

**UNIVERSITI TEKNOLOGI MARA**

**PHYTOCHEMICAL INVESTIGATION ON  
“*HEDYOTIS DIFFUSA*”**

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## ABSTRACT

The main objective of this study was to isolate the compounds from *n*-hexane and dichloromethane extracts of *Hedyotis diffusa* aerial parts. The compounds from the *n*-hexane extract were purified by fractionation method using preparative Thin Layer Chromatography (TLC). The pure compounds were subjected to Nuclear Magnetic Resonance ( $^1\text{H}$  NMR) analysis in order to know the structure of the compound. The structure of desired compound could not be interpreted by using only  $^1\text{H}$  NMR. This is because the quantity of compound was not sufficient for  $^{13}\text{C}$ -NMR and 2D-NMR analysis.

## CHAPTER 1

### INTRODUCTION

Plants have been used traditionally by people for curing various health disorders around the world. A vast knowledge about the usage of plants against different illness accumulated in areas where the use of plants is still of great importance. 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. Many drugs used conventionally were originally derived from plants.

*Hedyotis diffusa* (syn. *Oldenlandia diffusa*), a member of the family Rubiaceae, is an annual herb distributed in northeastern Asia. Pharmacologically, this plant is used for the treatment of cancer and inflammations such as appendicitis, arthritis and bronchitis due to its antibacterial activity. Three major classes of compounds, including iridoid glucosides, flavanoids, and anthraquinones, have been reported as bioactive compounds from this plant (Cuman *et al.*, 2008). As a part of our studies on Rubiaceae plants, our investigation was focus on isolation of chemical constituents from this plant. The current studies on this plant described the isolation and identification of active constituents.