

Micro-XRF investigation of the decoration materials and techniques of three 18 – 19th century mosques in Berat

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We will present here the data obtained from the examination with micro-XRF of a series of micro samples taken from the decorations of three mosques in Berat. These are part of an Islamic religious complex situated at the central area of the old town and include the “Helvetia Tekke”, the King’s Mosque and the Bachelor’s mosque, which were built or reconstructed during the second half of the 18th century and the beginning of the 19th century. Beside the architectural values of the buildings the interiors of the monuments are decorated with paintings of the walls and the ceilings made of carved wood.

As part of a restoration project, a sampling campaign was organized last year and a number of samples of decorative materials were collected in different parts of the buildings. The samples were measured at the lab using micro-XRF spectrometer ARTAX.

The results of the measurements indicate that the preparation layer of the paintings on wooden ceiling was made of gypsum while that of the wall paintings was made of calcium carbonate. The palette includes the following inorganic pigments: lead white, gold, yellow and red ochre, vermilion, red lead, a copper based green, smalt and probably carbon black. Some modern pigments were identified in the decorations of the King’s Mosque. Similarities and differences observed between the monuments and indications about the painting technique as well as the degradation of some pigments will also be discussed.