

**"GREEN SYNTHESIS AND CHARACTERIZATION OF ZINC OXIDE
NANOPARTICLE USING EUPHORBIA TITHYMALOIDES LEAF
EXTRACT"**

**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**

Miss. Nagare Usha Balu.

**UNDER THE GUIDANCE OF
MR. MILIND MESHAM**

DEPARTMENT OF CHEMISTRY

G.M.D. ARTS, B.W. COMMERCE AND SCIENCE COLLEGE, SINNAR 422103

OCT/NOV 2024-2025



Maratha Vidya Prasarak Samaj's

**G.M.D. ARTS, B.W. COMMERCE AND SCIENCE COLLEGE, SINNAR,
DIST- NASHIK**

DEPARTMENT OF CHEMISTRY

CERTIFICATE

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

**Topic name: Green Synthesis and characterization of Zinc oxide nanoparticle using
Euphorbia tithymaloide leaf extract.**

Has satisfactorily carried out by **Miss. Nagare Usha Balu** of **M.Sc. 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. Milind Meshram
(Project Guide)



Maratha Vidya Prasarak Samaj's

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


DEPARTMENT OF CHEMISTRY


CERTIFICATE


This is to certify that **Miss. Nagare Usha Balu** studying in MSc-II (Organic Chemistry) at **M.V.P. Samaj's G.M.D. Arts, B.W. Commerce and Science College, Sinnar**. He has successfully completed the project work in Organic Chemistry (CHO-607) during the Sem-III of academic year 2024-2025


Date: 16/11/24

Place: Sinnar.


Mr. Milind Meshram
(Project guide)


Prof. Dr. M.R. Gaware
HEAD
DEPARTMENT OF CHEMISTRY
G.M.D. Arts, B.W. Commerce
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Dr. P.V. Rasal
(Principal)
PRINCIPAL
G.M.D. Arts, B.W. Commerce and
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Internal Examiner


External Examiner

DECLARATION

I hereby declare that the presented Research Project on **Green Synthesis and characterization of Zinc oxide nanoparticle using Euphorbia tithymaloide leaf extract** is uniquely prepared by me at G.M.D. Arts, B.W. Commerce and Science College Sinnar under the guidance of Mr.Milind Meshram

Place: sinnar

Date: 16/11/2024

Name: - Nagare Usha Balu.

Sign- U Nagare

ACKNOWLEDGEMENT

- I would like to thank M.V.P. Samaj's G.M.D. Arts B.W. Commerce and Science College Sinnar, for providing me with the necessary resources, infrastructural, and facilities to carry out this project.
- I would like to thank our Principal Dr. P. V. Rasal for constant support and providing infrastructural facility for this project work.
- I would like to thank, HoD Prof. M.R. Gaware for his constructive help during project
- I would like to thank Mr.Milind Meshram (Project Guide), for their constant encouragement, insightful feedback, and expert guidance that helped me to navigate through the various challenges of this project.
- I would like to thank all the faculty members of the Department of Chemistry, for imparting me with the theoretical and practical knowledge necessary to complete this project.
- I would like to thank my classmates and colleagues, for their feedback, suggestions, and stimulating discussions that enriched my understanding of the subject matter.

Sign: Ushagare
Name: - NAGARE USHA BALU