

ABSTRACT

The influence of microwaves irradiation's power on thin layer chromatography's profile on synthesis of methyl *ortho* methoxycinnamate

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This study was conducted to compare some of microwave power, 120 Watt, 280 Watt and 400 Watt against the TLC profile on the synthesis of *ortho* coumaric acid derivative compounds, namely methyl *ortho*-methoxycinnamate. Methylation was carried out on the OH groups of carboxylic acid and phenolic groups from *o*-coumaric acid with dimethyl sulfate as a methylating agent. The material is dissolved in acetone and the alkaline reagent K_2CO_3 is used. sampling was carried out every 30 seconds on each power. As a result, complete reactions on 120 Watt, 280 Watt and 400 Watt were achieved at the 25th, 12th and 10th sampling times, respectively. Based on the results analysis using FT-IR spectrophotometer of the compound, this synthesis succeeded in producing new compounds. So it can be concluded that the higher the power used, the faster the reaction time.

Keywords: *Ortho* coumaric acid, Methyl *ortho* methoxycinnamate, Microwave, Synthesis, TLC