CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2000
DateRun:	03/28/2000
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 two groups of contaminants L- and C- were applied to the appropriate surface material, marble (L-) and ceramic (C-) 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); C-Lotion, C-Shampoo +, C-Soap (liquid), C-Shower Gel, C-Bath soap (bar)
CONTAMINATING PROCESS USED: L-contaminants were rubbed onto marble surfaces. C-contaminants were mixed together in a beaker (except bar soap) in equal proportions. The mix was applied to the ceramic tiles using swab. The bar soap was rubbed on the ceramic tiles.

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 Ecolab. For the Copley mix, water was found to leave the least amount of streaking after the single pass with the towel. During the spraying of the solutions, the Ecolab product had a noticeable smell that caused some discomfort to both lab staff members. The Rochester Midland sample did not have any objectionable odors.

Table 1. Cleaning Trial Observations

Lenox	Lenox	Lenox
Baseline	Cleaning	Post Clean
Streaky, white flakey, waxy appearance	1-Easy	Clean, few fine streaks
Streaky, white flakey, waxy appearance	2-Easier than 1, slippery	Clean, few fine streaks
Streaky, white flakey, waxy appearance	3-Tackier, foamy spray, smell issue	Clean, few fine streaks
Copley	Copley	Copley
Baseline	Cleaning	Post Clean
Streaky, clear, greasy appearance	1-Little sticky	Little streaks
Streaky, clear, greasy appearance	2-Slippery, easier than 1	Left streaks
Streaky, clear, greasy appearance	3-not as slippery as 2, more than 1	Left streaks

Ranking L = 2>1>3 Ranking C = 1>2>3

Summary:

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Substrates:	Ceramics
Contaminants:	Dirt, Fingerprints, Films, Soaps

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Water	DI Water	100	0.00	☑	
Rochester Midland Corporation	Washroom Cleaner	3	0.00	☑	
EcoLab	Oasis 499	4	0.00	☑	

Conclusion: The two cleaners and DI water were successful in removing most of the soap mixtures from the two surfaces. The current cleaners was the least successful of the three.