World Academy of Science, Engineering and Technology
International Journal of Chemical and Materials Engineering
Vol:9, No:07, 2015

Adsorption of Paracetamol Using Activated Carbon of Dende and Babassu Coconut Mesocarp

Authors : R. C. Ferreira, H. H. C. De Lima, A. A. Cândido, O. M. Couto Junior, P. A. Arroyo, K. Q De Carvalho, G. F. Gauze, M. A. S. D. Barros

Abstract : Removal of the widespread used drug paracetamol from water was investigated using activated carbon originated from dende coconut mesocarp and babassu coconut mesocarp. Kinetic and equilibrium data were obtained at different values of pH. Babassu activated carbon showed higher efficiency due to its acidity and higher microporosity. Pseudo-second order model was better adjusted to the kinetic results. Equilibrium data may be represented by Langmuir equation. Lower solution pH provided better removal efficiency as the carbonil groups may be attracted by the positively charged carbon surface.

Keywords : adsorption, activated carbon, babassu, dende
Conference Title : ICCE 2015 : International Conference on Chemical Engineering
Conference Location : Stockholm, Sweden
Conference Dates : July 13-14, 2015