CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2012

DateRun: 04/04/2012

Experimenters: Jason Marshall, Johnny Le

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Marble

PartType: Part

Contaminants: Calcium/lime

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric, Visual

Purpose: To evaluate supplied product on the effects on calcium stain removal via marble block test.

Experimental Procedure: Several marble chips of similar size and shape were weighed to determine the baseline weight of each piece. The selected chips were then immersed in the supplied product at full strength and use-dilution and allowed to sit for up to an hour if needed. After soaking at room temperature, the marble chips were removed from the products and rinsed in a tap water spray at 120 F for 1 minute to remove loose material from the chips. Then the chips were dried for 5 minutes using a Master Appliance Heat gun at 300 F. When the chips cooled to room temperature, final weights were recorded to determine weight loss, if any. Observations were made at the initial immersion of the chips into solutions, after 1 and 5 minutes.

Results: From visual observations, the two products affected the marble chips, showing signs of calcium removal from the blocks. During the soak, both products started to bubble upon immersion of the block. The table lists the initial weight, final weight and weight change for each marble chip soaked. The recommended dilution of the supplied product reduced the weight of the block by 0.7% in just 15 minutes. The full strength resulted in 3% reduction in 5 minutes.

Marble block					wt loss			% Reduction		
Full Strength		1 min	5 min	15 min	1 min	5 min	15 min	1 min	5 min	15 min
PC 115	12.3682	12.3267	12.1824	NT	0.0415	0.1858	NT	0.34	1.50	NT
Premier	11.3235	11.084	10.9824	NT	0.2395	0.3411	NT	2.12	3.01	NT
Recommended dilution										
PC 115	8.5655	8.5369	8.5589	8.5504	0.0286	0.0066	0.0151	0.33	0.08	0.18
Premier	6.1925	6.1838	6.161	6.1471	0.0087	0.0315	0.0454	0.14	0.51	0.73

Summary:

Substrates:	Marble
Contaminants:	Calcium/lime

Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
U.N.X. Incorporated	Horizon Premier	6.25	0.00	☑	0.73 % reduction at dilution
Next-Gen Supply Group	PC 115 Mild Acid Disinfectant Restroom & Shower Cleaner	2.3	0.00	☑	0.18% reduction at dilution

Conclusion: The supplied product was more effective than the comparative product for calcium removal.