

INTISARI

ISLAMI, R.P., 2016, SINTESIS SENYAWA ANALOG KALKON DENGAN MATERIAL AWAL 3,4-DIKLOROASETOFENON DAN INDOL-3-KARBALDEHID MENGGUNAKAN KATALIS NaOH DALAM PELARUT ETANOL, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Kalkon merupakan suatu prekursor flavonoid yang terdiri dari dua cincin aromatik yang dihubungkan oleh tiga karbon, dalam sistem α,β -tidak jenuh karbonil. Senyawa kalkon dan analognya dilaporkan mempunyai berbagai macam aktivitas biologis antara lain sebagai antibakteri, antikanker, antifungi, antiinflamasi, dan antioksidan. Penelitian ini bertujuan untuk mensintesis senyawa 3-(3-indolil)-1-(3,4-diklorofenil)prop-2-en-1-on menggunakan material awal indol-3-karbaldehid dan 3,4-dikloroasetofenon.

Senyawa 3-(3-indolil)-1-(3,4-diklorofenil)prop-2-en-1-on disintesis dengan material awal indol-3-karbaldehid dan 3,4-dikloroasetofenon menggunakan katalis basa NaOH dalam pelarut etanol pada suhu kamar. Pengujian kemurnian senyawa dilakukan menggunakan kromatografi lapis tipis, dan kromatografi gas. Struktur senyawa hasil sintesis dielusidasi menggunakan spektrometer massa, spektrofotometer UV-Vis, dan spektrofotometer IR.

Hasil penelitian menunjukkan bahwa telah diperoleh senyawa 3-(3-indolil)-1-(3,4-diklorofenil)prop-2-en-1-on berupa serbuk kuning dengan % *yield* 15,37%, dan kemurnian senyawa mencapai 100%. Elusidasi struktur senyawa hasil sintesis menunjukkan struktur kimia sesuai dengan perkiraan.

Kata kunci : sintesis, 3-(3-indolil)-1-(3,4-diklorofenil)prop-2-en-1-on, NaOH indol-3-karbaldehid, 3,4-dikloroasetofenon, analog kalkon

ABSTRACT

ISLAMI, R.P., 2016, SYNTHESIS OF CHALCONE ANALOGUE USING 3,4-DICHLOROACETOPHENONE AND INDOLE-3-CARBOXALDEHYDE CATALYZED BY NaOH IN ETHANOL, SKRIPSI, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Chalcones are considered as the precursors of flavonoids which consist of two aromatic rings linked by a three-carbon α,β -unsaturated carbonyl system. Chalcone and its analogues have been reported to possess various biological activities such as antibacterial, anticancer, antifungal, anti-inflammatory and antioxidant. The aim of this study was to synthesize 3-(3-indolyl)-1-(3,4-dichlorophenyl)prop-2-en-1-one using indole-3-carboxaldehyde and 3,4-dichloroacetophenone as starting materials.

3-(3-indolyl)-1-(3,4-dichlorophenyl)prop-2-en-1-one was synthesized from indole-3-carboxaldehyde and 3,4-dichloroacetophenone, catalyzed by NaOH in ethanol solvent. Thin layer and gas chromatography were used as purity test method. The structure of the compound was elucidated using mass spectrometer, UV-Vis spectrophotometer and IR spectrophotometer.

The results showed that 3-(3-indolyl)-1-(3,4-dichlorophenyl)prop-2-en-1-one was successfully synthesized, yellow powder was obtained with 15,37% of yield and 100 % of purity. Structure elucidation showed that the chemical structure was appropriate to estimated chemical structure.

Keywords : synthesis, 3-(3-indolyl)-1-(3,4-dichlorophenyl)prop-2-en-1-one, NaOH, indole-3-carboxaldehyde, 3,4-dichloroacetophenone, chalcone analogue