

Grisaille production: some examples from the 14th to the 20th century

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Grisaille was traditionally produced by glaziers and glass-painters themselves using a lead-based glass mixed with burned metals (iron or copper). From around 1855 these painting materials started to be industrially produced and traded leading to the creation of new and standardized formulas.

The main objective of this work is to analyse the evolution of this glass-based paint for better understanding changes in the raw materials used throughout time.

Stained-glass window fragments from the monastery of Batalha (Portugal), cathedral of León (Spain), Nidaros cathedral (Norway), church of the Holy Spirit in Madrid (Spain), a Belgian private collection, among others, were studied. Chronologies of the samples are encountered between 14th and 20th century.

The fragments were analysed by optical microscopy and particle induced X-ray emission and the results compared with previous ones in the literature.

As preliminary results, an increase on the homogeneity of the more modern samples was observed. This could be attributed to the industrial production process. Regarding the samples composition it was possible to identify the appearance of different metals, as cobalt, chromium and manganese oxides to begin with the 19th century samples. These new compounds usually appear together with iron or copper oxides which are the main identified colouring agents in older samples.