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LIGNO – CELLULOSIC MATERIALS FOR WASTEWATER TREATMENT

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Abstract

Life quality represent an imperative for super industrialized modern society, in conditions of a high demographic explosion, exhaustion of basic materials sources, pollutants diversification and increase of environmental pollutions. Water is undoubtedly the most precious natural resource that exists on our planet and biotechnological, ecological and efficient alternatives have to be developing in order to treat the wastewater.

Among the methods for wastewater treatment, biosorption of heavy metals and organic compounds from aqueous solutions can be considered as an alternative technique. So, the capacity of using cellolignine, sawdust, pumpkin core, hemp fibers and peat as biosorbents for reactive dyes, Fe (II), Cu (II) and Cr (III) ions from aqueous solutions was studied.

The biosorption is more efficient for the retention of cations or organic compounds at trace concentrations in aqueous solutions than the conventional treatment, involving also low energetic consumptions.

Keywords: wastewater, biosorption, biosorbents, chemical pollutants, removal

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