

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2019

DateRun: 04/03/2019

Experimenters: Sabrina Apel

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Dirt, Fingerprints, Oil, Food

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Gloss-Color Meter

Purpose: To compare the effectiveness of the supplied cleaner, Sample 1 Condensate, to the comparative cleaner, Chemco Stainless Steel Cleaner/Polish, for cleaning Vegetable Oil/Carpet Soil from stainless steel substrates using the Manual SLW unit.

Experimental Procedure: Three pre-weighed stainless-steel coupons per cleaner were coated with one half of a gram of Vegetable Oil/Carpet Soil at room temperature, using a handheld swab. The contaminated coupons were air dried for 24 hours at room temperature and weighed again to determine the amount of soil added the following day.

Three coupons of each substrate were placed in the SLW unit and a KC Wypal reinforced paper towel was attached to the cleaning sled and treated with two sprays of cleaning solution. Each coupon was sprayed twice with the same cleaning solution. The cleaning unit was run for 20 cycles (equivalent of 30 seconds of cleaning). Coupons were dried and final weights were recorded. Efficiencies were calculated and recorded.

A Spectro Guide Gloss-Color meter from BYK Gardner was used to evaluate gloss. Baseline gloss readings of the surface were measured in five locations on the stainless-steel coupons before cleaning. After each coupon was cleaned and air dried, gloss readings were measured in the same five locations. The difference in gloss-color was then compared to determine effectiveness.

Results: The two cleaning products removed over 97% of Vegetable Oil/Carpet Soil on each substrate using the manual wipe unit.

Table 1: Gravimetric Analysis

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed	% Average
Sample 1 Condensate	0.5102	0.0115	97.75	97.79
	0.5140	0.0103	98.00	
	0.5062	0.0120	97.63	
Chemco Stainless Steel Cleaner/Polish	0.4239	0.0102	97.59	97.96
	0.2368	0.0036	98.48	
	0.5082	0.0111	97.82	

Table 2: Gloss-Color Analysis

Cleaner	Coupon Type	Initial Gloss Reading	Average	Final Gloss Reading	Average
Sample 1 Condensate	Stainless Steel	34.7	35.27	65.6	59.47
		29.0		53.7	
		42.1		59.1	
Chemco Stainless Steel Cleaner/Polish	Stainless Steel	60.0	48.6	53.6	51.77
		54.5		54.5	
		31.3		47.2	

Summary:

Substrates:	Stainless Steel					
Contaminants:	Dirt, Fingerprints, Oil, Food					
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:	

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Ambrosia Industrial-Organic	Ambrosia Sample 1 Condensate	100	97.79	<input checked="" type="checkbox"/>	
Chemco	Stainless Steel Cleaner & Polish	100	97.96	<input checked="" type="checkbox"/>	

Conclusion:

Sample 1 Condensate and Chemco Stainless Steel Cleaner/Polish efficiently removed Vegetable Oil/ Carpet Soil on stainless steel substrates using the Manual SLW Unit. Sample 1 Condensate was as effective as the comparative cleaner, Chemco Stainless Steel Cleaner/Polish, with respective removal rates of 97.79% and 97.96%. According to the gloss-color analysis table, Sample 1 Condensate cleaner demonstrated an increase in gloss-color after cleaning, which is considered to be effective.