# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2019

DateRun: 09/24/2019

Experimenters: Aditi Patel, Rimsha Paneru

ClientType: Cleaning Equipment Mfr

ProjectNumber: Project #1

Substrates: Ceramics, Chrome

PartType: Coupon

Contaminants: Hucker's Soil

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate the effectiveness of Shine Toilet Bowl Cleaner and comparative products for removing Hucker's Soil on Ceramic and Chrome coupons.

Experimental Procedure: Six pre-weighed coupons, three of each substrate per cleaner, were soiled with Hucker's Soil (Evaporated milk 26.5%, Creamy Peanut Butter 17%, Salted Butter 17%, Stone ground wheat flour 17%, Linseed oil 2.25%, Saline solution 5.25%, India Ink 6.8%, Lemon Juice 8.2%) and aged for 24 hours at room temperature (68˚F). Dirty weights recorded before placing three coupons of the same substrate onto the Straight Line Washability (SLW) unit. The cleaner wipe was attached to the SLW sled and cleaned for 20 cycles (equivalent of 30 seconds of manual cleaning). Coupons air dried at room temperature (68 F) overnight before final weights were recorded.

Results:

| Cleaner | Substrate | Initial of cont. wt. | Final of cont. wt. | % Removal | Average | Overall Removal |
|---|---|---|---|---|---|---|
| 1 | Ceramic | 0.0651 | 0.0036 | 94.47 | 90.11 | 92.11 |
| | | 0.0393 | 0.0086 | 78.12 | | |
| | | 0.0312 | 0.0007 | 97.76 | | |
| | Chrome | 0.0301 | 0.0030 | 90.03 | 94.11 | |
| | | 0.0589 | 0.0021 | 96.43 | | |
| | | 0.0628 | 0.0026 | 95.86 | | |
| 2 | Ceramic | 0.0258 | 0.0029 | 88.76 | 93.58 | 92.06 |
| | | 0.0413 | 0.0028 | 93.22 | | |
| | | 0.1125 | 0.0014 | 98.76 | | |
| | Chrome | 0.0409 | 0.0085 | 79.22 | 90.54 | |
| | | 0.0495 | 0.0003 | 99.39 | | |
| | | 0.0400 | 0.0028 | 93.00 | | |
| 3 | Ceramic | 0.0449 | 0.0051 | 88.64 | 81.57 | 74.65 |
| | | 0.1004 | 0.0149 | 85.16 | | |
| | | 0.0368 | 0.0107 | 70.92 | | |
| | Chrome | 0.0288 | 0.0012 | 95.83 | 67.72 | |
| | | 0.0414 | 0.0057 | 86.23 | | |
| | | 0.0597 | 0.0471 | 21.11 | | |

1) Shine Bathroom, (2) 409 Cleaner (3) Clorox

Summary:

| **Substrates:** | Ceramics, Chrome | | | | |
|---|---|---|---|---|---|
| **Contaminants:** | Hucker's Soil | | | | |
| **Company Name:** | **Product Name:** | **Conc.:** | **Efficiency:** | **Effective:** | **Observations:** |
| Shine Bathroom | Shine Bathroom system | | 92.11 | ☑ | |
| Clorox Company | Formula 409 All Purpose Cleaner | 100 | 92.06 | ☑ | |
| Clorox Company | Clorox Bathroom Cleaner | 100 | 74.65 | ☐ | |

Conclusion: Shine was more slightly more effective at removing Hucker's soil from ceramic and chrome compared to 409 Cleaner.