

SYNTHESIS, SPECTROSCOPIC CHARACTERIZATION AND BIOLOGICAL ACTIVITIES OF NEW HYDRAZONE DERIVATIVE: 1-((1E,4E)-1,5-BIS(4-CHLOROPHÉNYL) PENTA-1,4-DIÈN-3-YLIDÈNE)-2-(2,4-DINITROPHÉNYL) HYDRAZINE

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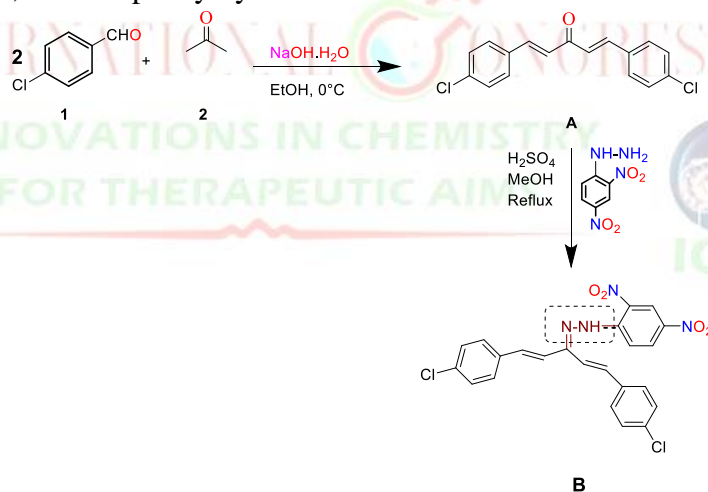
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Introduction & Objectives: Organic synthesis is a special branch of chemical synthesis and is concerned with the intentional construction of organic compounds. Organic molecules are often more complex than inorganic compounds, and their synthesis has developed into one of the most important branches of organic chemistry. This work is an organic synthesis of biologically active compound which is a substituted hydrazone

Methodology (Material and methods): An aromatic α, β -unsaturated Ketone (1E,4E)-1,5-bis(4-chlorophényl)penta-1,4-dièn-3-one (A) have been achieved by a *Claisen-Schmidt* reaction. A new hydrazone derivative 1-((1E,4E)-1,5-bis(4-chlorophényl) penta-1,4-dièn-3-ylidène)-2-(2,4-dinitrophényl) hydrazone (B) was synthesized by reacting under reflux chalcone (A) with 2,4-dinitrophenylhydrazine and evaluated for their biological activities .



Results and Discussion: The carbonyl compound was obtained by a mixt aldolic condensation, via Claisen-Schmidt reaction, in which the chlorobenzaldehyde (1) was used to react with an enolisable Ketone: (2) under basic condition. The structure of the compounds (A) and (B) was studied using diverse spectroscopic techniques such as ¹H and ¹³C NMR and FT-IR. The According to bioassay results, compound (B) exhibits highest superoxide anion radical and tyrosinase assays, respectively, compared to the used standards.

Conclusion : The methods used made it possible to obtain a chalcone and an important derivative of hydrazone with moderate yields

Keywords: 2,4-dinitrophenylhydrazone, aldolic condensation, biological activities.

References

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