

An Experimental Study to Evaluate Alternative Supports Used for the Treatment of Archaeological Marble Mosaics

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Abstract:

Archaeological mosaics are one of the most important sources of cultural heritage in the world, where the history of art can be studied in a historical period. Archaeological mosaics are exposed to many deterioration factors that lead to their damage. In some cases, their detachment is the best solution to protect them from damage. If the source of damage is permanent and renewable.

There are a number of materials used in the manufacture of alternative supports to restore archaeological detached mosaics, such as traditional supports: lime and gypsum supports, including what is modern, such as: honey comb, glass fibers and fire coremat supports.

This experimental study is aimed to evaluate some traditional and modern alternative supports used in the treatment of archaeological mosaics, by measuring their physical and mechanical properties, to choose the best applied in the treatment of marble mosaics in archaeological buildings and sites. An example of physical properties is density, porosity and water absorption. The evaluation process is based on selecting the least alternative support in porosity and water absorption, density to avoid moisture hazard on the archaeological marble mosaic, and mechanical properties as a compressive strength to select the most tolerant alternative support.

Keywords:

Alternative supports – Archaeological marble mosaics – An Experimental study - Physical and mechanical properties.