

ABSTRACT

SYNTHESIS OF 2-(2-CHLOROPHENYL)-3-PHENYLQUINAZOLIN-4(3H)-ONE AND 4-(2-(2-CHLOROPHENYL)-4-OXOQUINAZOLIN-3(4H)-YL)BENZENESULFONAMIDE UNDER MICROWAVE IRRADIATION

Prima Alifian Hergaputra

Quinazolinone derivatives are known to have activity as an antiinflammation. This aim of this study is to synthesis quinazolinone derivatives (2-(2-chlorophenyl)-3-phenylquinazolin-4(3H)-one and 4-(2-(2-chlorophenyl)-4-oxoquinazolin-3(4H)-yl)benzenesulfonamide) from two steps reaction. First step is synthesis of 2-(2-chlorophenyl)-4H-benzo[d][1,3]oxazin-4-one from anthranilic acid and 2-chlorobenzoyl chloride in pyridine. The second step is synthesis of quinazolinone derivatives from obtained benzoxazinone and nucleophile (aniline and sulfanilamide) under microwave irradiation.

Purity of the synthesized substance were tested using TLC test and melting point. Identification of synthesized compound were confirmed by UV-Vis spectrophotometry, FT-IR and ¹HNMR spectroscopy. The overall result of this study conclude that sulfonamide group reduces the reactivity of reaction.

Reaction between benzoxazinone with aniline yield 2-(2-chlorophenyl)-3-phenylquinazolin-4(3H)-one 63%. Reaction between benzoxazinone with sulfanilamide yield 4-(2-(2-chlorophenyl)-4-oxoquinazolin-3(4H)-yl)benzenesulfonamide 25%.

Keywords : quinazolinone, benzoxazinone, microwave irradiation, 2,3-disubstitute quinzoline-4(3H)-one, anthranilic acid.