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## OBTAINING AND CHARACTERIZATION OF ROMANIAN ZEOLITE SUPPORTING SILVER IONS

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### Abstract

The aim of this work was to obtain Ag - doped zeolite as antibacterial material using natural and sodium form of zeolite from Mirsid Romania with the dimensions ranged between 0.8-1.2 mm. The comparative structural characterization of natural and Ag - doped zeolite were performed using Laser Induced Breakdown Spectroscopy (LIBS), X-ray Diffraction (XRD), Scanning Electron Microscopy (SEM), Atomic Force Microscopy (AFM), and Infrared Spectroscopy (IR). In addition, the ion exchange total capacities for silver of natural and sodium forms of zeolite were determined. The quantitative assessment of silver amount incorporated into zeolite lattice was achieved by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).

*Key words:* Ag - doped zeolite, qualitative assessment, quantitative assessment, structural characterization

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