

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 08/23/2006

Experimenters: Jason Marshall

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 product for glass cleaning.

Experimental Procedure: The supplied cleaning product was diluted to vendor recommended concentration for glass cleaning (10%). 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 Texturizing 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.

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, efficiencies were calculated and recorded.

Results: The supplied product removed over 85% of the soil from the two substrates. The table below lists the amount of soil applied and removed from the coupons.

| Cleaner | Initial wt | Final wt | % Removed |
|------------------|------------|----------|-----------|
| DFC Glass-Glass | 0.0468 | 0.0006 | 98.72 |
| | 0.0354 | 0.0003 | 99.15 |
| | 0.0325 | 0.0009 | 97.23 |
| Water-Glass | 0.0611 | 0.0079 | 87.07 |
| | 0.0774 | 0.0152 | 80.36 |
| | 0.0621 | 0.0157 | 74.72 |
| DFC Glass-Chrome | 0.0798 | 0.0080 | 89.97 |
| | 0.0644 | 0.0107 | 83.39 |
| | 0.0609 | 0.0060 | 90.15 |
| Water-Chrome | 0.1372 | 0.0256 | 81.34 |
| | 0.0868 | 0.0168 | 80.65 |
| | 0.1462 | 0.0231 | 84.20 |

| | | | | | | |
|----------|--------------------------------|----------------------|---------------|--------------------|-------------------------------------|----------------------|
| Summary: | Substrates: | Glass/Quartz, Chrome | | | | |
| | Contaminants: | Films, Soaps | | | | |
| | Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| | Cogent Environmental Solutions | DFC Glass | 10 | 98.37 | <input checked="" type="checkbox"/> | Glass |
| | Cogent Environmental Solutions | DFC Glass | 10 | 87.84 | <input checked="" type="checkbox"/> | Chrome |

Conclusion: The overall efficiency of the DFC Glass cleaner was 93.10, passing the cut off of 85% established for the Massachusetts EPP janitorial cleaning evaluations.