

## ABSTRACT

### **Influence of methoxy substituent of 4-methoxybenzaldehyde on synthesis of 1-phenyl-3-(4-methoxyphenyl)-2-propen-1-one (with catalyst NaOH)**

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The aim of this research is to determine the Influence of methoxy substituent of 4-methoxybenzaldehyde on synthesis of 1-phenyl-3-(4-methoxyphenyl)-2-propen-1-one. It can be observed by comparing yields of products 1,3-diphenyl-2-propen-1-one and 1-phenyl-3-(4-methoxyphenyl)-2-propen-1-one. The methoxy substituent makes carbonyl (C=O) on 4-methoxybenzaldehyde more reactive than benzaldehyde. This synthesis use *Claisen-Schmidt* condensation with catalyst NaOH. The products was synthesized at room temperature for 60 minutes.

Synthesis of 1,3-diphenyl-2-propen-1-one was obtained 66.37 % yields yellow crystal (melting point 53°C-54°C). Synthesis of 1-phenyl-3-(4-methoxyphenyl)-2-propen-1-one 85.24% yields yellow crystal (melting point 73°-74°C). So it can be conclude that methoxy substituent on 4-methoxybenzaldehyde makes carbonyl carbon (C=O) on 4-methoxybenzaldehyde more reactive than benzaldehyde which gave influence on the yields of products.

Keyword: methoxy substituent, yields of products, *Claisen-Schmidt* condensation, NaOH