CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1995

DateRun: 04/18/1995

Experimenters: Donald Garlotta

ClientType: Biomedical Device Manufacturer

ProjectNumber: Project #1

Substrates: Plastic

PartType: Part

Contaminants: Lubricating/Lapping Oils, Fingerprints

Cleaning Methods: Ultrasonics

Analytical Methods: Visual

Purpose: To determine effectiveness of Sea Wash Neutral

Experimental Procedure: Cleaning was performed in the Crest Ultrasonic unit for 15 minutes at 140 F. The parts were then rinsed in a tap water bath and then a DI water bath, both at 140 F and for 5 minutes.
The parts were then dried under air knives for two minutes and then under an IR lamp for 30 minutes. The parts were then analyzed for cleanliness by visual inspection for residual oil and/or water spotting. A water break test was used to detect any non-visible oil. For a oil-free surface, the water should sheet off where the water would bead up on a contaminated surface.

CLEANING CONDITIONS:

	time (min)	Temp (^{o}F)
Ultrasonics	15	142
#1 RINSE/TAP H_2O	5	139
#2 RINSE/DEIONIZED H_2O	5	142
DRY air knives	2	room
DRY- IR Lamps	30	105

Clear Polycarbonate pieces
Fingerprints and light oils

Results: Parts came out very clean, no visible contamination and the water sheets off evenly thus indicating a clean surface. Drying time can be cut down considerably since most of the water is blown off by the air knives (10 minutes would probably be adequate).

Summary:

Substrates:	Plastic				
Contaminants:	Lubricating/Lapping Oils, Fingerprints				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Warren Chemical Company	Sea Wash Neutral	5	0.00	☑	

Conclusion: The Sea Wash Neutral appears to be a cleaner that would be suitable for Biomedical Device Manufacturer's needs.