

**UNIVERSITI TEKNOLOGI MARA**

**THE PHYTOCHEMICAL STUDY ON THE WOOD  
EXTRACT OF *CRYPTOCARYA MASSOY***

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## ABSTRACT

This research is to study one of *Cryptocarya* species which is *C. massoy*. This plant has been used by people at Indonesia and Papua New Guinea to treat certain diseases. It is used as an additive in flavor industry nowadays. Only a few researchers had done their research on this plant as this plant is endangered in nature. Due to the lack of information about *C. massoy*, the benefit of this plant is still unknown. So, in this research, the phytochemical study of the *C. massoy* wood extract was reviewed. This research also involved the liquid-liquid extraction of the hydrodistillate of *C. massoy* wood. The chemical structure drawings of the compounds are learned by ChemBioDraw Ultra 12.0 software from Cambridge Software. Meanwhile, the slide presentation is prepared by using Prezi, a virtual whiteboard from Prezi Inc. There are many methods to detect the phytochemical properties of the wood extract of this plant such as Thin Layer Chromatography (TLC) with UV-visible detection, phytochemical screening and also Nuclear Magnetic Resonance (NMR) spectroscopy ( $^1\text{H-NMR}$  and  $^{13}\text{C-NMR}$ ). The detection of lactones and terpenoids in the *C. massoy* wood extract was performed. The data from TLC, phytochemical screening and NMR spectroscopy was documented. The isolated compounds from this sample include both terpenes and lactones. Finally, the spectroscopic data of the isolated lactone was comparable with the signals for C-10 massoy lactone.

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# CHAPTER 1

## INTRODUCTION

### 1.1 : Introduction to *Cryptocarya*

Natural products such as animals and plants have contributed much in supplying the source for the use in pharmaceutical drug discovery and drug design. They have made it possible to supply for the sources which are very useful in pharmaceutical field due to their various pharmacological and biological activities. Plants are widely used among them. Many plants are used in traditional medicines because plants produce a diverse range of bioactive molecule, which automatically turns them into a rich source of different types of medicines. Moreover, as the time passed, the traditional medicines will be rapidly transformed to many common drugs prescribed in the clinical practices today. Besides, herbs and herbal products are still a crucial part of the primary health care system in many parts of the world.

One of the plant natural products that is beneficial to human is from the genus of *Cryptocarya*. *Cryptocarya* is a genus of evergreen trees belonging to the family Lauraceae. The genus comprises more than 350 species (Rohwer, 1993). It is distributed throughout the tropical, lower temperate or subtropical broadleaved forest of the world such as Indonesia, Australia, Vietnam Brazil and also Malaysia.