

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2011

DateRun: 01/04/2011

Experimenters: Johnny Le

ClientType: General

ProjectNumber: Project #1

Substrates: Ceramics, Fiberglass, Chrome

PartType: Coupon

Contaminants: Films, Soaps

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate additional products for bathroom cleaning using manual wiping.

Experimental Procedure: The supplied cleaning products were used at the recommended concentration. Prewedged chrome, ceramic and fiberglass, 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 hand held 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 Wypall X60 reinforced wipe 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 and efficiencies were calculated and recorded.

Products were selected based on kitchen cleaning needs and health and safety options.

Results: The additional four products selected for bathroom cleaning had efficiencies that were greater than 90%. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

| Cleaner | Initial wt | Final wt | % Removed | Overall Average |
|---------------------------------|------------|----------|-----------|-----------------|
| All Purpose N-1 Chrome | | | | |
| | 0.0131 | 0.0012 | 90.84 | 92.63 |
| | 0.0306 | 0.0017 | 94.44 | |
| | 0.0591 | 0.0015 | 97.46 | |
| All Purpose N-1 Ceramic | | | | |
| | 0.0693 | -0.0002 | 100.29 | |
| | 0.0603 | 0.0050 | 91.71 | |
| | 1.4140 | 0.3768 | 73.35 | |
| All Purpose N-1 Fiber Glass | | | | |
| | 0.1506 | 0.0127 | 91.57 | |
| | 0.0911 | 0.0030 | 96.71 | |
| | 0.1312 | 0.0035 | 97.33 | |
| MD Stetson PC 101 Chrome | | | | |
| | 0.0540 | 0.0019 | 96.48 | 95.53 |
| | 0.0621 | 0.0017 | 97.26 | |
| | 0.0543 | 0.0032 | 94.11 | |
| MD Stetson PC 101 Ceramic | | | | |
| | 0.0583 | 0.0001 | 99.83 | |
| | 0.0602 | 0.0063 | 89.53 | |
| | 0.0496 | 0.0016 | 96.77 | |
| MD Stetson PC 101 Fiber Glass | | | | |
| | 0.0939 | 0.0067 | 92.86 | |
| | 0.1066 | 0.0001 | 99.91 | |
| | 0.1252 | 0.0088 | 92.97 | |
| Cogent DFC Kitchen Spray Chrome | | | | |
| | 0.0327 | 0.0001 | 99.69 | 97.27 |

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|--------------------------------------|--------|--------|--------|-------|
| | 0.0302 | 0.0001 | 99.67 | |
| | 0.0295 | 0.0004 | 98.64 | |
| Cogent DFC Kitchen Spray Ceramic | | | | |
| | 0.0570 | 0.0068 | 88.07 | |
| | 0.0690 | 0.0022 | 96.81 | |
| | 0.0552 | 0.0008 | 98.55 | |
| Cogent DFC Kitchen Spray Fiber Glass | | | | |
| | 0.1264 | 0.0037 | 97.07 | |
| | 0.1381 | 0.0026 | 98.12 | |
| | 0.0838 | 0.0010 | 98.81 | |
| MD Stetson Lav Safe Chrome | | | | |
| | 0.0629 | 0.0028 | 95.55 | 92.16 |
| | 0.0455 | 0.0021 | 95.38 | |
| | 0.0541 | 0.0025 | 95.38 | |
| MD Stetson Lav Safe Ceramic | | | | |
| | 0.0615 | 0.0034 | 94.47 | |
| | 0.0537 | 0.0000 | 100.00 | |
| | 0.9138 | 0.2928 | 67.96 | |
| MD Stetson Lav Save Fiber Glass | | | | |
| | 0.0670 | 0.0025 | 96.27 | |
| | 0.0869 | 0.0116 | 86.65 | |
| | 0.0768 | 0.0017 | 97.79 | |

Summary:

| | | | | | |
|--------------------------------|----------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | Ceramics, Fiberglass, Chrome | | | | |
| Contaminants: | Films, Soaps | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| The Clean Environment Co | All Purpose N-1 | 12 | 92.63 | <input checked="" type="checkbox"/> | |
| Next-Gen Supply Group | PC 101 Neutral and Glass Cleaner | 2 | 95.53 | <input checked="" type="checkbox"/> | |
| Cogent Environmental Solutions | DFC Kitchen Spray | 100 | 97.27 | <input checked="" type="checkbox"/> | |
| Next-Gen Supply Group | LAV Safe 8 | 33 | 92.16 | <input checked="" type="checkbox"/> | |

Conclusion:

Several products from both bathroom trials were found to be more effective than the current product.