

**GREEN SYNTHESIS AND CHARECTERIZATION OF COPPER OXIDE  
NANOPARTICAL USING MANGIFERA INDICA 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. Khalkar Mangal Ramdas**

**UNDER THE GUIDANCE OF**

**Asst. Prof. Miss. Ankita Rayate Mam**

**DEPARTMENT OF CHEMISTRY**

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

**OCT-NOV 2024-2025**



Maratha Vidya Prasarak Samaj's

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**DEPARTMENT OF CHEMISTRY**

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

**Topic Name:** GREEN SYNTHESIS AND CHARACTERIZATION OF CuO  
NANOPARTICLES

Was satisfactorily carried out by Miss.Khalkar Mangal Ramdas 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 obtain from other sources have been acknowledged.

*Ankita*

Asst.Prof.Miss.Ankita Rayate Mam

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## CERTIFICATE

This is to certify that PG dissertation entitled Synthesis Green Synthesis and Characterization of Copper Oxide Nanoparticle Using Mangifera Indica Leaf Extract submitted by **Miss. Khalkar Mangal Ramdas** and it was carried out by the candidate under the supervision of **Miss. Ankita Rayate Mam**. He has successfully completed the project work in Organic Chemistry (CHO-607) during the Sem-III of academic year 2024-2025.

Date: 14/11/24  
Place: Sinnar

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Miss. Ankita Rayate Mam  
(Project Guide)

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## DECLARATION

I hereby declare that the presented Research Project on **Green Synthesis and Characterization of Copper Oxide Using Mangifera Indica Leaf Extract** is uniquely prepared by me at G.M.D. Arts, B.W. Commerce And Science College Sinnar under the guidance of **Miss. Ankita Rayate Mam.**

Place: Sinnar

Date: 14/11/24

Sign- Khalkar

Name-Khalkar Mangal Ramdas

## ACKNOWLEDEMENT

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- 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.
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Sign- 

Name- **Khalkar Mangal Ramdaas**