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Technological characterization of polychromies on a Balearic medieval stone Altarpiece of 15th Century

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There are many examples of Gothic art introducing polychrome finishes on stone sculpture, both in the religious and civil spheres in the Iberian Peninsula. In the Balearics, with the Christian conquest, this practice was also extended. The Passio Imaginis Altarpiece, at San Salvador Sanctuary in Felanitx (Mallorca) has been studied. The sculptor Huguet Barxa carved the relief along 1448-1453 on a sedimentary stone and Joan Marsol made the polychromy.

The characterization of the polychromies began with an organoleptic examination and photograph of general visible light and flush, assessed by digital image analysis (DIA). DIA allowed revealing traces of polychromies that had not been detected by naked eye in order to carry out the proper sampling. The samples were analyzed by optical microscopy; scan electron microscopy (SEM-EDX), and the study of organic binders.

The results obtained in the stratigraphic studies revealed the application of a sequence of layers of calcite and/or albayalde preparation. The pigments identified were vermilion, azurite or lapis lazuli; these pigments do not provide data on the chronology but coincide with medieval symbolism of colour and pigments employed in Iberian Peninsula. Binders detected are egg or animal glue. Data indicates that it is most likely an original finish.

Colour, as part of stone sculpture, is the logical consequence of different aesthetic-functional criteria that serve the concept of medieval beauty and symbolism, the protection of stone, the ordering of reading and its ornamentation. Colour study contributes through the knowledge of the Passio Imaginis altarpiece and the awareness of its remains, to avoid the misinterpretation and / or destruction of the pictorial strata present in stone carvings.