

عنوان مقاله:

Adsorption Kinetics of Azinphos-methyl onto Pyrolyzed Peat Moss

محل انتشار:

دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی (سال: 1395)

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خلاصه مقاله:

Peat Moss Sphagnum pyrolyzed at 800°C was used as an adsorbent for the adsorption of organophosphate insecticide, azinphos-methyl in a batch system. The adsorption parameters; contact time, adsorption temperature and initial concentration of the adsorbate were examined to investigate their effect on the adsorption process. The adsorption properties have been compared with respect to their capacity to remove azinphos-methyl from aqueous solution. The experimental data were analyzed using the adsorption kinetic model, of which a pseudo-first order and second order kinetic model. The pseudo-first order kinetic was found to be the best fit. The results indicate that the adsorption is spontaneous and favorable. Experimental equilibrium data were applied to the Freundlich isotherm. The calculated activation energy showed that the adsorption of azinphos-methyl onto pyrolyzed peat moss is a physical adsorption.

کلمات کلیدی:

adsorption, azinphos-methyl, adsorption isotherm, moss, pyrolyzed

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