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: Greases

Cleaning Methods: Ultrasonics

Analytical Methods:

Purpose: 4th contaminant cleaning

Experimental Procedure: Ten preweighed coupons were coated with Castrol Inc. Braycote 601 perfluoropolyether grease, using 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 immersed 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 five 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 Traditional system was more effective than the Flow-Matic equipment. The following table lists the results obtained during the evaluation.

Table 1. Cleaning Efficiencies

Process	Flow-Matic	Traditional
	24.89	69.91
	44.49	44.62
	13.52	50.76
	16.83	55.29
	20.56	48.17
Average	24.06	53.75
Std Dev	12.18	9.84

Summary:

Substrates:	Stainless Steel				
Contaminants:	Greases				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Water	Water	100	53.75	☐	Traditional system
Water	Water	100	24.06	☐	Flow-Matic system

Conclusion: The traditional ultrasonic method was more effective than the Flow-Matic system. Neither cleaner was successful in removing the grease from the stainless steel coupons.