



*Criterion no.1.3.2 Percentage of students undertaking project work/ field work/internships (Data for the latest complete academic year)*

INDEX			
SR. NO	PARTICULARS	REPORTS OF THE PROJECT/FIELD VISITS/INTERNSHIPS	NUMBER OF STUDENTS
<b>PROJECT WORK</b>			
1)	Second Year M. Pharm Research Project/Thesis	<a href="#">View Documents</a>	60
2)	Final Year B. Pharm Project Work	<a href="#">View Documents</a>	124
3)	Fifth Year Pharm-D Research Project Work	<a href="#">View Documents</a>	36
4)	First Year B. Pharm Environmental Science Project	<a href="#">View Documents</a>	112
<b>FIELD WORK</b>			
5)	Third Year B. Pharm Industrial Visit to Haffkine Bio-Pharmaceutical LTD	<a href="#">View Documents</a>	111
6)	Second Year B. Pharm Botanical Garden Visit	<a href="#">View Documents</a>	60
7)	Fourth Year Pharm-D Industrial Visit at Bio-radius Therapeutics Research	<a href="#">View Documents</a>	32
Total Number of Students Undertaking Project Work/ Field Work/Internships			535
Total Number of Students in A.Y 2022-23			776
Total Percentage of Students Undertaking Project Work/ Field Work/Internships			68.94%

**PROJECT WORK**

## Second Year M. Pharm Research Project/Thesis

**Progressive Education Society's**  
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Approved by All India Council for Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
 Directorate of Technical Education, Mumbai (MS), Permanently Affiliated to  
 Savitribai Phule Pune University, Pune & Approved under Section 2 (f) & 12 (B) of UGC Act, 1956  
 Section No.21, Yamunanagar, Nigdi, Pune-411 044. (M.S.) Tel.: 020-27661315 Fax: 020-27661314  
 E-mail: mcpnigdi44@gmail.com Website: www.mcop.org.in

Prof. Dr. P. D. Chaudhari  
 M.Pharm., Ph.D.  
 Principal

Prof. Dr. G. B. Shirsat  
 M.B.A., M.M.A., M.S.  
 Chairman, Business Council

Date- 16-06-2023

**M.PHARM SECOND YEAR PHARMACEUTICAL QUALITY ASSURANCE**  
**PROJECT DETAILS 2022-2023**


Roll no	Name	Research Topic	Guide Name
QA201	Agarkar samiksha surendra	Identification and Characterization of D-Limonene and Rosmarinic acid by HPTLC Analysis of Black caraway oil with antioxidant and antibacterial activities.	Dr.pallavi patil
QA202	Auti mayuri kashinath	Formulation and characterization of microcapsulated neem and castor oil in antiaging cream	Dr.A.S tapkir
QA203	Bambale prerana ganesh	A comparative study of green synthesis, characterization and Anti-microbial activity of ZnO, Cu and AgNO <sub>3</sub> Nanoparticles of sunflower honey.	Dr.A.Balap
QA204	Chattar harshada jitendra	Development of Polyherbal Anti-Dandruff Hair Shampoos	H.P Pimple
QA205	Chaudhari shivam anil	Development & Validation of High Performance Thin Layer chromatography method for estimation of Pioglitazone in bulk & Analytical marketed formulation by Green Approach.	Dr.K.S.Shalkh
QA206	Gholap abhijit balasahyeb	Formulation and evaluation of antiaging ointment containing micro capsulated turmeric and Jojoba oil.	Dr.A.S tapkir
QA207	Humnabadkar shubham chandrakant	Analytical quality by design (QBD) approach for Development and validation of HPLC method for lopinavir; Application to Hydrolytic, Thermal, Oxidative and Photolytic Degradation Kinetics	Dr.pallavi patil
QA208	Jadhav sidheshwar lobhaji	Design and synthesis of surface engineered mesoporous nanoparticles for assesment of anticancer activity of capactabine	Dr.Minal Harde
QA209	Jagtap kedar abhay	RP-HPLC Method Development & Validation of bulk & Pharmaceutical Dosage form	Mes.V.S.Bavadekar

STRIVING TOWARDS EXCELLENCE FOREVER

Principal  
 P. B. S. Modern College of Pharmacy  
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Approved by All India Council for Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
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Prof. Dr. P. D. Chaudhari  
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Prof. Dr. G. S. Eklote  
 M.S., M.N.A.M.S.  
 Chairman, Business Council

QA210	Kharate vrushali dattatraya	Development of validated Stability indicating HPTLC Method for estimation of Febuxostat in bulk and Tablet dosage form by QBD approach.	Dr.M.C Kuchekar
QA211	Niikalje rushikesh nitin	GC-MS and HPTLC Analysis of Hibiscus sabdariffa Linn. and its antimicrobial activity with formulated nanoparticles	Dr.K.S Kakad
QA212	Patil ankkita pradeep	Design & Synthesis of fluorescent carbon dots and their applications.	Dr.Minal Harde
QA213	Salunkhe manisha sanjay	Green Chemistry Approach to Analytical method development & Validation For estimation of Telmisartan by using Ultraviolet spectrophotometric & High Performance Thin Layer Chromatography	Dr. K.S.Shaikh
QA214	Surryawanshi pratiksha mahade	Design, formulation and evaluation of polyherbal gel Formulation from Honey & Catharanthus-roseus flowers extracts for it's wound Healing Activity.	Dr.A.Balap
QA215	Thete dipali sanjay	Identification and Quantification of potential genotoxic impurities from Rilpivirine Hydrochloride By Chromatographic Technique	Dr V.V Chopde
QA216	Wadgave pooja bandappa	Quantification and validation of sildenafil in bulk and dosage form by High performance thin layer chromatography, High performance liquid chromatography and UV Spectroscopy by using Hydrotropic Agents	Dr V.V Chopde

Dr.K.S.Shaikh  
 H.O.D

Dr.P. D. Chaudhari  
 PRINCIPAL

  
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**"IDENTIFICATION AND CHARACTERIZATION OF  
D-LIMONENE AND ROSMARINIC ACID BY HPTLC  
ANALYSIS OF BLACK CARAWAY OIL WITH  
ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES"**

***Thesis submitted to***  
**THE FACULTY OF PHARMACEUTICAL SCIENCES**  
**SAVITRIBAI PHULE PUNE UNIVERSITY,**  
**PUNE**



By  
**MS. SAMIKSHA SURENDRA AGARKAR**  
**(B. Pharm)**

*In partial fulfillment of  
The requirements for the degree of*

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL QUALITY ASSURANCE**

Under the Guidance of  
**DR. PALLAVI M. PATIL**  
**(M. Pharm, PhD)**  
Assistant Professor  
Department of Pharmaceutical Chemistry

**PROGRESSIVE EDUCATION SOCIETY'S MODERN  
COLLEGE OF PHARMACY, NIGDI, PUNE (2021-23)**



*[Signature]*  
**Principal**  
P. E. S. Modern College of Pharmacy  
Nigdi, Pune - 411 044.



**"IDENTIFICATION AND CHARACTERIZATION OF  
D-LIMONENE AND ROSMARINIC ACID BY HPTLC  
ANALYSIS OF BLACK CARAWAY OIL WITH  
ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES"**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**




By  
**Ms. Samiksha Surendra Agarkar**  
(B. Pharm)  
In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL QUALITY ASSURANCE**

UNDER THE GUIDANCE OF  
**DR. Pallavi M. Patil**  
(M. Pharm, PhD)  
Assistant Professor (Dept. of Pharmaceutical Chemistry)

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE – 4 (2021-23)  
(ACCREDITED BY NAAC AND NBA)**



  
Principal  
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Nigdi, Pune - 411 044.





(BEST COLLEGE AWARDED BY SAVITRIBAI PHULE  
PUNE UNIVERSITY)

SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

I am **Ms. SAMIKSHA SURENDRA AGARKAR** declare that the thesis entitled, "**IDENTIFICATION AND CHARACTERIZATION OF D-LIMONENE AND ROSMARINIC ACID BY HPTLC ANALYSIS OF BLACK CARAWAY OIL WITH ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES**" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. PALLAVI M PATIL** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 18/6/2023

Place: Nigdi, Pune

Ms. Samiksha S Agarkar



Principal  
P. E. S. Modern College of Pharmacy  
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**DR. PALLAVI M. PATIL**

Assistant professor  
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**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE-44  
(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **"IDENTIFICATION AND CHARACTERIZATION OF D-LIMONENE AND ROSMARINIC ACID BY HPTLC ANALYSIS OF BLACK CARAWAY OIL WITH ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES"** submitted for degree of Master of Pharmacy, is the record of research work carried out by **Ms. SAMIKSHA SURENDRA AGARKAR** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 18/6/2023  
Place: Nigdi, Pune

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(M.pharm, PhD)  
Research Guide



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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.




**MODERN COLLEGE OF PHARMACY**  
**NIGDI, PUNE-44**  
**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, **"IDENTIFICATION AND CHARACTERIZATION OF D-LIMONENE AND ROSMARINIC ACID BY HPTLC ANALYSIS OF BLACK CARAWAY OIL WITH ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES"** is a record of bonafide research work carried out by **Ms. SAMIKSHA SURENDRA AGARKAR** under the guidance of **Dr. PALLAVI M. PATIL** at Modern College of Pharmacy, Nigdi, and Pune-411044.

Date: 18/6/2023  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**“FORMULATION AND CHARACTERIZATION OF  
MICROENCAPSULATED NEEM AND CASTOR OILS  
IN ANTIAGING CREAM”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**Ms. AUTI MAYURI KASHINATH**  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY IN  
Pharmaceutical Quality Assurance**

**Under the Guidance of**  
**Dr. AMIT S. TAPKIR**  
(M. Pharm. PhD)  
Assistant Professor  
(Dept. of Pharmaceutical Chemistry)

**DEPARTMENT OF PHARMACEUTICAL QUALITY  
ASSURANCE  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE-44  
(2022-23)**



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Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY




DECLARATION

I am **MS. AUTI MAYURI KASHINATH** declare that the thesis entitled **“FORMULATION AND CHARACTERIZATION OF MICROENCAPSULATED NEEM AND CASTOR OILS IN ANTIAGING CREAM”** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. AMIT S. TAPKIR** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 13/06/2023  
Place: Nigdi, Pune

  
Ms. Auti Mayuri Kashinath



  
Principal  
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PES's, MODERN COLLEGE OF PHARMACY NIGDI, PUNE- 44  
(ACCREDITED BY NAAC)

**DR. AMIT S. TAPKIR**

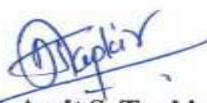
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**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND CHARACTERIZATION OF MICROENCAPSULATED NEEM AND CASTOR OILS IN ANTIAGING CREAM"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MS. AUTI MAYURI KASHINATH** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 13/06/2023  
Place: Nigdi, Pune



  
**Dr. Amit S. Tapkir**  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND CHARACTERIZATION OF MICROENCAPSULATED NEEM AND CASTOR OILS IN ANTIAGING CREAM"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MS. AUTI MAYURI KASHINATH** under the guidance and supervision of **DR. AMIT S. TAPKIR** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 13/6/2023  
Place: Nigdi, Pune



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Ex-Dean, Faculty of Pharmaceutical Sciences,

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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"FORMULATION AND CHARACTERIZATION OF MICROENCAPSULATED NEEM AND CASTOR OILS IN ANTIAGING CREAM"**. For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MS. AUTI MAYURI KASHINATH** under the guidance of **DR. AMIT S. TAPKIR** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 13/06/2023

Place: Nigdi, Pune



  
**Dr. P.D. Chaudhari**  
**Principal**

**Principal**  
P. E. S. Modern College of Pharmacy  
Savitribai Phule Pune University, Nigdi,  
Pune - 411 044.





**A COMPARATIVE STUDY OF GREEN SYNTHESIS,  
CHARACTERIZATION AND ANTI-MICROBIAL  
ACTIVITY OF ZnO, Cu AND AgNO<sub>3</sub>,  
NANOPARTICLES OF SUNFLOWER HONEY**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Ms. Prerana Ganesh Bambale**  
(M. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**

IN  
**Pharmaceutical Quality Assurance**

Under the Guidance of

**Dr. A.R. BALAP**

(M. Pharm. PhD)

Associate Professor

(Dept. of Pharmaceutical Chemistry)

**DEPARTMENT OF PHARMACEUTICAL QUALITY  
ASSURANCE**

**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF  
PHARMACY, NIGDI, PUNE-44 (2022-23)**



  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Ms. PRERANA GANESH BAMBALE** declare that the thesis entitled "A COMPARATIVE STUDY OF GREEN SYNTHESIS, CHARACTERIZATION AND ANTI-MICROBIAL ACTIVITY OF ZnO, Cu AND AgNO<sub>3</sub>, NANOPARTICLES OF SUNFLOWER HONEY" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. A.R. BALAP** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 15/6/2023

*P.G. Bambaule*  
Ms. PRERANA GANESH BAMBALE

Place: Pune



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Nigdi, Pune- 44.


CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled, "A COMPARATIVE STUDY OF GREEN SYNTHESIS, CHARACTERIZATION AND ANTI-MICROBIAL ACTIVITY OF ZnO, Cu AND AgNO<sub>3</sub>, NANOPARTICLES OF SUNFLOWER HONEY", submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **Ms. PRERANA GANESH BAMBALE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 15/06/2022  
Place: Pune

  
Dr. A.R. BALAP  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, "A COMPARATIVE STUDY OF GREEN SYNTHESIS, CHARACTERIZATION AND ANTI-MICROBIAL ACTIVITY OF ZnO, Cu AND AgNO<sub>3</sub>, NANOPARTICLES OF SUNFLOWER HONEY" submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **Ms. PRERANA GANESH BAMBALE** under the guidance and supervision of **Dr. A.R. BALP.** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 15/01/2023  
Place: Pune

  
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Ex-Dean, Faculty of Pharmaceutical Sciences,

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ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled, "A COMPARATIVE STUDY OF GREEN SYNTHESIS, CHARACTERIZATION AND ANTI-MICROBIAL ACTIVITY OF ZnO, Cu AND AgNO<sub>3</sub>, NANOPARTICLES OF SUNFLOWER HONEY" for the MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE) is a record of bonafide research work carried out by Ms. PRERANA GANESH BAMBALE under the guidance of DR.A.R. BALAP at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023

Date: 15/6/2023  
Place: Nigdi, Pune

Dr. P.D. Chaudhari  
Principal



Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**"DEVELOPMENT OF POLYHERBAL ANTI-DANDRUFF HAIR SHAMPOOS"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

Miss. CHATTAR HARSHADA JITENDRA  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN

**Pharmaceutical Quality Assurance**

Under the Guidance of  
Dr. BHUSHAN P. PIMPLE  
(M. Pharm. PhD)  
Head of Department  
(Dept. of Pharmacognosy)

**DEPARTMENT OF PHARMACEUTICAL QUALITY  
ASSURANCE  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE-44  
(2022-23)**



  
**Principal**  
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Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MISS. CHATTAR HARSHADA JITENDRA** declare that the thesis entitled "**DEVELOPMENT OF POLYHERBAL ANTI-DANDRUFF SHAMPOOS**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. BHUSHAN P. PIMPLE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 16/06/23

Miss. CHATTAR HARSHADA JITENDRA

Place: Pune



  
Principal

P. E. S. Modern College of Pharmacy  
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**DR. BHUSHAN P. PIMPLE**

Head of Department,  
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P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune- 44

CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled, **"DEVELOPMENT OF POLYHERBAL ANTI-DANDRUFF SHAMPOOS"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MISS. CHATTAR HARSHADA JITENDRA** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
Place: Pune

  
Dr. Bhushan P. Pimple  
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Principal  
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**DR. KARIMUNNISA S. SHAIKH**

Head of Department,  
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P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune- 44

CERTIFICATE BY THE HOD

This is to certify that the research work presented in this thesis entitled, "DEVELOPMENT OF POLYHERBAL ANTI-DANDRUFF SHAMPOOS" submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MISS. CHATTAR HARSHADA JITENDRA** under the guidance and supervision of **DR. BHUSHAN P. PIMPLE** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
Place: Pune

Dr. Karimunnisa S. Shaikh  
HOD



Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**PES's MODERN COLLEGE OF PHARMACY NIGDI, PUNE- 44**  
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**DR. P. D. CHAUDHARI**

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Ex-Dean, Faculty of Pharmaceutical Sciences,

Savitribai Phule Pune University, Pune.


ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled, **"DEVELOPMENT OF POLYHERBAL ANTI-DANDRUFF SHAMPOOS"**. For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MISS. CHATTAR HARSHADA JITENDRA** under the guidance of **DR. BHUSHAN P. PIMPLE** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2021-2022.

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Place: Nigdi, Pune

  
Dr. P.D. Chaudhari  
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**"DEVELOPMENT AND VALIDATION OF HPTLC  
METHOD FOR ESTIMATION OF PIOGLITAZONE IN  
BULK AND MARKETING FORMULATIONS BY  
GREEN APPROACH"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Mr. CHAUDHARI SHIVAM ANIL**  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN  
Pharmaceutical Quality Assurance

Under the Guidance of  
Dr. KARIMUNNISA S. SHAIKH  
(M. Pharm. PhD)  
Head of Department  
(Dept. of Pharmaceutical Quality Assurance)

**DEPARTMENT OF PHARMACEUTICAL QUALITY  
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DECLARATION

I am **MR. CHAUDHARI SHIVAM ANIL** declare that the thesis entitled "**DEVELOPMENT AND VALIDATION OF HPTLC METHOD FOR ESTIMATION OF PIOGLITAZONE IN BULK AND MARKETING FORMULATIONS BY GREEN APPROACH**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. KARIMUNNISA S. SHAIKH** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 18/06/23

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Date: 18/06/23  
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This is to certify that the research work presented in this thesis entitled, **"DEVELOPMENT AND VALIDATION OF HPTLC METHOD FOR ESTIMATION OF PIOGLITAZONE IN BULK AND MARKETING FORMULATIONS BY GREEN APPROACH"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MR. CHAUDHARI SHIVAM ANIL** under my co-guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.




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This is to certify that the research work presented in this thesis entitled, **"DEVELOPMENT AND VALIDATION OF HPTLC METHOD FOR ESTIMATION OF PIOGLITAZONE IN BULK AND MARKETING FORMULATIONS BY GREEN APPROACH"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MR. CHAUDHARI SHIVAM ANIL** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 18/06/23  
Place: Pune



  
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"DEVELOPMENT AND VALIDATION OF HPTLC METHOD FOR ESTIMATION OF PIOGLITAZONE IN BULK AND MARKETING FORMULATIONS BY GREEN APPROACH"**. For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MR. CHAUDHARI SHIVAM ANIL** under the guidance of **DR. KARIMINNISA S. SHAIKH** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2021-2022.

Date: 18/6/23  
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Dr. P.D. Chaudhari  
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**“FORMULATION AND EVALUATION OF  
ANTIAGING OINTMENT CONTAINING  
MICROENCAPSULATED TURMERIC AND JOJOBA  
OIL”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**MR. GHOLAP ABHIJIT BALASAHEB**  
(B. Pharm)

In partial fulfillment of,  
The requirements for the degree of  
**MASTER OF PHARMACY IN  
Pharmaceutical Quality Assurance**

**Under the Guidance of  
DR. AMIT S. TAPKIR**  
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Assistant Professor  
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DECLARATION

I am **MR. GHOLAP ABHIJIT BALASAHEB** declare that the thesis entitled **“FORMULATION AND EVALUATION OF ANTIAGING OINTMENT CONTAINING MICROENCAPSULATED TURMERIC AND JOJOBA OIL”** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. AMIT S. TAPKIR** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 16/6/23  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF ANTIAGING OINTMENT CONTAINING MICROENCAPSULATED TURMERIC AND JOJOBA OIL"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MR. GHOLAP ABHIJIT BALASAHEB** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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**CERTIFICATE BY THE HOD**

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**Ex-Dean, Faculty of Pharmaceutical Sciences,**

**Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"FORMULATION AND EVALUATION OF ANTIAGING OINTMENT CONTAINING MICROENCAPSULATED TURMERIC AND JOJOBA OIL"** For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MR. GHOLAP ABHIJIT BALASAHEB** under the guidance of **DR. AMIT S. TAPKIR** at P.E.S. Modern College of Pharmacy, Nigdi, Pune-44 during the academic year 2022-2023.

**Date: 16/6/23**  
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**“ANALYTICAL QUALITY BY DESIGN (QBD) APPROACH FOR  
DEVELOPMENT AND VALIDATION OF HPLC METHOD FOR  
LOPINAVIR: APPLICATION TO HYDROLYTIC, THERMAL,  
OXIDATIVE AND PHOTOLYTIC DEGRADATION KINETICS”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**Mr. HUMNABADKAR SHUBHAM CHANDRAKANT**  
(M. Pharm.)


In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**  
IN  
**Pharmaceutical Quality Assurance**

Under the Guidance of  
Dr. Pallavi M. Patil  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MR. HUMNABADKAR SHUBHAM CHANDRAKANT** declare that the thesis entitled **"ANALYTICAL QUALITY BY DESIGN (QBD) APPROACH FOR DEVELOPMENT AND VALIDATION OF HPLC METHOD FOR LOPINAVIR: APPLICATION TO HYDROLYTIC, THERMAL, OXIDATIVE AND PHOTOLYTIC DEGRADATION KINETICS"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. PALLAVI M. PATIL** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 15/06/23

Place: Pune



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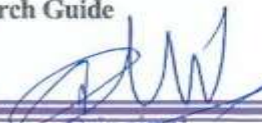
**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"ANALYTICAL QUALITY BY DESIGN (QBD) APPROACH FOR DEVELOPMENT AND VALIDATION OF HPLC METHOD FOR LOPINAVIR: APPLICATION TO HYDROLYTIC, THERMAL, OXIDATIVE AND PHOTOLYTIC DEGRADATION KINETICS"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MR. HUMNABADKAR SHUBHAM CHANDRAKANT** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 15/6/23  
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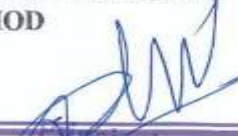
**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"ANALYTICAL QUALITY BY DESIGN (QBD) APPROACH FOR DEVELOPMENT AND VALIDATION OF HPLC METHOD FOR LOPINAVIR: APPLICATION TO HYDROLYTIC, THERMAL, OXIDATIVE AND PHOTOLYTIC DEGRADATION KINETICS"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MR. HUMNABADKAR SHUBHAM CHANDRAKANT** under the guidance and supervision of **DR. PALLAVI M. PATIL** at P.E.S. Modern College of Pharmacy Nigdi Pune 44 and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 15/6/23  
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ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled, **"ANALYTICAL QUALITY BY DESIGN (QBD) APPROACH FOR DEVELOPMENT AND VALIDATION OF HPLC METHOD FOR LOPINAVIR: APPLICATION TO HYDROLYTIC, THERMAL, OXIDATIVE AND PHOTOLYTIC DEGRADATION KINETICS"**. For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MR. HUMNABADKAR SHUBHAM CHANDRAKANT** under the guidance of **DR. PALLAVI M. PATIL** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

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**"DESIGN AND SYNTHESIS OF MESOPOROUS  
ALUMINA NANOPARTICLES FOR ASSESSMENT OF  
ANTICANCER ACTIVITY OF CAPECITABINE"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Mr. JADHAV SIDHESHWAR LOBHAI**  
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In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN  
**Pharmaceutical Quality Assurance**

Under the Guidance of  
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**Principal**

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**“RP-HPLC Method Development and Validation of Bulk  
and Pharmaceutical Dosage form”**

Thesis submitted to

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
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In partial fulfillment of  
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**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL QUALITY ASSURANCE**

UNDER THE GUIDANCE OF

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&

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**DECLARATION**


I Mr. Kedar Abhay Jagtap declare that the thesis entitled, "RP-HPLC Method Development and Validation of in Bulk and Pharmaceutical Dosage form" submitted by me for degree of 'Master of Pharmacy' is the record of work carried out by me under the guidance of Dr. P. D. Chaudhari and Mrs. V. S. Bavadekar and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 15/06/2023

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Mr. KEDAR A. JAGTAP



  
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**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, "RP-HPLC Method Development and Validation of in Bulk and Pharmaceutical Dosage form", submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 15/06/2023

Place: Pune

  
Mrs. V. S. Bavadekar  
(M. Pharm)  
Research Co-Guide



  
Principal  
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**Yamunanagar, Nigdi, Pune- 44**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **“RP-HPLC method development and validation of bulk and pharmaceutical dosage form”** submitted for degree of Master of Pharmacy (Pharmaceutical quality assurance), is the record of research work carried out by **Mr. KEDAR ABHAY JAGTAP** under my guidance and supervision of **DR. P.D. CHAUDHARI** at P.E.S modern college of pharmacy nigdi pune 44 and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 15/06/2023  
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**"Development of validated stability indicating HPTLC method for estimation of Febuxostat in bulk and Tablet dosage form by QBD Approach"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**Ms. KHARATE VRUSHALI DATTATRAYA**  
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In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**

IN  
**Pharmaceutical Quality Assurance**


Under the Guidance of  
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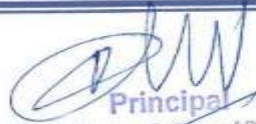
DECLARATION

I am **MS. KHARATE VRUSHALI DATTATRAYA** declare that the thesis entitled "**Development of validated stability indicating HPTLC method for estimation of Febuxostat in bulk and Tablet dosage form by QBD Approach**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. MOHINI C. KUCHEKAR** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 16/6/23 Ms. KHARATE VRUSHALI DATTATRAYA

