CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2019

DateRun: 08/28/2019

Experimenters: Othon Pagounes

ClientType:

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate an all-purpose degreasing cleaner on the removal of baked-on oil from stainless steel coupons.

Experimental Procedure: Production Soil (200 ml Quench oil, 200 ml cutting oil) was prepared mixing for 20 minutes at room temperature (68˚F) using a magnetic stirrer. Approximately 100 mg of the soil was applied to a pre-weighed clean stainless-steel coupon on one side using a handheld swab. Production soil contaminated coupons were baked in an oven for 30 minutes at 105° C (220 ° F). Coupons cooled at room temperature (68˚F) before taking dirty weights.

Three coupons were immersed in an unheated, ready-to-use cleaner for 30 minutes. Coupons were rinsed in an unheated DI water bath for 20 minutes before drying in the oven at 105° C for 30 minutes. Coupons cooled to room temperature (68˚F) before final weights were recorded.

Results:

Chemistry Evaluated	Initial Wt.(g) Cont.	Final Wt. (g) Cont.	% Cont. Removed	% Overall Removed
Crystal Simple Green	0.0898	0.0088	90.20	83.62
	0.118	0.0099	91.61	
	0.0782	0.0242	69.05	
Big Wipes Cleaner & Degreaser 4-201-023	0.0981	0.0108	88.99	90.36
	0.0675	0.0079	88.30	
	0.0742	0.0046	93.80	

Summary:

Substrates:	Stainless Steel				
Contaminants:	Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Simple Green	Crystal Simple Green Industrial Cleaner & Degreaser	100	83.62	☐	
Sycamore Group	Sycamore Big Wipes	100	90.36	☑	

Conclusion: Big Wipes Cleaner & Degreaser 4-201-023 was more effective than Crystal Simple Green at removing production soil from stainless steel.