CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	1995
DateRun:	05/17/1995
Experimenters:	Donald Garlotta, Jay Jankauskas
ClientType:	Brass Instrument Manufacturer
ProjectNumber:	Project #1
Substrates:	Brass
PartType:	Part
Contaminants:	Cutting/Tapping Fluids, Greases, Lubricating/Lapping Oils, Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	Further evalution of two products
Experimental Procedure:	This trial will test the Oakite Inproclean #3800 against the LPS Precision Clean for Musical Instrument Refinisher. The Oakite 3800 was very successful in last week's testing and it should be interesting to see how the LPS Precision Clean compares to it. The four sample parts sent from Musical Instrument Refinisher were weighed prior to contamination. All four contaminants were spread on each part at various locations as shown on the next page. Samples #3 and #4 will be brushed off after agitation to see if the brushing effect will scratch the finish of the parts. Parts #1 and #2 will not be brushed so to get a better idea of each cleaner's efficiency of removing the contaminants. The cleaners were each heated to 140 degrees and agitated with a stir bar. Cleaning lasted for 15 minutes. The rinse temperature was also at 140 degrees. Rinsing lasted for 5 minutes. The samples were then dried under air knives for two minutes and then placed in a convection oven set at 160 degrees for 90 minutes. After weighing, the parts were then heat sealed in plastic to avoid contamination.

Results:

Part #2	Part #4
Clean Mass = 32.9250 grams	Clean Mass = 61.6807 grams
Contaminated Mass = 33.1525	Contaminated Mass = 61.9530
Mass After Cleaning = 33.1005	Mass After Cleaning = 61.6744
Percent Removal = 23%	Percent Removal = 102%

OBSERVATIONS:
Part #2- Good removal on the Selmer grease and the 90 Wt Oil. The LPS Precision Cleaner was ineffective against the Valvoline bearing grease (Oakite 3800 performed much better). The LPS Precision Clean performed better than the Oakite 3800 against the lapping oil. The biggest problem about the LPS product is that it discolored the unfinished brass section.
Part #4- Excellent removal with the brushing. The finished brass was very shiny, but the unfinished brass was greatly discolored.

Summary:

Substrates:	Brass				
Contaminants:	Cutting/Tapping Fluids, Greases, Lubricating/Lapping Oils, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
LPS Laboratories	Precision Clean Concentrate	10	0.00	☐	

Conclusion: Because of the discoloration problem on both parts, the LPS Product should not be considered by Musical Instrument Re-finisher.