

**ADSORPTION OF DYES FROM TEXTILE  
INDUSTRY BY USING ACTIVATED RICE HUSK**

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## AUTHOR'S DECLARATION

I declare that the work in the thesis was carried out in accordance with the regulation of Universiti Teknologi MARA. It is original and is the results of my own, unless otherwise indicated or acknowledge as reference work.

I, hereby acknowledge that I have been supplied with the Academic Rules and Regulations, Universiti Teknologi MARA, regulating the conduct of my study and research.

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We declared that we read this thesis and in our point of view this thesis is qualified in terms of scope and quality for the purpose of awarding the Bachelor of Chemical Engineering (Environment) with Honours.

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## ABSTRACT

Dyes has been used almost in all industries especially in textile industry. However, these industries have contributed to water pollution due to direct or indirect discharge of unused dyes into nearby water stream such as river or seas. This study was carried out to determine the adsorption capacity of the low cost adsorbent, activated rice husk for removal of various dyes from textile industry effluents. The dyes used are Rhodamine B, Acid Orange 7 and Methylene Blue. The effect of adsorbent dosage and concentration of dyes are studied. The adsorbent is characterized by FTIR and UV-Vis spectrophotometry. 5, 7 and 10 ppm initial concentration of Rhodamine B dye, Acid Orange 7 and Methylene Blue was analysed with 0.25g and 0.50g activated and un-activated rice husk. The results of this study clearly shows that activated rice husk remove dyes concentration faster than un-activated rice husk. Acid Orange 7 removal of dye concentration is faster than Rhodamine B and Methylene Blue because anionic dyes react better on positive charged ion adsorbent. More amount of adsorbent dosage resulted in increased of percentage removal of dyes.