Synthesized Ni-doped Indium oxide as a reusable catalyst for one pot three component synthesis of 2-Amino-7-Hydroxy-4-Phenyl-4H-Chromene-3-Carbonitrile in water medium and their antimicrobial molecular docking studies.

RESEARCH PROJECT SUBMITTED TO

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE

FOR THE DEGREE OF

MASTER OF SCIENCE

IN

ORGANIC CHEMISTRY

UNDER THE FACULTY OF SCIENCE

BY

Mr. Pratik Sampat Bhabad

UNDER THE GUIDANCE OF

Mr. Jagdish Ghotekar

DEPARTMENT OF CHEMISTRY

G.M.D. ARTS, B.W. COMMERCE AND SCIENCE COLLEGE, SINNAR

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Year- 2024-25

Maratha Vidya Prasarak Samaj's

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This is to certify that the work incorporated in the project entitled-

Topic name: **Synthesized Ni-doped Indium oxide as a reusable catalyst for one pot three component synthesis of 2-Amino-7-Hydroxy-4-Phenyl-4H-Chromene-3-Carbonitrile in water medium and their antimicrobial molecular docking studies.**
Was satisfactorily carried out by **Mr. Pratik Sampat Bhabad** of M.Sc.II Organic Chemistry. He has completed this project under my supervision and guidance during Academic Year 2024 -2025. This project work submitted by his original and the scientific information obtained from other sources have been acknowledged.

Mr. Jagdish Ghotekar
(Project Guide)

Maratha Vidya Prasarak Samaj's
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CERTIFICATE

This is to certify that PG dissertation entitled **Synthesized Ni-doped Indium oxide as a reusable catalyst for one pot three component synthesis of 2-Amino-7-Hydroxy-4-Phenyl-4H-Chromene-3-Carbonitrile in water medium and their antimicrobial molecular docking studies** submitted by **Mr. Pratik Sampat Bhabad** and it was carried out by the candidate under the supervision of **Mr. Jagdish Ghotekar.** He has successfully completed the project work in Organic Chemistry **(CHO-681)** during the Sem-IV of academic year 2024-2025.

Date: 22/04/2025
Place: Sinnar

Mr. Jagdish Ghotekar
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Internal Examiner

Examined
External Examiner

Examined
25/04/25
External Examiner

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DECLARATION

I hereby declare that the presented Research Project on **Synthesized Ni-doped Indium oxide as a reusable catalyst for one pot three component synthesis of 2-Amino-7-Hydroxy-4-Phenyl-4H-Chromene-3-Carbonitrile in water medium and their antimicrobial molecular docking studies** is uniquely prepared by me at **G.M.D. Arts, B.W. Commerce And Science College Sinnar** under the guidance of **Mr. Jagdish Ghotekar.**

Place: Sinnar
Date: 22/04/2025

Sign-
Name-Pratik Sampat Bhabad

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