CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2001
DateRun:	01/22/2001
Experimenters:	Jason Marshall, John Brunelle
ClientType:	Chemical Company
ProjectNumber:	Project #1
Substrates:	Stainless Steel
PartType:	Part
Contaminants:	Latex binder
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Visual
Purpose:	To evaluate semi-aqueous alternatives.

Experimental Procedure:

Three products were selected using the lab's database of past testing. The first part of the evaluation used the products at full strength. The mixer was placed in a graduated cylinder that was slightly larger than the mixer. The solutions were then poured into the cylinders so that the entire mixer was covered. The parts were soaked for an hour. At the end of the hour, the solution was poured out. Observations were made on the condition of the exiting solution. Also, a nylon brush was inserted into the end of the mixer, removed and observed. This cycle was repeated for three hours. The most successful cleaners were used for the second part of the experiment which soaked the mixers over night.

SUBSTRATE MATERIAL: stainless steel static mixers
CONTAMINANTS: Latex binder (water 53.648%, Vultex CA-1 catalyst 0.724% (7664-41-7), Igepal CO-630 0.545% (9016-45-9), Biosoft D35 X 2.595%, Dur-O-Set NS 25-1823 24.447% (50-00-0), Fulatex Polymer 12.663%, Black pigment BS 15870 5.478%(1333-86-4), Repearl F-8025 0.900% (57-55-6)

Results:

Two of the cleaners showed signs of dissolving the contaminant. Both solutions of Ecolink and Savogran came out looking dirty. Some large contaminant pieces were observed in the Savogran product. Solvent Kleene did not work and was not used after the first hour of testing. At the end of the overnight soak, Ecolink was determined to less successful than the Savogran.

Further cleaning was performed using Savogran only. A system of pouring solution through the mixer and using a nylon brush proved to very effective in removing large chunks of contaminants. When the part was rinsed with water, it was noted that the flow through the mixer had decreased even further from the aqueous cleaning trials. One of the mixers had no flow. The solution was doing an excellent job loosening the contaminant inside the mixer. However, the contaminant pieces were too large to be easily removed, resulting in the clogging of the static mixer. The solution once heavily soiled was successfully filter and reused several times during the cleaning process.

Summary:

Substrates:	Stainless Steel				
Contaminants:	Latex binder				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Inland Technologies Inc	Safety Prep	100	0.00	☐	
Transene Company, Inc.	D Greeze 500 LO	100	0.00	☐	
Savogran Company	SI #8 Coating Remover	100	0.00	☑	

Conclusion:

Cleaning using Savogran SI # 8 Coating Remover was the most successful cleaner tested to date. Future cleaning procedure should include soaking the mixer for a period of time, followed by inserting a narrow nylon brush. Forcing compressed air through the mixer may help to loosen the contaminant in the hard to reach center of the mixer.