

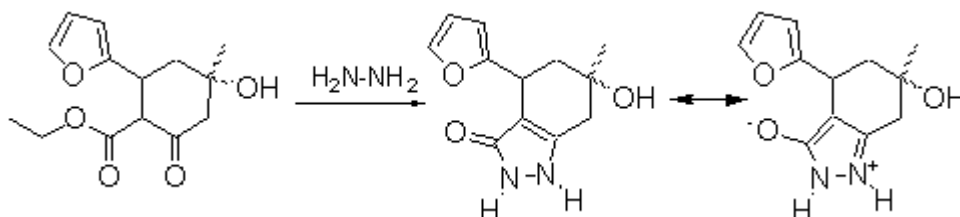
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4-Furyl-6-hydroxy-6-methyl-1,2,4,5,6,7-hexahydro-3H-indazole-3-one

Elena B. Usova, Ludmila I. Lysenko and Gennady D. Krapivin

Department of organic chemistry, Kuban State Technological University, Moskovskaya, 2, Krasnodar, 350072, Russian Federation. Phone +7 8612 559556, E-mail: organics@kubstu.ru

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It is known that indazoles have varied biological activity [1,2]. 4-Furyl-6-hydroxy-6-methyl-1,2,4,5,6,7-hexahydro-3H-indazole-3-one has been obtained for investigation of its biological activity. To a solution of 3-furyl-5-hydroxy-5-methyl-2-ethoxycarbonylcyclohexanone (1.24 g, 5 mmol) in ethanol (10 ml) were added an aqueous solution of hydrazine hydrate (52 %, 0.5 ml, 5 mmol) and acetic acid (0.5 ml), and the mixture heated to reflux until the reaction was complete (~1.5 h, TLC). The reaction mixture was then cooled to 5–10 °C, the crystalline product was collected, washed with cold ethanol and recrystallized from ethanol to yield 0.97 g (83 %) of hexahydroindazole-3-one as a white crystals.

M.p. 268–269 °C (ethanol).

¹H-NMR (CF₃COOD, 250 MHz): 7.48 (d, *J*₁=2.0 Hz, 1H, H-5 furan), 6.33 (dd, *J*₁=2.0 Hz, *J*₂=3.6 Hz, 1H, H-4 furan), 6.00 (d, *J*₂=3.6 Hz, 1H, H-3 furan), 4.60 (d, *J*=3.6 Hz, 1H, 4-H), 2.82 (broad s, 2H, 7-H, 7-H), 2.20 (dd, 1H, *J*₁=6 Hz, *J*₂=14 Hz, 5-H), 1.75 (dd, 1H, *J*₂=14 Hz, *J*₃=11 Hz, 5-H), 1.36 (c, 3H, CH₃).

IR (cm^{−1}, nujol): 3270, 3150, 1605, 1600.

UV [*I*_{max}(nm), log *e* (dm³mol^{−1}cm^{−1})] (ethanol): 208(4.24), 253(3.63).

Anal. calc. for C₁₂H₁₄N₂O₃ (234,25): C 61.52, H 6.02, N 11.96. Found: C 61.24, H 6.29, N 11.68.

References and Notes

1. Aran, V.J.; Flores, M.; Munoz, P.; Paez J.A.; Sanchez-Verdu, P.; Stud, M. *Liebigs. Ann.* **1996**, 683.
2. Morie, T.; Harada, H.; Kato, S. *Synth. Commun.* **1997**, 27, 559.

Sample Availability: Available from the authors.

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