THE CHEMICAL CONSTITUENTS OF THE ETHYL ACETATE EXTRACT OF THE STEMS OF *POLYALTHIA BULLATA*

MOHD AFIF BIN WASIS

Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Applied Chemistry
in the Faculty of Applied Sciences
Universiti Teknologi MARA

NOVEMBER 2008

This Final Year Project Report entitled "**THE CHEMICAL CONSTITUENTS OF THE ETHYL ACETATE EXTRACT OF THE STEMS OF *POLYALTHIA BULLATA*"** was submitted by Mohd Afif Bin Wasis, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by

Puan Faridahanim Binti Mohd Jaafar
Supervisor
B. Sc. (Hons.) Applied Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor

Miss Sabrina binti M. Yahaya
Project Coordinator
B.Sc (Hons) Applied Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA

Dr. Yusairie
Head of Programme
B.Sc. (Hons) Applied Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA

Date : 1/12/08

ACKNOWLEDGEMENTS

First of all, I would like to express my gratitude and appreciation to my supervisor, Puan Faridahanim Mohd Jaafar, for his advice, valuable guidance, inspiring suggestions, and motivation during the hard time for accomplished of this Final Year Project. Subsequently, I would like to thank all the postgraduate students of natural product studies who have always supported and helped me in completing my project successfully. My heartiest thanks and appreciation are for my parents, Encik Wasis Bin Kasan and Rokiah Binti Mohd Johan for their never ending support. To all my friends who have been very helpful, I will remember every moment that has been shared together. Last but not least, thank to all laboratory assistants for their helped and supported me until I finished this project

TABLE OF CONTENTS

ABSTRACT

THE CHEMICAL CONSTITUENTS OF THE ETHYL ACETATE EXTRACT OF THE STEMS OF *POLYALTHIA BULLATA*

Polyalthia Bullata is a plant that is traditionally effective as an aphrodisiac for men. In Malaysia, this plant is known as Tongkat Ali Hitam or Tongkat Ali Baginda. The stem bark of *Polyalthia Bullata* underwent successive solvent extraction using hexane, dichloromethane, ethyl acetate and methanol. The crude ethyl acetate extract was subjected to column and thin layer chromatography. Phytochemical analysis on the stem bark of *Polyalthia Bullata* yielded the known aporphine isoquinoline alkaloid, liriodenine. The compound was identified by UV, IR, GC-MS and NMR and compare with the literature. The weight and % yield of the compound were 3.8 mg and 0.4524 % respectively