

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2015
 DateRun: 05/05/2015
 Experimenters: Alicia Melvin, Michael McDermott
 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 test the cleaning quality of two different cleaners on multiple substrates soiled with Hucker Soil.

Experimental Procedure: Three coupons of three types of substrates were used for each cleaner; polycarbonate, painted steel, and ceramic. Initial weights were recorded and then each coupon was coated with 1 gram of Hucker Soil (Distilled water 44.2%, Evaporated milk 13.5%, Creamy peanut butter 8.8%, Salted butter 8.8%, Stone ground wheat flour 8.8%, Egg yolk 8.8%, Printer's ink with boiled linseed oil 0.9%, Saline solution 2.7% and India Ink 3.5%). The coupons were dried overnight, and dirty weights were recorded the next day. The coupons were tested on the abrasion manual cleaner machine. Three coupons of the same substrate were tested at the same time for one type of cleaner. One spray of the cleaner was applied to each coupon on the soiled surface and then sprayed once on the two layered WypAll paper towel connected to the manual machine cleaner. The coupons were then wiped 20 times with the machine and then placed back on the tray to dry overnight. This process was repeated for each set of substrates. The coupons dried overnight, and the final weights were recorded.

Chemistries Evaluated: Fresh 4 Pets RS020315A-2 (RS3-260); Shout Pets Stain and Odor Removal

Results:

| Cleaners | Substrate | Coupon # | Initial wt | Final wt | %Removed | Average | Std Dev |
|--------------|---------------|----------|------------|----------|----------|---------|---------|
| Fresh 4 Pets | Polycarbonate | 113 | 0.8472 | 0.0247 | 97.08 | 95.77 | 2.58 |
| Fresh 4 Pets | Polycarbonate | 97 | 0.7025 | 0.0181 | 97.42 | | |
| Fresh 4 Pets | Polycarbonate | 7 | 0.7624 | 0.0549 | 92.80 | | |
| Fresh 4 Pets | Painted Steel | 27 | 0.7456 | 0.0389 | 94.78 | 92.19 | 2.32 |
| Fresh 4 Pets | Painted Steel | 2 | 0.9959 | 0.0963 | 90.33 | | |
| Fresh 4 Pets | Painted Steel | 32 | 0.7688 | 0.0657 | 91.45 | | |
| Fresh 4 Pets | Ceramics | 22 | 0.7915 | 0.0707 | 91.07 | 88.45 | 7.57 |
| Fresh 4 Pets | Ceramics | 23 | 0.7893 | 0.1585 | 79.92 | | |
| Fresh 4 Pets | Ceramics | 24 | 0.8459 | 0.0477 | 94.36 | | |
| Shout Pets | Polycarbonate | 11 | 0.9905 | 0.1129 | 88.60 | 89.5 | 2.55 |
| Shout Pets | Polycarbonate | 49 | 0.7733 | 0.0966 | 87.50 | | |
| Shout Pets | Polycarbonate | 1 | 0.8184 | 0.0624 | 92.37 | | |
| Shout Pets | Painted Steel | 22 | 0.7331 | 0.0748 | 89.79 | 88.44 | 3.25 |
| Shout Pets | Painted Steel | 18 | 0.6186 | 0.0945 | 84.72 | | |
| Shout Pets | Painted Steel | 5 | 0.7774 | 0.0716 | 90.79 | | |
| Shout Pets | Ceramics | 25 | 0.7751 | 0.1342 | 82.69 | 86.63 | 5.25 |

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|------------|----------|----|--------|--------|-------|--|--|
| Shout Pets | Ceramics | 26 | 0.8309 | 0.1279 | 84.61 | | |
| Shout Pets | Ceramics | 28 | 0.8736 | 0.0647 | 92.59 | | |

Summary:

| | | | | | | |
|----------------------|---|---------------|--------------------|-------------------------------------|----------------------|--|
| Substrates: | Ceramics, Plastic, Steel | | | | | |
| Contaminants: | Hucker's Soil | | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| SC Johnson & Son Inc | Shout Carpet Oxy - Stain & odor remover | 100 | 88.19 | <input checked="" type="checkbox"/> | | |
| Fisher Scientific | Absolute Ethanol | 0 | 0.00 | <input type="checkbox"/> | | |
| Fisher Scientific | Absolute Ethanol | 0 | 0.00 | <input type="checkbox"/> | | |
| Fetch 4 Pets | Fetch 4 Pets RS020315A-2 (RS3-260) | 100 | 92.13 | <input checked="" type="checkbox"/> | | |

Conclusion:

Overall, Fresh 4 Pets RS020315A-2 (RS3-260) removed more of the soil than the Shout Pets Stain and Odor Removal.