



International Journal of Advanced Research in Biology, Ecology, Science and Technology (IJARBEST)
Vol. 2, Special Issue 8, February 2016 in association with
KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY, VIRUDHUNAGAR
DEPARTMENT OF BIOTECHNOLOGY

ORGANIZES

DBT, NEW DELHI SPONSORED NATIONAL LEVEL CONFERENCE ON CONTEMPORARY TRENDS IN
BIOENERGY AND GREEN TECHNOLOGY: CHALLENGES AND OPPORTUNITIES [ORA-2016]
(25-26TH FEBRUARY 2016)

REMOVAL OF BASIC MAGENTA DYE USING CASSAVA RHIZOME

Dhilip Kumar.G., Sasikala.N., Sivamani.S.

Department of Biotechnology, Kumaraguru College of Technology, Coimbatore.

*Corresponding Author: E-mail:sivmansel@gmail.com; Ph: 9486159667

Abstract

The removal of dye from industrial effluents by commercial activated charcoal is uneconomical now-a-days. In this method, the charcoal produced from the cassava (*Manihotesculenta*) rhizome by thermal activation method was investigated to remove basic magenta dye from its aqueous solution. The parameters under study were contact time, initial dye concentration, pH and temperature. The effect of contact time was used to investigate adsorption kinetics for pseudo-first order and pseudo-second order models. The effect of initial dye concentration was studied for Langmuir and Freundlich isotherms. The temperature was varied to evaluate Gibb's free energy, enthalpy and entropy. Thus, cassava rhizome can effectively be used as an adsorbent for the removal of basic magenta dye from its aqueous solution.

Keywords: Basic magenta; Cassava rhizome; Adsorption; Isotherms.

