

Sorption and biocidal properties of the composite based on glauconite Saratov region and copper nanoparticles

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Keywords: inorganic sorbents, glauconite, copper nanoparticles, sorption, composites.

Abstract

Copper nanoparticle based glauconite composite has been synthesized by in situ reduction of a copper ammonium complex ion and characterized by different analytical instruments. The copper nanoparticles were both intercalated and adsorbed. The sorption properties of the glauconite and composite basis on it in relation to iron ions(III) have been studied, the sorption isotherms were obtained. Antimicrobial activity of the composite was observed on Escherichia coli, Staphylococcus aureus. In the present form the glauconite composite shows good promise use for applications in medical practice.