CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 09/22/2016

Experimenters: Carla De La Cruz

ClientType: Jewelry Mfr

ProjectNumber: Project #3

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric, Visual

Purpose: To find the best fit product for cleaning Leach Garner's XXAluminum #19 from copper and stainless steel surfaces meant to resemble the cleaning of precious metals.

Experimental Procedure: Coupons of stainless steel and copper were selected and arranged on trays, so that each cleaner had an assigned set of each surface. Before taking initial weights coupons were wiped down with Kimwipes. After taking weights the coupons were promptly soiled and reweighed. All cleaners were gathered in respective bottles and beakers. A stir bar was used in conjunction with a heating plate equipped to stir the solutions. The coupons were added to the beakers three of a kind at one time, and then allowed to sit in the stirred solution at room temperature for 5 minutes while observations were taken. Finally, clean weights were taken at the end of all the testing.

Results:

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed
FluoSolv CX	0.0328	0.0027	91.77
	0.0337	0.0026	92.28
	0.0479	0.0007	98.54
FluoSolv NC	0.0361	0.0115	68.14
	0.0497	0.0106	78.67
	0.0347	0.0095	72.62
Vertrel Sion	0.0242	0.0035	85.54
	0.0200	0.0043	78.50
	0.0388	0.0044	88.66
Solstice PF	0.0447	0.0020	95.53
	0.0329	0.0030	90.88
	0.0285	0.0029	89.82

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
NuGeneration Technologies, LLC	FluoSolv CX	100	94.20	☑	
NuGeneration Technologies, LLC	FluoSolv NC 786	100	73.15	☐	
DuPont	Vertrel Sion	100	84.23	☑	
Honeywell	Solstice PF with N2	100	92.08	☑	

Conclusion: The testing of various cleaners on aluminum, concluded that FluoSolv CX was the best cleaner, followed by the Honeywell Solstice PF product. The oil was very lightweight and thus came off quite easily. There were some cleaners which removed the cleaner but left behind some residue or film on the coupons. Unlike with other testing, the DuPont product did not perform as well as it usually does.