

عنوان مقاله:

Synthesis of New Quinoline-2-Carboxylic Acid Compounds and Their Antimicrobial Activity Investigation

محل انتشار:

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خلاصه مقاله:

In this study, synthesis of novel Mannich bases, Schiff bases, and heterocyclic compounds starting from quinoline-2-carboxylic acid has been achieved and their antimicrobial activities were studied. The first step involved the synthesis of compound E₁ from reaction of 2-quinolinyl chloride with hydrazine. In the second step, compound E₂ was prepared from the reaction of E₁ with CS₂ in an alkaline medium. The third step included the preparation of compounds E₃-E₇ from the reaction of E₂ with different amines. In the fourth step, compound E₈ was synthesized from the reaction of compound E₂ with ethyl-2-chloroacetate in the presence of potassium carbonate. In the fifth step, compound E₉ was prepared from the reaction of compound E₈ with hydrazine in absolute ethanol. In the sixth step, compounds E₁₀-E₁₂ were prepared from a condensing reaction between compound E₉ and different aromatic aldehydes. In the seventh step, compounds E₁₃-E₁₈ were prepared, respectively, from the reaction of thioglycolic acid and sodium azide with compounds E₁₀-E₁₂. Finally, the prepared compounds were characterized by FT-IR and ¹H-NMR spectroscopy, and their antimicrobial activities were studied.

کلمات کلیدی:

Mannich bases, Thiol-oxadiazole, thiazolidinone, FT-IR, ¹H-NMR, Antimicrobial activities

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