CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2010
DateRun:	08/11/2010
Experimenters:	Jason Marshall, Timothy Weil
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 supplied products for glass cleaning using manual cleaning

Experimental Procedure:

Supplied products were used at room temperature at the requested dilution. Preweighed chrome and three 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 Wypall X60 reinforced wipe 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 recorded and efficiencies recorded.

Visual observations were made on the coupons for spotting and filming following the general guidelines set forth in the CSPA DCC 09A. Filming is best recognized as "haziness" or overall "milkiness", while streaking is best identified as dried droplets or "spotting", usually found strung together into thin white lines. Each coupon was evaluated separately for filming and streaking, (i.e., product residues without added soil), according to a scale of "1" to "7" with:

Filming Streaking
7 = high filming 7 = high streaking poor (performance)
1 = no visible filming 1 = no visible streaking (excellent performance)

Results:

The supplied product worked better the conventional product at removing the glass soap scum and left less spots and film behind on the glass and mirror surfaces. The table lists the amount of soil added, remaining and efficiency for each coupon cleaned. The table also lists the rating for spotting and filming.

Cleaner	Initial wt	Final wt	% Removed	Spotting	Filming
Windex - glass					
	0.0313	0.0013	95.85	2	3
	0.0618	0.0008	98.71	1	3
	0.0593	0.0019	96.80	1	3
Windex - mirror					
	0.0622	0.0020	96.78	1	3
	0.0555	0.0017	96.94	1	3
	0.0796	0.0034	95.73	1	2
Windex - chrome					
	0.0603	0.0057	90.55		
	0.0769	0.0018	97.66		
	0.0916	0.0032	96.51		
New Leaf Glass Cleaner - glass					
	0.0650	0.0037	94.31	1	3
	0.0472	0.0000	100.00	1	2

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	0.0533	0.0020	96.25	1	2
New Leaf Glass Cleaner - mirror					
	0.0809	-0.0015	101.85	1	3
	0.0505	-0.0003	100.59	1	2
	0.0496	0.0015	96.98	1	2
New Leaf Glass Cleaner - chrome					
	0.0640	0.0035	94.53		
	0.0840	0.0034	95.95		
	0.0529	0.0025	95.27		

Summary:

Substrates:	Glass/Quartz, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
SC Johnson & Son Inc	Windex Glass & More Cleaner (Spray)	100	96.17	☑	Spot - 1.2 Filming - 2.8
New Leaf Clean LLC	New Leaf Glass Cleaner	100	97.30	☑	Film 2.3; Streak 1

Conclusion: The supplied product had an overall average removal efficiency greater than 85% and worked as well as the conventional cleaning product.