

ABSTRACT

The Comparison of Synthesis of Benzoxazinone Derivatives Between Benzoyl Chloride and *p*-methoxycinnamoyl Chloride as Starting Material

The aim of this research was to compare the result of synthesis of benzoxazinone derivatives. There were two benzoxazinone derivatives that were synthesized. They were 2-phenyl-3,1-benzoxazin-4-one and 2-[2-(4-methoxyphenyl)vinyl]-3,1-benzoxazin-4-one. The first compound was synthesized by anthranilic acid and benzoyl chloride as starting material and was reacted for 1 hour. The second compound was synthesized by anthranilic acid and *p*-methoxycinnamoyl chloride as starting material and was reacted for 2,5 hours and 5 hours. Both of them were synthesized in triethylamine as solvent and pyridine as catalyst. The structure of synthesis products were identified by UV spectrophotometry, FT-IR spectrophotometry and ¹H NMR spectrometry.

The result percentage of them were compared to observe the influence of *p*-methoxystyryl group. The result percentage of 2-phenyl-3,1-benzoxazin-4-one was 81,5±1,08%. The result percentage 2-[2-(4-methoxyphenyl)vinyl]-3,1-benzoxazin-4-one wick was reacted for 2,5 hours was 48,8 % and 37,7 %. Then the rection time of second compound was increased to twice (5 hours) and the result percentage was 45,1 % and 42,7 %. The result percentage of the second compound was less than the first compound was caused by an open-chain compounds that had not cyclized perfectly. This showed that *p*-methoxystyryl group in *p*-methoxycinnamoyl chloride as starting material of second compound made the process of cyclization more difficult than the first compound.

Key words :

Benzoxazinone derivatives, 2-phenyl-3,1-benzoxazin-4-one, 2-[2-(4-methoxyphenyl) vinyl]-3,1-benzoxazin-4-one, *p*-methoxystyryl group.