

2-(3-thienyl)-2,3-dihydrofuro[2,3-b]quinoxaline

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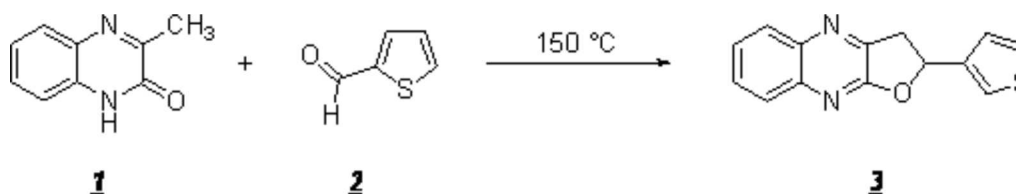
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Heterocyclic compounds particularly five and six membered ring compounds have occupied a prominent place among various classes of organic compounds for their diverse biological activities. Among a wide variety of heterocycles that have been explored for developing pharmaceutically important molecules. Quinoxaline and thiophene have played an important role in medicinal chemistry. Some of them have received considerable attention as potential antimicrobial [2], and antiviral [3,4].

The aim of this work is to describe the synthesis of a novel compound entitled 2-(3-thienyl)-2,3-dihydrofuro[2,3-b]quinoxaline.



The 3-methylquinoxalin-2(1H)-one **1** (1.25 mmol, 2 g) and 3-formylthiophene **2** (3.75 mmol, 4.8 mL) were heated in a bath oil at 150 °C for 3h. After cooling of the reaction, the crude product was recrystallized from ethanol to obtain compound **3**.

This compound was obtained in 65 % yield.

Melting point: > 250 °C.

¹H-NMR (300 MHz, DMSO-d₆): 3.17, 3.20 (m, 2H, H_aH_b, J_{AB} = 14.7 Hz, J_{AX} = J_{BX} = 7.2 Hz); 4.28 (q, 1H, H_x, J_{AX} = J_{BX} = 7.2 Hz); 7.05-7.62 (m, 7H, H_{Ar}).

¹³C-NMR (300 MHz, DMSO-d₆): 35.5 (CH); 48.5 (CH₂); 115.4, 120.6, 123.3, 126.0, 127.8, 128.3, 129.7 (CH_{Ar}); 131.9, 132.0, 146.4, 155.1, 160.8 (Cq).

MS (EI): M⁺(m/z = 254, 46%); 143 (100%).

Elemental analysis: Calculated for C₁₄H₁₀N₂OS: C, 66.12 %; H, 3.96 %; N, 11.02 %; Found: C, 66.22 %; H, 4.01 %; N, 11.12 %;

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