QUANTIFICATION AND PURIFICATION OF BIOLOGICAL AND CHEMICAL WASTES 
IN EFFLUENT OF SHIROKO HOTEL, 
MINNA.

BY

AIGBOLOGA. OHIEH. FRIDAY 
2003/17502EH.

A THESIS SUBMITTED IN PARTIAL FULFILLMENT 
OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF BACHELOR OF 
ENGINEERING (B. ENG.)

IN THE

DEPARTMENT OF CHEMICAL ENGINEERING 
SCHOOL OF ENGINEERING AND ENGINEERING 
TECHNOLOGY 
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA 
NIGER STATE, NIGERIA 

NOVEMBER 2007
DECLARATION

I here by declare that this project work is the result of my own hand work and has not been submitted by any body else where.

O.O. FRIDAY

student

Date

28/11/07
CERTIFICATION

certify that this project work was carried out by AIGBOLOGA OHIEN FRIDAY (2003/17502EH) in
Chemical Engineering Department, School of Engineering and Engineering Technology, Federal
University of Technology, Minna it was supervised, moderated, and Approved by the following
underlisted person on behalf of the department.

[Signature]

O. S. AZEEZ
Project Supervisor

[Signature]

M.O. EDOGA
(Head of Department)

[Signature]

EXTERNAL EXAMINER

DATE

DATE

DATE
DEDICATION

This project specially dedicated to Almighty God who through the blood of Jesus Christ which was shed on the cross of Calvary has redeemed, strengthened and seen me through at the course of my studies in the institution

Am also dedicating this project to AIBOLOGA'S family particularly my beloved mother and father who did all their possible best to give me a sound education, may the Almighty God through Christ Jesus continue to grow all your effort with abundant success(Amen).
ACKNOWLEDGEMENT

Adoration unto the lord for sparing my life throughout my academic pursuit in this citadel of learning, the Federal University of Technology, Minna.

Special thanks goes to my project supervisor in person of Engr. O.S. Azeez for his valuable guidance, advice, suggestion, encouragement and patient exhibited while letting the manuscripts of this work. I also thank every lecturer in my department and my HOD for all they have built within me especially how to be independent.

My gratitude also goes to those who have contributed in one way or the other either materially or financially to make this project a reality.

My special and sincere thanks to my caring loving parents Mr. and Mrs. Aigbologa who have given me the opportunity as well as legacy a child can acquire at the appropriate time. The scripture made us to understand that we should seek first the kingdom of God and all other things such as having loves one can be added unto you.

My gratitude also goes to all my brothers and sisters form the eldest to the youngest, I say you are all such a loving and caring brothers and sisters whom God have sent to make this project a reality, said God bless you all and host o brothers who have contributed to my success.

I will also like to acknowledge my course mates for the peaceful, loving attitude throughout our course of study especially my mates under the same supervision.

I also appreciate the love and efforts of my room mates in the course of this project, I can not mention all your names but you are remembered. Finally the greatest glory I give, for with him nothing is impossible I will keep on praising God for his goodness and mercy endures forever.
ABSTRACT

The physiochemical qualities of waste water and pollution level of the effluent from Shiroro Hotel was evaluated, the sample was collected and analyzed for physiochemical attributes e.g. pH, turbidity, conductivity, odour, colour, temperature, hardness, COD, iron, acidity, viscosity, alkalinity etc. results were obtained and various parameters were compared with the world health organization (WHO) recommended standard for portable water. The high result obtained in conductivity which was 2600uscm$^{-1}$ make it unfit to be discharged directly into river because fishes and other aquatic animals in them are not to thrive well. The higher coliform bacteria signify that the water is highly polluted with organic waste which causes typhoid and diarrhea in man. Also, higher content of hardness and iron makes it unsuitable for laundry and other domestic use. From all indications, the effluent should not be discharged into water body because of it's alarming high level of both physical and chemical parameters unsuitable for aquatic life and human consumption.