C.I-21

SYNTHESIS OF NEW 2-*N*-SUBSTITUTED 2,5-DIHYDROFURAN-3-CARBOXAMIDES

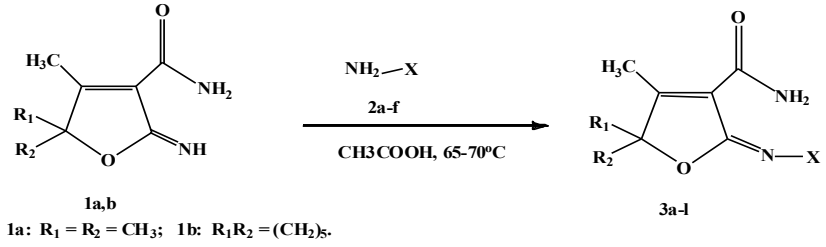
G. G. Tokmajyan, L. V. Karapetyan

Yerevan State University, lkarapetyan@ysu.am

Compounds comprising 2-oxo-2,5-dihydrofuran moiety are of interest both for the range of pharmacological properties and for their chemistry. In view of the ubiquity of this fragment in a variety of biologically active compounds, the synthesis of various analogs is important in gauging their potential as a source of chemotherapeutics.

Synthesis of new derivatives of 2-imino-2,5-dihydrofurans [1-5] has been of continuous interest in the development of efficient and convenient methods for preparation of various 2,5-dihydrofuran derivatives and in their synthetic applications.

We have presented a new strategy for the synthesis of new 2-*N*-substituted dihydrofurans by the reaction of 2-imino-2,5-dihydrofuran-3-carboxamides [3] with analgesic and sulfanilamide drugs and 4-aminoantipyrine in glacial acetic acid. This synthetic approach allowed the efficient and practical preparation of required compounds with minimal synthetic effort and might open a new avenue for the synthesis a variety of heterocyclic systems of biological significance. The methodology is simple, convenient, environmentally friendly and inexpensive affording high yields of the products.



1a,b

1a: $R_1 = R_2 = CH_3$; 1b: $R_1R_2 = (CH_2)_5$.

3a-l

3 a: $R_1 = R_2 = CH_3$, X =

3 b: $R_1 = R_2 = CH_3$, X =

3 c: $R_1 = R_2 = CH_3$, X =

3 d: $R_1 = R_2 = CH_3$, X =

3 e: $R_1 = R_2 = CH_3$, X =

3 f: $R_1 = R_2 = CH_3$, X =

3 g: $R_1R_2 = (CH_2)_5$, X =

3 h: $R_1R_2 = (CH_2)_5$, X =

3 i: $R_1R_2 = (CH_2)_5$, X =

3 j: $R_1R_2 = (CH_2)_5$, X =

3 k: $R_1R_2 = (CH_2)_5$, X =

3 l: $R_1R_2 = (CH_2)_5$, X =

References

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