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Tentative title: " Oxazole Rearrangement: Heterofunctionalization of Tetarhydrobenzo[b]thiophene at Position-2 Incorporating 1,2,4-Triazole Moiety"

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OXAZOLE REARRANGEMENT: HETEROFUNCTIONALIZATION OF TETARHYDROBENZO[B]THIOPHENE AT POSITION-2 INCORPORATING 1,2,4-TRIAZOLE MOIETY

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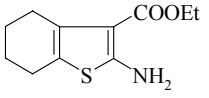
Abstract

Diazotization of 2-aminothiophene derivative **1** with sodium nitrite/HCl yielding the diazonium salt which on treating with hippuric acid, oxazolone derivative **2** was obtained. On boiling oxazolone **2** in ethanol containing catalytic amount of triethyl amine afforded the triazole ester **4**. Oxazolone **2** reacts with some active methylene namely ethyl cyanoacetate, malononitrile or 5-methyl-2,4-dihydro-pyrazol-3-one **5a-c** to afford the 1,2,4-triazol-3-oynitriles **6a-c** respectively. When **6a** was refluxed with hydrazine hydrate, the pyrazole derivative **7** was obtained. Also, on reacting compound **2** with 2-(1-phenyl-ethylidene)-malononitrile affording the pyranone derivative **8**. Compound **2** reacts with glycine to afford the N-substituted glycine derivative **9**, which on condensing with benzaldehyde the oxazolone derivative **10** was obtained. The reaction of **2** with hydrazines yielding the hydrazides **11a, b** respectively. Condensation of compound **11a** with benzaldehyde afforded the Schiff's base **12**. Treatment of **2** with anthranilic acid or o-phenelyenediamine yielding the benzoxazine derivative **14** and the benzoimidazole **16** respectively. Also, on the reaction of **2** with primary aromatic amines afforded the amide **17a, b** respectively.



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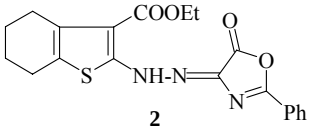

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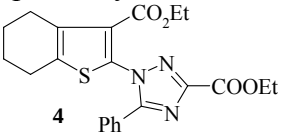

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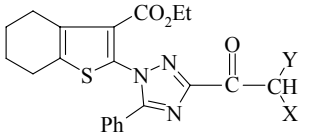
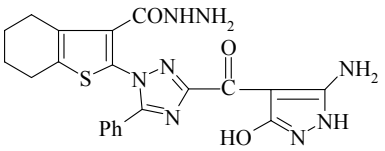


6a, X = COOEt, Y = CN
b, X = Y = CN
c, -X-Y- = -CONHC-



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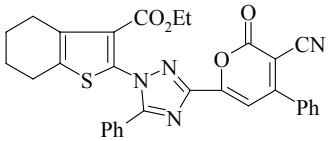

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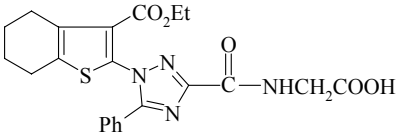

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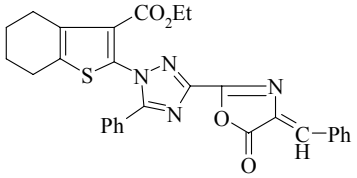

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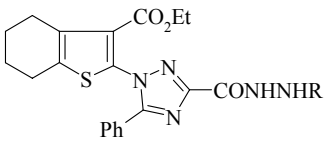
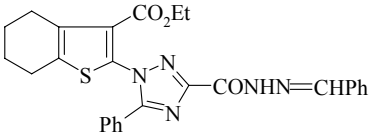


11a, R = H
b, R = Ph



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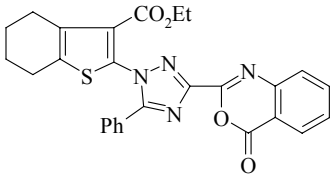

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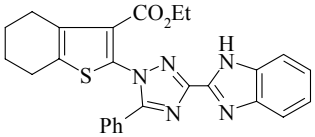

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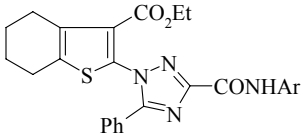

17a, Ar = C_6H_5
b, Ar = C_6H_4-CH_3p