Place: Pune



  
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CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled, "Development of validated stability indicating HPTLC method for estimation of Febuxostat in bulk and Tablet dosage form by QBD Approach" submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MS. KHARATE VRUSHALI DATTATRAYA** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, "**Development of validated stability indicating HPTLC method for estimation of Febuxostat in bulk and Tablet dosage form by QBD Approach**". For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MS. KHARATE VRUSHALI DATTATRAYA** under the guidance of **DR. MOHINI C. KUCHEKAR** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

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**“GC-MS AND HPTLC ANALYSIS OF *HIBISCUS SABDARIFFA* LINN. AND ITS ANTIMICROBIAL ACTIVITY WITH FORMULATED NANOPARTICLES”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



**By  
Mr. NIKALJE RUSHIKESH NITIN  
(B. Pharm.)**

**In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY  
IN  
Pharmaceutical Quality Assurance**

**Under the Guidance of  
Dr. KALYANI S. KAKAD  
(M. Pharm. PhD)  
Associate Professor  
(Dept. of Pharmacognosy)**

**DEPARTMENT OF PHARMACEUTICAL QUALITY  
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**(2022-23)**



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DECLARATION

I am **MR. NIKALJE RUSHIKESH NITIN** declare that the thesis entitled **"GC-MS AND HPTLC ANALYSIS OF HIBISCUS SABDARIFFA LINN. AND ITS ANTIMICROBIAL ACTIVITY WITH FORMULATED NANOPARTICLES"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. KALYANI S. KAKAD** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 14/6/23

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**ENDORSEMENT BY THE PRINCIPAL**

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**Date: 14/6/23**

**Place: Nigdi, Pune**



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**Pune- 411044**



**"DESIGN AND SYNTHESIS OF FLUORESCENT  
CARBON DOTS AND THEIR APPLICATIONS"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**MISS. PATIL ANKITA PRADEEP  
(B. Pharm.)**


In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN  
**Pharmaceutical Quality Assurance**

Under the Guidance of  
Dr. MINAL T. HARDE  
(M. Pharm. PhD)  
Assistant Professor  
(Dept. of Pharmaceutical Chemistry)

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Date: 17/6/23  
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ENDORSEMENT BY THE PRINCIPAL

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**"Green Chemistry Approach to Analytical Method  
Development and Validation for Estimation of Telmisartan by  
Using Ultraviolet Spectroscopy and High Performance Thin  
Layer Chromatography"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL  
SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



**By  
MISS.SALUNKHE MANISHA SANJAY  
(B. Pharm.)**

**Impartial fulfillment of  
The requirements for the degree of  
MASTER OF  
PHARMACY  
IN  
Pharmaceutical Quality Assurance**

**Under the Guidance of  
Dr. KARIMUNNISA S. SHAIKH  
(M. Pharm. PhD)**

**HEAD OF  
DEPARTMENT  
(Dept. of Pharmaceutical Quality Assurance)**

**DEPARTMENT OF PHARMACEUTICAL QUALITY  
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**Principal**

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Pune - 411 044.**



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NIGDI, PUNE-44  
(2022-23)

SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MISS. SALUNKHE MANISHA SANJAY** declare that the thesis entitled "**GREEN CHEMISTRY APPROACH TO ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR ESTIMATION OF TELMISARTAN BY USING ULTRAVIOLET SPECTROSCOPY AND HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. KARIMUNNISA S. SHAIKH** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

Date: 16/6/23

Place: Pune



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CERTIFICATE BY THE CO-GUIDE

This is to certify that the research work presented in this thesis entitled, **"GREEN CHEMISTRY APPROACH TO ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR ESTIMATION OF TELMISARTAN BY USING ULTRAVIOLET SPECTROSCOPY AND HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MISS. SALUNKHE MANISHA SANJAY** under my co-guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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**ENDORSEMENT BY THE PRINCIPAL**

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For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MISS. SALUNKHE MANISHA SANJAY** under the guidance of **DR. KARIMUNNISA S. SHAIKH** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023

Date: 16/6/23  
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**Dr. P.D. Chaudhari**  
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**"DESIGN, FORMULATION AND EVALUATION OF  
POLYHERBAL GEL FORMULATION FROM HONEY  
AND CATHARANTHUS-ROSEUS FLOWERS  
EXTRACT FOR IT'S WOUND HEALING ACTIVITY."**

Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By  
Miss. PRATIKSHA MAHADEV SURYAWANSHI  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN  
**Pharmaceutical Quality Assurance**

Under the Guidance of  
Dr. AISHWARYA R. BALAP  
(M. Pharm. PhD)  
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DECLARATION

I am **Miss. PRATIKSHA MAHADEV SURYAWANSHI** declare that the thesis entitled **"DESIGN, FORMULATION AND EVALUATION OF POLYHERBAL GEL FORMULATIONS FROM HONEY AND CATHARANTHUS-ROSEUS FLOWERS EXTRACT FOR ITS WOUND HEALING ACTIVITY"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. AISHWARYA R. BALAP** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 17/6/23

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CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled, "**DESIGN , FORMULATION AND EVALUATION OF POLYHERBAL GEL FORMULATION FROM HONEY AND CATHARANTHUS-ROSEUS FLOWER EXTRACT FOR IT'S WOUND HEALING ACTIVITY.**" submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **Miss PRATIKSHA MAHADEV SURYAWANSHI** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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ENDORSEMENT BY THE PRINCIPAL

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Date: 17/6/23  
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**"IDENTIFICATION AND QUANTIFICATION OF  
DIFFERENT POTENTIAL GENOTOXIC IMPURITIES  
FROM SELECTED API BY CHROMATOGRAPHIC  
TECHNIQUES"**

Thesis submitted to  
**THE FACULTY OF SCIENCES  
AND TECHNOLOGY  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**




By  
**Ms. DIPALI SANJAY THETE**  
**B. Pharm**  
In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL QUALITY ASSURANCE**

**UNDER THE GUIDENCE OF  
Dr. VITTHAL V. CHOPADE**  
**Associate Professor**  
**M. Pharm, Ph.D.**

**PROGRESSIVE EDUCATION SOCIETY'S  
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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

I am **Ms. DIPALI SANJAY THETE** declare that the thesis entitled, **"IDENTIFICATION AND QUANTIFICATION OF DIFFERENT POTENTIAL GENOTOXIC IMPURITIES FROM SELECTED API BY CHROMATOGRAPHIC TECHNIQUES"** submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. VITTHAL V. CHOPADE** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

*Js there.*

Date: 08/03/23

Ms. DIPALI SANJAY THETE

Place: Nigdi, Pune



*[Signature]*  
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**DR. KARIMUNNISA S. SHAIKH**

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**MODERN COLLEGE OF PHARMACY  
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**CERTIFICATE BY THE HOD**

This is to certify that the thesis entitled, **"IDENTIFICATION AND QUANTIFICATION OF DIFFERENT POTENTIAL GENOTOXIC IMPURITIES FROM SELECTED API BY CHROMATOGRAPHIC TECHNIQUES"** submitted for the degree of Master of Pharmacy (pharmaceutical Quality Assurance), is the record of research work carried out by **Ms. DIPALI SANJAY THETE** under my guidance and supervision of **Dr. VITTHAL V. CHOPADE** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 8/5/23  
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**CERTIFICATE BY THE GUIDE**

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Date: 8/5/23  
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**MODERN COLLEGE OF PHARMACY**  
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**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles **"IDENTIFICATION AND QUANTIFICATION OF DIFFERENT POTENTIAL GENOTOXIC IMPURITIES FROM SELECTED API BY CHROMATOGRAPHIC TECHNIQUES"** is a record of bonafide research work carried out by **Ms. DIPALI SANJAY THETE** under the guidance of **Dr. VITTHAL V. CHOPADE** at Modern College of Pharmacy, Nigdi, and Pune-411044.



**Date:** 8/5/2023  
**Place:** Nigdi, Pune

**Dr. P. D. Chaudhari**  
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**“Quantification and Validation of Sildenafil in Bulk and Dosage form by High performance Thin Layer Chromatography, High performance Liquid chromatography and UV Spectroscopy By using Hydrotropic Agents”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL  
SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



**By  
MISS.WADGAVE POOJA BANDAPPA**

**(B. Pharm.)**

**Impartial fulfillment of  
The requirements for the degree of  
MASTER OF  
PHARMACY**

**IN  
Pharmaceutical Quality Assurance  
Under the Guidance of**

**Dr. VITTHAL V. CHOPADE**

**(M. Pharm. PhD)**

**Associate professor**

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MISS. WADGAVE POOJA BANDAPPA** declare that the thesis entitled **"QUANTIFICATION AND VALIDATION OF SILDENAFIL IN BULK AND DOSAGE FORM BY HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY, HIGH PERFORMANCE LIQUID CHROMATOGRAPHY AND UV SPECTROSCOPY BY USING HYDROTROPIC AGENTS"** submitted by me for degree of Master of Pharmacy is the record of work carried out under the guidance of **DR. VITTHAL V. CHOPADE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

*P. Wadgave*

Date: 8/5/23

MISS. WADGAVE POOJA BANDAPPA

Place: Pune



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**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"QUANTIFICATION AND VALIDATION OF SILDENAFIL IN BULK AND DOSAGE FORM BY HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY, HIGH PERFORMANCE LIQUID CHROMATOGRAPHY AND UV SPECTROSCOPY BY USING HYDROTROPIC AGENTS"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MISS. WADGAVE POOJA BANDAPPA** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 8/11/20  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"QUANTIFICATION AND VALIDATION OF SILDENAFIL IN BULK AND DOSAGE FORM BY HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY, HIGH PERFORMANCE LIQUID CHROMATOGRAPHY AND UV SPECTROSCOPY BY USING HYDROTROPIC AGENTS"** submitted for degree of Master of Pharmacy (Pharmaceutical Quality Assurance), is the record of research work carried out by **MISS. WADGAVE POOJA BANDAPPA** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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**Ex-Dean, Faculty of Pharmaceutical Sciences,**

**Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, "**QUANTIFICATION AND VALIDATION OF SILDENAFIL IN BULK AND DOSAGE FORM BY HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY, HIGH PERFORMANCE LIQUID CHROMATOGRAPHY AND UV SPECTROSCOPY BY USING HYDROTROPIC AGENTS**".

For **MASTER OF PHARMACY (PHARMACEUTICAL QUALITY ASSURANCE)** is a record of bonafide research work carried out by **MISS. WADGAVE POOJA BANDAPPA** under the guidance of **DR. VITTHAL V. CHOPADE** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-23.

Date: 8/5/23  
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Approved by All India Council for Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
 Directorate of Technical Education, Mumbai (M5), Permanently Affiliated to  
 Savitribai Phule Pune University, Pune & Approved under Section 2 (f) & 12 (B) of UGC Act, 1956

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Prof. Dr. G. R. Ekbote  
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 Chairman, Business Council

Date- 16-06-2023

**M.PHARM SECOND YEAR PHARMACOLOGY PROJECT DETAILS-2022-2023**

Roll no	Name	Research Topic	Guide Name
COL201	Akansa Amritkar	Evaluation of Gel of <i>Carica papaya</i> Latex And <i>Boerhavia diffusa</i> Linn. for wound healing activity in experimental animals	Dr. S. S. Nipte
COL202	Pranali Bhandare	Evaluation of nephroprotective potential of Ethyl acetate fraction of <i>Punica granatum</i> leaves in 5-fluorouracil induced nephrotoxicity in experimental animals.	Dr. D. D. Bandawane
COL203	Abhijit Deshmukh	Evaluation of Anti-hemorrhoidal Activity of ointment formulation prepared from ethanolic extract of <i>Togetus Erecta</i> flower in croton oil induced hemorrhoids in experimental animal.	Dr. S. S. Nipte Co guide- P. S. Kore
COL204	Gayatri Gadekar	Evaluation of nephroprotective potential of ethyl acetate fraction of <i>acacia catechu</i> leaves in 5-fluorouracil induced nephrotoxicity in experimental animals.	Dr. D. D. Bandawane
COL205	Vinod Gaikwad	Evaluation of electric stimulation in wound healing activity using hydrogel containing Arginine and Proanthocyanidin in experimental animals.	Dr. S. S. Nipte
COL206	Pratiksha Hajare	To study anti-atherosclerotic activity of ethanolic extracts of <i>Peltophorum pterocarpum</i> Linn. stem bark and <i>syzygium cumini</i> DC leaves in experimental animals	Dr. S. S. Nipte
COL207	Dhanashri Katkar	Evaluation of anti-arthritis activity of ethyl acetate fraction of <i>Tectona grandis</i> Linn. Seeds in FCA-induced arthritis in experimental animals.	Dr. S. S. Nipte

H.O.D

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 Pune - 411 044.





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Savitribai Phule Pune University, Pune & Approved under Section 2 (f) & 12 (B) of UGC Act, 1956

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Principal

Prof. Dr. G. R. Ekbote  
M.S., M.N.A.M.S.  
Chairman, Business Council

COL208	Pradnya Khehbude	Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of <i>Punica granatum</i> peels in croton oil induced hemorrhoids in experimental animals.	Dr S. S. Nipte Co guide- Dr.P. S. Kore
COL209	Mohsin Mansoori	Ameliorative effect of <i>Abutilon indicum</i> leaves on liver steatosis in high fructose induced insulin resistance in experimental animals.	Dr. D. D. Bandawane
COL210	Kajal Pawade	Evaluation of ethyl acetate fraction of <i>Dendrophthoe Falcata</i> Linn. Leaves on the FCA- induced arthritis using Exosomes as drug carrier in experimental animals.	Dr. S. S. Nipte
COL211	Nikita Pawar	Pharmacological evaluation of <i>Aegle marmelos</i> leaves on NAFLD in high fructose-induced insulin resistance in experimental animals.	Dr. D. D. Bandawane
COL212	Ganesh Pore	Evaluation of hydroethanolic extract of <i>Musa paradisiaca</i> Linn. Peel on suicide and trait related behaviors in experimental animals.	Dr. D. D. Bandawane Co guide- P. S. Kore
COL213	Surabhi Shinde	Evaluation of hydroethanolic extract of <i>Tagetes Erecta</i> flowers on suicide and trait related behaviors in experimental rats.	Dr. D. D. Bandawane Co guide- P. S. Kore
COL214	Prajakta Tambe	Evaluation of hydroethanolic extract of <i>Portulaca oleracea</i> leaves on suicide and traits related behaviors in wistar rats	Dr. D. D. Bandawane Co guide- P. S. Kore

Dr.D. D. Bandawane  
HOD



Dr.P. D. Chaudhari  
PRINCIPAL

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**“EVALUATION OF GEL OF *CARICA PAPAYA*  
*LATEX* AND *BOERHEVIA DIFFUSA* LINN. FOR  
WOUND HEALING ACTIVITY IN  
EXPERIMENTAL ANIMALS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MISS. AKANKSHA PRAVEEN AMRITKAR**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDENCE OF  
**DR. SONALI S. NIPATE**  
(M. Pharm)

Associate Professor (Dept. of Pharmacology)

**DEPARTMENT OF PHARMACOLOGY  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE - 44.  
(2022-23)**



Principal

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Vaidya Nagar, Baner Road, Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Miss. Akanksha Praveen Amritkar** declare that the thesis entitled **“EVALUATION OF GEL OF *CARICA PAPAYA* LATEX AND *BOERHEVIA DIFFUSA* LINN. FOR WOUND HEALING ACTIVITY IN EXPERIMENTAL ANIMALS”** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sonali S. Nipate** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization



Date: 16/6/23

Place: Pune

<sup>AKG</sup>  
Miss. Akanksha Praveen Amritkar

*[Signature]*  
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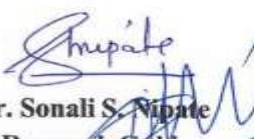
**Dr. Sonali S. Nipate**  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **“EVALUATION OF GEL OF *CARICA PAPAYA* LATEX AND *BOERHIEVA DIFFUSA* LINN. FOR WOUND HEALING ACTIVITY IN EXPERIMENTAL ANIMALS”** submitted for degree of Master of Pharmacy, is the record of research work carried out by **Miss. Akanksha Praveen Amritkar** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
Place: Nigdi, Pune



  
**Dr. Sonali S. Nipate**  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"EVALUATION OF GEL OF *CARICA PAPAYA* LATEX AND *BOERHEVIA DIFFUSA* LINN. FOR WOUND HEALING ACTIVITY IN EXPERIMENTAL ANIMALS"** submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Miss. Akanksha Praveen Amritkar** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
Place: Pune



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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, **"EVALUATION OF GEL OF CARICA PAPAYA LATEX AND BOERHEVIA DIFFUSA LINN. FOR WOUND HEALING ACTIVITY IN EXPERIMENTAL ANIMALS"** is a record of bonafide research work carried out by **Miss. Akanksha Praveen Amritkar** under the guidance of **Dr. Sonali S. Nipate** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 16/6/23



  
**Dr. P. D. Chaudhari**

**Principal**  
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Sector No.21, Yamunanagar, Nigdi,  
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**“EVALUATION OF NEPHROPROTECTIVE  
POTENTIAL OF ETHYL ACETATE FRACTION OF  
PUNICA GRANATUM LEAVES IN 5-FU INDUCED  
NEPHROTOXICITY IN EXPERIMENTAL  
ANIMALS.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**

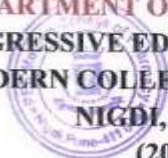



By  
**MISS. PRANALI ANANDRAO BHANDARE**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE OF  
**DR. D. D. BANDAWANE**  
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DECLARATION

I am **Ms. Pranali Anandrao Bhandare** declare that the thesis entitled “**Evaluation of Nephroprotective Potential of Ethyl Acetate Fraction of *Punica granatum* Leaves in 5- FU Induced Nephrotoxicity in Experimental Animals.**” submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr.D.D.Bandawane** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 16/6/23  
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**CERTIFICATE BY THE GUIDE**

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Date: 16/6/23  
Place: Nigdi, Pune



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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"Evaluation of Nephroprotective Potential of Ethyl Acetate Fraction of Punica granatum Leaves in 5- FU Induced Nephrotoxicity in Experimental Animals."** submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Ms. Pranali Anandrao Bhandare** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

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Date: 16/6/23  
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**Dr. P. D. Chaudhari**  
Principal

**Principal**  
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Pune - 411 044.



**“Evaluation of anti-hemorrhoidal activity of ointment  
formulation prepared from ethanolic extract of *Tagetes  
Erecta* flowers in Croton oil induced Hemorrhoids in  
experimental animals.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**Mr. ABHIJIT BALASAHEB DESHMUKH**  
(B. Pharm)


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The requirements for the degree of

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(M. Pharm, Ph. D)

Associate Professor (Dept. of Pharmacology)

**DEPARTMENT OF PHARMACOLOGY  
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(2022-23)**

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Mr. Abhijit Balasaheb Deshmukh** declare that the thesis entitled “**Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Tagetes Erecta* flowers in Croton oil induced Hemorrhoids in experimental animals.**” submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sonali S. Nipate** and the co-guidance of **Dr. P. S. Kore**, and has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization



Date: 17/6/23

Place: Pune

Mr. Abhijit Balasaheb Deshmukh

*Bent*  
*Principal*  
Principal  
P. S. S. Modern College of Pharmacy  
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**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE - 44.  
(ACCREDITED BY NAAC)**


**Dr. Sonali S. Nipate**  
Associate Professor,  
(Department of Pharmacology)  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune - 44.


**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **“Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Tagetes Erecta* flowers in Croton oil induced Hemorrhoids in experimental animals”** submitted for degree of Master of Pharmacy, is the record of research work carried out by **Mr. Abhijit Balasaheb Deshmukh** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 17/6/23  
Place: Nigdi, Pune



  
**Dr. Sonali S. Nipate**  
Research Guide

  
**Principal**  
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Sector No 27, Yamunanagar, Nigdi,  
Pune - 411 044.



**MODERN COLLEGE OF PHARMACY  
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(ACCREDITED BY NAAC)**

**Dr. P. S. Kore**  
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**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, "**Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Tagetes Erecta* flowers in Croton oil induced Hemorrhoids in experimental animals**" submitted for degree of Master of Pharmacy, is the record of research work carried out by **Mr. Abhijit Balasaheb Deshmukh** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.



Date: 17/6/23  
Place: Nigdi, Pune

**Dr. P. S. Kore**  
Research Co-Guide

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Pune - 411 044.



**P E S's MODERN COLLEGE OF PHARMACY, NIGDI,  
PUNE- 44  
(ACCREDITED BY NAAC)**

**DR. D. D. Bandawane**

**Head of Department & Professor,  
(PHARMACOLOGY),  
P. E. S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **“Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Tagetes Erecta* flowers in Croton oil induced Hemorrhoids in experimental animals.”** Submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Mr. Abhijit Balasaheb Deshmukh** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 17/6/23  
Place: Pune**



**Dr. D. D. Bandawane  
HOD**

**P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.**





**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE - 44.  
(ACCREDITED BY NAAC)**

**Dr. P. D. Chaudhari**  
Principal,  
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Yamunanagar, Nigdi, Pune - 44.  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, “**Evaluation of Anti-hemorrhoidal Activity of ointment formulation prepared from ethanolic extract of *Tagetes Erecta* flower in Croton oil induced Hemorrhoids in experimental animal**” is a record of bonafide research work carried out by **Mr. Abhijit Balasaheb Deshmukh** under the guidance of **Dr. Sonali S. Nipate** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 17/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal  
P.E.S. Modern College of Pharmacy  
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Pune - 411 044.





**“EVALUATION OF NEPHROPROTECTIVE  
POTENTIAL OF ETHYL ACETATE FRACTION OF  
ACACIA CATECHU LEAVES IN 5-FU INDUCED  
NEPHROTOXICITY IN EXPERIMENTAL  
ANIMALS.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MISS. GAYATRI JAISING GADEKAR  
(B. Pharm)**

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE OF  
**DR. D. D. BANDAWANE  
(M.Pharm.Ph.D)  
Head of Department**

**DEPARTMENT OF PHARMACOLOGY  
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MODERN COLLEGE OF PHARMACY,  
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(2022-23)**

  
**Principal**

**Progressive Education Society's Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.**



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Miss. Gayatri Jaising Gadekar** declare that the thesis entitled "**Evaluation of Nephroprotective Potential of Ethyl Acetate Fraction of *Acacia catechu* Leaves in 5- FU Induced Nephrotoxicity in Experimental Animals**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr.D.D.Bandawane** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 16/6/23  
Place: Nigdi, Pune

  
Miss. Gayatri Jaising Gadekar



  
Principal  
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**CERTIFICATE BY THE GUIDE**

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Date: 16/6/23  
Place: Nigdi, Pune



**Dr. D. D. Bandawane**  
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Date: 16/6/23  
Place: Nigdi, Pune



**Dr. D.D. Bandawane**  
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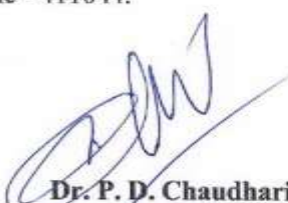

**MODERN COLLEGE OF PHARMACY  
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**Dr. P. D. Chaudhari**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

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Date: 16/6/23  
Place: Nigdi, Pune

  
**Dr. P. D. Chaudhari**  
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**“EVALUATION OF ELECTRIC STIMULATION IN  
WOUND HEALING ACTIVITY USING HYDROGEL  
CONTAINING ARGININE AND  
PROANTHOCYANIDIN IN EXPERIMENTAL  
ANIMALS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,**




By  
**MR. VINOD RAJENDRA GAIKWAD**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDENCE OF  
**DR. SONALI S. NIPATE**

(M. Pharm)  
Associate Professor (Dept. of Pharmacology)

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DECLARATION

I am **Mr. Vinod Rajendra Gaikwad** declare that the thesis entitled **"EVALUATION OF ELECTRIC STIMULATION IN WOUND HEALING ACTIVITY USING HYDROGEL CONTAINING ARGININE AND PROANTHOCYANIDIN IN EXPERIMENTAL ANIMALS"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sonali S. Nipate** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 18/6/23

Place: Pune



Mr. Vinod Rajendra Gaikwad

Principal

P. E. S. Modern College of Pharmacy  
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Pune - 411 044.





**MODERN COLLEGE OF PHARMACY  
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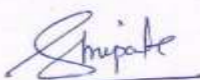
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**CERTIFICATE BY THE GUIDE**

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**Date:** 18/6/23  
**Place:** Nigdi, Pune

  
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Pune - 411 044





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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"EVALUATION OF ELECTRIC STIMULATION IN WOUND HEALING ACTIVITY USING HYDROGEL CONTAINING ARGININE AND PROANTHOCYANIDIN IN EXPERIMENTAL ANIMALS"** submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Mr. Vinod Rajendra Gaikwad** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 18/6/23  
Place: Pune



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**MODERN COLLEGE OF PHARMACY  
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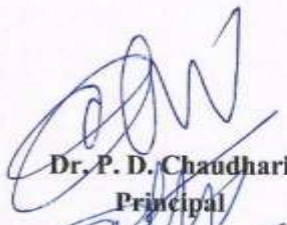
**Dr. P. D. Chaudhari**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, "EVALUATION OF ELECTRIC STIMULATION IN WOUND HEALING ACTIVITY USING HYDROGEL CONTAINING ARGININE AND PROANTHOCYANIDIN IN EXPERIMENTAL ANIMALS" is a record of bonafide research work carried out by **Mr. Vinod Rajendra Gaikwad** under the guidance of **Dr. Sonali S. Nipate** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 18/6/23  
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**Dr. P. D. Chaudhari**  
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Pune - 411 044.



