UNIVERSITI TEKNOLOGI MARA

PHYTOCHEMICAL INVESTIGATION OF ETHYL ACETATE EXTRACT FROM *HEDYOTIS DIFFUSA*

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ABSTRACT

Hedyotis diffusa is well known folk medicine in East Asia. There were not much studies have been carried out on this plant and very few articles were published on *Hedyotis diffusa*. *Hedyotis diffusa* was selected for this study due to its medicinal properties which in used by the locals in traditional medicine as a health tea. This study was done to investigate the phytochemical constituents present in the leaves of *Hedyotis diffusa* by extraction, fractionation and isolation of phytochemical constituents from the leaves of *Hedyotis diffusa* leaves. Several steps were done in order to accomplish the objectives. Fractionation was done for crude ethyl acetate extract to separate compound(s) into different fractions. Then, isolation of compound(s) was done from the fractions using Preparative Thin Layer Chromatography (PTLC). In this study, cerric sulphate was used as spray reagent. Compound(s) of interest was then subjected to purification to obtain pure compound(s). The pure compound(s) undergoes several test methods to identify its structure by using spectroscopic technique, which was Nuclear Magnetic Resonance (NMR) through ^{1}H and ^{13}C-NMR analysis. Two (2) compounds were successfully isolated from this study but identification of the compounds had not yet completed.

CHAPTER 1

INTRODUCTION

1.1 Introduction

Traditional medicine, particularly herbal remedies has been used for thousands of years in maintaining health and in recent years as an alternative or as a complement to modern medicine. Many drugs used conventionally, originally derived from plants. A huge knowledge of usage of traditional plants had been explored by pharmaceutical in order to discover any bioactive components that believe to have physiological action on human body. The medicinal value of plants is due to the presence of some chemical substances which produce a definite physiological action in human body.

The most important bioactive compounds from plants are alkaloids, flavanoids, tannins and phenolic compounds. Nowadays, researchers are doing investigations on medicinal plant that have potential to promote health. For example, *Ginkgo biloba* (Maidenhair tree) belong to the family Ginkgoaceae contains flavonoids that are inhibitor of the platelet activity. In this study, *Hedyotis diffusa* is selected due to its medicinal properties and used by the locals in traditional medicine as a health tea. This herb has many