

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2016

DateRun: 03/01/2016

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ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Ceramics, Plastic, White Board

PartType: Coupon

Contaminants: Greases, Oil, Food

Cleaning Methods: Manual Wipe

Analytical Methods: Gravimetric

Purpose: To evaluate janitorial cleaners for dirt removal on a variety of surfaces for which they may be used.

Experimental Procedure: Nine coupons for each sample (three ceramic, three plastic, and three painted steel) were weighed for initials. Using a swab, coupons were then dirtied with 0.5 grams of DCC-17 and air dried at 68°F overnight. Dirty weights were then collected the next day. The cleaning samples were diluted to requested amounts (Peroxi-det (1/128); Peroxi-det (10/128); MD Stetson PC 120 (RTU); Peroxi-det (10%)) and placed into the same brand lab testing spray bottles.

Three coupons of the same substrate were placed into a Gardner Straight Line Washability unit. A Wypall X60 reinforced wipe was attached to the cleaning sled and treated with two sprays of cleaning solution. Each coupon was treated with the same cleaning solution two times. The solution was allowed to penetrate for 30 seconds followed by cleaning in the SLW unit for 20 cycles (30 seconds of cleaning). Coupons were placed back on the tray and then weighed for a final weight. If coupon's gravimetric final results were off, coupons were reweighed the next day to allow substrates to fully dry.

Results: Ceramic substrates had the lowest removal out of all the substrates. Part of this is due to the substrate's semi vitreous material when cut into coupons. Allowing the coupons to dry overnight allowed for gravimetric results to reach effective percentage removal.

| Cleaner | Substrate | Initial wt | Final wt | % Removed | Average | Overall Ave |
|------------------------|---------------|------------|----------|-----------|---------|-------------|
| Peroxi-det (1/128) | | | | | | |
| | Ceramic | 0.384 | 0.0699 | 81.8 | 85.57 | 89.8 |
| | | 0.3926 | 0.06 | 84.72 | | |
| | | 0.5069 | 0.0497 | 90.2 | | |
| | Plastic | 0.4552 | 0.0342 | 92.49 | 93.44 | |
| | | 0.4158 | 0.0215 | 94.83 | | |
| | | 0.419 | 0.0293 | 93.01 | | |
| | Painted Steel | 0.3945 | 0.0454 | 88.49 | 90.4 | |
| | | 0.4674 | 0.0348 | 92.55 | | |
| | | 0.4308 | 0.0424 | 90.16 | | |
| Peroxi-det (10/128) | | | | | | |
| | Ceramic | 0.5724 | 0.0498 | 91.3 | 85.08 | 90.9 |
| | | 0.3828 | 0.0841 | 78.03 | | |
| | | 0.4787 | 0.0674 | 85.92 | | |
| | Plastic | 0.4852 | 0.0358 | 92.62 | 94.52 | |
| | | 0.4825 | 0.0244 | 94.94 | | |
| | | 0.4855 | 0.0194 | 96 | | |
| | Painted Steel | 0.4926 | 0.0367 | 92.55 | 93.09 | |
| | | 0.3765 | 0.0347 | 90.78 | | |
| | | 0.461 | 0.0187 | 95.94 | | |
| MD Stetson PC 120(RTU) | | | | | | |
| | Ceramic | 0.4267 | 0.0013 | 99.7 | 90.47 | 93.49 |
| | | 0.4393 | 0.0652 | 85.16 | | |
| | | 0.5159 | 0.0693 | 86.57 | | |
| | Plastic | 0.4847 | 0.0361 | 92.55 | 93.4 | |
| | | 0.4713 | 0.0092 | 98.05 | | |

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|------------------|---------------|--------|--------|-------|-------|-------|
| | | 0.4823 | 0.0502 | 89.59 | | |
| | Painted Steel | 0.4948 | 0.0167 | 96.62 | 96.61 | |
| | | 0.4747 | 0.0192 | 95.96 | | |
| | | 0.4854 | 0.0134 | 97.24 | | |
| Peroxi-det (10%) | | | | | | |
| | Ceramic | 0.4424 | 0.0125 | 97.17 | 92.86 | 93.36 |
| | | 0.4519 | 0.0434 | 90.4 | | |
| | | 0.4678 | 0.042 | 91.02 | | |
| | Plastic | 0.3868 | 0.0956 | 75.28 | 91.32 | |
| | | 0.3796 | 0.0047 | 98.76 | | |
| | | 0.3992 | 0.0003 | 99.92 | | |
| | Painted Steel | 0.3692 | 0.0179 | 95.15 | 95.9 | |
| | | 0.3597 | 0.0157 | 95.64 | | |
| | | 0.3543 | 0.0109 | 96.92 | | |

Summary:

| | | | | | | |
|-----------------------------|--------------------------------------|---------------|--------------------|-------------------------------------|----------------------|--|
| Substrates: | Ceramics, Plastic, White Board | | | | | |
| Contaminants: | Greases, Oil, Food | | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| The Janitors Supply Co. Inc | Peroxi-Det All Purpose Cleaner | 1.5 | 89.80 | <input checked="" type="checkbox"/> | | |
| The Janitors Supply Co. Inc | Peroxi-Det All Purpose Cleaner | 7.8 | 90.90 | <input checked="" type="checkbox"/> | | |
| Next-Gen Supply Group | PC 120 Peroxide Multisurface Cleaner | 100 | 93.49 | <input checked="" type="checkbox"/> | | |
| The Janitors Supply Co. Inc | Peroxi-Det All Purpose Cleaner | 10 | 90.90 | <input checked="" type="checkbox"/> | | |

Conclusion:

All the cleaners were effective at removing around 90% or more of the DCC-17 soil from all substrates.