CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2003
DateRun:	06/12/2003
Experimenters:	Jason Marshall
ClientType:	Medical Instrument Mfr
ProjectNumber:	Project #1
Substrates:	Nickel, Titanium
PartType:	Part
Contaminants:	Lubricating/Lapping Oils
Cleaning Methods:	Ultrasonics
Analytical Methods:	Performance Test, Visual, microscopic
Purpose:	To evaluate one of the client requested products on the supplied parts
Experimental Procedure:	One client supplied product was heated to 130 F and degassed in a Branson 200 40kHz ultrasonic unit for five minutes. One section of tubing was placed in the tank and cleaned for five minutes. The part was then rinsed in a tap water bath at 120 F for 15 seconds and dried using a Master Appliance Heat Gun at 500 F for 15 seconds. The part was then analyzed for cleanliness using the performance test and microscopic inspection.
Results:	The tubes were attached to a dry air line. The end of the tube was inserted into a latex glove that was tied off at the end (to simulate the balloon). Air was turned on and run until the glove filled up to the size of medium hand. The air was shut off and the gloves were inverted and visually inspected for signs of particulate. The cleaned part left no visible signs of contamination. Visual inspection under a microscope revealed that there may have been residual lubricant still inside the tube, but there was less than the uncleaned part.

Summary:

Substrates:	Nickel, Titanium				
Contaminants:	Lubricating/Lapping Oils				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
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Conclusion: Increasing cleaning time may improve the removal of the lubricant from inside the tubing. Additional testing may be done to determine if pressurized rinsing will also help cleaning efficiency.