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Poster Presentation

C-C-Recyclization as a New Way of Pyrimidines Functionalization

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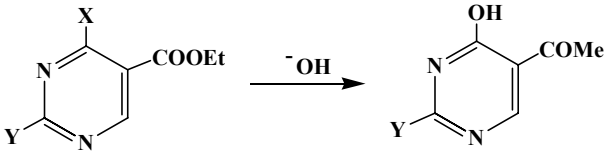
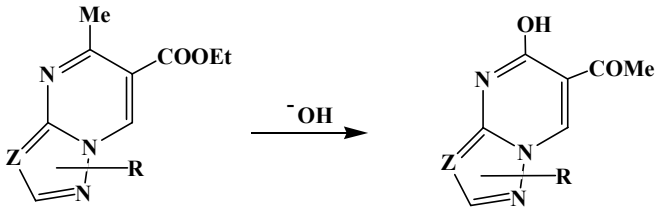
The communication is devoted to investigation of the recyclizations proceeding with substitution of an exocyclic carbon atom (C-4) of pyrimidine by an endocyclic carbon atom of 5-ethoxycarbonyl group.

It is shown that under the action of alkali 4-methyl-(4-amino)-5-ethoxycarbonylpyrimidines rearrange into 4-hydroxy-5-acetyl- and 4-hydroxy-5-carbamoylpyrimidines respectively.



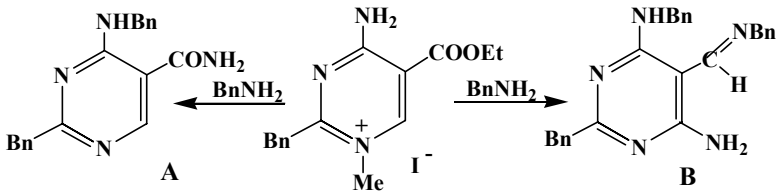
X = Me; Y = OH, SH, NH_2, Me, Bn. **X = NH_2; Y = OH, SH, Bn.**

The similar recyclization is readily (within several minutes) proceeds also in condensed pyrimidine systems.



Z = CH, N.

While alkylation of a cyclic nitrogen atom the direction of the nucleophilic attack changes that results in formation of products **A** and **B**.



A **B**

The described transformations differ from the known recyclizations of pyrimidines, to wit, Dimroth rearrangement (N-N-recyclizations) and Kost-Sagitullin rearrangement (N-C-recyclizations) [1, 2] and can find application as an accessible way of functionalization of pyrimidines for combinatorial and medicinal chemistry.

[1]. Sagitullin R.S., Kost A.N., Danagulyan G.G., Tetrahedron Lett. N 43, P. 4135, (1978).
[2]. Danagulyan G.G., Sahakyan L.G., Katritzky A.R., Denisenko S.N., Heterocycles, Vol. 53, N 2, P. 419 (2000).