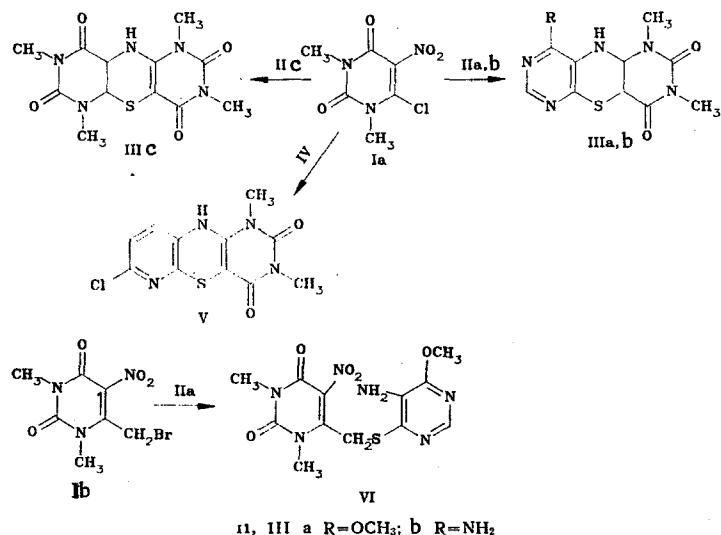


REACTION OF 1,3-DIMETHYL-5-NITRO-6-CHLOROURACIL WITH DERIVATIVES OF 5-AMINO-4-MERCAPTOPYRIMIDINE AND 3-AMINO-2-MERCAPTOPYRIDINE

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The reaction of 1,3-dimethyl-5-nitro-6-chlorouracil (Ia) with 6-substituted-5-amino-4-mercaptopypyrimidines (IIa and IIb) and with 5-amino-6-mercaptop-1,3-dimethyluracil (IIc) in the presence of bases leads to the formation of a new heterocyclic system, dipyrimidopyrimido[4,5-b]-[4',5'-e][1,4]thiazine (IIIa-c) [1]. Analogously, the reaction of uracil Ia with 3-amino-2-mercaptop-6-chloropyridine (IV) gave 1,3-dimethyl-2,4-dioxo-7-chloropyrido[2,3-b]pyrimido[4,5-e][1,4]thiazine (V). On the other hand, the reaction of pyrimidine IIa with a homolog of uracil I, namely, 6-bromomethyl-1,3-dimethyl-5-nitouracil, under conditions for the synthesis of dipyrimidothiazines IIIa-c, stops at the formation of sulfide VI.



Products IIIa, IIIc, V and VI are yellow or yellow-green crystalline compounds while IIIb forms dark violet crystals. Product IIIa was formed in 53% yield, mp 250–252°C (from ethanol). Product IIIb was formed in 78% yield, mp 260–262°C (from DMF). Product IIIc was formed in 58% yield, mp 276–278°C (from ethylcellosolve). Product V was formed in 66% yield, mp 238–240°C (from ethanol), while product VI was formed in 90% yield, mp 166–168°C. The elemental analysis data for III, V, and VI correspond to the calculated values and their spectral characteristics are in accord with the proposed structures.

Compounds IIIa-c and V are aza analogs of 5-thiaisoalloxazine and have similarities with the reported derivatives of this system [2] not only in their properties but also in their methods of preparation.

LITERATURE CITED

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