

Short Note

(2E)-3-(3,5-Dimethyl-1-phenyl-1H-pyrazol-4-yl)-1-(2,5-dimethyl-3-thienyl)prop-2-en-1-one

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Abstract: The title compound, (2E)-3-(3,5-dimethyl-1-phenyl-1H-pyrazol-4-yl)-1-(2,5-dimethyl-3-thienyl)prop-2-en-1-one (**3**) was synthesized in high yield by aldol condensation of 3-acetyl-2,5-dimethylthiophene and 3,5-dimethyl-1-phenylpyrazole-4-carboxaldehyde in ethanolic NaOH at room temperature. Its structure was fully characterized by elemental analysis, IR, ¹H NMR, ¹³C NMR and EI-MS spectral analysis.

Keywords: chalcone; aldol condensation; 3-acetyl-2,5-dimethylthiophene

Chalcones are open-chain flavonoids with a common skeleton of 1,3-diaryl-2-propen-1-one [1]. They possess a wide range of biological activities such as antioxidant [2], antibacterial [3], antidepressant [4], antihypertensive [5] and anti-inflammatory activity [6]. Transformation of chalcones into pyrazoline derivatives can dramatically increase their biological properties such as antibacterial [7], antiprotozoal [8], or anti-inflammatory [9] activities. On the basis of these aspects we have synthesized a novel pyrazoline-based chalcone from 3-acetyl-2,5-dimethylthiophene and 3,5-dimethyl-1-phenylpyrazole-4-carboxaldehyde.