CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2006
DateRun:	10/01/2006
Experimenters:	Jason Marshall
ClientType:	Metal Working
ProjectNumber:	Project #1
Substrates:	Brass
PartType:	Part
Contaminants:	Buffing/Polishing Compounds
Cleaning Methods:	Ultrasonics
Analytical Methods:	Photography, Visual
Purpose:	To evaluate successful cleaner at various operating conditions to meet the 2 minute cleaning time.
Experimental Procedure:	One cleaning product was diluted to 5 and 10% using DI water in 250 ml beakers. Each beaker-solution was first heated to 130 F in a Branson 3510 ultrasonic unit immersed in water. The products were degassed for at least five minutes before cleaning. Supplied brass parts that were received already contaminated were cleaned in each solution for up to two minutes. Four types of parts were cleaned using three of each type were cleaned. In addition, one brass buckle was cleaned. Following cleaning in the 40 kHz ultrasonic tank, parts were rinsed for 15 seconds in a tap water bath at 120 F and dried using dry compressed air at room temperature. Parts were analyzed visually and photographs were taken before and after cleaning for comparison. Cleaned parts were packaged and sent to the client. Following the cleaning at 130 F, any unsuccessful concentration was then heated to 150 and more parts were cleaned, rinsed, dried and analyzed in the same manner.
Results:	Alconox Detergent 8

Concentration	Temperature	Part Description	Observation
10%	130	Three stripes	needed only 30 seconds
		US circle	needed 60 seconds
		Small bars	needed only 30 seconds
		Large bars	took full 2 minutes
		Brass buckle	cleaned for 2 minutes
5%	130	Three stripes	needed 45 seconds
		US circle	needed 60 seconds
		Small bars	needed 45 seconds
		Large bars	took full 2 min-not 100% clean
		Brass buckle	cleaned for 2 min-not all clean
5%	150	Three stripes	needed 30 seconds
		US circle	needed 45 seconds
		Small bars	needed 45 seconds
		Large bars	took full 2 min-not 100% clean

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		Brass buckle	cleaned for 2 min

Summary:

Substrates:	Brass				
Contaminants:	Buffing/Polishing Compounds				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Alconox Inc	Detergent 8	5	0.00	☑	
Alconox Inc	Detergent 8	5	0.00	☑	
Alconox Inc	Detergent 8	10	0.00	☑	

Conclusion:

The Detergent 8 worked very well at the 10% concentration and 130 F temperature. The lower concentration also worked fairly well at 130 but had better results at the 150 F temperature.