

**Libya**

**Ministry of Higher Education and Scientific  
Research**

**AL Asmarya Islamic University**

**Faculty of Engineering**



## **EXTRACTION OF ESSENTIAL OIL FROM MINT PAPER**

A graduation project is submitted to the Chemical Engineering Department in partial fulfillment of the requirements for the degree of Bachelor of Science in chemical engineering.

by

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## **ABSTRACT**

Mint oil is one of the most important volatile oil and is the easiest oil to be extracted. It has several medical and industrial uses, and its benefits are many, including removing headaches and dizziness, as well as treating urinary tract infections. It is extracted in several ways, including traditional distillation using a heater, another using a microwave, and another method of distillation without using a solvent and a heat source. Here is the heater, and one of the most important of these methods is microwave distillation, where the best productivity was obtained at 200 grams and 500 milliliters of water. The traditional distillation method using the heater was used 200 grams of mint and 500 milliliters of water, and the goal of the experiments is to extract peppermint oil, so that the best productivity was obtained by conventional distillation with the help of microwave and its productivity reached 0.0566%. In a time of 120 minutes and the ratio of water to mint was (1:2.5), and it is obtained in the experiment of traditional distillation with the help of the heater the best productivity of 0.035%, in a time of 135 minutes, and in the experiment of distillation without using the solvent with the help of the heater, the maximum productivity was obtained about 0.017%.