

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2009
 DateRun: 10/26/2009
 Experimenters: Jason Marshall, Junhee Cho, Scott Nadolna
 ClientType: Cleaner Manufacturer
 ProjectNumber: Project #1
 Substrates: Ceramics, Fiberglass, Chrome
 PartType: Coupon
 Contaminants: Films, Soaps
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric
 Purpose: To evaluate reformulated product for bathroom cleaning following GS 37 guidelines.

Experimental Procedure: The supplied cleaning product was used at the requested concentration (5%) and a second product, selected by the lab, was used at the vendor supplied dilution for bathroom cleaning.

Preweighed chrome coupons were coated with SSL Soil 1 (Bathroom soap scum: All-in-one shampoo and conditioner 28.6%, Dry skin lotion 21.4%, Liquid hand soap 21.4%, Liquid body wash 14.3%, Deodorant bar soap 7.2% and water 7.1%.) using a handheld swab and 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 Kimberly Clark Reinforced paper towel 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 solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for 20 cycles (~33 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: Super H2O2 cleaning product nearly 90% of the bathroom soil on average from all three substrates using manual wiping application. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

| Cleaner | Initial wt | Final wt | % Removed |
|---------------------------|------------|----------|-----------|
| Super H2O2 Ceramic | 0.3980 | 0.0934 | 76.53 |
| | 0.5238 | 0.1162 | 77.82 |
| | 0.1336 | 0.0053 | 96.03 |
| Super H2O2 Fiberglass | 0.1273 | 0.0051 | 95.99 |
| | 0.2691 | 0.0069 | 97.44 |
| | 0.2615 | 0.0098 | 96.25 |
| Super H2O2 Chrome | 0.2384 | 0.0088 | 96.31 |
| | 0.0587 | 0.0179 | 69.51 |
| | 0.0895 | 0.0079 | 91.17 |
| Comet Bathroom Ceramic | 0.2686 | 0.1997 | 25.65 |
| | 0.2325 | 0.0844 | 63.70 |
| | 0.2822 | 0.1265 | 55.17 |
| Comet Bathroom Fiberglass | 0.1652 | 0.0107 | 93.52 |
| | 0.1639 | 0.0345 | 78.95 |
| | 0.2500 | 0.0168 | 93.28 |
| Comet Bathroom Chrome | 0.0529 | 0.0152 | 71.27 |
| | 0.1550 | 0.0146 | 90.58 |
| | 0.0695 | 0.0179 | 74.24 |

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|----------|---|----------------------|---------------|--------------------|-------------------|----------------------|
| Summary: | Substrates: Ceramics, Fiberglass, Chrome | | | | | |
| | Contaminants: Films, Soaps | | | | | |
| | Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |

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|---------------------|-------------------------------|-----|-------|-------------------------------------|--|
| Cleanline Products | H2O2 Super Citrus Concentrate | 5 | 88.56 | <input checked="" type="checkbox"/> | |
| Prestige Brands Inc | Comet Bathroom Cleaner | 100 | 71.82 | <input type="checkbox"/> | |

Conclusion:

The supplied product did have an overall average efficiency greater than 85% and would be considered effective based on the SSL testing methodology for bathroom cleaning.