CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2019
DateRun:	10/20/2019
Experimenters:	Sabrina Apel, Othon Pagounes
ClientType:	Medical Instrument Mfr
ProjectNumber:	Project #1
Substrates:	Titanium
PartType:	Part
Contaminants:	Oil
Cleaning Methods:	Ultrasonics
Analytical Methods:	Visual, Timing
Purpose:	To evaluate the dry time of two solvent products used to remove J2 oil from titanium parts.
Experimental Procedure:	Two titanium parts were pre-contaminated with J2 soil. Cleaners were heated to vendor recommended temperatures, parts were immersed and sonicated in a beaker in the ultrasonic tank for 15 minutes. After cleaning, the parts were timed to identify how long the solvent products would take to air dry at room temperature (68F).
Results:	Observations: Downanol PnBGE showed signs of being completely dry around 100 minutes at room temperature (68F), and Sta-Sol ESS 160 still had solvent on the part even after 120 minutes. A dry step with an unheated or heated drying process would be recommended for Sta-Sol ESS 160; heat would make the dry time be reduced compared to air drying at room temperature.

Summary:

Substrates:	Titanium				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Dow Chemical Company	Dowanol PnBGE	100%	120.00	☑	Needs a dry step if wanting to cut down dry time.
JR Hess & Co., Inc.	Sta-Sol ESS 160	100%	120.00	☑	Needs a dry step to cut down on dry time.

Conclusion: Dowanol PnBGE dries within 120 minutes and Sta-Sol ESS 160 does not dry within 120 minutes and will need a drying step after cleaning titanium parts using heated ultrasonics.