

**MICROWAVE ASSISTED PROCESS (MAP) FOR EXTRACTION OF FRAGRANCES FROM SELECTED MALAYSIAN FLOWER**

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**ABSTRACT**

The Microwave Assisted Process (MAP) is a high-speed method used to selectively extract target compounds from various raw materials. It was originally developed for the extraction of flavors and fragrances from plant materials, which is generally carried out by techniques that require a lot of energy or a long time or a combination of both. In this study, the important process parameters; the time, temperature and microwave power of the microwave extraction system are controlled in order to obtain the highest yield of extracted essential oil in less time. The Microwave Extraction and Conventional Method Extraction are compared for the extraction of essential oil from Jasmine flowers (*Jasminum officinale*). The Microwave Extraction Method provides more valuable essential oils, reduces the extraction time and allows a substantial saving of energy. After 60 minutes of Microwave Extraction, it is possible to collect sufficient essential oil for analytical determinations, whereas Conventional Method Extraction requires 8 hours. Gas chromatography-mass spectrometry (GC-MS) is used for detection and identification of the extracted compounds. The composition of essential oils isolated by Microwave Extraction and Conventional Method Extraction show a major difference in terms of their aromatic profiles.

<http://journal.masshp.net/wp-content/uploads/Journal/2006/Nurshahidah%2094-106.pdf>

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