# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2006 |
| DateRun: | 03/09/2006 |
| Experimenters: | Jason Marshall |
| ClientType: | Cleaner Manufacturer |
| ProjectNumber: | Project #1 |
| Substrates: | Glass/Quartz, Chrome |
| PartType: | Coupon |
| Contaminants: | Soaps |
| Cleaning Methods: | Manual Wipe |
| Analytical Methods: | Gravimetric |
| Purpose: | To evaluate supplied products for glass cleaning application. |
| Experimental Procedure: | One of the supplied cleaning product was diluted to vendor recommended concentration for glass cleaning using DI water (0.39%). In addition, water was also used. Six preweighed chrome and six 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.<br><br>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 table below list the amount of soil added, the amount reaming and the efficiency for each substrate. Additional results for glass cleaning using water was also included for comparative purposes. |

| Cleaner | Initial wt | Final wt | % Removed |
|---|---|---|---|
| Perma 180 Ceramic | 0.1207 | 0.0198 | 83.60 |
| | 0.1942 | 0.0365 | 81.20 |
| | 0.1590 | 0.0335 | 78.93 |
| Perma 1040 Ceramic | 0.2435 | 0.0878 | 63.94 |
| | 0.1970 | 0.0642 | 67.41 |
| | 0.1976 | 0.0589 | 70.19 |
| Water Ceramic | 0.2561 | 0.1491 | 41.78 |
| | 0.4360 | 0.2000 | 54.13 |
| | 0.2085 | 0.0721 | 65.42 |
| Perma 180 Fiberglass | 0.3395 | 0.0586 | 82.74 |
| | 0.4277 | 0.0684 | 84.01 |
| | 0.3446 | 0.0687 | 80.06 |
| Perma 1040 Fiberglass | 0.3391 | 0.0704 | 79.24 |
| | 0.4126 | 0.0867 | 78.99 |
| | 0.3355 | 0.0565 | 83.16 |
| Water Fiberglass | 0.4324 | 0.1620 | 62.53 |
| | 0.3794 | 0.0890 | 76.54 |
| | 0.3828 | 0.1545 | 59.64 |
| Perma 180 Chrome | 0.1441 | 0.0170 | 88.20 |
| | 0.1561 | 0.0142 | 90.90 |
| | 0.2653 | 0.0236 | 91.10 |
| Perma 1040 Chrome | 0.1651 | 0.0361 | 78.13 |
| | 0.1709 | 0.0210 | 87.71 |

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| | 0.3022 | 0.0379 | 87.46 |
| Water Chrome | 0.2664 | 0.0548 | 79.43 |
| | 0.2321 | 0.0607 | 73.85 |
| | 0.1780 | 0.0382 | 78.54 |

Summary:

| **Substrates:** | Glass/Quartz, Chrome | | | | |
|---|---|---|---|---|---|
| **Contaminants:** | Soaps | | | | |
| **Company Name:** | **Product Name:** | **Conc.:** | **Efficiency:** | **Effective:** | **Observations:** |
| Perma Inc | Geo Clean 180 | 0.39 | 82.76 | ☐ | |
| Water | Water | 100 | 77.07 | ☐ | |

Conclusion: The supplied product at the suggested concentration only removed 83% of the soil. This value is just under the cut-off for acceptable cleaning efficiency (85%).