

ACTIVATED CARBON FROM PALM SHELL, AN AGRICULTURAL WASTE, USING K_2CO_3 : INFLUENCE OF ACTIVATION TIME ON PORE DEVELOPMENT

Donni Adinata^a, Mohd Azmier Ahmad^{a,b}, Wan Mohd Ashri Wan Daud^a and Mohd Kheireddine Aroua^a

^a*Department of Chemical Engineering, Faculty of Engineering, University of Malaya, Kuala Lumpur, Malaysia*

^b*School of Chemical Engineering, Universiti Sains Malaysia, Seri Ampang, 14300 Nibong Tebal, Penang, Malaysia*

ABSTRACT

The main objective in this work is study the influence of activation times in the preparation of activated carbon by the method of potassium carbonate (K_2CO_3)-chemical activation. The characteristics and pore development of the prepared activated carbon were investigated. The experiments were carried out with activation time varied from 0.5 to 4.0 h. The results show that in all cases, increasing the activation time the yield decreases, while the adsorption of CO_2 will increase, progressively. It was found that the specific surface area of activated was at a maximum value (about 1170 m^2/g) at a activation time of 2.0 h with carbonization temperature of 800°C and at an impregnation ratio of 1.0.

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