revealed that the Flow-Matic system was more effective than the traditional ultrasonic equipment. The following table lists the results obtained during the evaluation.

Table 1. Cleaning Efficiencies

Process	Flow-Matic	Traditional
	99.17	99.24
	98.87	98.54
	98.71	99.08
	98.64	99.14
	99.74	99.00
	98.97	97.68
	98.69	98.45
	99.70	98.53
	98.74	97.52
Average	99.03	98.57
Std Dev	0.43	0.63

Summary:

Substrates:	Stainless Steel				
Contaminants:	Cutting/Tapping Fluids				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Water	Water	100	98.57	☑	Traditional
Water	Water	100	99.03	☑	Flow-Matic

Conclusion: The Flow-Matic system was more effective than the traditional ultrasonic method.