

ABSTRACT

Modification of Piroxicam Structure with 4-bromobenzoyl Chloride Reagent and The Activity Test in Mice (*Mus musculus*)

The research purposed to modify piroxicam structure and to determine its analgesic activity in mice (*Mus musculus*) was done. The process was carried out by reacting piroxicam with 4-bromobenzoyl chloride IN CHCl_3 . The product of modification was recrystallized with chloroform and ethyl acetate. According to the ultraviolet spectrophotometer, infra red spectrophotometer, $^1\text{H-NMR}$ and $^{13}\text{C-NMR}$ spectrometer analysis, it was concluded that the modification compound was 4-(4-bromobenzoyloxy)-2-pyridinyl -2H -1,2-benzothiazine-3-carboxamide-1,1-dioxide. The analgesic activity was tested using writhing test method. The results exhibit that in the dose 1.3 mg/kg mice body-weight, the pain-inhibition percentage average of 4-(4-bromobenzoyloxy)-2-pyridinyl -2H -1,2-benzothiazine-3-carboxamide-1,1-dioxide was 48.63 %. In the dose 2.6 mg/kg mice body-weight was 62.56 %. In the dose 3.9 mg/kg mice body-weight was 74.32 %. However, the standard compound piroxicam in the dose 1.3 mg/kg mice body-weight, the pain-inhibition percentage average was 36.42 %, in the dose 2.6 mg/kg mice body-weight was 46.41 %, and in the dose 3.9 mg/kg mice body-weight was 65.00 %. It was concluded that the 4-(4-bromobenzoyloxy)-2-pyridinyl -2H -1,2-benzothiazine-3-carboxamide-1,1-dioxide had higher analgesic activity than piroxicam.

Keyword : modification, 4-(4-bromobenzoyloxy)-2-pyridinyl -2H -1,2-benzothiazine-3-carboxamide-1,1-dioxide, analgesic activity