Removal of detergents from water by adsorption on activated carbons obtained from various precursors

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ABSTRACT

The adsorption of detergents—sulfonic and phenolic compounds—from aqueous solutions by activated carbons (AC), obtained on the base of different precursors, was studied. The carbon adsorbents used were prepared by water vapor pyrolysis of different raw materials: peach stones, olive stones, natural asphaltite, mixtures from coal tar pitch, and furfural. It was established that all the samples of ACs have close values of high adsorption capacities toward the studied detergents. Some factors affecting the adsorption process—the time of treatment and the amount of the adsorbent—were investigated. It was established that the amount of adsorbent has no significant influence on the adsorption process.

Keywords: Water purification; Detergent; Activated carbon; Biomass

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