CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 02/28/2016

Experimenters: Jason Marshall, Abigail Giarrosso, Catherine York, Sabrina Apel

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum, Brass, Ceramics, Stainless Steel, Marble, Porcelain

PartType: Coupon

Contaminants: Lubricating/Lapping Oils, Glass

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate possible immersion cleaning process for Brookfield compared to other cleaning solutions.

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Four cleaners were tested at room temperature on aluminum, brass, and stainless-steel coupons to evaluate how the Navi Guard Way Lube 32 soil was cleaned. Preweighed coupons were coated with the supplied Navi Guard soil using a handheld swab and weighed a second time to determine the amount of soil added. Each cleaner was put in a beaker and three coupons were immersed into the solution for 5 minutes. The coupons were then stood upright to air dry for 15 minutes and then placed on a tray. There was no rinse. Once dry, final weights were recorded, and efficiency calculated for each coupon cleaned.

Results:

Cleaner	Substrate	Initial Wt.	Final Wt.	% Removed
Fluosolv CX	Aluminum	21.5357	21.5362	98.73
	Aluminum	21.5777	21.5790	96.95
	Aluminum	21.6689	21.6689	100.00
	Brass	69.4516	69.4517	99.51
	Brass	69.5391	69.5396	98.05
	Brass	69.6129	69.6129	100.00
	Stainless	60.1003	60.1009	97.35
	Stainless	63.9329	63.9331	99.45
	Stainless	63.8901	63.8941	90.85
Fluosolv NC	Aluminum	21.0619	21.0619	100.00

Summary:

Substrates:	Aluminum, Brass, Ceramics, Stainless Steel, Marble, Porcelain				
Contaminants:	Lubricating/Lapping Oils, Glass				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
NuGeneration Technologies, LLC	FluoSolv CX	100	97.87	☑	
NuGeneration Technologies, LLC	FluoSolv NC 786	100	98.25	☑	

Conclusion: All four cleaners efficiently removed the Navi Guard soil on all three substrates at room temperature. The least efficient cleaner used was Solstice 2A from Honeywell, with the lowest cleaning average on the stainless-steel substrate. The Solstice 2A was still an efficient cleaner with a 97.52% efficiency but was less efficient than the other cleaners used. The most efficient cleaner would be Solstice PF from Honeywell which had an efficiency of 98.48%. All cleaners worked extremely well.