

ABSTRAK

Sintesis Senyawa Benzoilurea dari Benzoil Klorida dan Urea dengan Metode Kombinasi *Hot Plate* dan Irradiasi *Microwave*

Senyawa benzoilurea disintesis melalui reaksi asilasi antara urea dan benzoil klorida. Sintesis senyawa tersebut dilakukan dengan metode kombinasi *hot plate* dengan lama pemanasan selama 2, 3, 4 jam dan irradiasi *microwave* pada kekuatan 20% selama 100 detik. Persentase hasil sintesis pada masing-masing lama pemanasan adalah, sebesar 43,66%; 44,84%; dan 46,59%. Kemurnian hasil sintesis ditunjukkan dengan adanya bercak tunggal pada KLT dan jarak lebur yang sempit. Dari hasil pemeriksaan senyawa hasil sintesis dengan spektroskopi UV, IR, dan ¹H-RMI dapat disimpulkan bahwa senyawa hasil sintesis sesuai dengan senyawa yang diharapkan.

Kata kunci : benzoilurea, sintesis, lama pemanasan, *hot plate*, irradiasi *microwave*

ABSTRACT

The Synthesis of Benzoylurea from Benzoyl Chloride and Urea with Combination of Hot Plate and Microwave Irradiation Methods

The synthesis of benzoilurea was carried out by acylating urea with benzoyl chloride. The synthesis was done with combination of hot plate which is under different sets of temperature, which were 2, 3 and 4 hours and microwave irradiation method at 20% power for 100 seconds. The percentage yields were 43,66%; 44,84%; dan 46,59%. The purity of the synthesized product were shown by single spot on the Thin Layer Chromatogram and narrow range of melting point. Based on the UV, IR, and ¹H-RMI spectroscopy, it was concluded that the structure of the synthesized product were in accordance to the prediction.

Keyword : benzoilurea, synthesis, duration of heating, hot plate, microwave irradiation