CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 11/19/2007

Experimenters: Shweta Bansal

ClientType: Lab

ProjectNumber: Project #1

Substrates: Glass/Quartz, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure:

Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Several "do-it-yourself" home formulations were evaluated for performance on several substrates and typical soils for glass cleaning.

Cleaning: Spray cleaner on the coupons
10 secs Manual Wipe cleaning at 130 F
Contaminant: SSL Soil 2 - Glass
Substrate 2"x 4"x 0.06
Glass Coupons
Chrome Coupons

Window & Glass cleaners

Home Formulation 10 - Undiluted vinegar in a bottle

Home Formulation 11 - Equal parts vinegar and water in a bottle

Home Formulation 12 - ½ cup lemon juice and 2 cups water in a spray bottle

Home Formulation 13 - ½ cup vinegar or lemon juice, 2 cups water, ¼ tsp veg oil-based soap (Murphy's) and put in bottle

Home Formulation 14 - ½ cup cornstarch with 2 qts warm water. Apply with sponge and wipe with absorbent towel or cloth. NOTE, do not do on a sunny day or when windows are warm. Solution will dry and cause streaking

Home Formulation 15 - NO Streak Glass Cleaning, ¼ cup white vinegar, 1tbsp corn starch and 1-quart warm water.

Home Formulation 16 - Rubbing alcohol will also clean windows and glass

Results:

Product	Substrate	Average (%)
Formulation 10	Glass	90.05
	Chrome Plated	80.72
Formulation 11	Glass	86.61
	Chrome Plated	89.1
Formulation 12	Glass	82.81
	Chrome Plated	89
Formulation 13	Glass	76.63
	Chrome Plated	83.4
Formulation 14	Glass	80.21
	Chrome Plated	77.82
Formulation 15	Glass	80.59
	Chrome Plated	87.28
Formulation 16	Glass	85.39
	Chrome Plated	100.04

Summary:

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Substrates:	Glass/Quartz, Chrome				
Contaminants:	Films, Soaps				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
No Specific Vendor	Home Formulation 10	100	85.39	☑	
No Specific Vendor	Home Formulation 11	100	87.86	☑	
No Specific Vendor	Home Formulation 12	100	85.91	☑	
No Specific Vendor	Home Formulation 13	100	80.02	☑	
No Specific Vendor	Home Formulation 14	100	79.02	☑	
No Specific Vendor	Home Formulation 15	100	83.94	☑	
No Specific Vendor	Home Formulation 16	100	92.72	☑	

Conclusion: All glass cleaning formulations removed over 75% of the glass soil using manual wiping.