



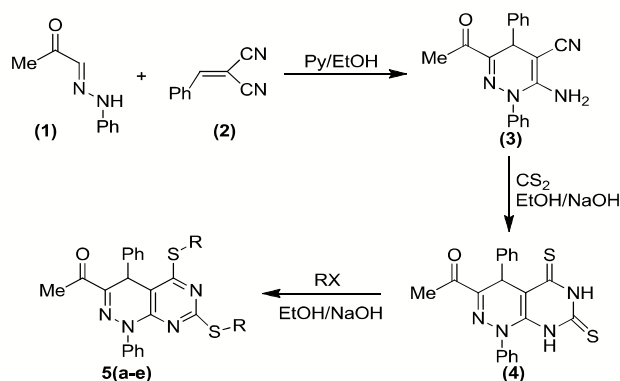
## Synthesis of new derivatives of pyrimido[4,5-c] pyridazine

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Pyridazines and pyrimidine derivatives are important class of heterocyclic compounds in medicinal chemistry especially in the treatment of diseases like the central nervous system and the cardiovascular system [1].

In continuation of our previous work on these heterocyclic systems we decided to synthesis new derivatives of pyrimido[4,5-c] pyridazine [2].

For this purpose initially, the phenyl hydrazone derivative (1) was reacted with 2-benzylidenemalononitrile (2) in EtOH to give compound (3). The treatment of compound (3) with CS<sub>2</sub> in boiling solution of NaOH in EtOH yielded quantitatively the desired compound (4) which was further alkylated with various alkylhalides to obtain the corresponding new derivatives of pyrimido[4,5-c] pyridazine (5(a-e)) in good to excellent yields. (Scheme 1)



Scheme 1

### References:

1. F. E. Nielsen, H. C. Hansen, J. B. Hansen, T. M. Tagmose, *Patent* 5,889,002, 1999.
2. M. Bakavoli, E. Mollashahi, S. M. Seyyedi, M. Rahimizadeh, A. Shiri, M. Nikpour, *J. Sulfur Chem.*, 2007, 28, 613.

