

Ascertaining the degradation state of ceramic tiles: A preliminary non-destructive step in view of conservation treatments using gamma radiation

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Conserving the cultural heritage is a general concern and the use of non-destructive techniques to characterize ancient materials is mandatory. Important deterioration effects in environmentally exposed ancient glazed ceramic tiles arise from the development of micro-organisms (algae/fungi) within the pore system. Subsequent biodegradation processes are particularly harmful once the decorated glaze is damaged by exfoliation/detachment.

Three case studies will be addressed: Portuguese polychrome decorated tiles from the interior of two churches (17th cent.) and from the outdoor of a Palace (18th cent.). Small tile fragments were directly irradiated in a wavelength-dispersive X-ray fluorescence spectrometer for glaze chemical characterization and subsequently irradiated in a powder diffractometer to assess the phase constitution of both glaze and ceramic body.

Cleaning and conserving these ancient cultural artefacts involves a decontamination process applying innovative non-destructive techniques. The present work is intended as a contribution to diagnose the actual degradation state of ancient tiles in view of future decontamination actions using gamma radiation.

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Introducing different kinds of decorations historical ceramics in Iran

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The art of Pottery, due to its popularity undergoes climate, historical, economical and cultural features of the people. The techniques used for making pottery objects from the view point of technology, shapes, colors, decoration is representative of and Imagination power of the producers. The human handmade products have been very simple without any decoration or glaze cover. But gradually the producers learn how to decorate the dishes. The pottery use has been seen for the first time in bricks of Choghazanbil temple in Second millennium BC in Shoosh.

This article tries to introduce different types of glaze decorations on historical potteries including pour glaze, carving under glaze, monochrome glaze and...

And also it tries to introduce the older potteries such as Koobachi, Iznik, Gamberoon, and white and blue dishes dating back to 10 and 15 centuries from that on the pottery making was deteriorated.