Removal of Nickel (II) from Aqueous Solution by Activated Carbon Prepared from Askari Grape Dust

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Abstract
Activated carbon prepared from Askari grape sawdust (AGAC) was used as an adsorbent for the removal of nickel (II) ions from aqueous solutions. The effects of initial pH, initial concentration of nickel ions and contact time on the adsorption of AGAC for Ni ions were studied in a batch process mode. The adsorption capacity of AGAC increases with pH. The equilibrium data in aqueous solutions were fitted to Langmuir, Freundlich and Temkin isotherm models and the model parameters were evaluated. The results showed that the equilibrium adsorption of AGAC was best described by Langmuir isotherm model.

Keywords: Askari grape; nickel (II) ions; Activated carbon.

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