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2-[N-(O-ethylaminophenyl) phenyl imidoyl methylylidene]-3,5-diphenyl-1,3,4-thiadiazole

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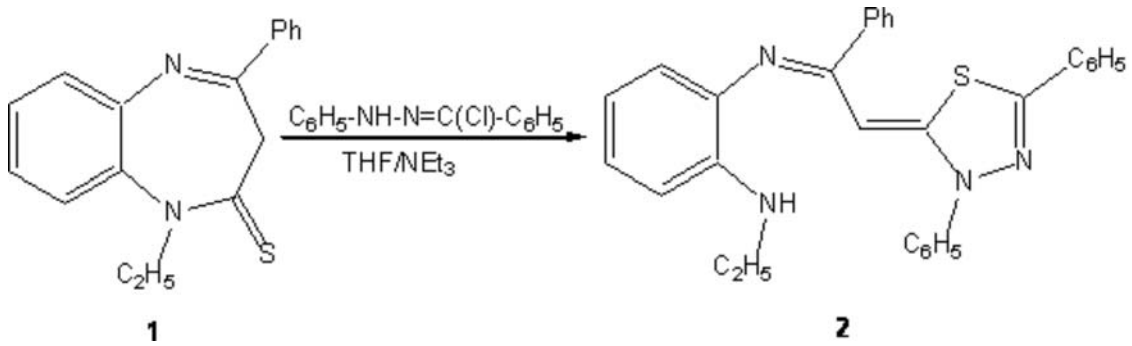
4-phenyl-1,5-benzodiazepine-2-thione are used as starting materials in the synthesis of several heterocyclic compounds for potential biological actvities.[1-3] The synthesis of a new 1,3,4-thiadiazole derivative is reported.



1 **2**

Scheme 1

To a solution of 0.01mol of 1-ethyl-4-phenyl-1,5-benzodiazepine-2-thione **1** [1] in 60 ml of tetrahydrofuran, 0,02 mol of hydrazonoyl chloride and 0.04 mol of triethylamine were added. Then, the mixture was refluxed for 12 hours. After cooling, salts are removed by filtration and solvent was evaporated under reduced pressure. The residue isolated was recrystallized from ethanol. The 1,3,4-thiadiazole derivative **2** was obtained in 60 % yield.

Melting point: 165 °C

^{1}H-NMR ($CDCl_3$, 250 MHz): δ= 1,34 (t, J = 7,12 Hz, 3H), 3,36 (q, J = 7,12 Hz, 2H), 7,24 (s, 1H), 6,05-7,92 (m, 19H).

^{13}C-NMR ($CDCl_3$, 67.5 MHz): δ= 15,24 (CH_3), 38,94 (CH_2), 90,19 (CH=), 110,00-130,26 (CHar), 130,53-142,35 (Car), 151,53 (C=N), 162,98 (C=N).

MS (EI): 474 $[M]^+$

Elemental analysis: Calculated for $C_{30}H_{26}N_4S$: C, 75.92%; H, 5.52%; N, 11.80%. Found: C, 75.97%; H, 5.46%; N, 11.84%;

References:
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