ABSTRACT

Keywords : Synthesis
Derivative carbamate substance
Eugenol

The objective of this research is to study substance form reaction derivative of carbamates; ((4-allyl-2-methoxy) phenyl-N-phenyl carbamate and (4-allyl-2-methoxy) phenyl-N-methyl carbamate) by using eugenol as base material. The substances synthesis were hoped to give alternative substance of new carbamate pesticide.

The base material used was eugenol (p.a.), the was reacted with phosgene and added with amine substances. The phosgenational reaction used followed the phosgene preparation procedure by Vogel. On the second step, after the first step of reaction process it was allowed for 1 (one) hour, then added with aniline (p.a.) for synthesis (4-allyl-2-methoxy) phenyl-N-phenyl carbamate. And added with methylamine for synthesis (4-allyl-2-methoxy) phenyl-N-methyl carbamate, but this procedures was not continued (stopped), because TLC analysis result of the product synthesis gave the same R_f value with eugenol.

Thorough the phosgenational reaction and added with aniline, it was yield white crystal with the range melting point 157 - 159 °C and randemen for 11,95%.

Result Thin Layer Chromatography analysis using 2 (two) different solution systems, the synthesis product substance (added with aniline) gave different R_f value than eugenol.

The structure characterization of the synthesis product substance used Ultraviolet Spectrometry, Infrared Spectrometry, Nuclear Magnetic Resonance Spectrometry (H-NMR), and GC-MS to determine the weight of molecules. From the structure characterization analysis that was done by using spectra from all instruments used, the synthesis product substance with added aniline gave different spectra than eugenol.