CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 10/25/2016

Experimenters: Vinh Tran

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Glass/Quartz, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate the efficiency of the removal of SSL #2 soil from glass and chrome coupons using Citrus Cleaning ES and Windex cleaners, as well as determine the level of streaking/filming on the glass coupons following cleaning.

Experimental Procedure: Two sets of 3 numbered glass coupons and 2 sets of 3 numbered chrome coupons were weighed to obtain initial weights. The coupons were soiled with SSL #2 soil using a hand swab. The soil was allowed to age for 24 hours. Following the 24 hours, the coupons were weighed again to obtain contaminated weights. The first set of three glass coupons and chrome coupons were placed in the manual wipe machine. A Wypall towel was used to cover the sled for the machine. The Wypall towel was sprayed twice and the coupons were sprayed once with the Citrus Cleaning ES. The machine was run for 20 cycles of abrasion surface cleaning. The same procedure was applied to the remaining two sets of 3 glass and chrome coupons with Windex. The coupons were allowed to dry for half an hour before final weights were recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed
Citrus ES_Glass			
	0.0439	0.0024	94.53
	0.0361	0.0008	97.78
	0.0401	0.0036	91.02
Citrus ES_Chrome			
	0.0446	0.0031	93.05
	0.0416	0.0045	89.18
	0.0456	0.0057	87.5
Windex_Glass			
	0.0415	-0.001	102.41
	0.0442	0.0034	92.31
	0.0423	0.0007	98.35
Windex_Chrome			
	0.0464	0.0066	85.78
	0.0452	0.0056	87.61
	0.0525	0.0066	87.43

Visual Rating of Glass coupons 1-5 (Best to worst)

Product Name	Streaking	Filming
Citrus ES	1.5	1
	1.5	1.5
	2	2
Windex	3	3
	3	2.5
	3	3.5

Summary:

Substrates:	Glass/Quartz, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
	Citrus Cleanser Extra Strength	100	93.10		

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A Natural Cleaning Company				☑	
SC Johnson & Son Inc	Windex Glass & More Cleaner (Spray)	100	92.30	☑	

Conclusion: Both the Citrus Cleaning ES and Windex cleaners were extremely effective at removing the soil, above 92%.