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Synthesis of 6-chloro-2-oxo-1,2-dihydroquinoline-4-carbohydrazide

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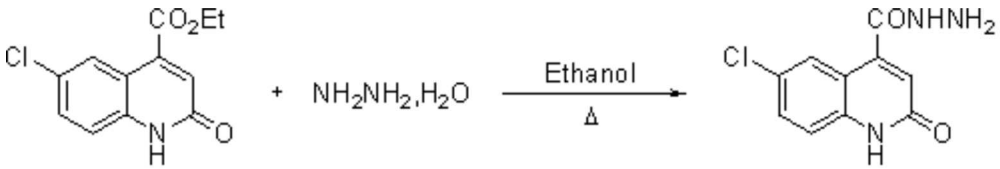
In previous works we have shown that hydrazides are highly useful starting materials and intermediates in the synthesis of several heterocyclic compounds[1-3] of potential biological activities.
The aim of this work is to describe the preparation of a novel compound entitled 6-chloro-2-oxo-1,2-dihydroquinoline-4-carbohydrazide.



1 **2**

To a solution of ethyl 2-oxo-1,2-dihydroquinoline-4-carboxylate **1** (1g, 3.9 mmol) in ethanol, was added hydrazine hydrate 80 % (0.22 mL, 4.6 mmol). The mixture was refluxed for 24h and ice-water was added. The precipate was filtered and recrystallised from ethanol to afford 0.73 g (70 % yields) of product **2**.

Melting point: > 250 °C.

^{1}H-NMR (300 MHz, DMSO): δ= 4.67 (NH_2); 6.54 (s, 1H, =CH); 7.35-7.78 (m, 3H, H_{Ar}); 9.93 (NH).

^{13}C-NMR (300 MHz, DMSO): δ= 121.8 (=CH); 118.0, 125.4, 131.2 (CH_{Ar}); 114.8, 126.3, 139.3, 139.9 (Cq); 161.3 (C=O); 165.0 (CON_2H_3).

MS (EI, m/z): 237.

Elemental analysis: Calculated for $C_{10}H_8ClN_3O_2$: C, 50.54 %; H, 3.39 %; N, 17.68 %; Found: C, 50.60 %; H, 3.42 %; N, 17.74 %;

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