

Short Note

1-(2,5-Dimethyl-3-thienyl)-3-(2,4,5-trimethoxyphenyl)prop-2-en-1-one

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Abstract: The title compound, 1-(2,5-dimethyl-3-thienyl)-3-(2,4,5-trimethoxyphenyl)prop-2-en-1-one (**3**) was synthesized in high yield by an aldol condensation reaction of 3-acetyl-2,5-dimethylthiophene and 2,4,5-trimethoxybenzaldehyde in methanolic NaOH at room temperature. Its structure was fully characterized by elemental analysis, IR, ¹H NMR, ¹³C NMR and EI-MS spectral data.

Keywords: chalcone; aldol condensation; 2,4,5-trimethoxybenzaldehyde

α,β -Unsaturated ketones are biogenic precursors [1] of flavonoids in higher plants, they are also known as chalcones. They display a wide variety of pharmacological properties, including antitumor [2], antibacterial [3], antiviral [4], anti-inflammatory [5], antiulcerative [6] and hepatoprotective activities [7]. Chemically, they consist of either aromatic groups or alkyl groups with an unsaturated chain. Cyclizations of chalcones give pyrazolines, thiazines, or pyrimidines which can show dramatically increased biological activity. On the basis of these aspects, in this paper we are reporting a novel chalcone from 3-acetyl-2,5-dimethylthiophene and 2,4,5-trimethoxybenzaldehyde.