CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 02/01/2007

Experimenters: Jason Marshall

ClientType: Jewelry Mfr

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Part

Contaminants: Buffing/Polishing Compounds

Cleaning Methods: Ultrasonics

Analytical Methods: Visual

Purpose: To evaluate selected products on supplied parts using ultrasonic cleaning

Experimental Procedure: Three products were selected from previous trial based on effectiveness. Each product was diluted to 5% using DI water in 600 ml beakers. Each solution was heated to 150 F in a Branson 3510 ultrasonic tanked filled with water. The solutions were degassed for 5 minutes.

Three stainless steel rings without lacquer finish but were coated with Jackonslea Grey Color 305 A (1344-28-1) were cleaned in each solution for 5 minutes using 40 kHz ultrasonic cleaning. Rings were rinsed for 15 seconds in 120 F tap water and dried using compressed air at room temperature for 30 seconds. If the rings were not completely clean after the initial 5 minutes, the rings would be cleaned for another 5 minutes. In addition, if the rings were not completely cleaned after 15 minutes, new concentrations would be tested (10 and 20%).

Results: The observations made for each product at the various times and concentrations are recorded in the table below.

Product	Conc	Time	Observation
Det 8	5	5	Not clean. Most clean of three products at 5%
		10	Almost clean
		15	Still not 100% clean
	10	15	Looked nearly clean, about same as MC 580
	20	10	All rings looked cleaned
MC 580	5	5	Not clean. About the same as 790 XS
		10	Cleaner than Det 8
		15	Still not 100% clean
	10	15	Looked nearly clean, about same as Det 8
	20	10	All rings looked cleaned
790 XS	5	5	Not clean. About the same as MC 580
		10	About the same as Det 8
		15	Still not 100% clean
	10	15	No 100% clean
	20	10	All rings looked cleaned

Summary:

Substrates:	Stainless Steel
Contaminants:	Buffing/Polishing Compounds

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Alconox Inc	Detergent 8	20	0.00	☑	
Matchless Metal Polish Company	MC 580	20	0.00	☑	
US Polychem Corporation	Polyspray Jet 790 XS	20	0.00	☑	

Conclusion: All three products worked well at a 20% concentration for 10 minutes at 150 F. Both Detergent 8 and MC 580 worked well at 10% concentration for 15 minutes at 150 F.