CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2021

DateRun: 09/22/2021

Experimenters: Nicole Kebler

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Greases, Dirt, Oil, Hucker's Soil, Starch, Food

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Visual

Purpose: Chemco Purple Tiger reformulation replacing FBS Miranol effectiveness using Huckers soil, DCC-17, DCC-12 and dried soda (Cola).

Experimental Procedure: Twelve pre-weighed coupons, three stainless steel coupons per soil, were soiled with Huckers soil, DCC 17, DCC 12, and dried soda using a hand-held swab. The DCC 12 and Dried Soda coupons were baked for one hour at 475 degrees Fahrenheit. Dirty weights were recorded for the Huckers soil and DCC 17 after the coupons had dried for 24 hours at room temperature (68° F) and after the DCC 12 and Soda had been baked on. Three coupons of the same soil were aligned into a Single Line Washing Unit (SLW) with Wypall X60 attached to the cleaning sled. The Wypall X60 reinforced wipe along with the coupons were all sprayed two times and were allowed to soak for 30 seconds. Afterward, the SLW was activated, and the coupons were cleaned for 20 cycles. Cleaned coupons dried overnight at room temperature before the final weights were recorded.

Results: There was full removal of the Huckers soil and the DCC 17 soil, both had an average of 96% removal effectiveness. DCC 12 had an average removal of 31% and was not effective for dried soda with a 3% removal. Some soil along the middle had come off for the DCC 12, but it did not appear any of the soda was removed.

Soil	Initial wt. of Cont.	Final wt. of Cont	Average	Combined Average
Hucker's Soil	0.2129	0.0052	97.56	96.10
	0.1789	0.0100	94.41	
	0.1527	0.0056	96.33	
DCC-17	0.4253	0.0019	99.55	95.75
	0.3943	0.0414	89.50	
	0.4172	0.0075	98.20	
DCC-12	0.3904	0.3899	0.13	31.11
	0.3360	0.1864	44.52	
	0.3095	0.1588	48.69	
Dry Soda	0.1338	0.1388	-3.74	3.32
	0.1129	0.0968	14.26	
	0.0880	0.0885	-0.57	

Summary:

Substrates:	Stainless Steel
Contaminants:	Greases, Dirt, Oil, Hucker's Soil, Starch, Food

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Chemco	Purple Tiger All purpose cleaner	RTU	0.00	☐	The Chemco Purple Tiger reformulation replacing FBS Miranol was fully effective for Huckers Soil and DCC 17 but not for DCC 12 and dried soda.

Conclusion: The Purple Tiger reformulation fully worked for the removal of Huckers soil and DCC 17. It removed about a third of the soil from DCC 12 and none from dried soda.