

Analysis and comparison of the materials used for the Middle Ages painting, decoration V, found in the Cordeliers church, Fribourg, Switzerland

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The analysis of the pigments and the mortar of a medieval fragmented wall painting, decoration V, found in the Church of the Cordeliers in Fribourg, Switzerland, follows an SNF project on decoration I-IV completed in 2012 under the direction of Professor V. Serneels (unpublished). The fragments were part of the decoration of the choir screen destroyed in 1745. The pieces of the broken wall were used as embankment. There is about 14'000 fragments divided into several different wall paintings. Optical microscopy, x-rays fluorescence spectroscopy, x-ray diffraction and scanning electron microscopy with WDS-EDS were used.

The ground layers are composed of mortar (sand particles in a lime matrix) on top of which three different preparation layers could have been applied (intonaco, dolomitic lime milk and gypsum). The superposition of the coloured layers and the coloured substances were interpreted to define part of the artist painting art. There are thirteen surface colours, ten pigments (except gold) and a minimum of several composed mixtures as well as various overlays. The superpositions and mixtures are complex and one fragment is not representative for a colour. Pigments found are cinnabar, haematite, minium, white lead, lead-tin yellow, azurite, malachite, an organic copper pigment, charcoal, ochre (sienna, yellow earth and red earth).

Keywords: Middle Ages; Pigments; Wall painting; SEM; XRD; WDS-XRF; Cordeliers church; Fribourg

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