

**EXTRACTION OF ESSENTIAL OIL FROM LEMONGRASS
(CYMBOPOGON CITRATUS)**

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ABSTRACT

Lemongrass (*Cymbopogon Citratus*) essential oil is very popular due to scent, therapeutic ability and other advantages such as can be used as insect repellent and etc. The main objective of this study is to determine the effect of ultrasonic soaking to the yield and citral content of the extracted lemongrass essential oil by using hydrodistillation method. As the frequency of ultrasonic soaking is varied from 0 to 37 and 50 kHz, the yield of essential oil is increased up to 0.955%. Study on effect of ultrasonic soaking time from 0 to 45 minutes at 37 kHz showed that there is reducing of citral content after 10 minutes of soaking. The geranial content is reduced significantly while neral content seems did not changed much. It is best to extract lemongrass essential oil with ultrasonic soaking at 37 kHz for 10 minutes in order to maintain high yield as well as high citral content.

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CHAPTER ONE

INTRODUCTION

BACKGROUND STUDY

Essential oil are used widely in aromatherapy and other traditional medicinal systems. More than 90 essential oils can be obtained in the market depending on their function and other characteristic [1]. In fact, the branch of study of the essential oil is widen, not only for its fragrance characteristic but also its ability to help curing diseases such as cancer, heart strokes, bronchitis and many more. Every essential oil have their own functions and characteristic based on the chemical composition group that build up that particular oil. Some plant have characteristic of antispasmodic, diaphoretic, carminative etc. such as Angelica plant while plant like Anise can produce essential oil that can be used as antiseptic, insecticide, stimulant and so on.

Commercially, essential oil can be found and used in several type of industries and production such as bakery and soft drinks production, medicines-related production, detergent and soap production and etc. Three main function of essential oils are shown in Table 1.1.