

UNIVERSITI TEKNOLOGI MARA

**CHROMATOGRAPHIC STUDY OF *VITEX*
CHLOROFORM EXTRACT**

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Dissertation submitted in partial fulfillment of the requirements
for the

Bachelor of Pharmacy (Hons.)

Faculty of Pharmacy

November 2009

ACKNOWLEDGEMENT

First and foremost, I would like to express my deepest gratitude to Allah who gave me health, strength, and ability to complete this research and gaining a lot of precious knowledge which I never experienced elsewhere.

I wish to express my highest appreciation to my supervisor, Dr. Ibtisam Abdul Wahab, who spends a lot of her time in giving me advice, continuous support, contributing ideas and guidance. Also, I would like to thank her for patiently reviewing and correcting my thesis draft. Her impartial, invaluable assistance and guidance have resulted in completing this research. It has been invaluable experience to work under her supervision.

I would like to express my deepest appreciation and thanks to Dr. Syed Adnan for his guidance on how to operate Nuclear Magnetic Resonance spectra. Not forgotten, I also would like to take this opportunity to thank Mrs. Anniss, Ms Nik Salmah, Ms Suraya and all iKUS laboratory members for their useful guidance and advices.

Beside that, I would like to thanks to all my group members, Nor Fadzila Badruddin, Fia Iskandar and Izma Sharizham Mat Zin who have been helping me throughout this research. Last but not least, I also would like to express my special gratitude to my lovely family for their supported and encouragement throughout period of this study.

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ABSTRACT

Medicinal plants have gained the interest of many researchers from all over the world. In the countries, herbal medicine has remained as the main therapy due to the availability and perhaps culture preferences. The researchers from various disciplines challenged their great concerned to discover the benefit of the medical plants by using modern medicinal equipment. In this study, the investigation of *Vitex trifolia* was limited to characterizing the constituents from the chloroform extract of the leaves. Further studies were considered to be interesting as the benefits of *Vitex* species were traditionally approved used to treat wide range of ailment. The extracts were introduced to thin layer chromatography (TLC) to clarify the bands. The band which contained interesting compounds was subjected to silica column chromatography. Fractions collected were again introduced to TLC. The chemical composition of the crude drug extract were analyzed and observed under ultraviolet light. Compounds of interest were subjected to Nuclear Magnetic Resonance (NMR). From NMR, two compounds, compound 2 and compound 4 can be suggested. Compound 2 was suggested to have polymethoxyl and methyl substituents similar to which present in ecdysteroid group. Meanwhile compound 4 was suggested as quercetin pentamethyl ether.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Many currently used medicines are derived from natural sources. Over the last 100 years there has been a steady move in developed countries from the original sources of medicine to manufactured alternatives. In the last twenty years, however, there has been a rediscovery of herbal alternatives, despite significant advances in modern medicine. In the most area of the world, herbal medicine has remained as the main therapy because of the availability and perhaps culture preference. The move from the original sources of medicine to manufactured alternative is the result of developments in chemistry which made it possible to extract chemicals from plants, to determine the active ingredients and thereafter to synthesise them artificially.

Vitex species is one of the herbal medicines that have been discovered by the scientists. Its can be categorized to many different species. It is a genus of about 270 species of shrubs and trees, 1-35 m tall, native to tropical, subtropical and also warm temperate regions throughout the world. It was widely included in the family Verbenaceae. However, it has recently been put under family Lamiaceae. The species are differentiated by their botanical name and habitat but they have slightly similar uses.

Vitex species has been reported to be used in traditional medicine to treat a wide range of ailments, such as depression, venereal diseases, malaria, asthma, allergy, wounds,