



**MONITORING THE BEHAVIOR OF THE
RESTORATION INTERVENTIONS OF THE PROBOTA
MONASTERY'S INDOOR FRESCOES UNDER THE
INFLUENCE OF THE ENVIRONMENT FACTORS.
II. MODIFICATIONS OF THE PHYSICAL-
STRUCTURAL AND CHEMICAL CHARACTERISTICS**

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Abstract

The paper deals with the physical-structural and chemical modifications of the components from the preparation layers of the indoor frescoes, after the restoration of the Church of Probota Monastery (Romania), especially the old layers of „arriccio” and „intonaco”, that were subject to the interventions of consolidation, stabilization and structural reintegration. Both structural elements were analyzed in order to determine several characteristics: the ratio lime/sand, the carbonating degree, the total compactness of the sample, the total porosity of the sample, the area of the BET surface, the capillary ascension, the permeability of the water vapors and the superficial cohesion. Moreover, the samples were analyzed using IR spectroscopy, that indicates the absorption bands specific to all water types and also by thermal derivatography evaluating the activation energy and the reaction order for the temperature domains specific to the elimination of some physically bound water types (hygroscopic water, mainly the reversible component).

Keywords: monitoring, indoor microclimate, efflorescence, hydrous equilibrium, consolidation, stabilization, reintegration, arriccio and intonaco.

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