Synthesis and some transformations into a row of thiazol-[3,2-f]-purine-2,4,6 (1H, 3H, 7H)-trione

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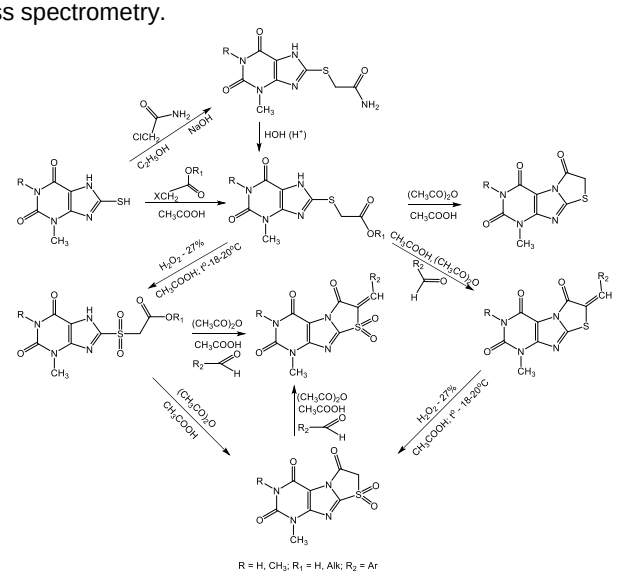
Synthesis of various N-methyl xanthines (2,6-dioxopurines) is one of the promising directions for the search for new drugs. Along with the development of methods for synthesizing natural derivatives of purine, studies have been widely developed to create more accessible synthetic analogues of these compounds, to search for substances that are less toxic and selectively affect individual systems and functions of the organism than their natural prototypes. For the same purpose, various proton groups were replaced by N1 and N7 in dimethylxanthines (3.7 or 1.3), as well as a hydrogen atom bound to carbon at position 8 of various purine alkaloids. Therefore, new, very valuable properties, which appeared as a result of the introduction of additional substituents, always appear against a background of versatile pharmacological activity.[1,2]

Continuing the search for biologically active compounds in the series of xanthine and its condensed derivatives, we carried out certain transformations based on 3-methyl- and 1,3-dimethylxanthinyl-8-thioacetic acids. (**Scheme 1**).

The structure of the obtained compounds was established using modern physicochemical methods of analysis-IR, NMR spectroscopy and mass spectrometry.



Scheme 1.

References:

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