

## **STUDY OF SOME ARCHAEOMETRIC CHARACTERISTICS USED IN PANEL PAINTING ICONS AUTHENTICATION**

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**Abstract.** The authentication of cultural heritage assets is a complex process of scientific investigation which regards obtaining information about: author (painter), the period when it was made, the owners and other data related to the main contexts of their evolution in time (routes travelled). In fact, the identification of specific archaeometric features is aimed, in determining the materials composition and the patina, then the study of artistic techniques and technology used in the making process of a work of art. Latest serves to define the patrimonial elements and the role of the artifact in time. The expertise of old panel painting icons requires an interdisciplinary approach, correlating the artistic style with technique and materials used. In this regard, the specific techniques of microscopy and spectroscopy are very useful tools for determining the composition of structural elements and their deterioration / degradation state. This work presents a comparative study of the paper used in the preparation layer of three icons painted in Russian style. As an analysis techniques were used the micro and macro photography assisted by Optical Microscopy (OM), SEM-EDX and micro-FTIR. Based on the experimental data obtained, it was found that the icons belong to the first half of the 19<sup>th</sup> century.

**Keywords:** icon, historic paper, SEM-EDX, micro-FTIR.