UNIVERSITI TEKNOLOGI MARA

CHROMATOGRAPHIC STUDY OF *VITEX* HEXANE EXTRACT

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TABLE OF CONTENTS

		Page
TITLE PAGE		
ACKNOWLEDGEMENT		ii
TABLE OF CONTENTS		iii
LIST OF TABLES		v
LIST OF FIGURES		vi
LIST OF ABBREVIATIONS		viii
ABSTRACT		ix
CHAPTER ONE (INTRODUCTION)		1
1.1	Research background	1
1.2	Statement of problem	2
1.3	Research objectives	3
1.4	Research hypothesis	3
1.5	Research's scope and limitation	4
CHAPTER TWO (LITERATURE REVIEW)		5
2.1	*Vitex* species	5
2.2	Chemical constituents of *Vitex* species	6
2.2.1	*Vitex trifolia*	7
2.2.2	*Vitex agnus-castus*	11
2.2.3	*Vitex negundo*	14
2.2.4	*Vitex polygama*	18
2.2.5	*Vitex altissima*	22
2.2.6	*Vitex rotundifolia*	24
2.3	Conclusion	29
CHAPTER THREE (METHODOLOGY)		31
3.1	Materials	31
3.1.1	Plant extract	31
3.1.2	Chemical	31
3.2	Experimental	32
3.2.1	Preparation of the fractions of interest	32
3.2.2	Fractionation of the extract by CC	32
3.2.3	Spectroscopic technique	33

ABSTRACT

Traditional plants have been used in the medicinal practice since hundred years ago. Most of these plants were claimed to have great therapeutic activities against various diseases. This study is pertaining to the purification and identification of chemical constituents of *Vitex trifolia* (*V. trifolia*, family: Verbenaceae). Many studies reported the potential biological activities of this plant. However, only few scientific evidences have proved all these claims and further investigation should be conducted to examine the chemical compositions of *V. trifolia*. The literature search on the chemical constituents of *Vitex* species had concluded that flavonoid was the most common type of chemical constituent of *Vitex* species. The chromatographic study had been applied in order to purify and investigate the chemical constituents from the leaves of *V. trifolia* hexane extract. Subsequently, spectroscopic evidences suggested that one of the non polar substances could be a labdane-type compound that can be used as a reference standard in quantitative measurements.

CHAPTER 1

INTRODUCTION

1.1 Research background

Herbal medicines are the precursors of many common drugs prescribed in modern clinical practice. Herbs and herbal products play an important role in the primary health care systems in many parts of the world. *Vitex* is one of the examples of herbal medicines identified to potentially give benefits in the field of health science due to its long history to clinical application as source of potential chemotherapeutic agents. *Vitex* 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, skin diseases, snake bite and body pains (Nyiligira et al., 2008).

This study is aimed to obtain different compounds from different solvents used to extract and isolate the chemical constituents of the *Vitex* crude plant extracts. In this research, the purification and examination of the leaves composition of *V. trifolia* or local lemuni (Figure 1.1) from the hexane extract will be conducted. Therefore, the characterization and examination of the chemical structures of *V. trifolia* can be used as a reference standard in quantitative measurements.