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ENVIRONMENTAL CARE FOR ROMANIAN OIL PAINTINGS. TECHNICAL EXAMINATION OF DEGRADATION PHENOMENA IN CANVAS TEXTILES

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Abstract

Paintings signed by Nicolae Grigorescu and Stefan Luchian, exponents of Romanian Modern Art were selected for a technical study on easel painting canvases. Both the physical integrity and the appearance of the artefacts derive mainly from the strength of the canvas and the physical and chemical characteristics of the fibres imparting their response to deterioration. In order to determine a deterioration pattern for canvases subjected to environmental stress, a simulation on flax fibres samples was performed using a climatic lab chamber. Structural changes of lignocellulosic materials were monitored by attenuated total reflectance infrared (ATR-FTIR) and FT-Raman spectroscopy. Changes in the intensity of FT-Raman signals of flax fibres indicate the evolution of the degradation phenomena due to environmental stress.

Key words: ATR-FTIR spectroscopy, canvas degradation, environment stress, FT-Raman spectroscopy, oil painting

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