**“To study Anti-atherosclerotic activity of ethanolic  
extracts of *Peltophorum pterocarpum* Linn stem bark  
and *Syzygium cumini* DC leaves in experimental  
animals.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MISS. PRATIKSHA KANTILAL HAJARE**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDENCE OF  
**DR. SONALI S. NIPATE**  
(M. Pharm, PhD)  
Associate Professor (Dept. of Pharmacology)

**DEPARTMENT OF PHARMACOLOGY  
PROGRESSIVE EDUCATION SOCIETY'S  
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(2022-23)**

  
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Pune - 411 044.





**MODERN COLLEGE OF PHARMACY  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **"To study Anti-atherosclerotic activity of ethanolic extracts of *Peltophorum pterocarpum* Linn stem bark and *Syzygium cumini* DC leaves in experimental animals"**

submitted for degree of Master of Pharmacy, is the record of research work carried out by **Miss. Pratiksha Kantilal Hajare** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 14/6/23**  
**Place: Nigdi, Pune**



**Dr. Sonali S. Nipate**  
**Research Guide**

**Principal**  
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Pune - 411 044.





PES's MODERN COLLEGE OF PHARMACY, NIGDI,  
PUNE- 44

(ACCREDITED BY NAAC)

**Dr. D.D.Bandawane**

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Yamunanagar, Nigdi, Pune-44.

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, "*To study Anti-atherosclerotic activity of ethanolic extracts of *Peltophorum pterocarpum* Linn stem bark and *Syzygium cumini* DC leaves in experimental animals.*" submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Miss. Pratiksha Kantilal Hajare** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/6/23  
Place: Nigdi, Pune



**Dr.D.D. Bandawane**  
**HOD**

**Principal**  
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Sector No.21, Yamunanagar, Nigdi,  
Pune-441044



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NIGDI, PUNE - 44.  
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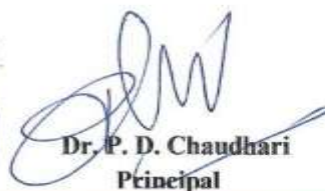
**Dr. P. D. Chaudhari**  
Principal,  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune - 44.  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, **"To study Anti-atherosclerotic activity of ethanolic extracts of *Peltophorum pterocarpum* Linn stem bark and *Syzygium cumini* DC leaves in experimental animals"** is a record of bonafide research work carried out by **Miss. Pratiksha Kantilal Hajare** under the guidance of **Dr. Sonali S. Nipate** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 14/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Miss. Pratiksha Kantilal Hajare** declare that the thesis entitled "To study Anti-atherosclerotic activity of ethanolic extracts of *Peltophorum pterocarpum* Linn stem bark and *Syzygium cumini* DC leaves in experimental animals." submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr.S.S.Nipate** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 14/6/23  
Place: Nigdi, Pune



**Miss. Pratiksha Kantilal Hajare**

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**“EVALUATION OF ANTIARTHRITIC ACTIVITY OF  
ETHYL ACETATE FRACTION OF *TECTONA GRANDIS*  
LINN. SEEDS IN FCA INDUCED ARTHRITIC  
EXPERIMENTAL ANIMALS.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MISS.DHANASHRI VIKRAM KATKAR**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE  
OF  
**DR. SONALI S. NIPATE**  
(M. Pharm, PhD)  
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**DEPARTMENT OF PHARMACOLOGY  
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MODERN COLLEGE OF PHARMACY,  
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(2022-23)**

  
Principal  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am Miss. Dhanashri Vikram Katkar declare that the thesis entitled "Evaluation Of Antiarthritic Activity Of Ethyl Acetate Fraction Of Seeds Of *Tectona Grandis* In FCA Induced Arthritic Experimental Animals." submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of Dr. Sonali S. Nipate has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 15/6/23  
Place: Nigdi, Pune

Miss. Dhanashri Vikram Katkar



*D. Katkar*

*[Signature]*

Principal

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**Dr. D.D.Bandawane**  
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Department of Pharmacology  
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Yamunanagar, Nigdi, Pune-44.

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, "**Evaluation Of Antiarthritic Activity Of Ethyl Acetate Fraction Of Seeds Of Tectona Grandis In FCA Induced Arthritic Experimental Animals**" submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Miss. Dhanashri Vikram Katkar** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 15/6/23  
Place: Nigdi, Pune



**Dr. D.D. Bandawane**  
HOD

**Principal**  
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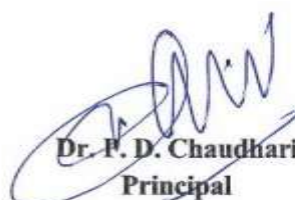
**Dr. P. D. Chaudhari**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

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Date: 15/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**“Evaluation of anti-hemorrhoidal activity of ointment  
formulation prepared from ethanolic extract of *Punica  
granatum* peels in Croton oil induced Hemorrhoids in  
experimental animals”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
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(B. Pharm)

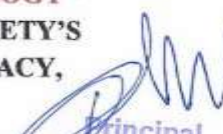
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UNDER THE GUIDANCE OF  
**DR. SONALI S. NIPATE**  
(M. Pharm)

Associate Professor (Dept. of Pharmacology)

**DEPARTMENT OF PHARMACOLOGY  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE - 44.  
(2022-23)**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi  
Pune - 411 044





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Miss. Pradnya Ankush Khelbude** declare that the thesis entitled **“Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Punica granatum* peels in Croton oil induced hemorrhoids in experimental animals”** ‘submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sonali S. Nipate** and the co-guidance of **Dr. P. S. Kore**, and has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization



Date: 16/6/23

Place: Pune

*PA Khelbude*  
Miss. Pradnya Ankush Khelbude

*[Signature]*  
Principal

P. E. S. Modern College of Pharmacy

Nigdi, Pune-411 044.



**MODERN COLLEGE OF PHARMACY  
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(ACCREDITED BY NAAC)**


**Dr. Sonali S. Nipate**  
Associate Professor,  
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P.E.S. Modern College of Pharmacy,  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Punica granatum* peels in Croton oil induced Hemorrhoids in experimental animals" submitted for degree of Master of Pharmacy, is the record of research work carried out by **Miss. Pradnya Ankush Khelbude** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
Place: Nigdi, Pune



  
**Dr. Sonali S. Nipate**  
Research Guide

  
**Principal**  
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Sector - 10, Yamunanagar, Nigdi,  
Pune - 411 044.



**MODERN COLLEGE OF PHARMACY  
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**Dr. P. S. Kore**  
Assistant Professor,  
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**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, “**Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Punica granatum* peels in Croton oil induced Hemorrhoids in experimental animals**” submitted for degree of Master of Pharmacy, is the record of research work carried out by **Miss. Pradnya Ankush Khelbude** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23  
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**Dr. P. S. Kore**  
Research Co-Guide

*Principal*  
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Pune - 411 044.





**P E S's MODERN COLLEGE OF PHARMACY, NIGDI,  
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**DR. D. D. Bandawane**

**Head of Department & Professor,  
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P. E. S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Punica granatum* peels in Croton oil induced hemorrhoids in experimental animals"** submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Miss. Pradnya Ankush Khelbude** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 16/6/23  
Place: Pune**



**Dr. D. D. Bandawane**  
**HOD**  
**Principal**

**P. E. S. Modern College of Pharmacy,  
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**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE - 44.  
(ACCREDITED BY NAAC)**


**Dr. P. D. Chaudhari**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, "**Evaluation of anti-hemorrhoidal activity of ointment formulation prepared from ethanolic extract of *Punica granatum* peels in Croton oil induced Hemorrhoids in experimental animals**" is a record of bonafide research work carried out by Miss. **Pradnya Ankush Khelbude** under the guidance of **Dr. Sonali S. Nipate** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 16/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

**Principal**  
P. E. S. Modern College of Pharmacy,  
Nigdi, Pune - 411044.



**“AMELIORATIVE EFFECT OF *ABUTILON*  
*INDICUM* LEAVES ON LIVER STEATOSIS IN  
HIGH FRUCTOSE INDUCED INSULIN  
RESISTANCE IN EXPERIMENTAL ANIMALS.”**

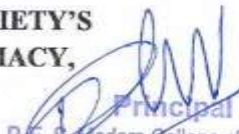
Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MR. MOHSIN ARMAN MANSOORI**  
(B. Pharm)  
In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE OF  
**DR. D. D. BANDAWANE**  
(M.Pharm.Ph.D)  
Head of Department

**DEPARTMENT OF PHARMACOLOGY  
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Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Mr. MOHSIN ARMAN MANSOORI** declare that the thesis entitled "**AMELIORATIVE EFFECT OF *ABUTILON INDICUM* LEAVES ON LIVER STEATOSIS IN HIGH FRUCTOSE-INDUCED INSULIN RESISTANCE IN EXPERIMENTAL ANIMALS**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr.D.D.Bandawane** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 18/6/23  
Place: Pune



**MR. MOHSIN ARMAN MANSOORI**

Principal

P. E. S. Modern College of Pharmacy  
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**MODERN COLLEGE OF PHARMACY  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, “*Ameliorative Effect of Abutilon indicum Leaves on Liver Steatosis in High Fructose Induced Insulin Resistance in Experimental Animals*” submitted for the degree of Master of Pharmacy, is the record of research work carried out by **Mr. Mohsin Arman Mansoori** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 18/6/23  
Place: Nigdi, Pune



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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"AMELIORATIVE EFFECT OF ABUTILON INDICUM LEAVES ON LIVER STEATOSIS IN HIGH FRUCTOSE-INDUCED INSULIN RESISTANCE IN EXPERIMENTAL ANIMALS "** submitted for degree of Master of Pharmacy (PHARMACOLOGY), is the record of research work carried out by **MR. MOHSIN ARMAN MANSOORI** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 18/6/23  
Place: Pune



**Dr. D.D. Bandawane**  
HOD

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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044



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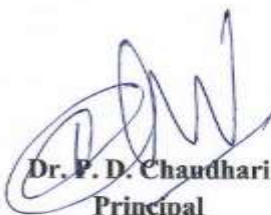
**Dr. P. D. Chaudhari**  
Principal,  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

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Date: 18/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

**Principal**  
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Pune - 411 044.



**“EVALUATION OF ETHYL-ACETATE FRACTION  
OF *DENDROPHATOE FALCATA* LINN. LEAVES ON  
THE FCA-INDUCED ARTHRITIS USING  
EXOSOMES AS DRUG CARRIER IN  
EXPERIMENTAL ANIMALS.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**

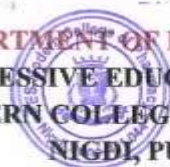


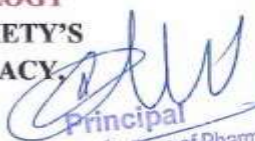
By  
**MISS. KAJAL SUNIL PAWADE**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE OF  
**DR. SONALI. S. NIPATE**  
(M. Pharm)  
Associate Professor (Dept. of Pharmacology)

**DEPARTMENT OF PHARMACOLOGY  
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Principal  
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Pune - 411044





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION


I am **MISS. KAJAL SUNIL PAWADE** declare that the thesis entitled **“EVALUATION OF ETHYL-ACETATE FRACTION OF *DENDROPHATOE FALCATA* LINN. LEAVES ON THE FCA-INDUCED ARTHRITIS USING EXOSOMES AS DRUG CARRIER IN EXPERIMENTAL ANIMALS”** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sonali. S. Nipate** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 18/6/23

Place: Nigdi, Pune



  
Miss. Kajal Sunil Pawade

  
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P. E. S. Modern College of Pharmacy  
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Pune - 411 044.





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**CERTIFICATE BY THE GUIDE**

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Date: 18/6/23  
Place: Nigdi, Pune



**Dr. Sonali S. Nipate**  
Research Guide

**Principal**

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**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44  
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**DR. D. D. Bandawane**

**Head of Department & Professor,  
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Yamunanagar, Nigdi, Pune-44.**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **“EVALUATION OF ETHYL-ACETATE FRACTION OF DENDROPHATOE FALCATA LINN. LEAVES ON THE FCA-INDUCED ARTHRITIS USING EXOSOMES AS DRUG CARRIER IN EXPERIMENTAL ANIMALS”** submitted for degree of Master of Pharmacy (Pharmacology), is the record of research work carried out by **Mr. Kajal Sunil Pawade** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 18/6/23  
Place: Nigdi, Pune**



**Dr. D. D. Bandawane**  
**HOD**

**Principal**  
**P. E. S. Modern College of Pharmacy**  
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Pune - 411 044.



**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE - 44.  
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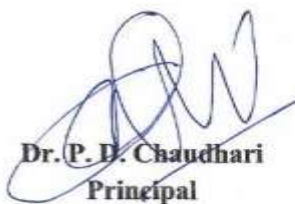
**Dr. P. D. Chaudhari**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

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Date: 18/6/23  
Place: Nigdi, Pune



  
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**“PHARMACOLOGICAL EVALUATION OF AEGLE  
MARMELOS LINN. LEAVES ON NAFLD IN HIGH FRUCTOSE-  
INDUCED INSULIN RESISTANCE IN EXPERIMENTAL  
ANIMALS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**




By  
**MISS. NIKITA GANGARAM PAWAR**  
(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE OF  
**DR. D. D. BANDAWANE**  
(M.Pharm.Ph.D)  
Head of Department

**DEPARTMENT OF PHARMACOLOGY  
PROGRESSIVE EDUCATION SOCIETY'S  
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(2022-23)**



  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Miss. Nikita Gangaram Pawar** declare that the thesis entitled "**Pharmacological evaluation of *Aegle marmelos* Linn. Leaves on NAFLD in High Fructose-Induced Insulin Resistance in Experimental Animals**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr.D.D.Bandawane** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 18/6/23  
Place: Nigdi, Pune

  
Miss. Nikita Gangaram Pawar



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**Dr. D. D. Bandawane**  
HOD and Professor,  
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Yamunanagar, Nigdi, Pune – 44.

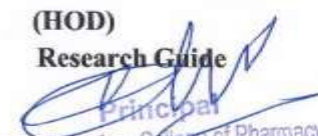
**CERTIFICATE BY THE GUIDE**

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Date: 18/6/23  
Place: Nigdi, Pune



  
**Dr. D. D. Bandawane**  
(HOD)  
Research Guide

  
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(ACCREDITED BY NAAC)**



**Dr. D.D.Bandawane**  
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Department of Pharmacology  
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Yamunanagar, Nigdi, Pune-44.

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Date: 18/06/2023  
Place: Nigdi, Pune



  
**Dr. D.D. Bandawane**  
**HOD**  
  
Principal  
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Pune - 411 044.





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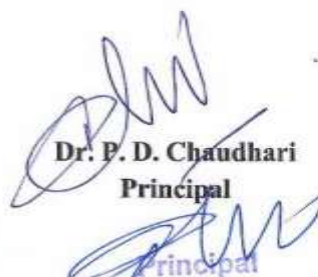
**Dr. P. D. Chaudhari**  
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Date: 18/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**"EVALUATION OF HYDROETHANOLIC EXTRACT OF *MUSA PARADISIACA* LINN. PEELS ON SUICIDE AND TRAIT RELATED BEHAVIORS IN EXPERIMENTAL ANIMALS."**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**




By  
**Mr. GANESH DATTATRAY PORE**  
(B. Pharm)

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**DEPARTMENT OF PHARMACOLOGY  
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Principal  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MR. GANESH DATTATRAY PORE** declare that the thesis entitled “**EVALUATION OF HYDROETHANOLIC EXTRACT OF *MUSA PARADISIACA* LINN. PEELS ON SUICIDE AND TRAIT RELATED BEHAVIORS IN EXPERIMENTAL ANIMALS**” submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. D. D. BANDAWANE** and co-guidance of **DR. P. S. KORE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization



Date: 14/6/23

Mr. GANESH DATTATRAY PORE

Place: Nigdi, Pune

*Signature*

*Signature*  
Principal

P. E. S. Modern College of Pharmacy  
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Pune - 411 044.



**MODERN COLLEGE OF PHARMACY  
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LINN. PEELS ON SUICIDE AND TRAIT RELATED  
BEHAVIORS IN EXPERIMENTAL ANIMALS"**

submitted for degree of Master of Pharmacy, is the record of research  
work carried out by **Mr. Ganesh Dattatray Pore** under my guidance  
and supervision and that it has not formed the basis for the award of any  
degree or diploma or other titles in this or any other university.

**Date:** 14/6/23  
**Place:** Nigdi, Pune



**Dr. D. D. Bandawane**  
**Research Guide**

*[Signature]*  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
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**Dr. P. S. Kore**  
Assistant Professor,  
Department of Pharmacology  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune - 44.

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Date: 14/6/23  
Place: Nigdi, Pune



**Dr. P. S. Kore**  
Research Co-Guide

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**MODERN COLLEGE OF PHARMACY  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled,  
**“EVALUATION OF HYDROETHANOLIC EXTRACT OF MUSA  
PARADISIACA LINN. PEELS ON SUICIDE AND TRAIT  
RELATED BEHAVIORS IN EXPERIMENTAL ANIMALS”**  
submitted for degree of Master of Pharmacy (Pharmacology), is the  
record of research work carried out by **Mr. Ganesh Dattatray Pore**  
under my guidance and supervision and that it has not formed the basis  
for the award of any degree or diploma or other titles in this or any other  
university.

Date: 14/6/23  
Place: Nigdi, Pune



**Dr. D. D. Bandawane**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, "EVALUATION OF HYDROETHANOLIC EXTRACT OF *MUSA PARADISIACA* LINN. PEELS ON SUICIDE AND TRAIT RELATED BEHAVIORS IN EXPERIMENTAL ANIMALS" is a record of bonafide research work carried out by **Mr. Ganesh Dattatray Pore** under the guidance of **Dr. D. D. Bandawane** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 14/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
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**“EVALUATION OF HYDROETHANOLIC EXTRACT OF  
TAGETES ERECTA FLOWERS ON SUICIDE AND TRAIT  
RELATED BEHAVIORS IN WISTAR RATS.”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MISS. SURABHI SHIVAJI SHINDE**  
(B. Pharm)

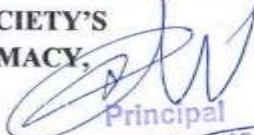
In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDANCE OF  
**DR. D.D. BANDAWANE**  
(M.Pharm.Ph.D)  
Head of Department

**DEPARTMENT OF PHARMACOLOGY  
PROGRESSIVE EDUCATION SOCIETY'S  
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DECLARATION

I am **Miss. Surabhi Shivaji Shinde** declare that the thesis entitled "**Evaluation of hydroethanolic extract of *Tagetes Erecta* flowers on suicide and trait related behaviors in wistar rats.**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. D. D. Bandawane** and co-guidance of **Dr. P. S. Kore** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 15/6/23  
Place: Nigdi, Pune

*Shinde*  
Miss. Surabhi Shivaji Shinde



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**CERTIFICATE BY THE GUIDE**

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**Date: 15/6/23**  
**Place: Nigdi, Pune**



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**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, "**Evaluation of hydroethanolic extract of *Tagetes Erecta* flowers on suicide and trait related behaviors in wistar rats**" submitted for degree of Master of Pharmacy, is the record of research work carried out by **Miss. Surabhi Shivaji Shinde** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 15/6/23  
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Date: 15/6/23  
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**HOD**

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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, "**Evaluation of hydroethanolic extract of *Tagetes Erecta* flowers on suicide and trait related behaviors in wistar rats**" is a record of bonafide research work carried out by **Miss. Surabhi Shivaji Shinde** under the guidance of **Dr. D. D. Bandawane** at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 15/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
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**"EVALUATION OF HYDROETHANOLIC EXTRACT OF  
PORTULACA OLERACEA LEAVES ON SUICIDE AND TRAIT  
RELATED BEHAVIORS IN WISTAR RATS."**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**Miss. Prajakta Dilip Tambe**  
(B. Pharm)  
In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACOLOGY**

UNDER THE GUIDENCE OF  
**DR. D. D. BANDAWANE**  
(M. Pharm, Ph.D)  
Head of Department

**DEPARTMENT OF PHARMACOLOGY  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE - 44.  
(2022-23)**



*[Signature]*  
Principal  
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Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Ms. Prajakta Dilip Tambe** declare that the thesis entitled “Evaluation of hydroethanolic extract of *Portulaca Oleracea* leaves on suicide and trait related behaviours in wistar rats..” submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr.D.D.Bandawane** and co- guidance of **Dr. P.S. Kore** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 17/6/23  
Place: Pune

Miss. Prajakta Dilip Tambe



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**CERTIFICATE BY THE GUIDE**

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Date: 17/6/23  
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**Dr. D. D. Bandawane**  
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**CERTIFICATE BY THE CO-GUIDE**

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Date: 17/6/23  
Place: Nigdi, Pune

  
**Dr. P. S. Kore**  
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Professor and HOD,  
Department of Pharmacology  
P. E. S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, "**Evaluation of hydroethanolic extract of *Portulaca Oleracea* leaves on suicide and trait related behaviours in wistar rats..**" submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **Miss. Prajakta Dilip Tambe** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 17/6/23  
Place: Pune



**Dr. D.D. Bandawane**  
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*[Signature]*  
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Pune - 411 044.



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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, "EVALUATION OF HYDROETHANOLIC EXTRACT OF *PORTULACA OLERACEA* LEAVES ON SUICIDE AND TRAIT RELATED BEHAVIORS IN WISTAR RATS" is a record of bonafide research work carried out by **Miss. Prajakta Dilip Tambe** under the guidance of **Dr. D. D. Bandawane** at Modern College of Pharmacy, Nigdi, Pune-411044.



Date: 17/6/23  
Place: Nigdi, Pune

**Dr. P. D. Chaudhari**  
Principal

P. E. S. Modern College of Pharmacy  
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 Section No.21, Yamunanagar, Nigdi, Pune-411 044. (M.S.) Tel.: 020-27661315 Fax: 020-27661314  
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 Chairman, Business Council

Date- 16-06-2023

**M.PHARM SECOND YEAR PHARMACEUTICS PROJECT DETAILS-2022-2023**

Roll no	Name	Research Topic	Guide Name
1	Akhote Ashwini	Formulation and evaluation of herbal anti-oxidant for chronic disease treatment	Dr.A.A.Phatak
2	Biradar Shilpa	Formulation and evaluation of Dual drug loaded polymeric mixed micelles for anti-diabetic treatment.	Dr.N.M Gaikwad
3	Birajdar Akshada	Formulation and evaluation of dosage form of drug based on hot metal extrusion process	Dr.K.S.Shaikh
4	Borbane Mayuri	Crystal Engineering: Development of Pharmaceutical crystal of Ritonavir.	Dr.U.C.Galgatte
5	Garhwani Yogish	Formulation and evaluation of Rilpivirine loaded solid lipid nano particles (SLN)	Dr.S.S.Pimple
6	Godbharle Amrut	Formulation and evaluation of directly compressed polyherbal antelmintic tablet.	Dr. A.G.More
7	Khorde Rushikesh	Crystal Engineering: Co-Crystallization approach for Ritonavir to improve solubility.	Dr.U.C.Galgatte
8	Mahangade Aishwarya	Formulation and evaluation of wound healing Spray with calcium phosphate nanoparticles	Dr. A.G.More
9	Mahajan Gaurav	Some Studies on exploring potential of zeolites as a drug delivery carrier.	Dr.S.S.Pimple
10	Maske Rutuja	Formulation and evaluation of Co-Crystals of Efavirenz	Dr.A.A.Phatak



Principal  
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## Criteria 1: Curricular Aspects



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 Chairman, Business Council

11	Phalke Tushar	Formulation and Characterization of fast dissolving oral film of prochlorperazine maleate	Dr.S.S.Pimple
12	Pote Priyanka	Formulation and evaluation of dual drug loaded polymeric mixed micelles for Anti-epileptic treatment	Dr.N.M Gaikwad
13	Tidke Yashoda	Formulation and evaluation of Etoricoxib self-micro emulsifying mouth dissolving films ( SMMDF) for periodontal diseases	Dr.U.S.Desai
14	Wable Apurva	Formulation development and evaluation of Darifenacin Hydro bromide nanoemulsion	Dr.A.A.Phatak
15	Wani Darshana	Development and Evaluation of Selenium and Climbazole nanoparticle laden Hydrogel for Seborrhic Dermatitis / Sebopsoriasis.	Dr.U.S.Desai
16	Wankhede Shefali	Formulation and evaluation of liquid suppository Dosage form	Dr.K.S.Shaikh

Dr.A.A.Phatak  
 HOD

Dr.P. D. Chaudhari  
 PRINCIPAL



Principal  
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 Pune - 411 044.

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**FORMULATION AND EVALUATION OF HERBAL  
ANTIOXIDANT IN THE TREATMENT OF CHRONIC  
DISEASE**

Thesis submitted to

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE.**



By

**Ms. Ashwini Dattatray Akhote**

**(B. Pharm)**

In partial fulfillment of  
The requirements for the degree of

**MASTER OF PHARMACY  
IN  
PHARMACEUTICS**

UNDER THE GUIDANCE OF

**Dr. A. A. PATHAK**

(M. Pharm, PhD)

Professor & HOD

(Dept of Pharmaceutics)

&

**Mr. D. L. Visokar**

(M. Pharm)

Assistant professor

(Dept of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

PROGRESSIVE EDUCATION SOCIETY'S

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NIGDI, PUNE-44.

