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 6, Issue 5, September 2026
Impact Factor: 8.2

Synthesis and Structural Characterization of Novel 6-Cinnamoyl-5,6-Dihydrothieno[2,3-c]pyridin-7(4H)-one Derivatives as Potential Pharmacologically Active Scaffolds

[1]Vikas L. Gore
[1]Department of Chemistry
K J Somaiya College of Science and Commerce, Vidyavihar, Mumbai, India

Abstract: *Heterocyclic compounds containing sulfur and nitrogen atoms, particularly thienopyridine derivatives, are of considerable interest in medicinal chemistry because of their diverse biological activities. The fused thiophene–pyridine system offers a versatile scaffold for structural modification, allowing optimization of physicochemical and pharmacological properties. In particular, 5,6-dihydrothieno[2,3-c]pyridin-7(4H)-one derivatives represent a promising platform due to their synthetic accessibility and potential for diversification. The incorporation of cinnamoyl substituents, known for their conjugated π-systems and biological relevance, provides a rational strategy for improving therapeutic potential. In this study, a series of novel 6-cinnamoyl-5,6-dihydrothieno[2,3-c]pyridin-7(4H)-one derivatives was synthesized using an EDC/HOBt-mediated coupling approach. The compounds were purified chromatographically and fully characterized by FT-IR, NMR, and HRMS analyses. This work broadens the chemical scope of cinnamoyl–thienopyridine hybrids and establishes a basis for future biological evaluation as lead candidates in drug discovery.*

Key Words: 6-Cinnamoyl derivatives, Thieno[2,3-c]pyridin-7(4H)-one, Synthesis, Characterization, Spectroscopic analysis, Medicinal chemistry

Copyright to IJARSCT
www.ijarsct.co.in
DOI: 10.48175/IJARSCT-40653