STUDY OF EASEL PAINTINGS WITH THE USE OF LIBS AND STATISTICAL ANALYSIS

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ABSTRACT  Research results of 6 easel paintings from XVII and XVIII century probably created by artists closely related to the King John III court are presented in the paper. The four of them are attributed to M.A. Palloni while authors of the two left have not been identified yet. The aim of the work was the analysis of a technique and technology of the paintings and comparison of their workshop features. Laser-Induced Breakdown Spectroscopy was used in the investigations while for comparison a multivariate statistical analysis was applied. The LIBS method, as a micro-destructive one, considerably expands possibilities of paint layer research since allows performing analyses in points where sampling is not allowed or possible. During the work presence of pigments in appointed places were identified and stratigraphy distributions in subsequent technology layers were determined. Measurement results were then statistically compared which gave some additional basis for final conclusions.

Keywords: easel paintings, LIBS, factorial analysis