**(2022 – 2023)**



  
Principal  
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SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

I Ms. Ashwini Dattatray Akhote declare that the thesis entitled, "Formulation and Evaluation of Antioxidant in treatment of Chronic Disease", submitted by me for degree of 'Master of Pharmacy' is the record of work carried out by me under the guidance of Dr. A. A. Pathak and Mr. D. L. Visokar and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 15/6/23

Place: pune



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Ms. Ashwini D. Akhote

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**DR. ATUL A. PHATAK**

**Head of Department & Professor,  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF ANTIOXIDANT IN TREATMENT OF CHRONIC DISEASE"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MISS. ASHWINI DATTATRAY AKHOTE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 15/6/23  
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This is to certify that the thesis entitled, "Formulation and Evaluation of Antioxidant in treatment of Chronic Disease", submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

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**CERTIFICATE BY THE CO-GUIDE**

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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and Evaluation of Antioxidant in treatment of Chronic Disease", is a record of bonafide research work carried out by Ms. Ashwini D. Akhote Under the guidance of Mr.A.A.Pathak and Co-Guidance of Mr. D. L. Visokar at Modern College of Pharmacy, Nigdi, Pune- 411044.

Date: 15/6/23

Place: pune



  
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(Principal)

  
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Pune - 411 044.



**“FORMULATION AND EVALUATION OF DUAL  
DRUG LOADED POLYMERIC MIXED MICELLES  
FOR ANTI-DIABETIC TRATMENT”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By


**Ms. Shilpa Sanjaykumar Biradar**  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**  
IN  
**Pharmaceutics**

Under the Guidance of  
Dr. N.M. Gaikwad  
( M. Pharm, Ph.D)  
Associate Professor  
(Dept. of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
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**Principal**  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY




**DECLARATION**


I am **MS. SHILPA SANJAYKUMAR BIRADAR** declare that the thesis entitled **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-DIABETIC TREATMENT"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. N.M. GAIKWAD** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

Date: 01/06/2023

Place: Pune



  
Ms. Shilpa Sanjaykumar Biradar

  
Principal  
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(ACCREDITED BY NAAC)**

**DR. N. M. GAIKWAD**

Associate Professor,  
Department of Pharmaceutics,  
P.E.S. Modern College of Pharmacy,  
Nigdi, Pune- 44.

**CERTIFICATE BY THE GUIDE**

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Date: 01/06/2023  
Place: Pune



**Dr. N.M. Gajkwad**  
**Research Guide**

**Principal**  
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**PES's MODERN COLLEGE OF PHARMACY NIGDI, PUNE- 44  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-DIABETIC TREATMENT"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MS. SHILPA SANJAYKUMAR BIRADR** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 01/06/2023  
**Place:** Pune



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**PES's MODERN COLLEGE OF PHARMACY NIGDI, PUNE- 44  
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**Ex-Dean, Faculty of Pharmaceutical Sciences,**

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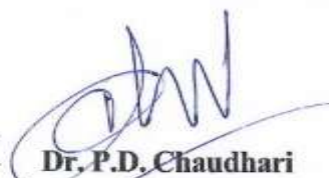
**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-DIABETIC TREATMENT"**. For **MASTER OF PHARMACY (PHARMACEUTICS)** is a record of bonafide research work carried out by **MS. SHILPA SANJAYKUMAR BIRADAR** under the guidance of **DR. N.M. GAIKWAD** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2021-2022.

**Date: 01/06/2023**

**Place: Nigdi, Pune**



  
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**“Formulation and evaluation of dosage form  
prepared by hot melt extrusion process”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**Miss. Birajdar Akshata Balaji**  
(B. Pharm.)


In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**

IN  
**Pharmaceutics**  
Under the Guidance of  
**Dr. K S. Shaikh**  
(M. Pharm. PhD)  
**Professor**  
(Department Of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S  
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**SAVITRIBAI PHULE PUNE UNIVERSITY**



**DECLARATION**

I am **MISS. BIRAJDAR AKSHATA BALAJI** declare that the thesis entitled **“Formulation and evaluation of dosage form prepared by hot melt extrusion process”** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. K. S. SHAIKH** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

Date: 15/6/23

Place: Pune



  
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PES's MODERN COLLEGE OF PHARMACY NIGDI, PUNE- 44  
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**CERTIFICATE BY THE GUIDE**

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Date: 15/6/23  
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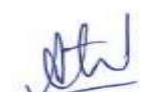
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**Date: 15/6/23**  
**Place: Pune**



  
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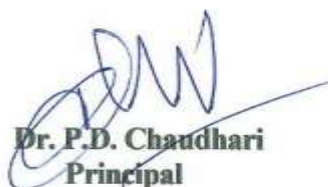
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**Date: 15/6/23  
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**“CRYSTAL ENGINEERING: DEVELOPMENT OF  
PHARMACEUTICAL COCRYSTALS OF RITONAVIR”**

Thesis submitted to  
**THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
Miss. MAYURI SHASHIKANT BORBANE  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**

**IN  
PHARMACEUTICS**  
Under the Guidance of  
**Dr. UPENDRA C. GALGATTE**  
(M. Pharm. PhD)

Associate  
Professor  
(Dept. of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Miss. MAYURI SHASHIKANT BORBANE** declare that the thesis entitled **“CRYSTAL ENGINEERING: DEVELOPMENT OF PHARMACEUTICAL COCRYSTALS OF RITONAVIR”** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. UPENDRA C. GALGATTE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

Date: 14/6/23

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**Date: 14/6/23**

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**Date: 14/6/23,**  
**Place: Pune**



  
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**Principal**  
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**Ex-Dean, Faculty of Pharmaceutical Sciences,**

**Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

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MAYURI SHASHIKANT BORBANE** under the guidance of **DR.  
UPENDRA C. GALGATTE** at P.E.S. Modern College of  
Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

**Date: 14/6/23**  
**Place: Nigdi, Pune**



**Dr. P.D. Chaudhari**  
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**“FORMULATION AND EVALUATION OF  
RILPIVIRINE LOADED SOLID LIPID  
NANOPARTICLES”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

Mr. GARHWANI YOGISH DHARMDAS  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN

**Pharmaceutics**

Under the Guidance of

Dr. SMITA S. PIMPLE  
(M. Pharm. PhD)

Professor

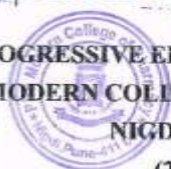
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MR. GARHWANI YOGISH DHARMDAS** declare that the thesis entitled **"FORMULATION AND EVALUATION OF RILPIVIRINE LOADED SOLID LIPID NANOPARTICLES"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. SMITA S. PIMPLE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 17/6/23

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Place: Pune



  
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**CERTIFICATE BY THE GUIDE**

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Date: 17/6/23  
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**Dr. P.D. Chaudhari**  
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**“FORMULATION AND EVALUATION OF DIRECTLY  
COMPRESSED POLYHERBAL ANTHELMINTIC  
TABLET”**

Thesis submitted to

THE FACULTY OF PHARMACEUTICAL SCIENCES

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

**Mr. AMRUT NAMDEV GODBHARLE**

**(B. Pharmacy)**

In partial fulfillment of

The requirements for the degree of

**MASTER OF PHARMACY IN**

**PHARMACEUTICS**

Under the Guidance of

**DR. ANURADHA G. MORE**

**(M. Pharm, Ph.D.)**

**(Department of Pharmaceutics)**


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DECLARATION

I, **Mr. AMRUT NAMDEV GODBHARLE** declares  
that the thesis entitled "Formulation and Evaluation of directly  
compressed polyherbal anthelmintic tablet" submitted by me  
for my Degree of Master of Pharmacy is the record of work  
carried out by me under the guidance of **DR. ANURADHA  
G. MORE** and has not formed the basis for the award of any  
degree or diploma or other titles in this or any other  
University.

Date: 14/6/23

Place: pune



Mr. Amrut Namdev Godbharle

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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "*Formulation And Evaluation of directly compressed anthelmintic polyherbal tablet*" submitted for the degree of **Master of Pharmacy**, is the record of research work carried out by **Mr. Amrut Namdev Godbharle** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 14/6/23

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Dr. Anuradha G More

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Date 14/6/23

Place: pune



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**“CRYSTAL ENGINEERING: CO-CRYSTALLIZATION  
APPROACH FOR RITONAVIR TO IMPROVE  
SOLUBILITY”**

**Thesis submitted to  
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PHARMACEUTICAL SCIENCES  
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By

**Mr. KHORDE RUSHIKESH VIKRAM  
(B. Pharm.)**

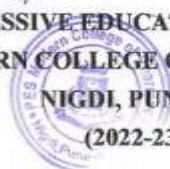
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Associate Professor  
(Dept. of Pharmaceutics)

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Sector No.21, Yamunanagar, Nigdi  
Pune - 411 044.**



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION



I am **MR. KHORDE RUSHIKESH VIKRAM** declare that the thesis entitled "**CRYSTAL ENGINEERING: CO-CRYSTALLIZATION APPROACH FOR RITONAVIR TO IMPROVE SOLUBILITY**" submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. UPENDRA C. GALGATTE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 16/6/23

Place: Pune



Mr. KHORDE RUSHIKESH VIKRAM

  
  
Principal  
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Associate Professor,  
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Date: 16/6/23  
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**Dr. Upendra C. Galgatte**  
Research Guide

  
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**Date: 16/6/23**

**Place: Nigdi, Pune**



**Dr. P.D. Chaudhari**  
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**Principal**  
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**Pune - 411 044.**





**“FORMULATION AND EVALUATION OF WOUND  
HEALING SPRAY WITH CALCIUM PHOSPHATE  
NANOPARTICLES ”**

**Thesis submitted to**

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



**By**

**Miss. AISHWARYA SHIVAJI MAHANGADE**

**(B. Pharmacy)**

**In partial fulfillment of**

**The requirements for the degree of**

**MASTER OF PHARMACY IN**

**PHARMACEUTICS**

**Under the Guidance of**

**DR. ANURADHA G. MORE**

**(M. Pharm, Ph.D.)**

**(Department of Pharmaceutics)**

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S**

**MODERN COLLEGE OF PHARMACY NIGDI, PUNE**

**- 2022-2023**



*[Signature]*  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

I, **Miss. AISHWARYA SHIVAJI MAHANGADE** declares that the thesis entitled "Formulation and Evaluation of Wound Healing spray with Calcium Phosphate Nanoparticles" submitted by me for my Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. ANURADHA G. MORE** and has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 19/06/2023

Miss. Aishwarya Shivaji Mahangade

Place: Nigdi, Pune



*Ashangade*  
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**Dr. Anuradha G. More**

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**PES's MODERN COLLEGE OF PHARMACY**

**NIGDI, PUNE-44**

**(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "*Formulation And Evaluation of Wound Healing Spray with Calcium Phosphate Nanoparticles*" submitted for the degree of **Master of Pharmacy**, is the record of research work carried out by **Miss. Aishwarya Shivaji Mahangade** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

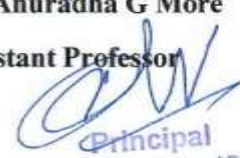
Date: 19/06/2023.

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**Dr. Anuradha G. More**

**Assistant Professor**



  
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**Dr. Atul A Phatak**

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**PES's MODERN COLLEGE OF PHARMACY**

**NIGDI, PUNE-44**

**(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE H.O.D**

This is to certify that the thesis entitled, "*Formulation And Evaluation of Wound Healing Spray with Calcium Phosphate Nanoparticles*" submitted for the degree of **Master of Pharmacy**, is the record of research work carried out by **Miss. Aishwarya Shivaji Mahangade** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.


**Date:** 19/06/2023

  
**Dr. Atul A Phatak**

**Place:** Nigdi, Pune



**H.O.D.**

  
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**DR. P. D. Chaudhari**  
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**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled *“Formulation And Evaluation of Wound Healing Spray with Calcium Phosphate Nanoparticles”* submitted for the degree of **Master of Pharmacy**, is the record of bonafide research work carried out by **Miss. Aishwarya S. Mahangade** under the guidance of **Dr. Anuradha G. More** at P.E.S's Modern College of Pharmacy, Nigdi, Pune-44.

Date 19/06/2023

Place: Nigdi, Pune.

  
**Dr. Pravin D. Chaudhari**

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**"SOME STUDIES ON EXPLORING POTENTIAL OF  
ZEOLITES AS A DRUG DELIVERY CARRIER"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Mr. MAHAJAN GAURAV ARUN**

(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
MASTER OF PHARMACY

IN

**Pharmaceutics**

Under the Guidance of

**Dr. SMITA S. PIMPLE**

(M. Pharm. PhD)

Professor

(Dept. of Pharmaceutics)

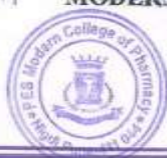
**DEPARTMENT OF PHARMACEUTICS**

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Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MR. MAHAJAN GAURAV ARUN** declare that the thesis entitled **"SOME STUDIES ON EXPLORING POTENTIAL OF ZEOLITES AS A DRUG DELIVERY CARRIER"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. SMITA S. PIMPLE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 14/6/23

Place: Pune



*G. Mahajan*

Mr. MAHAJAN GAURAV ARUN

*[Signature]*  
Principal  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **“SOME STUDIES ON EXPLORING POTENTIAL OF ZEOLITES AS A DRUG DELIVERY CARRIER”** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MR. MAHAJAN GAURAV ARUN** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/6/23  
Place: Pune



  
**Dr. Smita S. Pimple**  
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**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"SOME STUDIES ON EXPLORING POTENTIAL OF ZEOLITES AS A DRUG DELIVERY CARRIER"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MR. MAHAJAN GAURAV ARUN** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 14/6/23  
Place: Pune**



  
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**Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"SOME STUDIES ON EXPLORING POTENTIAL OF ZEOLITES AS A DRUG DELIVERY CARRIER"**. For **MASTER OF PHARMACY (PHARMACEUTICS)** is a record of bonafide research work carried out by **MR. MAHAJAN GAURAV ARUN** under the guidance of **DR. SMITA S. PIMPLE** at PES's Modern College of Pharmacy, Nigdi, Pune-44 during the academic year 2022-2023.

**Date: 14/6/23  
Place: Nigdi, Pune**



**Dr. P. D. Chaudhari  
Principal**

**P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.**



**"FORMULATION AND EVALUATION OF CO-CRYSTALS OF EFAVIRENZ"**

Thesis Submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES**  
**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



BY

**MISS. RUTUJA ZUMBER MASKE**

**(B. PHARM)**

In partial fulfillment of the  
Requirements for the degree of

**MASTER OF PHARMACY**

**IN**

**PHARMACEUTICS**

Under the Guidance of

**DR. ATUL A. PHATAK**

**(Professor and Head, Department of pharmaceuticals)**

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Pune - 411 044.



**"FORMULATION AND EVALUATION OF CO-CRYSTALS OF EFAVIRENZ"**



A THESIS SUBMITTED TO  
SAVITRIBAI PHULE PUNE UNIVERSITY  
FOR THE AWARD OF DEGREE  
MASTER OF PHARMACY

IN

PHARMACEUTICS

SUBMITTED BY

**MISS. RUTUJA ZUMBER MASKE**

(B. PHARM)

UNDER THE GUIDANCE OF

**DR. ATUL A. PHATAK**

(Professor and Head,

Department of pharmaceuticals)

RESEARCH CENTER

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(ACCREDITED BY NAAC)

(2022-23)



  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**DECLARATION BY THE CANDIDATE**

I, Miss. Rutuja Zumber Maske declare that the thesis entitled "Formulation and Evaluation of co-crystals of antiviral drug efavirenz" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of Dr. Atul A. Phatak and has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 01/06/2023

Place: Nigdi, Pune

Ms. Rutuja Zumber Maske



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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "**Formulation And Evaluation of co-crystals of antiviral drug Efavirenz**" submitted for degree of **Master of Pharmacy**, is the record of research work carried out by **Miss. Rutuja Zumber Maske** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 01/06/2023

Place: Nigdi, Pune



**Dr. Atul A. Phatak**

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Department of pharmaceutics)

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Pune - 411004



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Nigdi, Pune-44

**CERTIFICATE BY THE HOD**

This is to certify that the thesis entitled, "**Formulation And Evaluation of co-crystals of antiviral drug Efavirenz**" submitted for degree of **Master of Pharmacy**, is the record of research work carried out by **Miss. Rutuja Zumber Maske** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 01/06/2023

Place: Nigdi, Pune



  
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**Department of pharmaceutics)**

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Ex. Dean, Faculty of Pharmaceutical Sciences,

Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "**Formulation and Evaluation of Co-crystals of Antiviral Drug Efavirenz**" submitted for degree of Master of Pharmacy, is the record of bonafide research work carried out by **Miss. Rutuja Zumber Maske** under the guidance of Dr. Atul A. Phatak at P.E.S's Modern College of Pharmacy, Nigdi, Pune-44.



Date: 01/06/2023

Place: Nigdi, Pune

Dr. Pravin D. Chaudhari

Principal

Principal  
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Pune - 411 044



**FORMULATION AND CHARACTERISATION OF FAST  
DISSOLVING ORAL FILM OF PROCHLORPERAZINE  
MALEATE**

Thesis submitted to

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE.**



By

**Mr. Tushar Mahesh Phalke  
(B. Pharm)**

In partial fulfillment of  
The requirements for the degree of

**MASTER OF PHARMACY  
IN  
PHARMACEUTICS**

UNDER THE GUIDANCE OF

**Dr. S. S. PIMPLE**  
(M. Pharm, PhD)

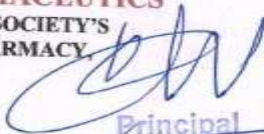
Professor  
(Dept of Pharmaceutics)  
&

**Mr. D. L. Visokar**  
(M. Pharm)

Assistant professor  
(Dept of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS  
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MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE-44.  
(2022 – 2023)**



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044. 1





SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

I Mr. Tushar Mahesh Phalke declare that the thesis entitled, "Formulation and characterization of fast dissolving oral film of prochlorperazine maleate", submitted by me for degree of 'Master of Pharmacy' is the record of work carried out by me under the guidance of Dr. S. S. Pimple and Mr. D. L. Visokar and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 14/6/23

Place: Pune

  
Mr. Tushar M. Phalke



  
Principal  
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P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.




**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "Formulation and characterization of fast dissolving oral film of prochlorperazine maleate", submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 14/6/23

Place: pune



  
Dr. S. S. Pimple  
(M. Pharm PhD)  
Guide

  
Principal  
P. E. S. Modern College of Pharmacy  
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P. E. Society's  
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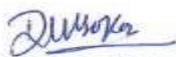
**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, "Formulation and characterization of fast dissolving oral film of prochlorperazine maleate", submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 14/6/23

Place: Pune



  
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Research Co-Guide

  
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P. E. S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND CHARACTERIZATION OF FAST DISSOLVING ORAL FILM OF PROCHLORPERAZINE MALEATE"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MR. PHALKE TUSHAR MAHESH** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.



**Date: 14/6/23  
Place: Pune**

**Dr. Atul A. Phatak  
HOD**

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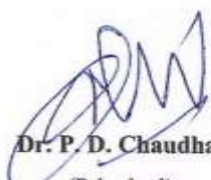
**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and characterization of fast dissolving oral film of prochlorperazine maleate", is a record of bonafide research work carried out by Mr. Phalke Tushar Mahesh Under the guidance of Ms. S. S. Pimple and Co-Guidance of Mr. D. L. Visokar at Modern College of Pharmacy, Nigdi, Pune- 411044.

Date: 14/6/23

Place: Pune



  
Dr. P. D. Chaudhari  
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**"FORMULATION AND EVALUATION OF DUAL  
DRUG LOADED POLYMERIC MIXED MICELLES  
FOR ANTI-EPILEPTIC TREATMENT"**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Ms. Priyanka Dadabhau Pote**  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**  
IN  
**Pharmaceutics**

Under the Guidance of  
Dr. N. M. Gaikwad  
(M. Pharm, Ph.D)  
Associate Professor  
(Dept. of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S**

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**DECLARATION**


I am **MS. PRIYANKA DADABHAU POTE** declare that the thesis entitled **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-EPILEPTIC TREATMENT"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. N. M. GAIKWAD** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

Date: 01/06/2023

Place: Pune



  
Ms. Priyanka Dadabhau Pote

  
Principal  
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Nigdi, Pune- 44.**

**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-EPILEPTIC TREATMENT"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MS. PRIYANKA DADABHAU POTE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 01/06/2023  
**Place:** Pune



  
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**Research Guide**

  
**Principal**  
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Yamunanagar, Nigdi, Pune- 44**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-EPILEPTIC TREATMENT"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MS. PRIYANKA DADABHAU POTE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 01/06/2023  
Place: Pune**



**Dr. Atul A. Phatak  
HOD**

**P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.**



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(ACCREDITED BY NAAC)**

**DR. P. D. CHAUDHARI**

**Principal,**

**P.E.S. Modern College of Pharmacy,**

**Yamunanagar, Nigdi, Pune- 44**

**Ex-Dean, Faculty of Pharmaceutical Sciences,**

**Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"FORMULATION AND EVALUATION OF DUAL DRUG LOADED POLYMERIC MIXED MICELLES FOR ANTI-EPILEPTIC TREATMENT"**. For **MASTER OF PHARMACY (PHARMACEUTICS)** is a record of bonafide research work carried out by **MS.PRIYANKA DADABHAU POTE** under the guidance of **DR. N.M. GAIKWAD** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2021-2022.

Date: 01/06/2023

Place: Nigdi, Pune



**Dr. P.D. Chaudhari**  
**Principal**

**Principal**  
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Pune - 411 044.



Formulation and Evaluation of Etoricoxib Self micro emulsifying mouth dissolving films (SMMDF) for periodontal diseases.

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL  
SCIENCES SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE.**



By  
**Ms. Yashoda Navnath Tikde**  
**(B. Pharm)**

For the award of degree  
**MASTER OF PHARMACY**  
**IN**  
**PHARMACEUTICS**

**UNDER THE GUIDANCE OF**  
**Dr. K. S. Shaikh (M. Pharm, PhD)**  
Professor  
(Dept of Pharmaceutics)

&  
**Dr. U. S. Desai (M. Pharm, PhD)**  
Assistant professor  
(Dept of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**  
**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE**  
**OF PHARMACY, NIGDI, PUNE - 44.**  
**(ACCREDITED BY NAAC)**

**(2022 – 2023)**



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

I am Ms. Yashoda Navnath Tikde declare that the thesis entitled, "Formulation and Evaluation of Etoricoxib Self micro emulsifying mouth dissolving films (SM MDF) for periodontal diseases." submitted by me for degree of 'Master of Pharmacy' is the record of work carried out by me under the guidance of Dr. K. S. Shaikh and Dr. U.S. Desai and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 17/6/23

Place: Pune



*Yashoda Tikde*  
Ms. Yashoda Tikde

*[Signature]*  
Principal

P. E. S. Modern College of Pharmacy  
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MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.**



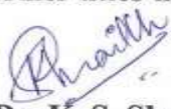
**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "Formulation and Evaluation of Etoricoxib Self micro emulsifying mouth dissolving films (SMMDF) for periodontal diseases," submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Date:** 17/6/23

**Place:** pune



  
**Dr. K. S. Shaikh**  
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Research Guide

  
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**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, "Formulation and Evaluation of Etoricoxib Self micro emulsifying mouth dissolving films (SMMDF) for periodontal diseases.", submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 17/6/23

Place: Pune



  
**Dr. U. S. Desai**  
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Research Co-Guide

  
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and Evaluation of Etoricoxib Self micro emulsifying mouth dissolving films (SMMDF) for periodontal diseases." is a record of bonafide research work carried out by **Ms. Yashoda Navnath Tidke** under the guidance of **Dr. K. S. Shaikh** and Co-Guidance of **Dr. U. S. Desai** at Modern College of Pharmacy, Nigdi, Pune- 411044.

