

Analytical study of Ottoman Egyptian ceramic tiles from Abdel Baqi El Shorbagy mosque, Alexandria.

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Abstract

The present paper describes the analytical study performed on three different glazed ceramic tiles from Abdel Baqi El Shorbagy (Georbagy) mosque (Alexandria, Egypt) which dates back to 1780 AD / 1191 AH. The tiles were manufactured according to a distinguished local school of tile making which is known in Egypt as Maghrebischool and is influenced by the North African school of tile making. The materials used for the manufacture of the tiles were revealed using optical and polarizing microscopy, X-ray diffraction (XRD) and scanning electron microscopy–energy dispersive X-ray spectroscopy (SEM-EDS). It was revealed that the tiles were made of ferruginous, highly calcareous clay in an oxidizing atmosphere. Mineral phases such as; silica, haematite, gehlenite, lime and feldspars have been identified. Decorations were applied on tin opacified lead glazes. Copper and/or cobalt were used in the green and blue glazes while Naples yellow was used in the yellow glazes. Manganese oxide was used to produce the brown glazes.