1-[5-Acetyl-4-(2-furyl)-2,6-dimethyl-1,4-dihydro-3-pyridinyl]-1-ethanone

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1,4-Dihydropyridines are of interest because some of them exhibit various kinds of pharmaceutical activity [1-3]. So in the course of our study we have synthesized novel derivatives of 1,4-dihydropyridine based on the reactions of furaldehydes with acetylacetone.

\[
\text{O} + \text{CH}_3\text{C}=\text{O} + \text{H}_2\text{NCO}\rightarrow \text{CH}_3\text{C}=\text{N}\text{O} + \text{H}_2\text{O}
\]

A mixture of acetylacetone (5.0 g, 30 mmol), furfural (2.4 g, 25 mmol) and CH\textsubscript{3}COONH\textsubscript{4} (1.25 g, 16 mmol) in 20 mL of ethanol was refluxed for 5 h (the reaction duration was monitored with TLC) and left overnight at room temperature. Then solvent was evaporated, residue was washed with water, dried and recrystallized from ethyl acetate - hexane mixture to yield 3.19 g, 77 % of titled compound as pale yellow crystals.

Mp: 159-160 °C.

IR (KBr): 3300, 3230, 1675, 1665 cm\textsuperscript{-1}.

\[1^1\text{H NMR} (\text{acetone-d}_6, 60 \text{ MHz}, \text{ppm}): 2.23 (s, 12H, \text{CH}_3), 5.15 (s, 1H, H\textsubscript{A}), 5.85 (d, J_{3,4} = 3.2, 3-H\textsubscript{Fur}), 6.13 (d, J_{4,5} = 1.8, 4-H\textsubscript{Fur}), 7.20 (d, J_{3,5} = 0.9, 5-H\textsubscript{Fur}), 7.97 (s, 1H, NH).\]

Anal. calc. for C\textsubscript{15}H\textsubscript{17}NO\textsubscript{3}: C 69.48, H 6.61, N 5.40; Found: C 69.79, H 6.44, N 5.57.

References and Notes


Sample availability: available from the authors.

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