

# Extraction of cellulosic fibres from agricultural waste and its applications

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## ABSTRACT

One of the major problems in the environment is deforestation. In the last five years, the deforestation rate is about 10 Million hectares per year. The main reason for deforestation is the dominance of wood dependent industries. On the other hand, agricultural biomass is generated in huge amounts in India. Agricultural wastes are considered to be a promising and novel source for the preparation of Cellulose, a highly valued precursor for production of cellulose based bio-polymer, paper, textile products. Recently, enormous research is being performed in the utilization of agricultural biomass to various by-products. In the present work, extraction of alpha-cellulose from Rice husk waste as an alternative for the extraction of cellulose for application in various industries has been discussed. Rice husk is initially delignified using 12%(v/v) NaOH at 100°C for 60 min and bleached with 15%(v/v) Hydrogen peroxide for 20 min. The effect of temperature on the extraction of alpha-cellulose content from the rice husk has been carried out. The results revealed that at the temperature of 150°C, cellulose yield was high with alpha cellulose content of 86%.

## REFERENCES

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