# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2018 |
| DateRun: | 10/14/2018 |
| Experimenters: | Sabrina Apel, Ted Kearney |
| ClientType: | Cleaner Manufacturer |
| ProjectNumber: | Project #1 |
| Substrates: | Ceramics, Plastic, Chrome |
| PartType: | Coupon |
| Contaminants: | Films, Soaps |
| Cleaning Methods: | Manual Wipe |
| Analytical Methods: | Gravimetric |
| Purpose: | To evaluate bathroom cleaning products at removing soils from ceramic, plastic, and chrome substrates. |
| Experimental Procedure: | Nine pre-weighed coupons per cleaner (three Ceramic, three Plastic and three Chrome) were coated with a half of a gram of SSL Soil 1 Bathroom Soil using a handheld swab. The contaminated coupons were air dried for 24 hours at room temperature and weighed again to determine the amount of soil added.<br>Three coupons of each substrate were placed in the Straight-Line Washability (SLW) unit, and a KC Wypal reinforced paper towel was attached to the cleaning sled and treated with two sprays of cleaning solution; each coupon was sprayed twice with the same cleaning solution. The SLW unit ran for 20 cycles (equivalent of 30 seconds of cleaning). Coupons were air dried after cleaning before recording final weights. |

Results:

| Cleaner | Substrate | Initial wt of cont. | Final wt of cont. | % Cont Removed | % Average | % Overall Cleaner |
|---|---|---|---|---|---|---|
| Fas-Pak MF Deep Foam Spray | Ceramic | 0.1304 | 0.0098 | 92.48 | 91.04 | 78.99 |
| | | 0.1307 | 0.0117 | 91.05 | | |
| | | 0.1218 | 0.0127 | 89.57 | | |
| | Plastic | 0.1298 | 0.0312 | 75.96 | 58.98 | |
| | | 0.1287 | 0.0395 | 69.31 | | |
| | | 0.1522 | 0.1040 | 31.67 | | |
| | Chrome | 0.1275 | 0.0239 | 81.25 | 86.95 | |
| | | 0.1216 | 0.0065 | 94.65 | | |
| | | 0.1176 | 0.0177 | 84.95 | | |
| Lysol Toilet Bowl Cleaner | Ceramic | 0.1135 | 0.0084 | 92.60 | 90.87 | 78.46 |
| | | 0.1152 | 0.0138 | 88.02 | | |
| | | 0.1125 | 0.0090 | 92.00 | | |
| | Plastic | 0.1426 | 0.0354 | 75.18 | 83.49 | |
| | | 0.1456 | 0.0205 | 85.92 | | |
| | | 0.1403 | 0.0149 | 89.38 | | |
| | Chrome | 0.1249 | 0.0955 | 23.54 | 61.02 | |
| | | 0.1158 | 0.0309 | 73.32 | | |
| | | 0.1225 | 0.0169 | 86.20 | | |
| Lysol Toilet Bowl Cleaner w/ Hydrogen Peroxide | Ceramic | 0.1235 | 0.0063 | 94.90 | 94.46 | 91.59 |
| | | 0.1319 | 0.0068 | 94.84 | | |
| | | 0.1275 | 0.0081 | 93.65 | | |
| | Plastic | 0.1421 | 0.0183 | 87.12 | 87.81 | |
| | | 0.1415 | 0.0229 | 83.82 | | |
| | | 0.1477 | 0.0111 | 92.48 | | |
| | Chrome | 0.1483 | 0.0124 | 91.64 | 92.49 | |
| | | 0.1619 | 0.0047 | 97.10 | | |
| | | 0.1625 | 0.0183 | 88.74 | | |
| Clorox Toilet Cleaning Gel | Ceramic | 0.1191 | 0.0152 | 87.24 | 91.46 | 87.84 |
| | | 0.1288 | 0.0089 | 93.09 | | |
| | | 0.1295 | 0.0077 | 94.05 | | |
| | Plastic | 0.1467 | 0.0211 | 85.62 | 82.94 | |
| | | 0.1410 | 0.0343 | 75.67 | | |

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|---|---|---|---|---|---|---|
| | | 0.1364 | 0.0170 | 87.54 | | |
| | Chrome | 0.1304 | 0.0112 | 91.41 | 89.11 | |
| | | 0.1309 | 0.0179 | 86.33 | | |
| | | 0.1451 | 0.0151 | 89.59 | | |
| Scrubbing Bubbles Toilet Bowl Cleaner Bubbly Beach Gel | Ceramic | 0.1235 | 0.0105 | 91.50 | 89.40 | 89.24 |
| | | 0.1450 | 0.0181 | 87.52 | | |
| | | 0.1673 | 0.0181 | 89.18 | | |
| | Plastic | 0.1327 | 0.0166 | 87.49 | 90.66 | |
| | | 0.1511 | 0.0093 | 93.85 | | |
| | | 0.1421 | 0.0133 | 90.64 | | |
| | Chrome | 0.1399 | 0.0094 | 93.28 | 87.66 | |
| | | 0.1275 | 0.0253 | 80.16 | | |
| | | 0.1367 | 0.0143 | 89.54 | | |

Summary:

| **Substrates:** | Ceramics, Plastic, Chrome |
|---|---|
| **Contaminants:** | Films, Soaps |

| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
|---|---|---|---|---|---|
| Fas-Pak Inc | MF Deep Foam Spray | 100 | 78.99 | ☑ | |
| Reckitt Benckiser | Lysol Power Toilet Bowl Cleaner | 100 | 78.46 | ☑ | |
| Reckitt Benckiser | Lysol Toilet Bowl Cleaner with Hydrogen Peroxide | 100 | 91.59 | ☑ | |
| Clorox Company | Clorox Toilet Cleaning Gel | 100 | 87.84 | ☑ | |
| SC Johnson & Son Inc | Scrubbing Bubbles | 100 | 89.24 | ☑ | |

Conclusion:

Fas-Pak MF Deep Foam Spray had a 79% efficiency of removing SSL Soil 1 from ceramic, plastic, and chrome substrates. Fas-Pak MF Deep Foam Spray was either less or as effective in performance of soil removal in comparison to the conventional cleaning products. The most effective cleaner was Lysol Toilet Bowl Cleaner with Hydrogen Peroxide with a 92% efficiency in soil removal.