

ABSTRACT

SYNTHESIS OF 2-HYDROXY-*N'*-(4-HYDROXY-3-METHOXYBENZYLIDENE)BENZOHYDRAZIDE FROM 2-HYDROXYBENZOHYDRAZIDE AND VANILLIN BY MICROWAVE IRRADIATION

Diah Ayu Triwahyuni

The aim of this study was to synthesize 2-hydroxy-*N'*-(4-hydroxy-3-methoxybenzylidene)benzohydrazide using microwave irradiation. The synthesis reaction of 2-hydroxy-*N'*-(4-hydroxy-3-methoxybenzylidene)benzohydrazide and *N'*-benzylidene-2-hydroxybenzohydrazide were completed in two steps. The first step was synthesis of 2-hydroxybenzohydrazide by nucleophilic acyl substitution. While the second step was reaction between 2-hydroxy benzohydrazide and benzaldehyde or vanillin to get *N'*-benzylidene-2-hydroxybenzohydrazide (88%) and 2-hydroxy-*N'*-(4-hydroxy-3-methoxybenzylidene) benzohydrazide (97%), respectively.

It was concluded that vanillin was more reactive than benzaldehyde based on the percentage yield of the resulted products.

Keyword : 2-hydroxy-*N'*-(4-hydroxy-3-methoxybenzylidene) benzohydrazide, hydrazide derivatives, microwave irradiation.