

عنوان مقاله:

Removal of Pb (II) from aqueous solutions using Myrtus communis

محل انتشار:

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خلاصه مقاله:

Myrtus communis (MC) was investigated for its ability to perform as a suitable sorbent for Pb(II) from aqueous solution. Activated carbon prepared from concentrated H₂SO₄ and oven in 180°C. A batch sorption model was applied to predict the equilibrium sorption capacity. Equilibrium behavior of the adsorption system is necessary for modeling of adsorption kinetics. Adsorption data are usually described by adsorption isotherms. These isotherms indicate the relation between equilibrium impurities(ions) uptake per unit weight of adsorbent (q_e) and the equilibrium adsorbate concentration in the bulk fluid phase (C_e) at a given temperature. In addition, the experimental results were analysed by Langmuir, Freundlich and Temkin isotherms. The Langmuir model with coefficient of 0.9933 was found to fit the data significantly better than Freundlich and Temkin models. According to the evaluation using the Langmuir equation, the monolayer sorption capacity was obtained to be 108.7 mg g⁻¹. The (MC) investigated in this study showed good potential for the removal of Pb(II) from aqueous solutions

کلمات کلیدی:

Myrtus communis; Pb(II); Isotherm; aqueous solution

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