

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000
 DateRun: 03/29/2000
 Experimenters: Jason Marshall, John Brunelle
 ClientType: Consultant
 ProjectNumber: Project #1
 Substrates: Ceramics
 PartType: Coupon
 Contaminants: Dirt, Fingerprints, Films, Soaps
 Cleaning Methods: Manual Wipe
 Analytical Methods: Visual

Purpose: To compare current tub & tile cleaner with proposed new cleaning solution.

Experimental Procedure: The new product to be compared was diluted to 4 oz cleaner in one gallon of water (approximately 3% by volume) using DI water. The solution was put in a one quart plastic spray bottle, similar to the supplied current cleaning solution. The contaminants L- were applied to the appropriate surface material, marble tiles. The tiles were allowed to sit for five minutes before cleaning took place. Observations were made by two SCL Staff members to determine what the baseline level of contamination looked like. After recording the both sets of observations separately, the cleaning process was started. Cleaning involved spraying the tile with three equal sprays, followed by a single wipe with a paper towel. The spraying and wiping was performed by the same individual for all tiles and cleaners to ensure consistent cleaning. During the wiping, observations were made as to how easy the cleaning felt. After all tiles were cleaned, final clean observations were made by the same two staff members. Two tiles were cleaned for each solution to be evaluated. The cleaning products were ranked according to all observation made during the entire trial.

The chemistries used were:

COMPANY PRODUCT

1-Water DI Water (Control)

2-Rochester Midland EnviroCare Washroom Fixture Cleaner (Alternative Cleaner)

3-Ecolab Oasis 499 (Current Cleaner)

SUBSTRATE MATERIAL: Marble Tile, Ceramic Tiles

CONTAMINANTS: L-Gilchrist & Soames Skin Care soap with aloe vera(bar), L-Gilchrist & Soames Soap (bar), L-Gilchrist & Soames Body Lotion (liquid), L-Gilchrist & Soames Conditioning Shampoo (liquid)

CONTAMINATING PROCESS USED: L-bar contaminants were rubbed onto marble surfaces. L-liquid contaminants were mixed together in a beaker in equal proportions. The mix was applied using a swab.

Results: The following table lists the observations made for the two contaminant mixtures. In the Lenox soap mix, EnviroCare had the most success, followed by water and Oasis 499. The DI water Oasis were about equal in cleaning capabilities.

Table 1. Follow Up Lenox Cleaning Trial Observations

| Baseline | Cleaning |
|--------------------------------------|--------------------------------|
| Streaky soap, strong odor, wet spots | 1-Still Streaky, tacky surface |
| Streaky soap, strong odor, wet spots | 2- Few streaks, smooth |
| Streaky soap, strong odor, wet spots | 3-Still Streaky, tacky surface |
| Ranking | L = 2>1>3 |

Summary:

| Substrates: | Ceramics | | | | |
|-------------------------------|----------------------------------|--------|-------------|-------------------------------------|---------------|
| Contaminants: | Dirt, Fingerprints, Films, Soaps | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Water | DI Water | 100 | | <input type="checkbox"/> | |
| Rochester Midland Corporation | Washroom Cleaner | 4 | | <input checked="" type="checkbox"/> | |
| EcoLab | Oasis 499 | 4 | | <input type="checkbox"/> | |

Conclusion: The Rochester Midland EnviroCare solution was the best cleaner for the complete Lenox mix.