

**PHYTOCHEMICAL SCREENING AND TOTAL PHENOLIC CONTENT
(TPC) OF STEM OF *FICUS DELTOIDEA* VAR *ANGUSTIFOLEA* SPECIES**

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OCTOBER 2007

ACKNOWLEDGEMENT

Alhamdulillah, finally I finished my project with the title of “Total phenolic content in the *Ficus deltoidea* var *angustifolia* species” on the time given. First, I would like to thank to my supervisor Dr Sharipah Ruzaina Bt Syed Aris who had guide me in this study. Thanks a lot for giving me advice, help, kindness and time throughout this research. Thanks also to laboratory assistants in Makmal Kimia 2, En Adnan and En. Khairul who helped me a lot in the laboratory procedure.

I also would like to express my deepest gratitude to my parents En Ishak and giving me the moral and financial support in completing this study. Last but not least to my partner Nur Hidayu who had helped me a lot in this study. Thanks a lot.

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ABSTRACT

The aim of this study is to detect the presence of saponins, alkaloids, flavonoids and terpenes and also to compare the total phenolic content in n-hexane, chloroform, and methanol extractions from the stem of *Ficus deltoidea* var *angustifolia* gold line species (Mas Cotek) by using phytochemical screening tests and total phenolic content (TPC). This experiment used the successive extraction method for the extraction process. The results found that no alkaloids present in the sample. Test of flavonoids were positive in all extractions. Saponin was not detected in the n-hexane extraction but were presents in both chloroform extraction 1+ (froth) and methanol extraction with 2+ (froth). Terpene screening tests were detected in all the sample. Therefore, the stem of this plant contain saponin, flavonoid , and terpene compounds that proved from the photochemical screening tests. All the solvents can be use to extract the saponin, flavonoid , and terpene compounds except n-hexane that cannot extract saponin because no trace of saponin found in the screening test. The total phenolic contents found in methanol extraction is the highest concentration of phenolic (446 ppm), followed by n-hexane extraction (21.40 ppm) and chloroform extraction (19.27 ppm).

CHAPTER 1

INTRODUCTION

1.3 General Information

Malaysia is a country that rich of natural plants that poses useful chemical compounds. The chemical content extracted from plant can give beneficial to human. Most of people in the world use plants for it medicine properties. Natural product chemistry is the study of natural product which are including plants and living organisms. Natural product is used to examine the natural resources such as plant and herbs, whereby the product can be isolated or extracted from the sources and the compound identified using specific techniques. Recently, one of the plant investigated by several natural products researchers that can give benefit to human is *Ficus deltoidea* or known as 'mas cotek' in Peninsular Malaysia. *Ficus deltoidea* has been traditionally used to cure several pathological conditions including cancer and diabetes.

Researchers claim that *Ficus deltoidea* consists of antioxidant, antioxidant is a compound that donates an electron to free radical and converts it to a harmless molecule. In this way, the antioxidants intercept free radical and protect cells from the oxidative damage that leads to aging and diseases. In biological systems, the normal process of oxidation produces highly reactive free radicals. These can readily react and damage other molecule. Oxidize compounds that present in our