CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2007
DateRun:	02/05/2007
Experimenters:	Heidi Wilcox
ClientType:	Metal Working
ProjectNumber:	Project #1
Substrates:	Brass
PartType:	Part
Contaminants:	Buffing/Polishing Compounds
Cleaning Methods:	Ultrasonics
Analytical Methods:	Visual
Purpose:	To determine if temperature or concentration were the cause for the tarnish seen on the parts cleaned during the on-site piloting.
Experimental Procedure:	The product was selected based on on-site pilot testing. The product was diluted to 5% and 10 % using DI water. Both solutions were heated to the lower temperature of 130F in a Crest 40kHz ultrasonic filled with water. The solutions were degassed for 5 minutes. Three brass cylinders soiled with buffing compound were placed in each beaker and cleaned for 5 minutes using 40kHz ultrasonic cleaning. He rings were rinsed for 10 seconds in 120F tap water and dried for 10 seconds using compressed air at 68F. Parts were visually inspected for tarnish.
Results:	The parts in both solutions tarnished. This was observed by the fact they changed color from a yellow to a rose during cleaning. The parts were previously cleaned at 150F in this solution; therefore, temperature was thought to be a factor in the tarnishing as well as chemistry. With these results further testing of this product will be done with this chemistry at room temperature to determine definitely if temperature or chemistry is causing the tarnish.

Summary:

Substrates:	Brass				
Contaminants:	Buffing/Polishing Compounds				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
US Polychem Corporation	Polyspray Jet 790 XS	5	0.00	☐	Tarnished
US Polychem Corporation	Polyspray Jet 790 XS	10	0.00	☐	Tarnished

Conclusion: The product was found to tarnish parts at a lower temperature of 130 F. Further testing will be done with the product at room temperature to definitely determine whether chemistry or temperature is causing the tarnish.