# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| SCL #: | 2021 |
| DateRun: | 11/10/2021 |
| Experimenters: | Zoe Lawson, Nicole Kebler, Tatyanna Moreland Junior |
| ClientType: | Lab |
| ProjectNumber: | Project #5 |
| Substrates: | Ceramics, Plastic, Painted metal |
| PartType: | Coupon |
| Contaminants: | Hucker's Soil |
| Cleaning Methods: | Manual Wipe |
| Analytical Methods: | Gravimetric, Visual |
| Purpose: | To evaluate Ever Spring cleaner for the removal of Huckers soil on ceramic, painted metal, and plastic. |
| Experimental Procedure: | Three coupons of each substrate (ceramic, painted metal, and plastic) were collected and initial weights were taken. Huckers soil was applied to each coupon and allowed to air dry for 24 hours. After the 24 hour dry time, the weights of the newly contaminated coupons were measured. All coupons were placed into a Straight-Line Washability (SLW) machine. A KC Wypall cleaning cloth was attached to the cleaning block used for the test. The Wypall cloth and all coupons received 2 sprays of the Ever Spring Cleaner and the SLW machine was run for 20 repetitions, simulating 20 manual wipes. Once cleaning concluded, the cleaned coupons were allowed to air dry for 24 hours. After 24 hours, the weights of the cleaned coupons were measured. |
| Results: | Visually all three substrates were clean after the 20 cycles of wipes. Cleaner was left on the ceramic substrate and a darkened streak dried on the center, resulting in lower percentage removal. Painted metal and plastic had less of a dried cleaner streak on the surface and had 85% removal for both. |

| Substrate | Initial wt. of cont. | Final wt. of cont | Average | Combined Average |
|---|---|---|---|---|
| Ceramic | 0.1554 | 0.0764 | 50.84 | 71.26 |
| | 0.0929 | 0.0199 | 78.58 | |
| | 0.1260 | 0.0197 | 84.37 | |
| Painted Metal | 0.1214 | 0.0187 | 84.60 | 84.70 |
| | 0.1448 | 0.0195 | 86.53 | |
| | 0.1475 | 0.0251 | 82.98 | |
| Plastic | 0.0980 | 0.0102 | 89.59 | 85.03 |
| | 0.1050 | 0.0167 | 84.10 | |
| | 0.1291 | 0.0240 | 81.41 | |

Summary:

Conclusion: Ceramic would have done better with a final wipe from a less saturated wypall to remove excess cleaner from drying on the surface, but all hardened huckers soil was removed. Painted metal and plastic both had total removal of huckers soil with minimal cleaner dried on the surface resulting in higher percentage removals. Ever Spring was successful at removing aged huckers soil from all three substrates.