CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	1995
DateRun:	05/11/1995
Experimenters:	Donald Garlotta, Jay Jankauskas
ClientType:	Brass Instrument Manufacturer
ProjectNumber:	Project #1
Substrates:	Brass
PartType:	Coupon
Contaminants:	Cutting/Tapping Fluids, Greases, Lubricating/Lapping Oils, Oil
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	Evaluate Calgon Geo-Guard 2215
Experimental Procedure:	Coupons were cleaned and dried with a heat gun to get the clean weight. A total of nine coupons were contaminated with contaminants #1, #2, and #4. #3 was ommitted because of lack of coupons and this appears to be the easiest contaminant to remove. The coupons were then weighed after contamination. Cleaning was done in an aggitated stirbar beaker at 140 degrees for 5 minutes. The parts were then rinsed in tap water at 140 degrees for 5 minutes and dipped in deionized water for a few seconds. Drying was done under the air knives for 2 minutes and then placed in an oven set at 216 degrees for 90 minutes.
Results:	Lapping oil- The Geo-Guard does not remove the lapping oil with the aggitation alone. After brushing for about 15 seconds, all of the lapping oil is removed, but it appears that the lapping oil has etched the brass coupon. The Geo-Guard wasn't effective in removing the Valvoline bearing grease or the Selmer Grease at all.

Summary:

Substrates:	Brass				
Contaminants:	Cutting/Tapping Fluids, Greases, Lubricating/Lapping Oils, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Calgon Corporation	Geo Guard 2215	10	0.00	☐	

Conclusion: The Geo-Guard solution was ineffective for all contaminants. It was also noted that the geo-Guard Etches onto brass when used with the lapping compound. Weights of the coupons after cleaning were not taken because it was obvious of the cleaner's ineffectiveness. The Geo-Guard will not be tested any further for Musical Instrument Refinisher.