

عنوان مقاله:

Immobilization of new Schiff base complexes on zeolite in two different methods and Comparison of their antibacterial activities

محل انتشار:

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خلاصه مقاله:

Porous materials such as zeolites have been evaluated in vitro as biomaterials [1]. Their properties such as high surface area, chemical inertness, high resistance and easy synthesis and modification procedure have allowed their use in biomedical applications like antimicrobial activity [2]. Besides, it was also observed antibacterial activities in a number of Schiff base complexes [3]. In view of the foregoing discussion, we are going to investigate the biological activity of some Schiff base complexes immobilized on NaY Zeolite with spacer or without it (Fig.1). The first method in this work, the spacer (3-APTES) was first anchored over NaY Zeolite and then it had reaction with related Schiff base complexes and in other method, the complexes attached to surfaces without any space (below scheme). The prepared materials were characterized by several techniques: CHN, DRS, FT-IR, XRD and TGA. The in vitro antibacterial activity of these compounds was evaluated against Gram-positive and Gram-negative bacteria. The results from immobilization of Schiff base complexes on porous materials with the spacer show fine inhibition on bacterial growth till 24 hours but we cannot observe the same results for anchoring of the complexes without spacer.

کلمات کلیدی:

Porous materials, zeolite, Schiff base complexes, antimicrobial activity

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