

FACULTY OF ENGINEERING

DEPARTMENT OF CHEMICAL AND PROCESS ENGINEERING

FINAL YEAR PROJECT REPORT

MAIN TITLE

**INVESTIGATION OF OPTIMUM TEMPERATURE FOR ACCELERATED DOMESTIC
WASTEWATER TREATMENT PROCESS BY**

NAMBI SARAH, MWAITA ANTHONY, AND MULUMBA MATHIAS

SUB-SYSTEM 3

**EFFECT OF TEMPERATURE ON THE ACCERELATED REMOVAL (CLARIFICATION)
OF COLOR AND TOTAL SUSPENDED SOLIDS FROM BIOLOGICAL EFFLUENT.**

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Final year project report presented to Dept. of Chemical and Process Engineering as a partial fulfillment for the award of bachelor's degree in Agro-processing Engineering of Busitema University.

DECLARATION

I **MULUMBA MATHIAS** declare that this project proposal report and the information contained therein, has not been submitted by any individual for the award of a degree or diploma in any institution.

Date.....

Signature.....

APPROVAL

This project proposal is submitted to the Faculty of Engineering for examination with approval of my supervisors and the contents are satisfactory for the award of the degree.

Supervisor:

Signature: **Date:**

(MR. SSERUMAGA PAUL)

DEDICATION

I dedicate this report to my parents for their unwavering support towards my education. I can't be thankful enough for their constant encouragement right from my early schooling. May the almighty Lord bless them abundantly.

ACKNOWLEDGEMENT

My profound appreciation goes to the almighty Lord for his constant protection and a blessing of knowledge and understanding.

I would also extend my appreciation to my supervisor for constantly guiding me despite his busy schedule to see to it that this proposal is completed on time. Am also forever grateful to my family for their constant encouragement and prayers, financial support, as well as moral support, may the almighty Lord reward you abundantly. I also wish to thank the Chemical and Process department for always being there for us.

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ABSTRACT

The purpose of this study is to investigate the optimum temperature for accelerated clarification of effluent from the biological wastewater treatment phase. The parameters that were investigated in this study are color and total suspended solids removal. Results obtained indicated that at a temperature range of 37-40°C, accelerated removal of color would be achieved with removal percentages of 62.05%. On the other hand, accelerated total suspended solids removal was achieved at temperature ranges of 35-40°C within a time interval of 30 minutes. The system could be refined by increasing the time interval along which the settleability of solids can be determined.