ABSTRAK

Sintesis Senyawa Benzoiltiourea Dari Benzoilklorida Dan Tiourea Dengan Lama Pemanasan Yang Berbeda

Struktur kimia senyawa benzoiltiourea mirip dengan senyawa benzoilurea, suatu ureida asiklik yang memiliki struktur serupa dengan turunan barbiturat yang telah diketahui aktivitasnya sebagai penekan sistem saraf pusat (SSP). Sintesis senyawa benzoiltiourea diperoleh dari reaksi asilasi antara salah satu gugus amina primer tiourea dengan gugus benzoil dari benzoilklorida. Lama pemanasan yang dilakukan yaitu 1,5 jam; 2 jam; 2,5 jam; dan 3 jam. Hasil sintesis benzoiltiourea dengan persentase terbesar diberikan pada lama pemanasan selama 2,5 jam (51,39%). Kemurnian hasil sintesis ditunjukkan dengan adanya noda tunggal pada kromatografi lapis tipis (KLT) dan jarak lebur yang sempit. Berdasarkan hasil analisis struktur dengan spektrofotometer ultraviolet (UV), spektrofotometer inframerah (IM), spektrometer ^{1}H-RMI , dan kromatografi gas-spektrometer massa (KGSM) terbentuk senyawa hasil sintesis Benzoiltiourea.

Kata Kunci : Benzoiltiourea, sintesis, lama pemanasan

The synthesis of Benzoylthiourea from Benzoyl Chloride and Thiourea with the different heating time

The chemical structure of Benzoylthiourea has a similar structure with benzoylurea, a acyclic ureide which has a same structure with derivatives of barbiturate. The activities of derivatives of barbiturate had been known as a central nervous system depressant (CNS depressant). The synthesis of Benzoiltiourea compounds was carried out by acylation reaction thiourea with benzoyl chloride. The heating time is 1,5 hours; 2 hours; 2,5 hours; and 3 hours with the percentage yield are 47,13%; 49,23%; 51,39%; dan 40,98%. The highest percentage yield of benzoylthiourea is given by 2,5 hours of heating.
The purity of the synthesis product are shown by the single spot on the thin layer chromatography (TLC) and narrow range of melting point. Based on the structure analysis with ultraviolet (UV) and infrared (IR) spectrophotometries, ^{1}H-NMR spectrometries and gas chromatography mass spectrometries (GC-MS), it was concluded that the structure of the synthesis product were in accordance to the prediction.

Key Word : Benzoylthiourea, synthesis, heating time.