

UNIVERSITI TEKNOLOGI MARA

**PHYTOCHEMICAL INVESTIGATION OF THE
YELLOW PART OF *PANDANUS TECTORIUS*
“SANDERI” LEAVES**

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ABSTRACT

The main objective of this study is to investigate the phytochemistry of the yellow part of the leaves of *Pandanus tectorius* "Sanderi". This project involved the fractionation and isolation of compounds from the crude extract. Twelve fractions were obtained and analyzed by Thin Layer Chromatography (TLC). The compounds were detected using spray reagents. In order to isolate the compounds, repetitive fractionation was performed on selected samples by using column chromatography. Preparative TLC was also carried out, resulting two purified samples from fraction A and B. Finally, the pure compound was prepared for Nuclear Magnetic Resonance (NMR) spectroscopy for structural identification. Unfortunately, no NMR data was obtained. In conclusion, the objective of this project was achieved. Future analysis will include complete elucidation of the pure *Pandanus* constituents.

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Plants have been used traditionally by human for curing various health disorders around the world. The medicinal value of plants is due to the presence of some chemical substances that produce a definite physiological action on the human body. In addition, many drug listed as conventional medications were originally derived from plants. Plant of the genus *Pandanus* of the family Pandanaceae encompasses about 600 species (Wakte et al, 2007). Many of them are used by traditional medicine practitioners as medicines in treating disease (Takayama et al, 2001). *Pandanus tectorius* also known as thatch screwpine, is widely distributed in Polynesia, Micronesia, Melanesia and Australia. Currently, it's also distributed in western such as Malaysia, Sri Lanka and India (Lechat, V. et al, 1996). Polynesians used the fruit or root as a traditional medicine to treat several diseases (Lechat, V. et al, 1996). *Pandanus tectorius* is dioecious, meaning that each individual plant has either only female flower or male flowers (Thomson, L. A. J. et al, 2006). *Pandanus* is known as the second 'tree of life' after coconut due to the importance of the edible varieties for food and other varieties for weaving, handicrafts, building and medicine. All part of the plant are used, from the fruit