**Date:** 17/6/23

**Place:** Pune



  
**Dr. P. D. Chaudhari**  
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**Principal**  
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**Date:** 17/6/23

**Place:** pune



  
**Dr. A. A. Phatak**  
**HOD**

  
**Principal**  
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Pune - 411 044.





**"FORMULATION DEVELOPMENT AND EVALUATION OF DARIFENACIN  
HYDROBROMIDE NANOEMULSION"**

Thesis Submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAL PHULE PUNE UNIVERSITY, PUNE**



BY

**MISS. APURVA NITIN WABALE**

**(B. PHARM)**

In partial fulfillment of the  
Requirements for the degree of  
**MASTER OF PHARMACY**

IN

**PHARMACEUTICS**

Under the Guidance of

**DR. ATUL A. PHATAK**

**(Professor and Head, Department of pharmaceuticals)**

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S**

**MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44 (2022-23)**

**(ACCREDITED BY NAAC and NBA)**



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"FORMULATION DEVELOPMENT AND EVALUATION OF  
DARIFENACIN  
HYDROBROMIDE NANOEMULSION"**



A THESIS SUBMITTED TO  
SAVITRIBAL PHULE PUNE UNIVERSITY  
FOR THE AWARD OF DEGREE  
MASTER OF PHARMACY

IN

PHARMACEUTICS

SUBMITTED BY

**MISS. APURVA NITIN WABALE**

(B. PHARM)

UNDER THE GUIDANCE OF

**DR. ATUL A. PHATAK**

(Professor and Head,

Department of pharmaceuticals)

RESEARCH CENTER

**PROGRESSIVE EDUCATION SOCIETY'S**

**MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44**



(ACCREDITED BY NAAC)

(2022-23)

  
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Sector No.21, Yamunanagar, Nigdi,  
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**DECLARATION BY THE CANDIDATE**

I, Miss. Apurva Nitin Wabale declare that the thesis entitled "FORMULATION DEVELOPMENT AND EVALUATION OF DARIFENACIN HYDROBROMIDE NANOEMULSION" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of Dr. Atul A. Phatak and has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 01/06/2023

Place: Nigdi, Pune



*Apurva Wabale*  
Ms. Apurva Nitin Wabale

*[Signature]*  
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NIGDI, PUNE-44

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**Dr. Atul A. Phatak**

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Nigdi, Pune-44

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "FORMULATION DEVELOPMENT AND EVALUATION OF DARIFENACIN HYDROBROMIDE NANOEMULSION" submitted for degree of **Master of Pharmacy**, is the record of research work carried out by **Miss. Apurva Nitin Wabale** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 01/06/2023

Place: Nigdi, Pune



  
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Research Guide

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**Dr. Atul A. Phatak**

Professor and Head,

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**CERTIFICATE BY THE HOD**

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Date: 01/06/2023

Place: Nigdi, Pune



**Dr. Atul A. Phatak**

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DR. P. D. Chaudhari

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Ex. Dean, Faculty of Pharmaceutical Sciences,

Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "FORMULATION DEVELOPMENT AND EVALUATION OF DARIFENACIN HYDROBROMIDE NANOEMULSION" submitted for degree of Master of Pharmacy, is the record of bonafide research work carried out by Miss. **Apurva Nitin Wabale** under the guidance of Dr. Atul A. Phatak at P.E.S's Modern College of Pharmacy, Nigdi, Pune-44.



Date: 01/06/2023

Place: Nigdi, Pune

Dr. Pravin D. Chaudhari  
Principal

P.E.S. Modern College of Pharmacy  
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Pune - 411 044.



**Development and Evaluation of Selenium and  
Climbazole Nanoparticles Laden Hydrogel for  
Sebopsoriasis.**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE.**



By  
**MS. DARSHANA H. WANI**

In Partial Fullfillment of The  
Requirements for the degree  
of

**MASTER OF PHARMACY  
IN PHARMACEUTICS**

**UNDER THE GUIDANCE OF**

**Dr. Upendra C. Galgatte**  
(M. Pharm, PhD)  
Associate Professor

**CO-GUIDE**

**Dr. Ujwala S. Desai**  
(M. Pharm, PhD)  
Assistant Professor

**DEPARTMENT OF PHARMACEUTICS  
PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE  
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(ACCREDITED BY NAAC)  
(2022 – 2023)**



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Pune - 411 044.



**SAVITRIBAI PHULE PUNE UNIVERSITY**



**DECLARATION**

I Ms. Darshana H. Wani declare that the thesis entitled, "Development and Evaluation of Selenium and Climbazole Nanoparticles Laden Hydrogel for Sebopsoriasis." submitted by me for degree of 'Master of Pharmacy' is the record of work carried out by me under the guidance of Dr. U. C. Galgatte & Dr. U. S. Desai and has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization.

Date: 16/6/23

Place: Nigdi, Pune



  
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Pune - 411 044.





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**DR. UPENDRA C. GALGATTE**  
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P. E. S. Modern College of Pharmacy,  
Nigdi, Pune-44

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, “**Development and Evaluation of Selenium and Climbazole Nanoparticles Laden Hydrogel for Sebopsoriasis.**” submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other university.


Date: 16/6/23

  
Dr. Upendra C. Galgatte

Place: Nigdi, Pune

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**DR. UJWALA S. DESAI**

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Nigdi, Pune-44

**CERTIFICATE BY THE CO-GUIDE**

This is to certify that the thesis entitled, “**Development and Evaluation of Selenium and Climbazole Nanoparticles Laden Hydrogel for Sebopsoriasis.**” submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 16/6/23

Place: Nigdi, Pune



  
**Dr. Ujwala S. Desai**  
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Sector No.21, Yashwanagar, Nigdi,  
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Nigdi, Pune-44.**



**CERTIFICATE BY THE HOD**

This is to certify that the thesis entitled, **“Development and Evaluation of Selenium and Climbazole Nanoparticles Laden Hydrogel for Seborrheic Dermatitis”** submitted for degree of Master of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other university.


**Date:** 16/6/23

**Place:** Nigdi, Pune

  
**Dr. Atul P. Phatak**



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**DR. P.D. CHAUDHARI**

Principal,  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.


**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, "Development and Evaluation of Selenium and Climbazole Nanoparticles Laden Hydrogel for Sebopsoriasis" is a record of bonafide research work carried out by Ms. Darshana Harishchandra Wani under the guidance of Dr. U. C. Galgatte and Dr. U. S. Desai at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 16/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
(Principal)

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**“FORMULATION AND EVALUATION OF LIQUID  
SUPPOSITORY DOSAGE FORM”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**Miss. SHEFALI DINESHRAO WANKHADE**  
(B. Pharm.)

In partial fulfillment of  
The requirements for the degree of  
**MASTER OF PHARMACY**  
IN  
**Pharmaceutics**

Under the Guidance of  
Dr. K. S. SHAIKH  
(M. Pharm. PhD)  
Professor  
(Dept. of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE-44  
(2022-23)**



**Principal**  
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Sector No 21, Yamunanagar, Nigdi,  
Pune - 411 044



SAVITRIBAI PHULE PUNE UNIVERSITY




DECLARATION

I am **Miss. SHEFALI DINESHRAO WANKHADE** declare that the thesis entitled **"FORMULATION AND EVALUATION OF LIQUID SUPPOSITORY DOSAGE FORM"** submitted by me for degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. K. S. SHAIKH** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 14/6/23  
Place: Pune



  
Miss. SHEFALI DINESHRAO WANKHADE

  
Principal  
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**DR. K. S. SHAIKH**

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P.E.S. Modern College of Pharmacy,  
Nigdi, Pune- 44.**

**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF LIQUID SUPPOSITORY DOSAGE FORM"** submitted for degree of Master of Pharmacy (Pharmaceutics) is the record of research work carried out by **MISS. SHEFALI DINESHRAO WANKHADE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 14/6/23  
Place: Pune**



**Dr. K. S. Shaikh  
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**DR. ATUL A. PHATAK**

**Head of Department,  
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**P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune- 44**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF LIQUID SUPPOSITORY DOSAGE FORM"** submitted for degree of Master of Pharmacy (Pharmaceutics), is the record of research work carried out by **MISS. SHEFALI DINESHRAO WANKHADE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 14/6/23  
Place: Pune**



  
**Dr. Atul A. Phatak  
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**DR. P. D. CHAUDHARI**

**Principal,  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"FORMULATION AND EVALUATION OF LIQUID SUPPOSITORY DOSAGE FORM"**. For **MASTER OF PHARMACY (PHARMACEUTICS)** is a record of bonafide research work carried out by **MISS. SHEFALI DINESHRAO WANKHADE** under the guidance of **DR. K. S. SHAIKH** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2021-2022.

**Date: 14/6/23  
Place: Nigdi, Pune**



**Dr. P.D. Chaudhari  
Principal**

**Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.**



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 Directorate of Technical Education, Mumbai (MS), Permanently Affiliated to  
 Savitribai Phule Pune University, Pune & Approved under Section 2 (f) & 12 (B) of UGC Act, 1956

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Prof. Dr. P. D. Chaudhari  
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 Chairman, Business Council

Date- 16-06-2023

**M.PHARM SECOND YEAR PHARMACEUTICAL CHEMISTRY**

**PROJECT DETAILS 2022-2023**

Roll no	Name	Research Topic	Guide Name
201	Geeta anil anawade	Design, synthesis and evaluation of some MAO-B inhibitors as Anti-Alzheimer's agents.	Mr. S.Y. Chaudhari
202	Dnyaneshwari ravindra chopade	Design, synthesis and evaluate antioxidant, antibacterial and anti-inflammatory activity of some Luteolin derivatives.	Dr Pallavi Patil
203	Rutuja udhav gaikwad	Synthesis, purification, isolation and characterization of key impurities of Metoprolol.	Dr. A. S. Tapkir
204	Shraddha Prakashrao gaikwad	Design and synthesis of novel pyridopyrimidine derivatives as selective jak inhibitors in antineoplastic activity.	Dr. S. B. Jadhav
205	Sahil shyam gawande	Design, synthesis and evaluation of quinoline derivatives as Anti-Cancer agents.	Dr. S. B. Jadhav
206	Virendrakumar madhukar kamble	Bile Acid Functionalized $\pi$ -conjugated Derivatives: Synthesis & Biological evaluation.	Dr. S. B. Jadhav
207	Vaishnavi sanjay magari	Design, synthesis and evaluation of di-hydro pyrimidinone derivatives as Anti-Cancer agents.	Dr. S. B. Jadhav
208	Sneha Nandkumar Rashinkar	Synthesis, Purification and characterization of some impurities of Bisoprolol.	Dr. A. S. Tapkir
209	Asavari Ramesh Shinde	Design, synthesis and evaluation of some NMDA receptor antagonists as Anti-Alzheimer's agents.	Mr. S.Y. Chaudhari
210	Namrata Narsingrao Shinde	Design, synthesis and evaluation of some GSK- 3 Beta inhibitors as Anti-Alzheimer's agents.	Mr. S.Y. Chaudhari

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Savitribai Phule Pune University, Pune & Approved under Section 2 (f) & 12 (B) of UGC Act, 1956

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Chairman, Business Council

211	Sanket Rajendra Shirsath	Design, synthesis and evaluation of some BACE-1 inhibitors as Anti-Alzheimer's agents.	Mr. S.Y. Chaudhari
212	Mayuri Bharat Suryawanshi	Design, synthesis and evaluate antioxidant, antibacterial and anti-inflammatory activity of some Apigenin derivatives.	Dr Pallavi Patil
213	Radhika Somnath Vyavahare	Design, Synthesis and Biological Evaluation of some naphthoquinone derivatives as Anti-Alzheimer agents	Dr. S. B. Jadhav
214	Pradnya Sangram Waghmare	Synthesis, purification and characterization of some impurities of propranolol.	Dr. A. S. Tapkir

  
Dr.S.B.Jadhav  
H.O.D

  
Dr.P. D. Chaudhari  
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STRIVING TOWARDS EXCELLENCE FOREVER





**“DESIGN, SYNTHESIS AND EVALUATION OF SOME  
MAO-B INHIBITORS AS ANTI-ALZHEIMERS AGENTS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**Ms. GEETA ANIL ANAWADE  
(B. Pharm )**

In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

UNDER THE GUIDENCE OF  
**Mr. SOMADATTA Y. CHAUDHARI  
( M. Pharm )**

Assistant Professor (Dept. of Pharmaceutical Chemistry)

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY  
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MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE – 44  
(2021-23)  
(BEST COLLEGE AWARDED BY SAVITRIBAI PHULE  
PUNE UNIVERSITY)**



**SAVITRIBAI PHULE PUNE UNIVERSITY**

*[Signature]*  
Principal

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Sector No.24, Yashwantrao Chavan  
Pune - 411 044.





## DECLARATION


I am **Ms. GEETA ANIL ANAWADE** declare that the thesis entitled, **“DESIGN, SYNTHESIS AND EVALUATION OF SOME MOA-B INHIBITORS AS ANTI-ALZHEIMERS AGENT”** submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Dr. SOMADATTA Y. CHAUDHARI** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.



**Date:** 17/6/23

**Place:** Nigdi, Pune

**Ms. Geeta A. Anawade**

  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, “**DESIGN, SYNTHESIS AND EVALUATION OF SOME MAO-B INHIBITORS AS ANTI-ALZHEIMERS AGENT**” submitted for degree of Master of Pharmacy, is the record of research work carried out by **Ms. GEETA ANIL ANAWADE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 17/6/23  
Place: Nigdi, Pune



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**MODERN COLLEGE OF PHARMACY**  
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**ENDORSEMENT BY THE PRINCIPAL**

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**Date:** 17/6/23  
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**“DESIGN, SYNTHESIS AND EVALUATE THE  
ANTIOXIDANT, ANTIBACTERIAL, AND ANTI-  
INFLAMMATORY ACTIVITY OF SOME  
LUTEOLIN DERIVATIVES”**

***Thesis submitted to***

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



**By**

**MS. DNYANESHWARI RAVINDRA CHOPADE  
(B. PHARM)**

***In partial fulfillment of  
The requirements for the degree of***

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

**Under the Guidance of**

**DR. PALLAVI M. PATIL**

**(M. PHARM Ph.D.)**

**Assistant Professor**

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Pune - 411044**





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### DECLARATION

I am **Ms. DNYANESHWARI RAVINDRA CHOPADE** declare that the thesis entitled, “**DESIGN, SYNTHESIS, AND EVALUATE THE ANTIOXIDANT, ANTIBACTERIAL, AND ANTI-INFLAMMATORY ACTIVITY OF SOME LUTEOLIN DERIVATIVES**” submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. PALLAVI M. PATIL** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Date:** 12-06-2023

**Ms. DNYANESHWARI CHOPADE**

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Date: 12-06-2023

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**Date: 12-06-2023**

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**“SYNTHESIS, PURIFICATION, ISOLATION AND  
CHARACTERIZATION OF KEY IMPURITIES OF  
METOPROLOL”**

***Thesis submitted to***

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



**By**

**MS. RUTUJA UDHAV GAIKWAD  
(B. Pharm)**

***In partial fulfillment of  
The requirements for the degree of***

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

**Under the Guidance of**

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Date: 14/6/23

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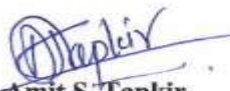
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**Date: 14/6/23**  
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**“DESIGN AND SYNTHESIS OF NOVEL  
PYRROLOPYRIMIDINE DERIVATIVES AS SELECTIVE  
JAK INHIBITORS IN ANTINEOPLASTIC ACTIVITY”**

*Thesis submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MS. SHRADDHA PRAKASHRAO GAIKWAD**  
(B. Pharm)

*In partial fulfillment of  
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**MASTER OF PHARMACY  
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PHARMACEUTICAL CHEMISTRY**

Under the Guidance of

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### DECLARATION

I am **Ms. SHRADDHA PRAKASHRAO GAIKWAD** declare that the thesis entitled, "**DESIGN AND SYNTHESIS OF NOVEL PYRROLOPYRIMIDINE DERIVATIVES AS SELECTIVE JAK INHIBITORS IN ANTINEOPLASTIC ACTIVITY**" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. SHAILAJA B JADHAV** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.



**Date:** 10/06/2023

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**Date:** 10/06/23

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**Dr. Shailaja B Jadhav**

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**Date:** 10/06/23  
**Place:** Nigdi, Pune



**Dr. P. D. Chaudhari**  
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**DECLARATION**

I am Mr. SAHIL SHYAM GAWANDE declare that the thesis entitled,  
"DESIGN, SYNTHESIS AND EVALUATION OF SOME  
QUINOLINE DERIVATIVES AS AN ANTI-CANCER AGENT"  
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has not formed the basis for the award of any degree or diploma or other  
titles in this or any other University.

Date: 18/6/23

Place: Nigdi, Pune

Mr. SAHIL GAWANDE



Principal  
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**DR. SHAILAJA B JADHAV**  
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Date: 18/6/23  
Place: Nigdi, Pune,

  
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**Date: 18/6/23**  
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**Principal**  
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**"BILE ACID FUNCTIONALIZED  $\pi$ -CONJUGATED  
DERIVATIVES: SYNTHESIS & BIOLOGICAL  
EVALUTION"**

*Thesis submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**Mr. VIRENDRAKUMAR MADHUKAR KAMBLE**  
(B. Pharm)

*In partial fulfillment of  
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IN  
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Under the Guidance of

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### DECLARATION

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Date: 12-06-2023

Mr. Virendrakumar M. Kamble

Place: Nigdi, Pune

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**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, **"BILE ACID FUNCTIONALIZED  $\pi$ -CONJUGATED DERIVATIVES: SYNTHESIS & BIOLOGICAL EVALUTION"** is a record of bonafide research work carried out by **Mr. VIRENDRAKUMAR MADHUKAR KAMBLE** under the guidance of **Dr. SHAILAJA B JADHAV** at Modern College of Pharmacy, Nigdi, and Pune-411044.

Date: 12/06/2023

Place: Nigdi, Pune



**Dr. P. D. Chaudhari**  
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Principal

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**"DESIGN, SYNTHESIS AND EVALUATION OF SOME  
DIHYDROPYRIMIDINONE DERIVATIVES AS ANTI-  
CANCER AGENTS"**

*Thesis submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MS. VAISHNAVI SANJAY MAGAR**  
(B. Pharm)

*In partial fulfillment of  
The requirements for the degree of*

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**


Under the Guidance of

**DR. SHAILAJA B JADHAV**  
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(2021-23)**

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**DECLARATION**

I am Ms. VAISHNAVI SANJAY MAGAR declare that the thesis entitled, "DESIGN, SYNTHESIS AND EVALUATION OF DIHYDROPYRIMIDINONE DERIVATIVES AS ANTI-CANCER AGENTS" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of DR. SHAILAJA B JADHAV has not formed the basis for the award of any degree or diploma or other titles in this or any other University.


Date: 19/6/23

  
Ms. Vaishnavi S Magar

Place: Nigdi, Pune

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(ACCREDITED BY NAAC)

**CERTIFICATE BY THE GUIDE**


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Date: 19/6/23  
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**ENDORSEMENT BY THE PRINCIPAL**

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Date: 19/6/23  
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**“SYNTHESIS, PURIFICATION AND  
CHARACTERIZATION OF SOME IMPURITIES OF  
BISOPROLOL”**

Thesis submitted to

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**Ms. SNEHA N. RASHINKAR**

(B. Pharm)

In partial fulfillment, of  
The requirements for the degree of

**MASTER OF PHARMACY IN  
PHARMACEUTICAL CHEMISTRY**

UNDER THE GUIDANCE OF

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### DECLARATION

I am **Ms. SNEHA NANDKUMAR RASHINKAR** declare that the thesis entitled, "SYNTHESIS, PURIFICATION AND CHARACTERIZATION OF SOME IMPURITIES OF BISOPROLOL" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. AMIT S. TAPKIR** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 18/6/23

Place: Nigdi, Pune



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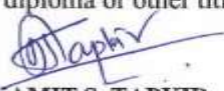
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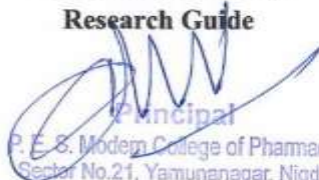
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**Date:** 18/6/23  
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**Date:** 18/6/23  
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**“DESIGN, SYNTHESIS, AND EVALUATION OF SOME NMDA  
RECEPTOR ANTAGONISTS AS ANTI-ALZHEIMER’S  
AGENT”**

*Thesis submitted to*  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
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*By*  
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In partial fulfillment, of  
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### DECLARATION


I, Ms. Asavari Ramesh Shinde, declare that the thesis entitled,  
**"DESIGN, SYNTHESIS, AND EVALUATION OF SOME NMDA  
RECEPTOR ANTAGONISTS AS ANTI-ALZHEIMER'S AGENT"**  
submitted by me for the degree of Master of Pharmacy is the record of  
work carried out by me under the guidance of **Mr. Somdatta Yashwant  
Chaudhari** and has not formed the basis for the award of any degree or  
diploma or other titles in this or any other university.

Date: 16/6/23

  
Ms. Asavari Ramesh Shinde

Place: Nigdi, Pune



  
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**CERTIFICATE BY THE GUIDE**

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**Date: 16/6/23**  
**Place: Nigdi, Pune**



  
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Date: 16/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
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**"DESIGN, SYNTHESIS AND EVALUATION OF SOME  
GSK-3 BETA INHIBITORS AS ANTI-ALZHEIMER'S  
AGENTS"**

*Thesis submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MS. NAMRATA NARSINGRAO SHINDE**  
(B. Pharm)

*In partial fulfillment of  
The requirements for the degree of*

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

Under the Guidance of

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Assistant Professor  
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**“DESIGN, SYNTHESIS AND EVALUATION OF SOME  
GSK-3 BETA INHIBITORS AS ANTI-ALZHEIMER’S  
AGENTS”**

Thesis submitted to  
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PUNE**



By  
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In partial fulfillment, of  
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### DECLARATION

I am **Ms. NAMRATA NARSINGRAO SHINDE** declare that the thesis entitled, **"DESIGN, SYNTHESIS AND EVALUATION OF SOME GSK-3 BETA INHIBITORS AS ANTI-ALZHEIMER'S AGENTS"** submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **Mr. SOMDATTA Y. CHAUDHARI** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 17/6/23

Place: Nigdi, Pune



  
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**(ACCREDITED BY NAAC)**

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Date: 17/6/23  
Place: Nigdi, Pune



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**Date: 17/6/23**  
**Place: Nigdi, Pune**



**Dr. P. D. Chaudhari**  
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**Principal**  
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**“DESIGN, SYNTHESIS, AND EVALUATION OF SOME BACE-1  
INHIBITORS AS ANTI-ALZHEIMER’S AGENT”**

*Thesis submitted to*  
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In partial fulfillment, of  
The requirements for the degree of  
**MASTER OF PHARMACY  
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**UNDER THE GUIDANCE OF  
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### DECLARATION


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Date: 14/6/23

  
Mr. Sanket R. Shirsath

Place: Nigdi, Pune



  
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**Date: 14/6/23**  
**Place: Nigdi, Pune**



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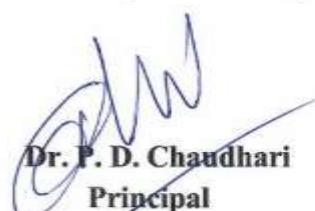
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**Date: 14/6/23**  
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**“DESIGN, SYNTHESIS AND EVALUATE  
ANTIBACTERIAL, ANTIOXIDANT, AND ANTI-  
INFLAMMATORY ACTIVITY OF SOME APIGENIN  
DERIVATIVES”**

*Thesis submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MS. MAYURI BHARAT SURYAWANSHI**  
(B. Pharm)

*In partial fulfillment of  
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Assistant Professor  
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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

I am **Ms. MAYURI BHARAT SURYAWANSHI** declare that the thesis entitled, "**DESIGN, SYNTHESIS AND EVALUATE ANTIBACTERIAL, ANTIOXIDANT AND ANTI-INFLAMMATORY ACTIVITY OF SOME APIGENIN DERIVATIVES**" submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. PALLAVI M. PATIL** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 08/06/2023  
Place: Nigdi, Pune



**Ms. Mayuri B. Suryawanshi**

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**Dr. Pallavi M. Patil**  
Assistant Professor  
(Pharmaceutical Chemistry)  
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**MODERN COLLEGE OF PHARMACY  
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(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **“DESIGN, SYNTHESIS AND EVALUATE ANTIBACTERIAL, ANTIOXIDANT AND ANTI-INFLAMMATORY ACTIVITY OF SOME APIGENIN DERIVATIVES”** submitted for degree of Master of Pharmacy, is the record of research work carried out by **Ms. MAYURI B. SURYAWANSHI** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 02/06/2023  
Place: Nigdi, Pune



**Dr. Pallavi M. Patil**  
Research Guide

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**Dr. P. D. Chaudhari**

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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.



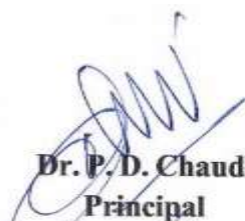
**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE-44  
(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, “**DESIGN, SYNTHESIS AND EVALUATE ANTIBACTERIAL, ANTIOXIDANT AND ANTI-INFLAMMATORY ACTIVITY OF SOME APIGENIN DERIVATIVES**” is a record of bonafide research work carried out by **Ms. MAYURI B. SURYAWANSHI** under the guidance of **Dr PALLAVI M. PATIL** at Modern College of Pharmacy, Nigdi, and Pune-411044.

