



Improving the quality of Patchouli Oil Using Microwave Distillation

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Abstract:There are so many plants that could produce volatile oil grow in Indonesia. Volatile oil is a compound, mostly liquid, produced from the parts of plants, such as roots, cortex, trunks, leaves, fruits, seeds, or flowers through distillation process. Volatile oil is commonly used as additional aroma in food, soap, tooth paste, and medicine. In order to fulfill these demand, volatile oil is extracted from various kinds of plant as the demand of it is getting higher. One kind of volatile oil is patchouli oil, the most favorable in Indonesia for its high economic value. Patchouli oil has a fresh and distinct fragrance as well as high fixation power that is incomparable to any synthetic product. A new process is developed to improve the quality of patchouli oil, that is by using microwave distillation process. This process is the combination of microwave and distillation system. This study aims to analyze the most suitable distillation time and temperature to produce higher patchouli oil content and rendement than Indonesian National Standard (SNI) determined. Variable used in this research are 200 watt, 300 watt, 400 watt and distillation time of 40 minutes, 80 minutes, 120 minutes, and 160 minutes. This study resulted patchouli oil content as much as 84.41756% and produced rendement about 3.4%. Meanwhile the production based on SNI is the minimum standard of patchouli oil content, that is 35%, and commonly the rendement acquired is 2.5%.

Keywords: microwave, patchouli oil, patchouli oil content.