# SYNTHESIS AND ANTIMICROBIAL ACTIVITY OF 3-AMINO-5-METHYL-2-(ALKYTHIO)-4-OXO-3,4-DIHYDROTHIENO[2,3-d]PYRIMIDINE-6-CARBOXYLIC ACID DERIVATIVES

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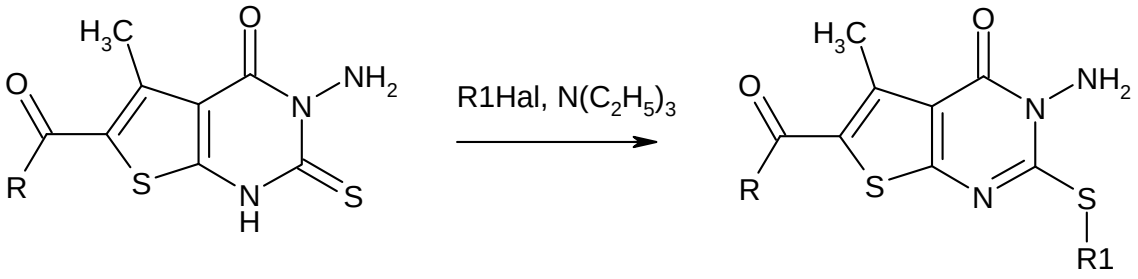
Synthesis and study of antimicrobial activity of 3-amino-5-methyl-2-(alkythio)-4-oxo-3,4-dihydrothieno[2,3-d]pyrimidine-6-carboxylic acid derivatives is an important task, because many of the compounds with the similar structure were reported as antimicrobials.

Synthesis of the target compounds 2 has been performed by alkylation of the compounds **1** with benzyl chlorides and chloroacetic acid. The reaction was carried out in dimethylformamide media uising triethylamine as ac basic catalyst.




**1.1-1.6** **2.1-2.8**

**2.1** R = OEt, R1= $CH_2COOH$; **2.2** R = NH(p-$CH_3$Ph), R1 = $CH_2COOH$;
**2.3** R = NH(p-$CH_3$Ph), R1 = $CH_2$Ph; **2.4** R = NH(o-$CH_3$Ph), R1 = $CH_2$Ph;
**2.5** R = NH(p-$CH_3$Ph), R1 = $CH_2$(p-$CH_3$Ph); **2.6** R = NH(2-Pyridyl), R1 = $CH_2$(p-$CH_3$Ph);
**2.7** R = NH(p-FPh), R1 = $CH_2$(p-$CH_3$Ph); **2.8** NH(p-OCH3Ph)

The structures of all of the compounds were confirmed by $^1$H NMR spectroscopic data and in some cases chromato-mass spectrometric analyses.

The antimicrobial activity of the compounds **2** has been studied by agar well-diffusion method. In general the larger zone of growth inhibition was considered as indicator of higher antimicrobial activity for the exact tested compound. The highest activity has been determined for **2.3** and **2.5**, which are modified with *p*-methylphenyl substituent in amide fragment of the molecule. Though the activity of all of the compounds **2** tested may be classified as moderate.