CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2001
DateRun:	08/13/2001
Experimenters:	Jason Marshall
ClientType:	General
ProjectNumber:	Project #1
Substrates:	Brass
PartType:	Part
Contaminants:	Paints
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Visual
Purpose:	To identify potential cleaning formulations for cleaning brass parts
Experimental Procedure:	Nine cleaning formulations were selected based on past trials and vendor information according to the client supplied data. Three solutions were used at 100% and the remaining six were diluted to 10% using DI water in 250 ml beakers. Solutions were heated to 130 F in a Branson 3150 40 kHz ultrasonic tank filled with water. One part was submersed into the heated solution and cleaned for 10 minutes. Parts were observed after the first 5 minutes and at the end of cleaning. Upon completion of cleaning, parts were rinsed with tap water at 120 F and dried using a heat gun at 500 F. Observations were recorded and products were evaluated for effectiveness.
Results:	Most of the products tested showed some signs of removing the paint from the brass parts. A couple of the products brightened the exposed metal. The following table lists the observations made at the 5 and 10 minute cleaning intervals, followed by a table of the ranking for each product (1 = best).

Cleaner	5 min	10 min	Ranking
Soy Gold 2000	dirt removed-paint stil there	paint softened	9
Compliance	dirt removed-paint softened	paint coming off, brightening of metal	6
Shopmaster RC	paint dissolving	dissolving and peeling	2
Bio T Max	paint dissolving-peeling	exposed brass brighter	4
SC Supersolve	paint lifting-peeling	more peeling, some brightening of metal	3
Inproclean 3800	lifting-dissolving	some brightening, more peeling	7
Inproclean 4000 T	dissolving-peeling	good brightening, most of paint peeled off	1
Beyond 2003	some dissolving/ lifting	peeling	8
Polyspray Jet 790 XS	lifting-dissolving-brightening	peeling, good brightening	5
Inproclean 4000 T			
Shopmaster RC			

CLEANING LABORATORY EVALUATION SUMMARY

SC Supersolve			
Bio T Max			
Polyspray Jet 790 XS			
Compliance			

After cleaning was completed, it was noted that the parts selected for cleaning were not identical in the amount of paint and size of the part. Additional test will be performed for the top six product with more closely matched parts. View pictures of dirty and clean samples.

Summary:

Substrates:	Brass				
Contaminants:	Paints				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
AG Environmental Products	Soy Gold 2000	100	9.00	☐	Rank
Brulin Corporation	Compliance	5	6.00	☐	Rank
Buckeye International	Shopmaster RC	100	2.00	☑	Rank
Bio Chem Systems	Bio T Max	100	4.00	☑	Rank
Gemtek Products	SC Supersolve Safety Solvent	100	3.00	☑	Rank
Oakite Products	Inproclean 3800	5	7.00	☐	Rank
Oakite Products	Inproclean 4000 T	100	1.00	☐	Rank
Today & Beyond	Beyond 2003	5	8.00	☑	Rank
US Polychem Corporation	Polyspray Jet 790 XS	5	5.00	☑	Rank

Conclusion:

The top six products, Inproclean 4000 T, Shopmaster RC, SC Supersolve, Bio T Max, Polyspray Jet 790 XS and Compliance will be reevaluated under the similar conditions using more equal parts.