Date: 08/06/2023  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
Principal

**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamuna Nagar, Nigdi,  
Pune - 411 044.



**“DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION  
OF SOME NAPHTHOQUINONE DERIVATIVES AS ANTI-  
ALZHEIMER AGENTS”**

***Thesis submitted to***

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



**By**

**MS. Radhika Somnath Vyavahare  
(B. Pharm)**

***In partial fulfillment of  
The requirements for the degree of***

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

**Under the Guidance of**

**DR. SHAILAJA B. JADHAV  
(M. Pharm)**

**Assistant Professor and HOD  
Department of Pharmaceutical Chemistry**

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY, NIGDI, PUNE  
(2021-23)**



**Principal**  
Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi  
Pune - 411 004





**“DESIGN, SYNTHESIS AND BIOLOGICAL EVALUATION OF  
SOME NAPHTHOQUINONE DERIVATIVES AS ANTI-  
ALZHEIMER AGENTS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**

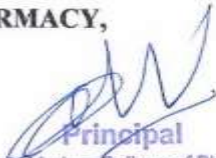


By  
**Ms. Radhika Somnath Vyavahare**  
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In partial fulfillment, of  
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**MASTER OF PHARMACY  
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UNDER THE GUIDENCE OF  
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(BEST COLLEGE AWARDED BY SAVITRIBAI PHULE  
PUNE UNIVERSITY)

SAVITRIBAI PHULE PUNE UNIVERSITY



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Date: 17/6/23

Place: Nigdi, Pune



**Ms. Radhika S. Vyavahare**

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**DR. SHAILAJA B. JADHAV**

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**Yamunanagar, Nigdi, Pune- 44**



**MODERN COLLEGE OF PHARMACY**

**NIGDI, PUNE-44**

**(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, “**Design, Synthesis and Biological Evaluation of some naphthoquinone derivatives as Anti-Alzheimer agents**” submitted for degree of Master of Pharmacy, is the record of research work carried out by **Ms. Radhika S. Vyavahare** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Date: 17/6/23**

**Place: Nigdi, Pune**



**Dr. Shailaja B Jadhav**

**Research Guide**

**Principal**

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Sector No 21, Yamunanagar, Nigdi,**



**Dr. P. D. Chaudhari**  
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**MODERN COLLEGE OF PHARMACY**  
**NIGDI, PUNE-44**  
**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

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**Date:** 17/6/23  
**Place:** Nigdi, Pune

  
**Dr. P. D. Chaudhari**  
**Principal**

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411044





**“SYNTHESIS, PURIFICATION AND  
CHARACTERIZATION OF SOME IMPURITIES OF  
PROPRANOLOL”**

*Thesis submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MS. PRADNYA S. WAGHMARE**  
(B. Pharm)

*In partial fulfillment of  
The requirements for the degree of*

**MASTER OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

Under the Guidance of

**DR. A. S. TAPKIR**  
(M. Pharm)

Assistant Professor

Department of Pharmaceutical Chemistry

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY, NIGDI, PUNE  
(2022-23)**

Principal

P. E. S. Modern College of Pharmacy

Pune - 411 044.





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Thesis submitted to

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PUNE**



By

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(B. Pharm)

In partial fulfillment, of

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UNDER THE GUIDENCE OF

**DR. A. S. TAPKIR**

(M. Pharm)

Assistant Professor (Dept. of Pharmaceutical Chemistry)

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY**

**PROGRESSIVE EDUCATION SOCIETY'S**

**MODERN COLLEGE OF PHARMACY,**

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**(2021-23)**



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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



(BEST COLLEGE AWARDED BY SAVITRIBAI PHULE  
PUNE UNIVERSITY)

SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

I am **Ms. WAGHMORE PRADNYA SANGRAM** declare that the thesis entitled, **“SYNTHESIS, PURIFICATION AND CHARACTERIZATION OF SOME IMPURITIES OF PROPRANOLOL”** submitted by me for Degree of Master of Pharmacy is the record of work carried out by me under the guidance of **DR. A. S. TAPKIR** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 16/6/23

Place: Nigdi, Pune



*Pradnya*  
**Ms. Pradnya S Waghmare**

*Principal*  
Principal  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**DR. A. S. TAPKIR**

**Assistant Professor  
(Pharmaceutical Chemistry)  
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Yamunanagar, Nigdi, Pune- 44**



**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE-44  
(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

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**Date: 16/6/23  
Place: Nigdi, Pune**



**Dr. A. S. TAPKIR  
Research Guide**

**Principal**  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
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**Date: 16/6/23**  
**Place: Nigdi, Pune**



**Dr. P. D. Chaudhari**  
**Principal**

**Principal**  
P. E. S. Modern College of Pharmacy  
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## Final Year B. Pharm Project Work

Progressive Education Society's  
**MODERN COLLEGE OF PHARMACY**

Sector No. 21, Yamunanagar, Nigdi, Pune - 411 044.

(Accredited by NBA &amp; NAAC)

URL : [www.mcop.org.in](http://www.mcop.org.in) , Email - [mcopnigdi44@gmail.com](mailto:mcopnigdi44@gmail.com)

## UG PROJECTS 2022-23

Sr. No.	Project Guide	Students Names	Final Project Titles
1	Dr. Atul Phatak	Dipak Deokar Pranjali Inamdar Vaishnavi Magar	Development and evaluation of Eugenol containing antimicrobial formulation
2	Dr. Padmaja Kore	Dnyaneshwar Bemde	Formulation and evaluation of herbal ointment for dermatophytic skin infection
3	Dr. Smrita Pimple	Dnyaneshwari Chavan Rohit Choudhary Gaurav Karbhari	Formulation and evaluation of in-situ miosomal gel of chloramphenicol
4	Dr. K.S. Shaikh	Kartik Cavali Vaishnavi Jangam Rutuja Mane	Preparation and evaluation of rectal dosage forms
5	Dr. U. C. Galgatte	Sanjana Dole Ruchika Gupta Manali Majgaonkar	Development of Ritonavir co-crystals
6	Dr. A.R. Balap	Harshal Bhakare	Formulation, Characterization and Wound Healing Activity of Guar gum Hydrogel loaded with





		Vaishali Chitta	Honey Silver nanoparticles.
		Khushboo Choudhary	
7	Dr. Nikita Galkwad	Kaveri Ganjare	Development and evaluation of antifungal topical cream including clotrimazole and clotrimazole
		Srishti Jha	
		Tegawini Basate	
8	Dr. Padmaja Kore	Devesh Chaudhari	Formulation and Evaluation of herbal dermal patches for dermatophytic skin infection
		Pawankumar More	
9	Dr. Padmaja Kore	Rameshwar Bhalke	Formulation and evaluation of tannin containing chewing gum for mouth ulcer
10	Dr. Anuradha More	Akshay Deo	Development and characterization of a novel anti-acne Niosomal Gel
		Shraddha Jadhav	
11	Dr. Anuradha More	Kaushal Gandhi	Formulation, evaluation and comparison of the herbal shampoo with the commercial shampoos
		Nitesh Misal	
12	Dr. Shailaja. B. Jadhav	Sakshi Kudale	Synthesis of schiff bases from indole-3-carbaldehyde
		Akshay Kalyan	
		Vinayaji Goradwar	
13	Dr. MinatHarde	Shravani Agalave	Synthesis and characterization of Fe <sub>3</sub> O <sub>4</sub> nanoparticles
		Truptee Banakar	Synthesis, characterization and applications of iron oxide nanoparticles.
		Ajay Dhapte	Synthesis and evaluation of Iron oxide nanoparticles
14	Prof. PallaviPatil	Rahul Andhale	Develop and validate HPTLC method for determination of Antidepressants drug in bulk form
		Shruti Bajare	
		Sneha Hojage	
15	Dr. A.S Tapkir	Tejas Anandkar	"Extraction, Isolation And Evaluation Of Lawsone From Lawsonialnensis Extract And Marketed Formulation By Hptlc"
		Shivani Dighe	"Extraction, Isolation And Evaluation Of Quinine Sulphate From Extract And Marketed Formulation By HPTLC"



*Signature*



		Harshal Jagtap	"Extraction, Isolation And Evaluation Of Calcium Sennoside From Cassia Angustifolia Extract And Marketed Formulation By HPTLC"
16	Prof. SoudattaChaudhari	Pooja Chavan	Design, synthesis and evaluation of some NMDA receptor antagonists as anti-alzheimer agents.
		Pratiksha Kondawar	Design, synthesis and evaluation of some GSK-3 beta inhibitors as anti-alzheimer agents.
		Abhishek Maskare	Design, synthesis and evaluation of some MAO-B inhibitors as anti-alzheimer agents.
17	Dr. Deepthi. D. Bandamne	Prathamesh Badhe	Evaluating the effect of fructose- Induced NAFLD on Physicochemical Parameters in Rats
		Bhagirathi Bhale	
		Sampada Kulkarni	
18	Dr. S. S. Nipate	Shradha Ahirao	To study the effect of Cedrusdeodora (Cedar wood) essential oil on wound healing in experimental animals.
19	Dr. S. S. Nipate	Akash Irwanai	To study the effect of royal jelly derived from ApisMellifera and Melaleuca Oil (Tea Tree oil)
20	Dr. S. S. Nipate	Ankush Chavan	Evaluation of wound healing activity of ethanolic extract of saccharumofficinarium leaves in experimental animals
21	Dr. MS Kuchekar	Vanita Bhurkude	Formulation and Evaluation of Herbal Shampoo
		Milind Dyagatwar	
		Siddharth Gaikwad	
22	Dr. MohiniKuchekar	Vikas Karulekar	Formulation and evaluation of herbal lotion
23	Dr K.S. Kakad	Guruprasad Chavan	Chemical fingerprinting and antimicrobial activity of selected medicinal herbs and it's ayurvedic formulation.
		Anuj Gaikwad	
		Hrushikesh Ladkat	A Review on therapeutic potential of Bergenuligolata Wall
24	Dr. VitthalChopade	Mr. Jayesh Jaiswal	Pharmacognosy study of citron fruits.
		Puskar Karande Patil	Formulation and evaluation of syrup from citron fruits.
		Abhishek More	Formulation and evaluation of lozenges from citron fruits.







25	Dr. Bhushan Pimple	Ganesh Kudke	Formulation and Evaluation of herbal Polyphenolic Tablets
		Rutuja Deshmukh	
26	Dr. Bhushan Pimple	Pravin Bahir	Preparation and evaluation of herbal hair oil
27	Dr. Bhushan Pimple	Nikhita Kumbhar	Formulation and evaluation of antifungal cream.
28	Mr. Shubham Khade	Balu Palekar	Synthesis and Characterization of Magnetic Nanoparticles.
		Aparna Patil	Design, Synthesis & Evaluation of Fe <sub>2</sub> O <sub>3</sub> Nanoparticles.
		Nirajan Rajput	Synthesis and Evaluation of Iron Oxide nanoparticles with application's.
29	Mrs. Sheetal Chaudhari	Tejashree Rane	Eco-friendly Method Development and Validation by UV- Visible spectroscopy
		Samarth Shinde	
		Akash V Wakale	
30	Mrs. Rupali Jinturkar	Shreenidhi Naik	Design, synthesis and Molecular docking of some Tacrine derivatives as AChE Inhibitors.
		Priya Shete	
		Rohit Tapkir	
31	Mrs. Nikita Kale	Nirajan Sonawane	Formulation and Evaluation of gunja cream
		Dhanashree Yadav	
		Smriti Gaikwad	
32	Ms. Anita Malsure	Kadamburi Shinde	Formation and evaluation of polyherbal chewable tablet
		Varsha Shinde	RP-HPLC method development and validation for determination of felbinac
		Anjali Raju Wasule	
33	Ms. Arti Shingan	Ashish Sakhare	RP-HPLC method development and validation for determination of felbinac
		Shirfule Nagesh N.	
		Akansha Telang	
34	Mrs. Vasudha Bavdekar	More Mayuri	Method development and validation in bulk and pharmaceutical dosage form by HPTLC
		Shinde Utkarsha	



*(Handwritten signature)*





		Zarwar Mansi	
35	Mr. D. L. Visokar	Sonali Neagule Kartik Yenkure	Formulation and evaluation of polyherbal anti-inflammatory analgesic liniment for gouty arthritis and osteoarthritis.
		Mahesh Pekamwar	Formulation and evaluation of polyherbal anti-aging cream
36	Dr. Sangita Kale	Shweta Wagh	Formulation and Evaluation of polyelectrolyte complex Nanoparticles for diabetes
		Vasundhara Patil	Polysaccharide Based Drug Delivery system For Periodontitis
		Ajinkya Salve	Formulation and evaluation of transdermal patch for wound healing
37	Dr. Ujjwala Desai	Sarvade Ajinkya	Title: formulation and evaluation of medicated herbal chewing gum for mouth infections
		Mohini Thute	Formulation and evaluation of terbinafine hydrochloride microsomal nail lacquer.
		Vaishnavi Sonone	Formulation and evaluation of herbal facewash and exfoliating tablet
38	Mr. Shivraj Mane	Shrinath Waghmare Harshita S Waghmode Sarvesh Yeole	Formulation development and evaluation of herbal sunscreen lotion.
39	Mr. Rohit Gurav	Utkarsha Patil Nikita Pawar Snehal Shinde	The Formulation, Evaluation and optimization of Antifungal Ufosomal Gel
40	Mrs. Priyanka Bagade	Ajaykumar Patel Harshali Sonawane Vanve Shubham	Formulation and Evaluation of Anti-aging and Anti-acne herbal scrub based face wash





## Criteria 1: Curricular Aspects



41	Mrs. Alka Bhure	Tammy Satkar Ashish Shinde Raviraj Shinde	Formulation, development and evaluation of diclofenac sodium gel by using HPMC.
42	Ms. Surbhi Gupta	Sudhal Parbhakar Yashvati Patil Lata Sargar	Formulation and evaluation of diclofenac sodium nano suspension.
43	Dr. Padmaja S. Kore	Shital Sasar Naveed Syed Tupe Samadhan	Evaluation of in vitro-anthelmintic activity of herbal extracts.
44	Mr. Prashant Pawar	Neha Pandit Prasanna Suryawanshi Pratik Suryawanshi	Awareness and assessment of risk factors associated with breast cancer among Indian women : A questionnaire survey
45	Mrs. Priyanka Sarda	Saurav Pawar Shradha Raut Shweta Saene	Development and validation of HPTLC method for estimation of deferiprone in bulk and marketed formulations.
46	Mrs. Suchal Shelke	Nikita Salunke Priyanka Tandekar Utkarsh Devan	Assessment of Clinical Profile data and Treatment pattern of Guillain-Barre syndrome (GBS).
47	Ms. S. S. Bhosale	Adwait Toke Madhavi Vikharankar Rutuja Wayal	Assessment of Knowledge and Awareness about Drug-Food Interactions among General Public in India : A questionnaire survey
48	Mrs. Suvarna A. Vajje	Shivhar Shete Shradha Shingade Waghire Nikhil	Comparative evaluation of herbal lip balm developed using various natural bases.



*[Handwritten signature]*

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Class Teacher Final Year B-Pharm (Div: A)  
Dr. Padmaja S. Kore

*[Handwritten signature]*  
Class Teacher Final Year B-Pharm (Div: B)  
Mrs. Suchal Shelke

*[Handwritten signature]*  
Principal  
Dr. Praveen D. Chaudhari  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**Development and Evaluation of Eugenol  
Containing antimicrobial formulation.**

Project submitted to  
**THE FACULTY OF PHARMACEUTICAL  
SCIENCES**

**As a part of Final Year B Pharm  
Semester VIII**



**By  
Dipak Deokar  
Pranjali Inamdar  
Vaishnavi Magar**

**Under the guidance of  
Dr. Atul Phatak  
(Prof. and Head, Dept Of Pharmaceutics)**

**DEPARTMENT OF PHARMACEUTICS  
PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY, NIGDI,  
PUNE - 44.**

**(ACCREDITED BY  
NAAC)(2022 – 2023)**



  
**Principal**  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.**



**DECLARATION**

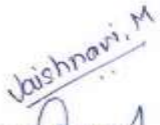
I Dipak Deokar, Pranjali Inamdar, Vaishnavi Magar declare that the project entitled, "Development and Evaluation of Eugenol Containing Antimicrobial Formulation", submitted by me for degree of 'Bachelor of Pharmacy Final Year Sem VIII' is the record of work carried out by me under the guidance of Dr. Atul Phatak and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

**Date:** 31/05/2023


**Place:**

  
Dipak Deokar

  
Pranjali Inamdar

  
Vaishnavi Magar



  
**Principal**  
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**P. E. Society's  
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Nigdi, Pune-44.**



**CERTIFICATE BY THE GUIDE**

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**Date:** 31/05/2023

**Dr. Atul Phatak**

(Prof. and  
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**Principal**  
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Pune - 411 044.



**P. E. Society's  
MODERN COLLEGE OF PHARMACY  
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**ENDORSEMENT BY THE PRINCIPAL**

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**Date:** 31/05/2023

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Pune - 411 044.



**"FORMULATION AND EVALUATION OF HREBAL OINTMENT  
FOR DERMATOPHYTIC SKIN INFECTION"**

Project report submitted to

The Faculty of  
PHARMACEUTICAL SCIENCE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

Dnyaneshwar R Bembde

B. Pharm (Semester-VIII)

In partial fulfillment of the requirements for the degree of

Bachelor of Pharmacy

Under the Guidance of

Dr. Padmaja Kore (M. pharm Ph. D)

Department of Pharmacology




Progressive Education Society's

Modern College of Pharmacy, Nigdi, Pune-44

(Accredited by NAAC and NBA)



  
**Principal**  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am Dnyaneshwar Rajendra Bembde declared that the thesis entitled "Formulation and evaluation of herbal Ointment for dermatophytic skin infection" submitted by us for the award of degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of by **Dr. Padmaja Kore (Guide)** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/6/23

Mr. Dnyaneshwar Rajendra Bembde

Place: Nigdi, Pune

*Bembde*



*[Signature]*  
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Progressive Education Society's Modern College of Pharmacy  
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Certificate by Guide

This is to certify that the thesis entitled, "Formulation and evaluation of herbal ointment for dermatophytic skin infection" submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Mr. Dnyaneshwar Rajendra Bembde** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/6/23  
Place : Nigdi Pune

  
Dr. Padmaja Kore (M. pharm Ph. D)  
Department of Pharmacology



  
Principal  
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Progressive Education Society's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled "**Formulation and evaluation of herbal ointment for dermatophytic skin infection**" is a record of bonafide research work carried out Mr .Dnyaneshwar Rajendra Bembde under the guidance of **Dr Padmaja Kore(Guide)** P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 14/6/23  
Place: Nigdi, PUNE

Dr. P. D. Chaudhari  
Principal,  
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Principal  
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#### ACKNOWLEDGEMENT

I am thankful to Dr. P. D. Chaudhari, Principal of PES's Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Mrs. Padmaja Kore for extending her valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

I express my deep sense of gratitude towards my parents and my friend Pavankumar Dattatraya Mare for his constant support and valuable help throughout this work.

Place: Nigdi, Pune-44.

Date: 14/6/23.

Mr.Dnyaneshwar Rajendra Bembde  
(Final year B. Pharm)



Principal  
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Sector No.21, Yamunanagar, Nigdi,  
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**"FORMULATION AND EVALUATION OF IN-SITU  
NIOSOMAL GEL OF CHLORAMPHENICOL"**

Thesis submitted to

**THE FACULTY OF PHARMACEUTICAL SCIENCES**

**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Miss. Dnyaneshwari Chavan, Mr. Rohit Choudhary and Mr.  
Gaurav Kharabi**

(B. Pharmacy)

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**DR. SMITA S. PIMPLE**

(M. Pharm, Ph.D.)

(Department of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S**

**MODERN COLLEGE OF PHARMACY NIGDI, PUNE**

**2022-2023**



  
**Principal**

P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We, **Miss. Dnyaneshwari Chavan, Mr. Rohit Choudhary and Mr. Gaurav Kharabi** declare that the thesis entitled “**Formulation and Evaluation of In-situ Niosomal Gel of Chloramphenicol**” submitted by me for my Degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **DR. SMITA S. PIMPLE** and has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 10/6/2023

Miss. Dnyaneshwari Chavan *Dnyaneshwari*

Place: pune

Mr. Rohit Choudhary *Rohit*

Mr. Gaurav Kharabi *Gaurav*



*[Signature]*  
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Dr. Smita S. Pimple  
Professor,  
Department of Pharmaceutics  
P. E.S. Modern College of Pharmacy  
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**PES's MODERN COLLEGE OF PHARMACY**

**NIGDI, PUNE-44**

**(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "FORMULATION AND EVALUATION OF IN-SITU NIOSOMAL GEL OF CHLORAMPHENICOL" submitted for the degree of Bachelor of Pharmacy, is the record of research work carried out by Miss. Dnyaneshwari Chavan, Mr. Rohit Choudhary and Mr. Gaurav Kharabi under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 10/06/2023

Place: pune

Dr. Smita S. Pimple

Professor



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**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44  
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(PHARMACEUTICS),**

**P. E. S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.**

**CERTIFICATE BY THE HOD**

This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF IN-SITU NIOSOMAL GEL OF CHLORAMPHENICOL"** submitted for degree of Bachelor of Pharmacy (Pharmaceutics), is the record of research work carried out by **MISS. DNYANESHWARI CHAVAN, MR. ROHIT CHOUDHARY AND MR. GAURAV KHARABI** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 10/06/2023  
**Place:** Pune

**Dr. Atul A. Phatak**  
**HOD**



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**DR. P. D. Chaudhari**  
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**PES's MODERN COLLEGE OF PHARMACY**

**NIGDI, PUNE-44**

**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and Evaluation of In-situ Niosomal Gel of Chloramphenicol" submitted for the degree of Bachelor of Pharmacy, is the record of bonafide research work carried out by **Miss. Dnyaneshwari Chavan, Mr. Rohit Choudhary and Mr. Gaurav Kharabi** under the guidance of Dr. Smita S. Pimple at P.E.S's Modern College of Pharmacy, Nigdi, Pune-44.

Date 14-10-2023

Place: Pune

**Dr. Pravin D. Chaudhari**

**Principal**



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**“Preparation and Evaluation of Rectal Dosage Forms”**

**Thesis submitted to  
The Faculty of  
PHARMACEUTICS  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

Mr. Kartik Gavali, Ms. Vaishnavi Jangam and  
Ms. Rutuja Mane

**(B. Pharm)**

In partial fulfillment of the requirements for the degree  
of

Bachelor of Pharmacy

Under the Guidance of

**PROF. K.S.SHAIKH**

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**Progressive Education Society's Modern College of  
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**(Accredited by NAAC and NBA)**



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**Preparation and Evaluation of Rectal Dosage Forms**



SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

We are Mr. Kartik Gavali, Ms. Vaishnavi Jangam and Ms. Rutuja Mane declared that the thesis entitled **“Preparation and Evaluation of Rectal Dosage Forms”** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Prof. K.S.Shaikh** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14-06-23

Place: Nigdi, Pune

Mr. Kartik Gavali *Kavali*

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**Principal**  
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**Preparation and Evaluation of Rectal Dosage Forms**



**PES's Modern College of Pharmacy**  
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**Certificate by the Guide**

This is to certify that the thesis entitled, "**Preparation and Evaluation of Rectal Dosage Forms**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Kartik Gavali, Ms. Vaishnavi Jangam and Ms. Rutuja Mane under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 14-06-23  
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**Preparation and Evaluation of Rectal Dosage Forms**



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Nigdi, Pune-44  
(Accredited by NAAC and NBA)**

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**Ex-Deans, Faculty of Pharmaceutical Sciences,**  
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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled “**Preparation and Evaluation of Rectal Dosage Forms**” is a record of bonafide research work carried out by by Mr.Kartik Gavali, Ms.Vaishnavi Jangam and Ms.Rutuja Mane under the guidance of Prof. K.S.Shaikh at P.E.S Modern College of Pharmacy Nigdi, Pune.

**Date:** 14-06-23

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**Dr. P. D. Chaudhari**

**Principal**

**Principal**

P. E. S. Modern College of Pharmacy  
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**Preparation and Evaluation of Rectal Dosage Forms**





**“Development of Ritonavir Co-crystals”**

Thesis submitted to  
The faculty of  
**PHARMACEUTICAL SCIENCE SAVITRIBAI PHULE**  
**PUNE UNIVERSITY, PUNE**



By  
**Ms. Sanjana Chhagan Dole,**  
**Ms. Ruchika Dayashankar Gupta**  
**and Ms. Manali Mahadev**  
**Majgaonkar (B. Pharm)**

In partial fulfillment of the  
requirements for the award of  
degree

**BACHELOR OF**  
**PHARMACY**

**MCP**

Under the guidance of  
**Dr. U. C. Galgatte (M. Pharm, PhD)**  
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**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE**  
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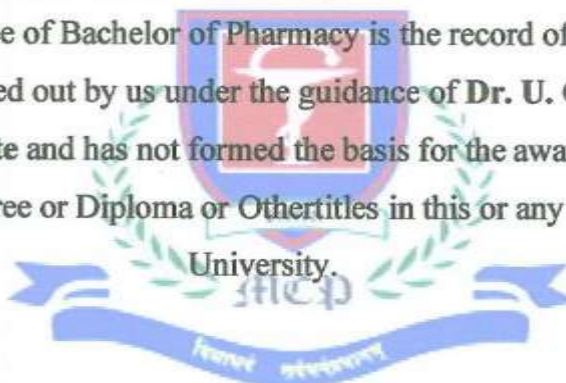


SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Ms. Sanjana Chhagan Dole, Ms. Ruchika Dayashankar Gupta and Ms. Manali Mahadev Majgaonkar declare that the thesis entitled, "Development of Ritonavir Co-crystals", submitted by us for degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of Dr. U. C. Galgatte and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.



Date: 2-06-23

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Place: Nigdi, Pune

Ms. Manali Majgaonkar - *Manali*



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Nigdi, Pune- 44




CERTIFICATE BY THE GUIDE

This is to certify that the thesis entitled, “**Development of Ritonavir Co-crystals**”, submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by Ms. Sanjana Dole, Ms. Ruchika Gupta and Ms. Manali Majgaonkar under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 2-06-23

Place: Nigdi, Pune



  
**Dr. U. C. Galgatte**  
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the partial research work for the dissertation entitled, "Development of Ritonavir Co-crystals" is a record of bonafide research work carried out by Ms. Sanjana C. Dole, Ms. Ruchika D. Gupta and Ms. Manali M. Majgaonkar under the guidance of **Dr. U. C. Galgatte** at P. E. S's Modern College of Pharmacy, Nigdi, Pune.

