

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2017  
 DateRun: 10/01/2017  
 Experimenters: George Liang, Vinh Tran, Hayley Byra  
 ClientType:  
 ProjectNumber: Project #1  
 Substrates: Glass/Quartz, Chrome  
 PartType: Coupon  
 Contaminants: Glass  
 Cleaning Methods: Manual Wipe  
 Analytical Methods: Gravimetric, Visual

Purpose: To evaluate supplied product for glass soil removal from glass, chrome and mirror surfaces.

Experimental Procedure: Pre-weighed glass, chrome and mirror coupons were soiled with one gram of SSL Soil 2 glass soap scum using a hand held swab. The glass soap scum is made from a blend of water 51.5%, hair gel 25.6%, Toothpaste 10.4%, shaving cream 5.3%, hair spray 3.7% and spray deodorant 3.5%. The coupons were allowed to dry for 24 hours at room temperature before re-weighing for the amount of contaminated added onto the coupons. Three of the same type of coupons were placed into a Gardner Straight Line Washability unit. A Wypall X60 reinforced wipe was attached to the cleaning sled and soaked with one spray of cleaning solutions. Each coupon was sprayed once with the same cleaning solution. Both cleaning solutions was made by using the premeasured packets provided by the vendor and diluting it with one quart of water, and shook to mix. The solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for five cycles (~10 seconds). The coupons were left to sit at room temperature overnight and re-weighted again to obtain the amount of contaminants removed. Three testers were used to do a visual ranking to measure the visual efficacy of the cleaning agents. The visual ranking of the cleaned coupons was in accordance to the following ratings: 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" where:

Filming Streaking

7 = high filming 7 = high streaking poor (performance)

1 = no visible filming 1 = no visible streaking (excellent performance)

Results:

Cleaner	Coupon Type	Initial wt. of cont. (g)	Final wt. of cont. (g)	Cont. Removed (%)	Avg. Cont. Removed (%)	Overall Avg. Cont. Removed (%)
Glass & Hard Surface Cleaner	Glass	0.0842	0.0362	57.01	76.29	85.98
		0.0864	0.0110	87.27		
		0.0772	0.0119	84.59		
	Chrome	0.0806	0.0036	95.53	95.25	
		0.0750	0.0025	96.67		
		0.0822	0.0053	93.55		
	Mirror	0.0779	0.0025	96.79	86.39	
		0.0785	0.0021	97.32		
		0.1093	0.0382	65.05		
Oasis 255 Glass Cleaner	Glass	0.0410	0.0048	88.29	87.64	89.98
		0.0495	0.0065	86.87		
		0.0466	0.0057	87.77		
	Chrome	0.0994	0.0092	90.74	91.72	
		0.0956	0.0062	93.51		
		0.0913	0.0083	90.91		
	Mirror	0.0888	0.0088	90.09	90.56	
		0.0988	0.0080	91.90		
		0.1018	0.0105	89.69		

Filming Observations

Cleaner	Coupon Type	Filming (1)	Filming (2)	Filming (3)	Avg. Filming	Overall Filming
	Glass	4.0	4.0	4.0	2.7	2.7

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Glass & Hard Surface Cleaner	Chrome	3.5	1.0	2.0	2.3	3.2
		2.5	1.5	2.0		
		2.0	3.5	3.0		
	Mirror	2.0	2.0	3.5	3.0	
		1.5	2.0	1.0		
		2.5	2.0	2.0		
		6.0	6.0	3.0		
		2.5	1.5	1.5		
		2.5	1.5	1.5		
Oasis 255 Glass Cleaner	Glass	2.0	1.0	1.0	2.7	3.2
		4.5	4.0	4.0		
		2.0	2.0	3.5		
	Chrome	3.5	3.0	2.0	2.3	
		2.0	1.0	1.5		
		4.0	2.0	2.0		
	Mirror	6.0	5.0	5.0	4.7	
		5.0	2.0	5.0		
		5.0	3.0	6.0		

### Streaking Observations

Cleaner	Coupon Type	Streaking (1)	Streaking (2)	Streaking (3)	Avg. Streaking	Overall Streaking
Glass & Hard Surface Cleaner	Glass	4.0	2.5	3.0	3.1	2.6
		3.0	4.0	3.0		
		2.0	4.0	2.5		
	Chrome	1.5	2.0	1.5	2.1	
		1.5	2.0	3.0		
		2.0	3.5	2.0		
	Mirror	2.5	6.0	1.0	2.5	
		1.5	1.0	1.0		
		2.0	5.0	2.5		
Oasis 255 Glass Cleaner	Glass	3.5	5.5	3.5	3.6	3.7
		2.0	3.0	3.5		
		2.5	4.5	4.0		
	Chrome	1.5	3.0	2.0	3.1	
		2.5	5.0	2.0		
		2.5	5.0	4.0		
	Mirror	3.0	2.5	4.0	4.4	
		4.0	6.0	5.0		
		4.0	6.0	5.0		

Summary:

<b>Substrates:</b>	Glass/Quartz, Chrome				
<b>Contaminants:</b>	Glass				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
Case Medical Inc.	BioGone Cleaner/Decontaminator	100	89.09	<input checked="" type="checkbox"/>	

Conclusion:

Both new dilutions worked well at 89%