

Characterization of activated carbon that's synthesis from green bean peels by using H₂SO₄ agent: Implementation in reactive blue dye removal

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Abstract : In this article used green bean peels (GBPs) that collected from Iraqi markets to synthesis activated carbon (AC). H₂SO₄ agent using in one step chemical activation method. The effect of volume (15, 25, 35 ml) and concentration (4, 6, 8 molarity) of H₂SO₄ on the activated carbon (AC) yield was studied by removal reactive dye blue from wastewater. Adsorption using synthesis activated carbon has been proven by calculated the dye removal efficiency and the amount of adsorbed dye. Activated carbon (AC) was characterized by laser particles size, XRD and FTIR. The best volume and concentration of H₂SO₄ using in this study are (15 ml volume) and (4 molarity concentration) that investigated by % efficiency of dye removal (90.3%) and the amount of adsorbed dye (11.31 mg/gm).

Keywords : GBPs, Sulfuric acid, Reactive dye Blue.

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