عنوان مقاله:

Synthesis, Characterization, and Antibacterial Activity of Some New Oxazepine Derivatives

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خلاصه مقاله:

In this work, new ۱,۳-oxazepine derivatives were synthesized from a Schiff base. The latter was prepared by reacting ۴-amino antipyrine with ۴-amino acetophenone, then the Schiff base, which has an amine group, reacted with maleic anhydride to produce the corresponding amic acid. The prepared amic acid compound has an azomethine group utilized in synthesizing new derivatives of ۱,۳-oxazepine through reacting the amic acid with different cyclic anhydrides (succinic anhydride, maleic anhydride, phthalic anhydride, tetrachlorophthalic anhydride, and citraconic anhydride). Different techniques have been used to confirm the structures of synthesized compounds in terms of physical properties and spectroscopic measurements, where proton nuclear magnetic resonance ۱H-NMR and Fourier Transform Infrared FT-IR spectroscopies have been used to confirm the synthesized compounds. In addition, the antibacterial activity of oxazepinederivatives was examined against two types of bacteria, gram-negative and gram-positive.

کلمات کلیدی:

Oxazepine derivatives, Schiff base, Organic synthesis, antipyrine, Amic acid