IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 8, April 2025
Impact Factor: 7.67

Synthesis and Characterization of Schiff Bases from 1-Amino Naphthalen-2-Ol

Bhagat Jayesh Janardan, Golandaz Mahek Suhel, Mr. Khan Shoyeab Mutalib
Department of Chemistry
Anjuman Islam Janjira Degree College of Science, Murud-Janjira, Raigad, Maharashtra, India

Abstract: *Schiff bases are a significant class of organic compounds exhibiting diverse applications in medicinal chemistry, catalysis, and material science. This study presents the synthesis and characterization of novel Schiff bases derived from 1-amino-2-naphthol through its condensation with various aromatic aldehydes under optimized reaction conditions. The synthesized compounds were characterized using spectroscopic techniques to confirm their structural properties. It is potential as effective antimicrobial agents. These Schiff bases also hold industrial significance and exhibit diverse biological properties. The synthesized compounds were structurally confirmed using thin-layer chromatography (TLC), melting point analysis, and spectral data, which were consistent with reported literature. This method provided excellent product yield, minimized solvent usage, and reduced reaction time, making it a sustainable and efficient approach for synthesizing Schiff bases. The findings support the advancement of greener methodologies in organic synthesis and highlight the significance of these compounds in pharmaceuticals and industrial applications.*

Keywords: Schiff bases, 1-amino-2-naphthol, synthesis, characterization, spectroscopy, azomethine, bioactive compounds, catalysis

DOI: 10.48175/IJARSCT-25507