"REMOVAL OF HEAVY METAL BY ADSORPTION USING BUTEA MONOSPERMA"

(Sponsored By K.S.C.S.T., Bangalore)

A Project Report
submitted in partial fulfillment of the requirements
for the award of the Degree of
Bachelor of Engineering in Chemical Engineering
of the Visvesvaraya Technological University, Belgaum

Submitted by

Shruti N. Patil	2KL07CH024
Gouramma Pattanashetti	2KL07CH006
Manjunath Bhiradi	2KL07CH014
Shankar Madagouda	2KL07CH023

Under the Guidance of

Prof. Santosh A. Kadapure

DEPARTMENT OF CHEMICAL ENGINEERING

K.L.E SOCIETY'S

COLLEGE OF ENGINEERING AND TECHNOLOGY

UDYAMBAG, BELGAUM – 590 008

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM

2010-2011

ABSTRACT

The waste water containing hexavalent chromium is treated with adsorbent prepared from Butea monosperma and was investigated in batch experiments. The project is aimed at finding the efficiency of activated charcoal made from Butea monosperma (ACBM), and also to determine how it is affected by the pH value of the chromium solution and hence finding the optimal chromium solution. We have fitted the adsorption data thus obtained in the Freundlich adsorption isotherms. We have generated a comprehensive data to compare the adsorption of the Butea monosperma for checking the effects of the various parameters (viz. contact time, adsorbent dose, pH of the sample, initial concentration etc.) on the adsorbent capacity. The adsorptive capacity of the Butea monosperma was dependant on the pH of the chromium solution, with pH 2 being optimal.