

POSTER PRESENTATIONS

SYNTHESIS OF NEW AZOMETHINES BASED ON 3,5-DIALKYL-3,4-DIHYDROTHIENO[2,3-d]PYRIMIDINE-6-CARBOHYDRAZIDE

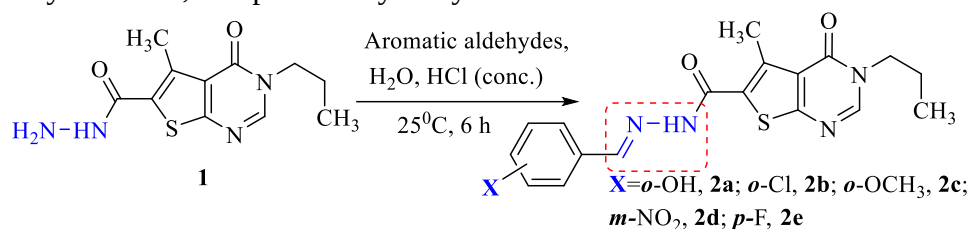
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Azomethines (Schiff bases) represent an important class of organic compounds exhibiting a wide range of biological activities, including antimicrobial, anti-inflammatory, antitumor, and antioxidant properties [1]. Particular interest has been focused on the synthesis of azomethines containing a thienopyrimidine fragment, since thieno[2,3-d]pyrimidine derivatives are structural analogs of biologically important nitrogen-containing heterocycles and are capable of interacting with various biological targets [2].

In the present study, a series of new azomethine derivatives based on 3-propyl-5-methyl-4-oxo-3,4-dihydrothieno[2,3-d]pyrimidine-6-carbohydrazide was synthesized via condensation with various substituted aromatic aldehydes. The reactions were carried out in water at room temperature in the presence of 1–2 drops of concentrated hydrochloric acid as a catalyst. The target hydrazones were obtained as precipitates, isolated by filtration, and purified by recrystallization:



Condensation of carbohydrazide with aromatic aldehydes afforded the corresponding hydrazones containing a C=N linkage. The structures of the synthesized compounds were confirmed by IR and NMR spectroscopic analyses. The IR spectra displayed characteristic bands assigned to the azomethine (C=N) stretching vibrations, whereas the ¹H NMR spectra revealed signals corresponding to the azomethine proton (CH=N).

The results obtained indicate that 3-propyl-5-methyl-4-oxo-3,4-dihydrothieno[2,3-d]pyrimidine-6-carbohydrazide is a promising precursor for the directed synthesis of novel functionalized thienopyrimidine derivatives with potential relevance for further biological studies.

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References

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