CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009

DateRun: 01/26/2009

Experimenters: Jason Marshall, Junhee Cho

ClientType: Community Group

ProjectNumber: Project #1

Substrates: Glass/Quartz, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric, Photography

Purpose: To evaluate supplied recipes for glass cleaning.

Experimental Procedure: The supplied cleaning product was used at the supplied concentration (256:1). A second product, selected by the lab, was used at full strength based on vendor recommended usage for glass cleaning. Preweighed mirrored glass coupons were coated with SSL Soil 2 (Glass soap scum: Water 51.5%, Hair gel 25.6%, toothpaste 10.4%, Shaving cream 5.3%, Hair spray 3.7% and Spray deodorant 3.5%) using a handheld swab and allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added.

Three coupons were placed into a Gardner Straight Line Washability unit. A Kimberly Clark Reinforced paper towel was attached to the cleaning sled and soaked with 5-7 sprays of cleaning solutions. Each coupon was sprayed 7-10 times with the same cleaning solution. The solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for 5 cycles (~10 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were measured, and efficiencies were calculated and recorded. In addition, a panel of four staff members reviewed the cleaned coupons to determine the level of streaking and smearing. They ranked the two sets of cleaners based on which product had less streaking and smearing.

Photographs of the before and after cleaning were taken to assist in the comparison of the two products.

Results: The supplied formulation removed a majority of the soap scum mixture using manual cleaning. The streaking observed on the supplied formulation was less than the traditional cleaning product. The table list the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
BWG Amazing - glass	0.0378	0.0004	98.94
	0.0285	0.0007	97.54
	0.0264	0.0008	96.97
BWG Amazing - chrome	0.0643	0.0027	95.80
	0.0637	0.0020	96.86
	0.0392	0.0017	95.66
Windex - glass	0.0245	0.0009	96.33
	0.0398	0.0007	98.24
	0.0635	0.0016	97.48
Windex - chrome	0.0645	0.0005	99.22
	0.0582	0.0016	97.25
	0.0889	0.0031	96.51

Summary:

Substrates:	Glass/Quartz, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Brazilian Womens Group	Maravilhoso Limpa Vidro	100	96.96	☑	
SC Johnson & Son Inc	Windex Glass & More Cleaner (Spray)	100	97.51	☑	

Conclusion: The supplied product had an overall average efficiency greater than 85% and would be considered effective based on the SSL testing methodology for glass cleaning and for Green Seal GS 37 requirements. Streaking of the supplied formulation was equal to the laboratory selected product.