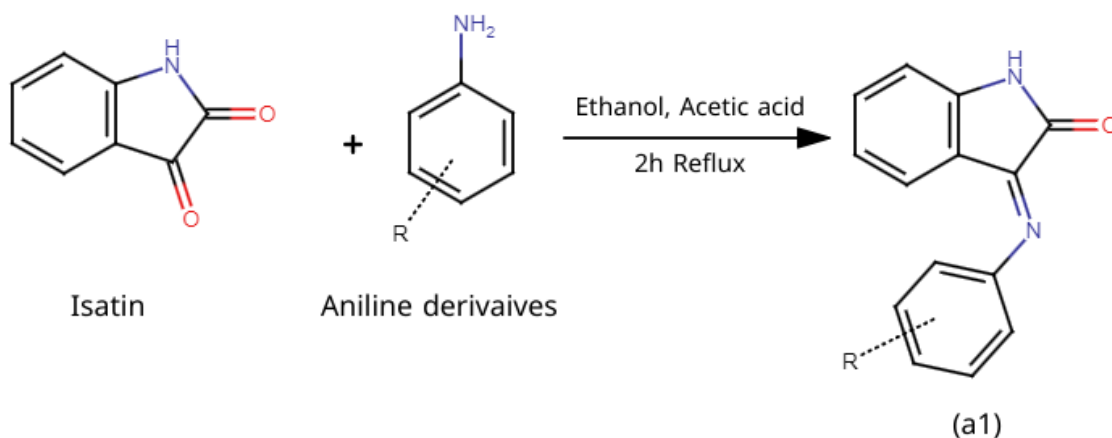


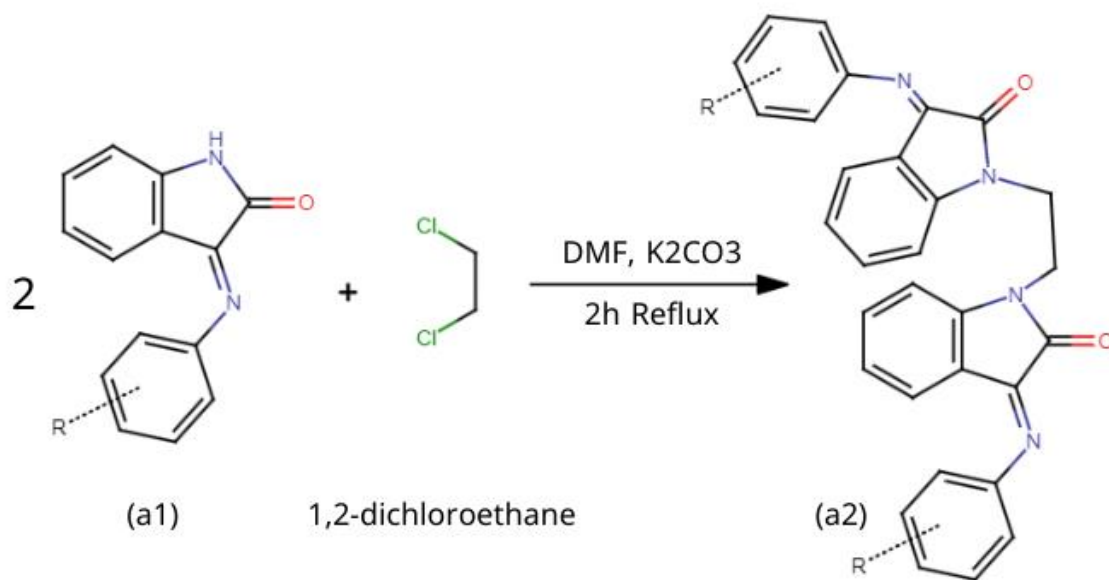
A novel schiff base of isatin derivatives: Synthesis, characterization, and biological activity

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Isatin Schiff bases are an important class of organic compounds that have garnered significant attention in the field of medical chemistry. They are derived from the condensation reaction between isatin, a cyclic compound, and various aromatic or aliphatic primary amines. The diverse applications of isatin Schiff bases have attracted considerable interest in the development of new synthetic methodologies and the exploration of their biological activities. In the present study, a series of novel Schiff bases of isatin were synthesized throughout two steps (1) the reaction of isatin with aniline derivatives [1] to form Schiff bases (a1), (2) 1,2-dichloroethane reacted with (a1) to give (a2). The chemical structures of the synthesized compounds were confirmed by Infrared (IR), HNMR. These derivatives are expected to have a good biological activities, including antimicrobial, anticancer, anti-inflammatory, and antioxidant properties. The importance of using isatin Schiff bases in the medical field stems from their ability to interact with specific molecular targets, such as enzymes, receptors, and DNA, which are crucial for the regulation of biological processes. By modulating these targets, isatin Schiff bases can influence cellular signaling pathways and biochemical reactions, leading to therapeutic effects.





References:

- [1] G. Shi *et al.*, "Synthesis of 3', 4'-Diaryl-4' H-spiro [indoline-3, 5'-[1', 2', 4'] oxadiazol]-2-ones via DMAP-catalyzed Domino Reactions and Their Antibacterial Activity," *Chinese J. Chem.*, vol. 34, no. 9, pp. 901–909, 2016.