

## **EVALUATION OF THE EFFECT OF HIGH FREQUENCY PLASMA IN THE CONSERVATION TREATMENTS OF CULTURAL HERITAGE ITEMS WITH ORGANIC SUPPORT**

Dorina Rusu<sup>1</sup>, Ghiocel Ioanid<sup>2</sup>

<sup>1</sup>Mobile Cultural Heritage Restoration – Conservation Centre, Iași, Romania

<sup>2</sup>”P.Poni” Institute of Macromolecular Chemistry Iași, Romania

The preservation of cultural heritage and its transmission to future generations has no frontiers and represents a permanent preoccupation for all specialists involved in the conservation of cultural heritage items.

The most efficient way of preserving cultural heritage evergreen is to assure the optimal microclimate conditions. Yet, this is an objective rather difficult to achieve for many museums throughout the world. Consequently, it is often necessary to carry out a qualified intervention for the implementation of the conservation operations, which usually consist in the decontamination and/or cleaning of the cultural heritage items. These treatments are done using toxic substances which endanger not only the condition of the item itself but also of the personnel involved in carrying out those treatments. Also the negative impact of such substances on the environment is to be taken into account.

Current worldwide tendencies are to replace or at least to eliminate the usage of any such product. The application of cold high frequency plasma for the implementation of decontamination and cleaning treatments of cultural heritage items is continuously more and more studied as an ecological non-noxious non-invasive selective option of treatment for the cultural heritage items made of both organic and inorganic materials.

The present paper aims at studying the effect of HF plasma in the conservation of organic cultural heritage items by specific biologic and physical – chemical analyses (SEM microscopy, spectroscopy, optical microscopy, chromatography).

Acknowledgements: the study has been carried out in the framework of the excellence project CEEEX 54/2006 - Romania.