

Short Note

(2*E*)-3-(4-Dimethylaminophenyl)-1-(2,5-dimethylfuran-3-yl)-prop-2-en-1-one

Abdullah M. Asiri ^{1,2,*} and Salman A. Khan ¹

¹ Chemistry Department, Faculty of Science, King Abdul Aziz University, P.O. Box 80203, Jeddah, Saudi Arabia

² The Center of Excellence for Advanced Materials Research, King Abdul Aziz University, Jeddah, P.O. Box 80203, Saudi Arabia

* Author to whom correspondence should be addressed; E-Mail: aasiri2@kau.edu.sa; Tel.: +966 2 6952292; Fax: +966 2 6952292.

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Abstract: The title compound, (2*E*)-3-(4-dimethylaminophenyl)-1-(2,5-dimethylfuran-3-yl)-prop-2-en-1-one (**3**) was synthesized in high yield by reaction of 3-acetyl-2,5-dimethylfuran and 4-dimethylaminobenzaldehyde in the presence of 30% NaOH solution. The compound was fully characterized from its IR, ¹H NMR, ¹³C NMR, GC-MS data and elemental analysis.

Keywords: chalcone; condensation; 4-dimethylaminobenzaldehyde

Chalcones are characterized by the α,β -unsaturated carbonyl system [1], which is important in elucidating the mechanism of transamination and racemisation reactions in biological systems. Chalcones have been studied as antimalarial [2], antifungal [3], anticancer [4], antioxidant [5], tyrosinase inhibitory [6], antiinflammatory [7] and antibacterial agents [8]. Beyond these very important applications in biological chemistry, chalcones have attracted some attention in the field of material sciences including non-linear optics (NLO) [9], optical limiting [10], electrochemical sensing [11] and Langmuir film [12]. They are also used as intermediates for the formation of various heterocyclic compounds such as pyrimidines, pyrazolines, pyrazoles, thiazines [13]. These observations led us to synthesize a new chalcone from 3-acetyl-2,5-dimethylfuran and 4-dimethylaminobenzaldehyde.