**Date:** 2-06-23

**Place:** Nigdi, Pune

  
**Dr. P. D. Chaudhari**  
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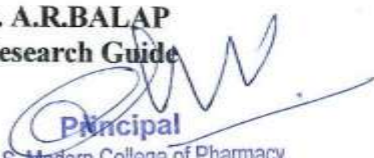
**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **FORMULATION, CHARACTERIZATION AND WOUND HEALING ACTIVITY OF GUAR GUM HYDROGEL LOADED WITH HONEY SILVER NANOPARTICLE** submitted under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-6-23  
Place: Pune

  
**Dr. A.R.BALAP**  
Research Guide



  
**Principal**  
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**Principal,**

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**Ex-Dean, Faculty of Pharmaceutical Sciences,**

**Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **FORMULATION, CHARACTERIZATION AND WOUND HEALING ACTIVITY OF GUAR GUM HYDROGEL LOADED WITH HONEY SILVER NANOPARTICLE** is a record of bonafide research work carried out by **Mr. Bhakare Harshal, Ms. Vaishali Chitta And Ms. Khushbhoo Choudhary** under the guidance of **DR. A.R. BALAP** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2021-2022.

**Date:** 10-6-23

**Place:** Nigdi, Pune

**Dr. P.D. Chaudhari**  
**Principal**



**Principal**  
**P. E. S. Modern College of Pharmacy**  
**Sector No.21, Yamunanagar, Nigdi,**  
**Pune - 411 044.**



**FORMULATION, CHARACTERIZATION AND  
WOUND HEALING ACTIVITY OF GUAR GUM  
HYDROGEL LOADED WITH HONEY SILVER  
NANOPARTICLE**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**




By  
**Mr. BHAKARE HARSHAL  
Ms. VAISHALI CHITTA  
Ms. KHUSHBHOO CHOUDHARY  
(B. Pharm.)**

Under the Guidance of  
**Dr. A.R.BALAP**  
(M. Pharm. PhD)  
Assistant Professor  
(Dept. of Pharmaceutical Chemistry)

**PROGRESSIVE EDUCATION SOCIETY'S  
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(2022-23)**



  
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Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Mr. Bhakare Harshal**, **Ms. Vaishali Chitta**, **Ms. Khushbhoo Choudhary** declare that the thesis entitled **"FORMULATION , CHARACTERIZATION AND WOUND HEALING ACTIVITY OF GUAR GUM HYDROGEL LOADED WITH HONEY SILVER NANOPARTICLE"** submitted by us under the guidance of **DR. A.R. BALAP** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 10-6-23  
Place: Pune

Mr. Bhakare Harshal   
Ms. Vaishali Chitta   
Ms. Khushbhoo Choudhary



Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**DEVELOPMENT AND EVALUATION OF ANTIFUNGAL  
TOPICAL CREAM INCLUDING CLIMBAZOLE AND  
CLOTRIMAZOLE**

Thesis submitted to  
**THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAIPHULE PUNE UNIVERSITY**



By

**Ms. SRISHTI JHA  
Ms. KAVERI GANJURE  
Ms. TEJASWINI BASATE  
(B. Pharm)**

Under the Guidance of  
**Dr. Nikita M. Gaikwad  
(M. Pharm, PhD)  
Associate Professor  
Department of Pharmaceutics**

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE-44  
(2022-23)**



  
**Principal**  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I Ms. Srishti Jha, Ms. Kaveri Ganjure and Ms. Tejaswini Basate declare that the thesis entitled **“DEVELOPMENT AND EVALUATION OF ANTIFUNGAL TOPICAL CREAM INCLUDING CLIMBAZOLE AND CLOTRIMAZOLE”** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. NIKITA M. GAIKWAD** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 03-06-2023

Place: Nigdi, Pune

  
Ms. Srishti Jha

  
Ms. Kaveri Ganjure

  
Ms. Tejaswini Basate



  
Principal  
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**Dr. NIKITA M. GAIKWAD**  
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Department of Pharmaceutics  
PES's Modern College of Pharmacy  
Nigdi, Pune-44


CERTIFICATE BY THE GUIDE

This is to certify that the thesis entitled **"DEVELOPMENT AND EVALUATION OF ANTIFUNGAL TOPICAL CREAM INCLUDING CLIMBAZOLE AND CLOTRIMAZOLE"** submitted for the degree of bachelor of pharmacy, is the record of research work carried out by Ms. Srishti Jha, Ms. Kaveri Ganjure and Ms. Tejaswini Basate under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 03-06-2023  
Place: Nigdi, Pune



  
**Dr. NIKITA M. GAIKWAD**  
Research guide

  
Principal  
PES's Modern College of Pharmacy  
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**Dr. P.D. CHAUDHARI**

Principal

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Nigdi, Pune-44

Ex. Dean, Faculty of Pharmaceutical sciences,  
Savitribai Phule Pune University, Pune

ENDORSEMENT BY PRINCIPLE

This is to certify that the partial research work for the dissertation entitled, **"DEVELOPMENT AND EVALUATION OF ANTIFUNGAL TOPICAL CREAM INCLUDING CLIMBAZOLE AND CLOTRIMAZOLE"** is a record of bonafide research work carried out by Ms. Srishti Jha, Ms. Kaveri Ganjure and Ms. Tejaswini Basate under the guidance of **Dr. NIKITA M. GAIKWAD** at PES's Modern College of Pharmacy Nigdi, Pune during the academic year 2022-23.

Date: 03-06-23

Place: Nigdi, Pune



**Dr. P.D. Chaudhari**

Principal

P. E. S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Nigdi  
Pune - 411 044.





**"FORMULATION AND EVALUATION OF HREBAL DERMAL  
PATCHES FOR DERMATOPHYTIC SKIN INFECTION"**

Project report submitted to

**The Faculty of  
PHARMACEUTICAL SCIENCE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Mr. Pavankumar Dattatraya Mare, Devesh Sunil Chaudhari**

**B. Pharm (Semester-VIII)**

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**Dr. P. D. Chaudhari (M. pharm Ph. D)**

**Department of Pharmaceutics**

**Dr. Padmaja Kore (M. pharm Ph. D)**

**Department of Pharmacology**



**Progressive Education Society's**

**Modern College of Pharmacy, Nigdi, Pune-44**

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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Mr Pavankumar Dattatraya Mare, Mr. Devesh sunil Chaudhari declared that the thesis entitled "Formulation and evaluation of herbal dermal patches for dermatophytic skin infection" submitted by us for the award of degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of by **Dr. P.D. Chaudhari(Guide)**, **Dr. Padmaja Kore(Co-Guide)** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.


Date: 2-6-2023

Place: Nigdi, Pune

  
Mr. Pavankumar Dattatraya Mare

  
Mr. Devesh Sunil Chaudhari



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044

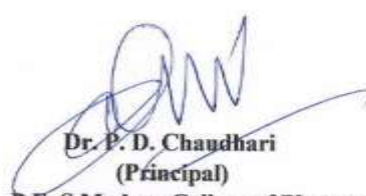


Progressive Education Society's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

Certificate by Guide

This is to certify that the thesis entitled, "Formulation and evaluation of herbal dermal patches Forr dermatophytic skin infection" submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Mr. Pavankumar Dattatraya Mare, Devesh Sunil Chaudhari** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 2-06-23  
Place : Nigdi Pune

  
**Dr. P. D. Chaudhari**  
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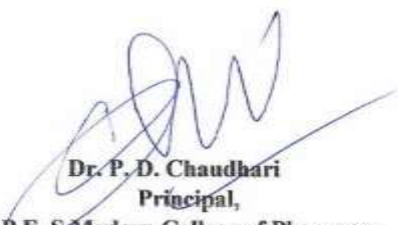


Progressive Education Society's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled "**Formulation and evaluation of herbal dermal patches for dermatophytic skin infection**" is a record of bonafide research work carried out **Mr. Pavankumar Dattatraya Mare, Devesh Sunil Chaudhari** under the guidance of **Dr.P.D Chaudhari(Guide), Dr Padmaja Kore(Co-Guide)** P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 2-06-23  
Place: Nigdi, PUNE

  
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Pune - 411 044.





**FORMULATION AND EVALUATION OF  
TANNIN CONTAINING CHEWING GUM FOR MOUTH  
ULCER**

Project Report Submitted to  
**THE FACULTY OF PHARMACEUTICAL  
SCIENCES SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE.**



By  
**Mr. RAMESHWAR SHIVRAJ BHALKE**  
B. Pharm (Semester VIII)  
In Partial Fulfillment of the  
Requirement for the Degree of  
**BACHELOR OF PHARMACY**

**UNDER THE GUIDANCE OF**  
**Dr. P.S. KORE** (M. Pharm, PhD)  
Associate professor  
(Dept of Pharmacology)  
&  
**Dr. U. S. Desai** (M. Pharm, PhD)  
Assistant professor  
(Dept of Pharmaceutics)



**DEPARTMENT OF PHARMACEUTICS**  
**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE  
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*[Signature]*  
**Principal**  
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Pune - 411 044.



(ACCREDITED BY NAAC)  
(2022 – 2023)  
**SAVITRIBAI PHULE PUNE UNIVERSITY**



**DECLARATION**

I Mr. RAMESHWAR S. BHALKE declare that the thesis entitled, "Formulation and evaluation of Tannin Containing Chewing Gum for Mouth Ulcer", submitted by me for degree of 'Bachelor of Pharmacy' is the record of work carried out by me under the guidance of Dr. P. S. Kore and Dr. U.S. Desai and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.



  
Principal

P. E. S. Modern College of Pharmacy  
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**P. E. Society's  
MODERN COLLEGE OF PHARMACY**

**Date:** **Mr. Rameshwar Bhalke**

**Place:**

**Nigdi, Pune-44.**



**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "**Formulation and evaluation of Tannin Containing Chewing Gum for Mouth Ulcer**", submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Rameshwar S. Bhalke** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Date:** 14-06-23

**Place:** pune



**Dr. P. S. Kore**  
(M. Pharm, PhD)

**Research Guide**

**Principal**

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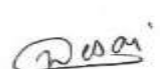
**CERTIFICATE BY THE CO-GUIDE**

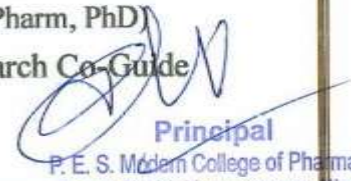
This is to certify that the thesis entitled, "Formulation and evaluation of Tannin Containing Chewing Gum for Mouth Ulcer", submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Rameshwar S. Bhalke** under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Date:** 14-06-23  
**Place:** Pune



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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and evaluation of Tannin Containing Chewing Gum for Mouth Ulcer" is a record of bonafide research work carried out by **Mr. Rameshwar S. Bhalke** under the guidance of **Dr. P. S. Kore** and CoGuidance of **Dr. U. S. Desai** at Modern College of Pharmacy, Nigdi, Pune-411044.

**Date:** 14-06-23

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**Dr. P. D. Chaudhari**

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**ACKNOWLEDGEMENT**

I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy **Dr. P. D. Chaudhari**, and my project guide Prof. **Dr. P.S. Kore & Dr. U.S. Desai** for extending her valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

I express my deep sense of gratitude towards my parents and my friend Kartik Yenpure for his constant support and valuable help throughout this work.




*[Signature]*  
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**Date:** 14-06-23      **Mr. Rameshwar Bhalke**  
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**“Development and Characterization of Novel Anti-acne  
Niosomal Gel”**

Thesis submitted to

THE FACULTY OF PHARMACEUTICAL SCIENCES

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

**Mr. Akshay Deo and Ms. Shraddha Jadhav**

(B. Pharmacy)

In partial fulfillment of the requirements for the degree of

Bachelor of Pharmacy

Under the Guidance of

**Dr. Anuradha G. More**

(M. Pharm, Ph.D.)

(Department of Pharmaceutics)

DEPARTMENT OF PHARMACEUTICS

PROGRESSIVE EDUCATION SOCIETY'S

MODERN COLLEGE OF PHARMACY NIGDI, PUNE

2022-2023

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### DECLARATION

We Mr. Akshay Deo and Ms. Shraddha Jadhav declare that the thesis entitled **“Development and Characterization of Novel Anti-acne Niosomal Gel”** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. Anuradha G. More** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date 10-6-23

Place: Nigdi, pune

Akshay Deo

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PES's MODERN COLLEGE OF PHARMACY

NIGDI, PUNE-44

(ACCREDITED BY NAAC)

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled,  
"Development and Characterization of Novel Anti-acne  
Niosomal Gel" submitted for the degree of **Bachelor of  
Pharmacy**, is the record of research work carried out by  
Mr. Akshay Deo and Ms. Shraddha Jadhav under my  
guidance and supervision and that this has not formed the  
basis for the award of any degree or diploma or other  
titles in this or any other University.

Date: 10-6-23

Dr. Anuradha G. More

Place: Pune

Associate Professor



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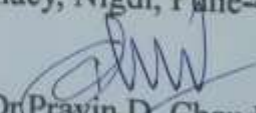
PES's MODERN COLLEGE OF PHARMACY  
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(ACCREDITED BY NAAC)

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled,  
"Development and Characterization of Novel Anti-acne  
Niosomal Gel" submitted for the degree of Bachelor of  
Pharmacy, is the record of bonafide research work  
carried out by Mr. Akshay Deo and Ms. Shraddha  
Jadhav under the guidance of Dr. Anuradha G. More at  
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**"FORMULATION, EVALUATION AND COMPARISON OF THE  
HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS"**

A PROJECT REPORT SUBMITTED TO  
THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Kaushal S. Gandhi**

**Nitesh R. Misal**

In partial fulfilment of the requirements for the degree of

**Bachelor of Pharmacy**

Under The Guidance Of

**Dr. Anuradha G. More**

(M. Pharm PhD.)

DEPARTMENT OF PHARMACEUTICS

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
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DECLARATION

We **Nitesh R. Misal** and **Kaushal S. Gandhi** declare that the thesis entitled "**FORMULATION, EVALUATION AND COMPARISON OF THE HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS**" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. Anuradha G. More** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE: 10-6-23

PLACE: Nigdi, Pune

Kaushal Gandhi

Nitesh Misal



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**Dr. P. D. Chaudhari**

**Principal**

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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled "FORMULATION, EVALUATION AND COMPARISON OF THE HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Mr. Kaushal S. Gandhi** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 10-6-23

**Place:** Nigdi, Pune

**Dr. P. D. Chaudhari**

**(Principal)**



**Principal**

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**CERTIFICATE BY THE CO-GUIDE**


This is to certify that the thesis entitled "FORMULATION, EVALUATION AND COMPARISON OF THE HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Mr. Kaushal S. Gandhi** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 10-6-23

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(Associate Professor)



  
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Associate Professor

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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled "**FORMULATION, EVALUATION AND COMPARISON OF THE HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS**" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Mr. Nitesh R. Misal** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the project report entitled, "FORMULATION, EVALUATION AND COMPARISON OF THE HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS" submitted for the degree of **Bachelor of Pharmacy**, is the record of bonafide research work carried out by **Mr. KAUSHAL S. GANDHI** and **Mr. NITESH R. MISAL** under the guidance of **Dr. P. D. Chaudhari** and **Dr. Anuradha G. More** at P.E.S's Modern College of Pharmacy, Nigdi, Pune-44.

Date 10-6-23

Place: Nigdi, Pune



**Dr. Pravin D. Chaudhari**

(Principal)

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**"Synthesis Of Schiff Base from Indole 3 Carbaldehyde"**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES**  
**SAVITRIBAI PHULE PUNE UNIVERSITY,**  
**PUNE**



By

**Miss.Sakshi Sunil Kudale**

**Mr.Vimaji Goradwar**

**Mr.Akshay Kalyan**  
**(B. Pharm )**

In partial fulfillment, of  
The requirements for the degree of  
**BACHELOR OF PHARMACY**  
**IN**  
**PHARMACEUTICAL CHEMISTRY**

**UNDER THE GUIDENCE OF**

**Dr. S.B.Jadhav**  
**( M. Pharm, ph.D )**  
**Associate Professor**  
• **(Dept. of Pharmaceutical Chemistry)**

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY**  
**PROGRESSIVE EDUCATION SOCIETY'S**  
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**NIGDI, PUNE – 44**

**(2022-23)**



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(BEST COLLEGE AWARDED BY SAVITRIBAI PHULE  
PUNE UNIVERSITY)

SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

We are Miss Sakshi Sunil Kudale , Mr. Vimaji Goradwar, Mr.Akshay Kalyan declare that the thesis entitled, "Synthesis Of Schiff Base from Indole 3 Carbaldehyde" submitted by me for Degree of Bacheolar of Pharmacy is the record of work carried out by me under the guidance of Dr.Shialaja B Jadhav has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 8/06/23

Miss Sakshi S Kudale *Sakshi*

Mr. Vimaji Goradwar *Vimaji*

Mr. Akshay Kalyan *Akshay*

Place: Nigdi, Pune



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**MODERN COLLEGE OF PHARMACY  
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(ACCREDITED BY NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "**Synthesis Of Schiff Base from Indole 3 Carbaldehyde**" submitted for degree of Bacheoler of Pharmacy, is the record of research work carried out by **Miss Sakshi Sunil Kudale , Mr. Vimaji Goradwar, Mr.Akshay Kalyan** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Place: Nigdi, Pune**



**Dr.Shailaja B Jadhav  
Research Guide**

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**(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, "**Synthesis Of Schiff Base from Indole 3 Carbaldehyde**" is a record of bonafide research work carried out by Miss Sakshi Sunil Kudale , Mr. Vimaji Goradwar, Mr.Akshay Kalyan under the guidance of **Dr.Shailaja B Jadhav** at Modern College of Pharmacy, Nigdi, and Pune-411044.

**Date:** 08-06-23

**Place:** Nigdi, Pune

**Dr. P. D. Chaudhari**  
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Pune - 411 044.



**“SYNTHESIS AND CHARACTERIZATION OF  $Fe_3O_4$  NANOPARTICLES”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Shravani Pandurang Agalave**

(B. Pharm)

UNDER THE GUIDANCE OF

**Dr. Minal Harde**

(Ph. D)

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
(2022-2023)

*(Accredited by NAAC and NBA)*



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Sector No.21, Yamunanagar, Nigdi,  
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### DECLARATION

I **SHRAVANI PANDURANG AGALAVE** declare that the thesis entitled "**Synthesis and characterization of Fe<sub>3</sub>O<sub>4</sub> Nanoparticles**" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. Minal Harde** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**DATE :** 08-06-23

**PLACE:** Pune  
**Pandurang Agalave**

*Sh. Agalave*  
**Shravani**



*[Signature]*  
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**Dr. Minal Harde**

Assistant Professor

Department of Pharmaceutical chemistry

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled "**Synthesis and characterization of Fe<sub>3</sub>O<sub>4</sub> nanoparticles**" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by Ms. Shravani Pandurang Agalave under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.


**Date:** -08-06-23

**Place:** pune



  
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**(Assistant Professor)**

  
**Principal**  
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**Dr. P. D. Chaudhari**

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**P.E. S Modern College of Pharmacy**  
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**Ex-Deans, Faculty of Pharmaceutical Sciences**

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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Ms. Shravani Pandurang Agalave “**Synthesis and characterization of Fe<sub>3</sub>O<sub>4</sub> nanoparticles**” and under the guidance of Dr. Minal Harde at P.E.S Modern College of Pharmacy Nigdi, Pune

**Date:** 08-06-23  
**Place:** pune



**Dr. P. D. Chaudhari**  
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**Principal**  
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Pune - 411 044.



**“SYNTHESIS AND EVALUATION OF IRON OXIDE  
NANOPARTICLES”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE.



Submitted by

**AJAY JAGANNATH DHAPATE**

(B. Pharm)

UNDER THE GUIDANCE OF

**Dr. Minal Harde**

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DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

Progressive Education Society's Modern College of Pharmacy,

Nigdi, Pune (2022-2023)

(Accredited by NAAC and NBA)



  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I Ajay Jagannath Dhapate declare that the thesis entitled **"SYNTHESIS AND EVALUATION OF IRON OXIDE NANOPARTICLES"** submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **Dr. Minal Harde** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**DATE:** 10-6-23

**PLACE:** pune

*Ajay*

**Ajay Dhapate**



*[Signature]*  
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**PES's Modern College of Pharmacy Nigdi, Pune-44**

**(Accredited by NAAC and NBA)**

**Dr. Minal Harde**

Assistant Professor

Department of Pharmaceutics

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled **"SYNTHESIS AND EVALUATION OF IRON OXIDE NANOPARTICLES"** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Ajay Dhapate under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 10-6-23

**Place:** pune

**Dr. Minal Harde**

**(Assistant Professor)**



**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**P.E.S Modern college of pharmacy, Nigdi, Pune-44**  
(Accredited by NAAC and NBA)

**Dr. P. D. Chaudhari**

**Principal**

**P.E. S Modern College of Pharmacy**  
**Nigdi, Pune – 44**

**Ex-Deans, Faculty of Pharmaceutical Sciences**  
**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Mr. Ajay Dhapate “SYNTHESIS AND EVALUATION OF IRON OXIDE NANOPARTICLES” and under the guidance of Dr. Minal Harde at P.E.S Modern College of Pharmacy Nigdi, Pune.

**Date:** 10-06-23

**Place:** pune



**Dr. P.D. Chaudhari**  
(Principal)

**Principal**  
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**"SYNTHESIS, CHARACTERISATION AND  
APPLICATION OF IRON OXIDE NANOPARTICLES "**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Truptee Hiralal Banakar**

(B. Pharm)

UNDER THE GUIDANCE OF

**Dr. Minal Harde**

(M. Pharm)

DEPARTMENT OF PHARMACEUTICAL CHEMISTRY

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(Accredited by NAAC and NBA)



  
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SAVITRIBAI PHULE PUNE UNIVERSITY



S

### DECLARATION

I Truptee Hiralal Banakar declare that the thesis entitled “**Synthesis, Characterisation and Application of Iron Oxide Nanoparticles**” submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **Dr. Minal Harde** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE : 14-06-23

PLACE: pune

*H Banakar*

Truptee Banakar



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**CERTIFICATE BY THE GUIDE**


This is to certify that the thesis entitled "**Synthesis, Characterisation and Application of Iron Oxide Nanoparticles**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by Ms. Truptee Banakar under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14-06-23

Place: Pune



  
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**Dr. P. D. Chaudhari**

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**Place:** pune



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**“Develop and Validate HPTLC method for  
determination of Antidepressants drug in bulk form”**

Thesis submitted to  
The Faculty of  
**PHARMACEUTICAL SCIENCE**  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

Mr. Rahul Andhale  
Ms. Shruti Bajare  
Ms. Sneha Hojage  
(B. Pharm)

In partial fulfillment of the requirements for the degree of

Bachelor of Pharmacy

Under the Guidance of

**Dr. Pallavi M. Patil**

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DECLARATION

I am Mr. Rahul Andhale, Ms. Shruti Sanjay, Ms. Sneha Hojage declared that the thesis entitled "Develop and Validate HPTLC method for determination of Antidepressants drug in bulk form" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of Dr. Pallavi M. Patil and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Place: Nigdi, Pune

Date: 14/6/2023



Mr. Rahul Andhale  
  
Ms. Shruti Bajare  
  
Ms. Sneha Hojage



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**Certificate by the Guide**

This is to certify that the thesis entitled, "**Develop and Validate HPTLC method for determination of Antidepressants drug in bulk form**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Rahul Andhale, Ms. Shruti Bajare, Ms. Sneha Hojage under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Place: Nigdi, Pune

Date: 14/6/2023

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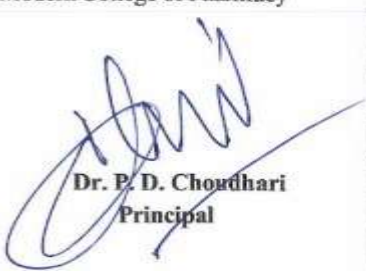
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**Endorsement by the Principal**


This is to certify that the partial research work for the dissertation entitled “Develop and Validate HPTLC method for determination of Antidepressants drug in bulk form” is a record of bonafide research work carried out by Mr. Rahul Andhale, Ms. Shruti Bajare, Ms. Sneha Hojage under the guidance of Dr. Pallavi M. Patil at P.E.S Modern College of Pharmacy Nigdi, Pune.

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**ACKNOWLEDGEMENT:**

I am thankful to Dr. P. D. Chaudhari, Principal of Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy **Dr. P. D. Chaudhari**, and my project guide **Dr. Pallavi M. Patil** for extending their valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

I express my deep sense of gratitude towards my parents and my all friends for their trust, love and support throughout this work.

