

Preparation and Characterization of Activated Carbon from Animal Bone

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Abstract : The aim of this project was to study the synthesis of activated carbon from low-cost animal beef and the characterization of the product obtained. The bone was carbonized in an inert atmosphere at three different temperatures (500°C, 700°C and 900°C) in an electric furnace, followed by activation with hydrochloric acid. The activated animal bone charcoals obtained were characterized by using scanning electron microscopy (SEM) to observe the effect of activation compared to the unactivated bone charcoal. The following parameters were also determined: ash content, moisture content, volatile content, fixed carbon, pH, pore volume and bulk (apparent) density. The characterization result showed that the activated bone charcoal has good properties and is compared favorably with other reference activated carbons.

Keywords : bones, carbonization, activation, characterization, activated carbon

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