Arte Mundit® cleaning paste has seen increased use for the cleaning of stone building interiors. One significant advantage to this product is the ease of removal and disposal of the cured latex film that is part of the cleaning system. Arte Mundit® is also generally effective as a cleaning system but little work has been done that addresses the potential long-term effects to stonework as a result of residue left after cleaning. In response to this concern, the research described below explores the following questions: 1. Does Arte Mundit® leave residues on or in the substrate it is meant to clean, and, 2. Does the amount of residue vary with the type of stone?

In order to answer these questions, an in-depth analysis of the product and several stones used in architectural interiors treated with Arte Mundit®, specifically granite, Berea sandstone, Indiana limestone, Tennessee marble, travertine, and Texas Cream limestone was conducted. Each sample was examined by microscopy, under ultraviolet light and measuring capillary uptake. After the application and removal of Arte Mundit®, the samples were tested for the presence of residual latex using Evolved Gas Analysis (EGA) and Pyrolysis-Gas Chromatography/ Mass Spectrometry (py-GC/MS). The presence of absorbed electrolytes before and treatment with Arte Mundit® was measured using conductivity.

The results of EGA indicate that residue from Arte Mundit® persists on the surface of the stone, even if not immediately apparent to the naked eye. Berea Sandstone, travertine and Texas Cream limestone, stones with a variable surface topography and open pores exposed at the surface of the sample, contain the greatest amount of residue relative to all samples tested. In some cases the presence of residue can be confirmed by observing the yellow-green fluorescence of cured Arte Mundit® on the stone surface under UV light. In addition, the results of this study confirm that treatment of a substrate with Arte Mundit® does not increase the presence of absorbed electrolytes within the stone.

Based on the six interior stones tested, it can be concluded that after treatment using Arte Mundit® residue from the product remains on the stone. Within the sample set, a correlation was noted between the presence of residue and the overall surface topography.