



National University of Science and Technology

Think in Other Terms



DEPARTMENT OF CHEMICAL ENGINEERING

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COURSE: RESEARCH AND DEVELOPMENT

TITLE: FURFURAL PRODUCTION FROM BAGASSE

This report is submitted in partial fulfilment of the requirements of the Bachelor of Engineering Honours Degree in Chemical Engineering at N.U.S.T



EXECUTIVE SUMMARY

In this project, the author investigated the technical and economic feasibility of producing furfural from the raffinate produced during sucrose extraction from sugar cane. The author also looked at commercial available technologies for production of furfural from biomass specifically bagasse; the market potential of furfural chemical and evaluated the likely economic performance of the project.

The production of Furfural from bagasse is an economically feasible project with a net present value of **US \$11.10million** after ten years and payback period of 6.02 years. Challenges likely to be faced by prospective furfural manufacturers as determined from the research are low furfural yields when using conventional processes, fluctuating prices of furfural on the world market and the disposal of liquid effluent from a furfural producing facility.