

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007
 DateRun: 01/31/2007
 Experimenters: Jason Marshall
 ClientType: Cleaner Manufacturer
 ProjectNumber: Project #1
 Substrates: Ceramics, Plastic, Steel
 PartType: Coupon
 Contaminants: Hucker's Soil
 Cleaning Methods: Manual Wipe
 Analytical Methods: Gravimetric
 Purpose: To evaluate supplied products for all purpose janitorial cleaning

Experimental Procedure: The supplied cleaning products were used at the recommended concentration (2%, 2% and 1.5%). Nine preweighed ceramic, six plastic and six steel coupons were coated with Hucker's Soil Formulation (Jif Creamy Peanut Butter 9.2%, Salted Butter 9.2%, Arrowhead Mills stone ground wheat flour 9.2%, Egg Yolk 9.2%, Evaporated milk 13.8%, Distilled water 45.8%, Printer's ink with boiled linseed oil 0.9%, Shaws saline solution 2.7%) 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. AA 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.

Results: All three products were effective in removing the soil with a manual wiping action. Two of the products had lower efficiencies for removing the Hucker's soil from the plastic coupons. The third product, Blue Jay, had lower efficiency on the steel coupons. The table lists the amount of soil added and the amount remaining after cleaning and the product efficiency for each coupon cleaned.

| Cleaner | Initial wt | Final wt | % Removed |
|------------------|------------|----------|-----------|
| 120 Steel | 0.2168 | 0.0093 | 95.71 |
| | 0.2219 | 0.0057 | 97.43 |
| | 0.1506 | 0.0139 | 90.77 |
| 108 Steel | 0.1202 | 0.0063 | 94.76 |
| | 0.1254 | 0.0086 | 93.14 |
| | 0.1980 | 0.0141 | 92.88 |
| 120 Plastic | 0.1479 | 0.0028 | 98.11 |
| | 0.1224 | 0.0084 | 93.14 |
| | 0.1438 | 0.0053 | 96.31 |
| 108 Plastic | 0.0876 | 0.0089 | 89.84 |
| | 0.1428 | 0.0156 | 89.08 |
| | 0.1461 | 0.0102 | 93.02 |
| 120 Ceramic | 0.1955 | 0.0350 | 82.10 |
| | 0.1205 | 0.0394 | 67.30 |
| | 0.3635 | 0.1192 | 67.21 |
| 108 Ceramic | 0.3501 | 0.0390 | 88.86 |
| | 0.2510 | 0.0296 | 88.21 |
| | 0.1399 | 0.0228 | 83.70 |
| Blue Jay Steel | 0.6655 | 0.1082 | 83.74 |
| | 0.7624 | 0.1039 | 86.37 |
| | 0.8457 | 0.2769 | 67.26 |
| Blue Jay Plastic | 0.9588 | 0.0272 | 97.16 |
| | 0.6103 | 0.0211 | 96.54 |
| | 0.9727 | 0.0170 | 98.25 |
| Blue Jay Ceramic | 0.6652 | 0.0791 | 88.11 |
| | 0.9397 | 0.1544 | 83.57 |
| | 0.8453 | 0.1714 | 79.72 |

Summary:

CLEANING LABORATORY EVALUATION SUMMARY

| | | | | | |
|-----------------------|--------------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| Substrates: | Ceramics, Plastic, Steel | | | | |
| Contaminants: | Hucker's Soil | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Next-Gen Supply Group | PC 120 Peroxide Multisurface Cleaner | 2 | 87.56 | <input checked="" type="checkbox"/> | |
| Next-Gen Supply Group | PC 108 Spray & Wipe Cleaner | 2 | 90.39 | <input checked="" type="checkbox"/> | |
| Next-Gen Supply Group | Blue Jay | 1.5 | 86.75 | <input checked="" type="checkbox"/> | |

Conclusion:

The three products had an overall average efficiency over 85% and would be considered effective according to the Mass EPP protocol for an all-purpose cleaner.