

## Zinc Adsorption Determination of H<sub>2</sub>SO<sub>4</sub> Activated Pomegranate Peel

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**Abstract :** Active carbon can be obtained from agricultural sources. Due to the high surface area, the production of activated carbon from cheap resources is very important. Since the surface area of 1 g activated carbon is approximately between 300 and 2000 m<sup>2</sup>, it can be used to remove both organic and inorganic impurities. In this study, the adsorption of Zn metal was studied with the product of activated carbon, which is obtained from pomegranate peel by microwave and chemical activation methods. The microwave process of pomegranate peel was carried out under constant microwave power of 800 W and 1 to 4 minutes. After the microwave process, samples were treated with H<sub>2</sub>SO<sub>4</sub> for 3 h. Then prepared product was used in synthetic waste water including 40 ppm Zn metal. As a result, removal of waste Zn in waste water ranged from 91% to 93%.

**Keywords :** activated carbon, chemical activation, H<sub>2</sub>SO<sub>4</sub>, microwave, pomegranate peel

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