Chemistry of Heterocyclic Compounds, Vol. 33, No. 7, 1997

SYNTHESIS OF THE NEW HETEROCYCLIC SYSTEM 7,8,9,10-TETRAHYDROBENZTHIAZOLO[2,3-i]PURINE

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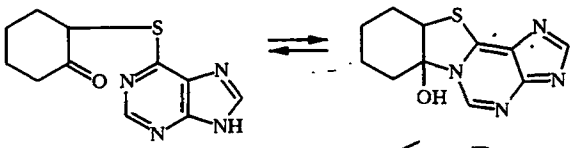
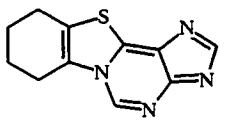
In the development of the work [1], we accomplished the synthesis of the first example of a new tetracyclic system with a common nitrogen atom — 7,8,9,10-tetrahydrobenzthiazolo[2,3-i]purine (II).

The synthesis of compound (II) consists of two stages. The reaction of 6-purinethione with 2-bromocyclohexanone affords 6-(2-oxocyclohexyl)thiopurine (I) [2], the dehydration of which by dehydrating agents, e.g., $POCl_3$ (boiling for 4 h), leads to compound (II).



IA IB



II

The yield of compound (II) is 73%. The mp is 274-276°C (with decomposition, from aqueous methanol). The mass spectrum is characterized by the M^+ 236. The IR spectrum (KBr tablet) is characterized at 1600 cm^{-1} (C=N, C=C). Found, %: C 57.14, H 4.32, N 16.86, and S 13.89. $C_{11}H_{10}N_4S$. Calculated, %: C 57.37, H 4.39, N 17.02, and S 13.92.

REFERENCES

1. P. M. Kochergin, M. Yu. Gromov, E. V. Aleksandrova, and S. Ya. Skachilova, Khim. Geterotsikl. Soedin., No. 2, 265 (1996).
2. P. M. Kochergin, M. Yu. Gromov, E. V. Aleksandrova, and S. Ya. Skachilova, Khim. Geterotsikl. Soedin., No. 11, 1548 (1993).

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0009-3122/97/3307-0881$18.00