

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003
 DateRun: 04/18/2003
 Experimenters: Jason Marshall, Heidi Wilcox
 ClientType: State Agency
 ProjectNumber: Project #2
 Substrates: Glass/Quartz, Chrome
 PartType: Coupon
 Contaminants: Films, Soaps
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric, Photography
 Purpose: To evaluate newly supplied cleaner on SSL Soil 2 on two substrates

Experimental Procedure: The supplied cleaning product was diluted to vendor recommended concentration for glass cleaning (0.4%). The product was diluted with DI water. Three preweighed chrome and three glass coupons were coated with SSL Soil 2 (Glass soap scum: Colgate Regular shaving cream 5.3%, Arid Extra Extra Spray Deodorant 3.5%, Suave Naturals Flexible Hold hair spray 3.7%, Aleeda Texurizing hair gel 25.6% Colgate Total toothpaste 10.4%, Water 51.5%) by pump spraying the mix. The soil was allowed to dry for 24 hours at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. Photographs were taken.

Three coupons were placed into a Gardner Straight Line Washability unit. A Professional Painter's Rag 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 cleaning unit was run for 5 cycles (~9 seconds). At the end of the cleaning, coupons were wiped once with a dry paper towel. Final weights were recorded and a second set of photographs were taken. Efficiencies were calculated and recorded.

Results: The product was successful in removing the soil from the glass substrates. The table below lists the amount of soil applied and removed from the coupons.

Table 1. Soil Removal

| Cleaner | Initial wt | Final wt | % Removed |
|---------|------------|----------|-----------|
| Glass | 0.0194 | 0.0000 | 100.00 |
| | 0.0158 | -0.0005 | 103.16 |
| | 0.0155 | 0.0000 | 100.00 |
| Chrome | 0.0153 | 0.0044 | 71.24 |
| | 0.0178 | 0.0048 | 73.03 |
| | 0.0191 | 0.0047 | 75.39 |

Summary:

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|----------------------|----------------------|----------------------|--------------------|-------------------------------------|----------------------|
| Substrates: | | Glass/Quartz, Chrome | | | |
| Contaminants: | | Films, Soaps | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| EnvirOx LLC | Grout Safe | 1 | 100.00 | <input checked="" type="checkbox"/> | Glass |
| EnvirOx LLC | Grout Safe | 1 | 73.22 | <input type="checkbox"/> | Chrome |

Conclusion: The overall efficiency of the glass cleaner, GroutSafe, was 87.14, passing the cut off of 85%. The final supplied product will be tested on SSL Soil 3.