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**“EXTRACTION, ISOLATION AND EVALUATION OF  
LAWSONE FROM LAWSONIA INERMIS EXTRACT  
AND MARKETED FORMULATION BY HPTLC”**

**Thesis submitted to  
THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**MR. TEJAS BHIMRAO ANANDKAR**

**(B. Pharm)**

In partial fulfillment of,  
The requirements for the degree of  
**Bachelor of Pharmacy**

**Under the Guidance of**

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**“EXTRACTION, ISOLATION AND EVALUATION OF  
QUININE SULPHATE FROM EXTRACT AND  
MARKETED FORMULATION BY HPTLC”**

Thesis submitted to  
**THE FACULTY OF  
PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

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In partial fulfillment of,  
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**Under the Guidance of**

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DECLARATION

I am **MISS.SHIVANI APPASAHEB DIGHE** declare that the thesis entitled **“EXTRACTION, ISOLATION AND EVALUATION OF QUININE SULPHATE FROM EXTRACT AND MARKETING FORMULATION BY HPTLC”** submitted by me for degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **DR. AMIT S. TAPKIR** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization



Date: 10-6-23  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"EXTRACTION, ISOLATION AND EVALUATION OF QUININE SULPHATE FROM EXTRACT AND MARKETING FORMULATION BY HPTLC"** submitted for degree of Bachelor of Pharmacy (Pharmaceutical chemistry) is the record of research work carried out by **MISS. SHIVANI APPASAHEB DIGHE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-6-23  
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Date: 10-6-23  
Place: Nigdi, Pune



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Principal

Principal

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**“EXTRACTION, ISOLATION AND EVALUATION OF  
CALCIUM SENNOSIDE FROM CASSIA  
ANGUSTIFOLIA EXTRACT AND MARKETING  
FORMULATION BY HPTLC”**

**Thesis submitted to  
THE FACULTY OF  
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SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

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In partial fulfillment of,  
The requirements for the degree of  
**Bachelor of Pharmacy**


**Under the Guidance of  
DR. AMIT S. TAPKIR  
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Associate Professor**

**DEPARTMENT OF PHARMACEUTICAL  
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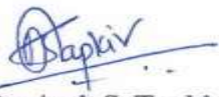
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Date: 14-06-23  
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**ENDORSEMENT BY THE PRINCIPAL**

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CALCIUM SENNOSIDE FROM CASSIA  
ANGUSTIFOLIA EXTRACT AND MARKETING  
FORMULATION BY HPTLC"** For **BACHELOR OF  
PHARMACY (PHARMACEUTICAL CHEMISTRY)** is a  
record of bonafide research work carried out by **MR.  
HARSHAL SANJAY JAGTAP** under the guidance of **DR.  
AMIT S. TAPKIR** at P.E.S. Modern College of Pharmacy,  
Nigdi, Pune-44 during the academic year 2022-2023.

Date: 14-06-23  
Place: Nigdi, Pune



**Dr. P. D. Chaudhari**  
Principal

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P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
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**“DESIGN, SYNTHESIS AND EVALUATION OF SOME  
MAO-B INHIBITORS AS ANTI-ALZHEIMER’S  
AGENTS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**Mr. ABHISHEK BHAU MASKARE**  
(B. Pharm)


In partial fulfillment, of  
The requirements for the degree of  
**BACHELORS OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

UNDER THE GUIDENCE OF  
**Mr. SOMDATTA Y. CHAUDHARI**  
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**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY  
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### DECLARATION

I am **Mr. ABHISHEK BHAU MASKARE** declare that the thesis entitled, "**DESIGN, SYNTHESIS AND EVALUATION OF SOME MAO-B INHIBITORS AS ANTI-ALZHEIMER'S AGENTS**" submitted by me for Degree of Bachelors of pharmacy is the record of work carried out by me under the guidance of **Mr. SOMDATTA Y. CHAUDHARI** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 2-6-23

  
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This is to certify that the thesis entitled, "**DESIGN, SYNTHESIS AND EVALUATION OF SOME MAO-B INHIBITORS AS ANTI-ALZHEIMER'S AGENTS**" submitted for degree of Bachelors of Pharmacy, is the record of research work carried out by **Mr. ABHISHEK B. MASKARE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 2-6-23  
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles, “**DESIGN, SYNTHESIS AND EVALUATION OF SOME MAO-B INHIBITORS AS ANTI-ALZHEIMER'S AGENTS**” is a record of bonafide research work carried out by **Mr. ABHISHEK B. MASKARE** under the guidance of **Mr. SOMDATTA Y. CHAUDHARI** at Modern College of Pharmacy, Nigdi, and Pune-411044.

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**“DESIGN, SYNTHESIS AND EVALUATION OF SOME  
NMDA RECEPTOR ANTAGONISTS AS ANTI-  
ALZHEIMER’S AGENTS”**

Thesis submitted to  
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RECEPTOR ANTAGONISTS AS ANTI-ALZHEIMER'S  
AGENTS**” submitted by me for Degree of Bachelors of pharmacy is the  
record of work carried out by me under the guidance of **Mr.  
SOMDATTA Y. CHAUDHARI** has not formed the basis for the award  
of any degree or diploma or other titles in this or any other University.

Date: 10-6-23

<sup>Pooja</sup>  
Ms. POOJA R. CHAVAN

Place: Nigdi, Pune



  
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**MODERN COLLEGE OF PHARMACY  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **"DESIGN, SYNTHESIS AND EVALUATION OF SOME NMDA RECEPTOR ANTAGONISTS AS ANTI-ALZHEIMER'S AGENTS"** submitted for degree of Bachelors of Pharmacy, is the record of research work carried out by **Ms. POOJA R. CHAVAN** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 10-6-23  
Place: Nigdi, Pune



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(ACCREDITED BY NAAC)**

**ENDORSEMENT BY THE PRINCIPAL**

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Date: 10-6-23  
Place: Nigdi, Pune



**Dr. P. D. Chaudhari**  
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**“DESIGN, SYNTHESIS AND EVALUATION OF SOME  
GSK-3 BETA INHIBITORS AS ANTI-ALZHEIMER’S  
AGENTS”**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**Ms. PRATIKSHA BALAJI KONDAWAR**  
(B. Pharm)

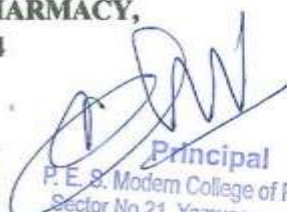
In partial fulfillment, of  
The requirements for the degree of  
**BACHELORS OF PHARMACY  
IN  
PHARMACEUTICAL CHEMISTRY**

UNDER THE GUIDENCE OF  
**Mr. SOMDATTA Y. CHAUDHARI**  
( M. Pharm )

Assistant Professor (Dept. of Pharmaceutical Chemistry)

**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY  
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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION


I am **Ms. PRATIKSHA BALAJI KONDAWAR** declare that the thesis entitled, "**DESIGN, SYNTHESIS AND EVALUATION OF SOME GSK-3 BETA INHIBITORS AS ANTI-ALZHEIMER'S AGENTS**" submitted by me for Degree of Bachelors of pharmacy is the record of work carried out by me under the guidance of **Mr. SOMDATTA Y. CHAUDHARI** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 14-06-23

  
Ms. Pratiksha.B.Kondawar

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**ENDORSEMENT BY THE PRINCIPAL**

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**Date: 14-6-23**  
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**“EVALUATING THE EFFECT OF FRUCTOSE-  
INDUCED NAFLD ON PHYSICOCHEMICAL  
PARAMETERS IN RATS”**

Final Year B-Pharm Project Report Submitted to

**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Mr. Prathamesh Badhe, Ms. Bhagirathi Bhale  
and Ms. Sampada Kulkarni**

Under the Guidance of

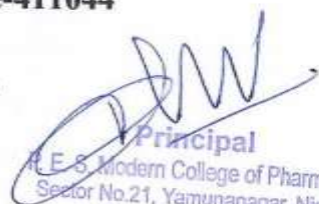
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**Progressive Education Society's Modern College of  
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**DECLARATION**

We are Mr.Prathamesh Badhe, Ms.Bhagirathi Bhale and Ms.Sampada Kulkarni declare that the thesis entitled "Evaluating the Effect of Fructose-induced NAFLD on Physicochemical Parameters in Rats" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr.D.D. BANDAWANE** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 2/6/23

Place: Nigdi, Pune

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**Certificate by the Guide**

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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the project report entitled, "FORMULATION, EVALUATION AND COMPARISON OF THE HERBAL SHAMPOO WITH THE COMMERCIAL SHAMPOOS" submitted for the degree of **Bachelor of Pharmacy**, is the record of bonafide research work carried out by **Mr. KAUSHAL S. GANDHI** and **Mr. NITESH R. MISAL** under the guidance of **Dr. P. D. Chaudhari** and **Dr. Anuradha G. More** at P.E.S's Modern College of Pharmacy, Nigdi, Pune-44.

Date 10-6-23

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**Principal**

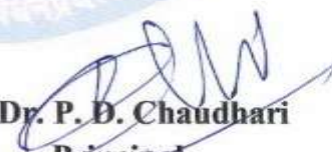
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**Ex-Deans, Faculty of Pharmaceutical Sciences,**  
**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“Evaluating the effect of fructose-induced NAFLD on physicochemical parameters in rats”** is a record of bonafide research work carried out by Mr. Prathamesh Badhe, Ms. Bhagirathi Bhale and Ms. Sampada Kulkarni under the guidance of Dr. D.D. Bandawane at P.E.S Modern College of Pharmacy, Nigdi, Pune.

**Date:** 2 / 6 / 23  
**Place:** Nigdi, PUNE

  
**Dr. P. D. Chaudhari**  
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**“TO STUDY THE EFFECT OF CEDRUS DEODORA  
(CEDARWOOD) ESSENTIAL OIL ON WOUND HEALING IN  
EXPERIMENTAL ANIMALS.”**

Project report submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**




By  
**MISS. SHRADDHA ANIL AHIRRAO**  
(B. Pharm) Sem-VIII

UNDER THE GUIDENCE OF  
**DR. SONALI S. NIPATE**  
(M. Pharm,Phd)  
Associate Professor (Dept. of Pharmacology)

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### DECLARATION

I, Miss. Shraddha Anil Ahirrao, declare that the thesis entitled, "TO STUDY THE EFFECT OF CEDRUS DEODORA (CEDARWOOD) ESSENTIAL OIL ON WOUND HEALING IN EXPERIMENTAL ANIMALS." submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of Dr. Sonali S. Nipate and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/06/23

Place: Nigdi, Pune



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**Date:** 14/06/23  
**Place:** Nigdi, Pune



**Dr. Sonali S. Nipate**  
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**Dr. P. D. Chaudhari**  
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## ACKNOWLEDGEMENT

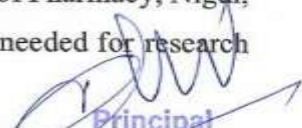
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**Principal**  
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I am grateful to my friends **Akash, Ankush, Vinod, Akanksha** who helped me directly or indirectly in the successful completion of project.

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Nothing can resist a determined will, and without an intense desire to succeed, I will be always thankful to the Almighty GOD for giving me the strength, will and wisdom to carry out the project successfully.

Date: 14/06/23

  
Miss. Shraddha Anil Ahirrao



  
Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
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**“TO STUDY THE EFFECT OF ROYAL JELLY DERIVED  
FROM APIS MELLIFERA AND MELALEUCA OIL (TEA TREE  
OIL).”**

Project report submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**




By  
**Mr. AKASH NARESH JIWNANI**  
(B. Pharm) Sem-VIII

UNDER THE GUIDENCE OF  
**DR. SONALI S. NIPATE**  
(M. Pharm,Phd)  
Associate Professor (Dept. of Pharmacology)

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### DECLARATION


I, Mr. Akash Naresh Jiwnani, declare that the thesis entitled, "TO STUDY THE EFFECT OF ROYAL JELLY DERIVED FROM APIS MELLIFERA AND MELALEUCA OIL (TEA TREE OIL)." submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of Dr. Sonali S. Nipate and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/06/23

Place: Nigdi, Pune

  
Mr. Akash Naresh Jiwnani



  
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Date: 14/06/23  
Place: Nigdi, Pune



  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

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## ACKNOWLEDGEMENT

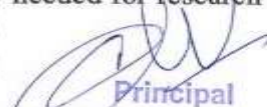
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**Mr. Akash Naresh Jiwnani**



  
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**“EVALUATION OF WOUND HEALING ACTIVITY OF  
ETHANOLIC EXTRACT OF SACCHARUM OFFICINARUM  
LEAVES IN EXPERIMENTAL ANIMALS”**

Project report submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**Mr. ANKUSH LAXMAN CHAVHAN**  
(B. Pharm) Sem-VIII

UNDER THE GUIDANCE OF  
**DR. SONALI S. NIPATE**  
(M. Pharm, PhD)  
Associate Professor (Dept. of Pharmacology)

**PROGRESSIVE EDUCATION SOCIETY'S  
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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

I, **Mr. Ankush Laxman Chavhan**, declare that the thesis entitled, "EVALUATION OF WOUND HEALING ACTIVITY OF ETHANOLIC EXTRACT OF SACCHARUM OFFICINARUM LEAVES IN EXPERIMENTAL ANIMALS." submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sonali S. Nipate** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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Place: Nigdi, Pune

  
Mr. Ankush Laxman Chavhan



  
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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "EVALUATION OF WOUND HEALING ACTIVITY OF ETHANOLIC EXTRACT OF SACCHARUM OFFICINARUM LEAVES IN EXPERIMENTAL ANIMALS." submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Mr. Ankush Laxman Chavhan** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-6-23  
Place: Nigdi, Pune



  
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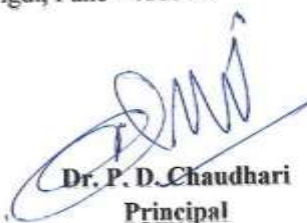
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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitles "EVALUATION OF WOUND HEALING ACTIVITY OF ETHANOLIC EXTRACT OF SACCHARUM OFFICINARUM LEAVES IN EXPERIMENTAL ANIMALS." is a record of bonafide research work carried out by **Mr. Ankush Laxman Chavhan** under the guidance of **Dr. Sonali S. Nipate** at Modern College of Pharmacy, Nigdi, Pune - 411044.

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## ACKNOWLEDGEMENT


It is a moment of gratification and pride to look back with a sense of contentment at the long-travelled path, to be able to recapture some of the fine moments, there are too many people who helped lead me here and supported me.

I dedicated this thesis to my family.

First of all, I take this opportunity to express my heart- felt & deep sense of gratitude with sincerity to my esteemed Research Guide **Dr. Sonali S. Nipate** Associate Professor Department of Pharmacology at P.E.S. Modern College of Pharmacy, Nigdi, Pune; for her constant help, support, encouragement and valuable suggestions throughout project work. I am very much thankful for her unflinching support, affection, which helped me a lot in exploring my abilities. She supported me at each and every step of the research work. I must say thanks for her patience and courage to help me out throughout the project and providing good environment for the research work. And made it possible for me to carry out the present work which otherwise, would have been very difficult. It was my luck to get an opportunity to work under her guidance. Thank you, Ma'am!

I express my sincere thanks to **Dr. Praveen D. Chaudhari**, Principal, P.E. Society's Modern College of Pharmacy, Nigdi, Pune, for making available every facility needed for research work.



  
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I would like to thank all teaching and non-teaching staff of P.E. Society's Modern College of Pharmacy, Nigdi, Pune for their help to complete my project work successfully.

I am grateful to my friends **Shraddha, Akash, Vinod, Akanksha** who helped me directly or indirectly in the successful completion of project.

My deepest gratitude goes to my family for their unflagging love and support throughout my life; this dissertation is simply impossible without them.

Nothing can resist a determined will, and without an intense desire to succeed, I will be always thankful to the Almighty GOD for giving me the strength, will and wisdom to carry out the project successfully.

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**"FORMULATION AND EVALUATION OF HERBAL SHAMPOO"**

Project report submitted

The Faculty of  
PHARMACOGNOSY  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

Mr. Siddhant F. Gaikwad

Mr. Milind G. Dyagatwar

Ms. Vanita R. Bhurkunde

B. Pharm (Semester-VIII)

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**Dr. M. C. Kuchekar**

(Associate professor)

**Dr. Bhushan Pimple**

Head of Department

Department of Pharmacognosy



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DECLARATION

I am **Mr. Siddhant F. Gaikwad**, **Mr. Milind G. Dyagatwar**, **Ms. Vanita R. Bhurkunde** declared that the thesis entitled "**Formulation and evaluation of herbal shampoo**" submitted by me for the award of degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of by **Dr. M. C. Kuchekar** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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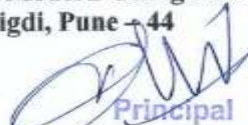
Certificate by Guide

This is to certify that the thesis entitled, "Formulation and evaluation of herbal shampoo" submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Mr. Siddhant F. Gaikwad, Mr. Milind G. Dyagatwar, Ms. Vanita R. Bhurkunde** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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Endorsement by the Principal

This is to certify that the partial research work for the dissertation entitled "**Formulation and evaluation of herbal shampoo**" is a record of bonafide research work carried out **Mr. Siddhant F. Gaikwad Mr. Milind G. Dyagatwar, Ms. Vanita R. Bhurkunde** under the guidance of , Dr. Kuchekar M.C P.E.S Modern College of Pharmacy Nigdi, Pune.

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### ACKNOWLEDGEMENT

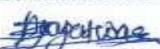
I am thankful to Dr. P. D. Chaudhari, Principal of PES's Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Dr. M.C. Kuchekar for extending his valuable guidance, instructions and timely support without which this project would not have assumed its shape.


I would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

Date : 2-6-23

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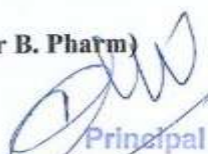
  
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**“FORMULATION AND EVALUATION OF HREBAL LOTION ”**

Project report submitted to

The Faculty of  
**PHARMACEUTICAL SCIENCE**  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

**Mr. Vikas Gangadhar Kurulekar**  
**B. Pharm (Semester-VIII)**

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**  
Under the Guidance of


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**Dr. Mohini Kuchekar (M. pharm Ph. D)**  
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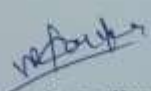
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**DECLARATION**

We are Vikas Gangadhar Kurulekar declared that the thesis entitled "Formulation and evaluation of herbal lotion" submitted by us for the award of degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of by **Dr. P.D. Chaudhari(Guide)**, **Dr. Mohini Kuchekar(Co-Guide)** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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Place: Nigdi, Pune



  
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**Endorsement by the Principal**

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**“Chemical fingerprinting and antimicrobial activity of  
selected medicinal herb and its ayurvedic formulation”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

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(B. Pharm)

UNDER THE GUIDANCE OF

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(M.Pharm PhD)


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DECLARATION

We Anuj Gaikwad and Guruprasad Chavan declare that the thesis entitled "**Chemical fingerprinting and antimicrobial activity of selected medicinal herb and its ayurvedic formulation**" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. Kalyani S. Kakad** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university

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**CERTIFICATE BY THE GUIDE**

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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Mr. Anuj Gaikwad and Mr. Guruprasad Chavan "**Chemical fingerprinting and antimicrobial activity of selected medicinal herb and its ayurvedic formulation**" and under the guidance of Dr. Kalyani S. Kakad at PES,s Modern College of Pharmacy Nigdi, Pune 44

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### **ACKNOWLEDGEMENT:**


The Almighty has been bestowing us with his blessing throughout our life. We thank from bottom of our heart for all that he has done for us and our friends. We are his disciples. Words are few to express the feeling of thanks and gratitude to the following persons.

We would like to grab the opportunity to thank our research guide Dr. Kalyani S. Kakad, Department of Pharmacognosy, Modern College of Pharmacy, Nigdi, Pune for her immense support for the project. Mam you have been a great support for us, enlightening my path of education and knowledge. Thanks for your unparallel and excellent guidance continuous encouragement for our project.

With a deep sense of gratitude and respect, we sincerely thank our esteemed principal Dr.P.D.Chaudhari sir, M.Pharm ,Dean, Faculty of Pharmaceutical Sciences, University of Pune, for his inestimable support, valuable suggestions and constant encouragement during the course of this study. Continuous help, friendly affection, and constant source of inspiration during my project work.

We sincerely acknowledge the timely help rendered to us by all my colleagues during the course of my work.




  
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We sincerely thank the librarian Mrs. Yadav Madam and Mr. Rajendra Chaudhari Sir. for providing us library facilities and their untiring and really appreciable help in our project.

We are completely short of words in describing the everlasting love and encouragement of our mother and father for their sincere inspiration throughout our research work and lifting us uphill in this phase of our life, we owed everything to them. Besides this, several people have knowingly and unknowingly helped us in the successful completion of the project. It was the blessing of all of them that gave us courage to face the challenges and make our path easier.



  
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**“A review on Therapeutic potentials of *Bergenia Ligulata* wall”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
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Submitted by  
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UNDER THE GUIDANCE OF

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DEPARTMENT OF PHARMACOGNOSY

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**Ex-Deans, Faculty of Pharmaceutical Sciences**  
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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Mr. Hrushikesh Ladkat "A review on therapeutic potentials of *Bergenia ligulate wall*" and under the guidance of Dr. Kalyani S. Kakad at PES,s Modern College of Pharmacy Nigdi, Pune 44

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**“Formulation and Evaluation of lozenges from  
Citron fruits”**

**Thesis submitted to  
THE FACULTY OF  
SCIENCE AND TECHNOLOGY  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**MR. ABHISHEK A. MORE**

**(B. Pharm)**

In partial fulfillment of,  
The requirements for the degree of  
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**Under the Guidance of  
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DECLARATION

I am **MR. ABHISHEK A. MORE** declare that the thesis entitled **"FORMULATION AND EVALUATION OF LOZENGES FROM CITRON FRUITS"** submitted by me for degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **DR. VITTHAL V. CHOPADE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

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This is to certify that the research work presented in this thesis entitled, **"FORMULATION AND EVALUATION OF LOZENGES FROM CITRON FRUITS"** submitted for degree of Bachelor of Pharmacy (Pharmacognosy) is the record of research work carried out by **MR. ABHISHEK A. MORE** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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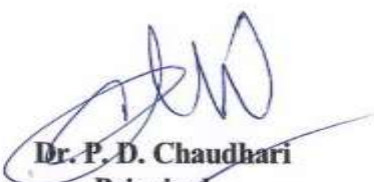
**Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.**

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled,  
**"FORMULATION AND EVALUATION OF LOZENGES  
FROM CITRON FRUITS"** For **BACHELOR OF  
PHARMACY (PHARMACOGNOSY)** is a record of bonafide  
research work carried out by **MR. ABHISHEK A. MORE**  
under the guidance of **DR. VITTHAL V. CHOPADE** at P.E.S.  
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**Pune - 411 044.**





**“Formulation and Evaluation of Syrup from  
Citron fruits”**

**Thesis submitted to  
THE FACULTY OF  
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By

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In partial fulfillment of,  
The requirements for the degree of  
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**Under the Guidance of  
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DECLARATION

I am **MR. PUSHKAR B. KARANDE PATIL** declare that the thesis entitled **"FORMULATION AND EVALUATION OF SYRUP FROM CITRON FRUITS"** submitted by me for degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **DR. VITTHAL V. CHOPADE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization

Date: 14/06/2023  
Place: Nigdi, Pune

  
**MR. PUSHKAR B. KARANDE PATIL**



  
**Principal**  
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PES's, MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44  
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**DR. VITTHAL V. CHOPADE**


Associate Professor,  
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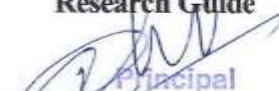
**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **“FORMULATION AND EVALUATION OF SYRUP FROM CITRON FRUITS”** submitted for degree of Bachelor of Pharmacy (Pharmacognosy) is the record of research work carried out by **MR. PUSHKAR B. KARANDE PATIL** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/06/2023  
Place: Nigdi, Pune



  
Dr. Vitthal V. Chopade  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled,  
**"FORMULATION AND EVALUATION OF SYRUP  
FROM CITRON FRUITS"** For **BACHELOR OF  
PHARMACY (PHARMACOGNOSY)** is a record of bonafide  
research work carried out by **MR. PUSHKAR B. KARANDE  
PATIL** under the guidance of **DR. VITTHAL V. CHOPADE**  
at P.E.S. Modern College of Pharmacy, Nigdi, Pune-44 during  
the academic year 2022-2023.

Date: 14/06/2023

Place: Nigdi, Pune

  
**Dr. P. D. Chaudhari**  
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**“ Pharmacognosy Study of Citron Fruits”**

**Thesis submitted to  
THE FACULTY OF  
SCIENCE AND TECHNOLOGY  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**MR. Jayesh R. Jaiswal  
(B. Pharm)**

In partial fulfillment of,  
The requirements for the degree of  
**Bachelor of Pharmacy**


**Under the Guidance of  
DR. VITTHAL V. CHOPADE**

Associate Professor

**DEPARTMENT OF PHARMACEUTICAL  
CHEMISTRY**

**PROGRESSIVE EDUCATION SOCIETY'S  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **MR. JAYESH R. JAISWAL** declare that the thesis entitled “ **Pharmacognosy Study of Citron Fruits** ” submitted by me for degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **DR. VITTHAL V. CHOPADE** has not formed the basis for the award of any degree or diploma or other titles in this or any other university/organization



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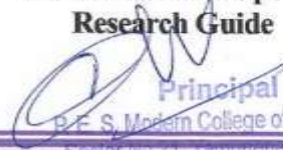
**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled, **"Pharmacognosy Study of Citron Fruits"** submitted for degree of Bachelor of Pharmacy (Pharmacognosy) is the record of research work carried out by **MR. JAYESH R. JAISWAL** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-6-23  
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Ex-Dean, Faculty of Pharmaceutical Sciences,

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ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled,  
**"Pharmacognosy Study of Citron Fruits"** For  
**BACHELOR OF PHARMACY (PHARMACOGNOSY)** is a  
record of bonafide research work carried out by **MR. JAYESH  
R. JAISWAL** under the guidance of **DR. VITTHAL V.  
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Date: 10-6-23  
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Dr. P. D. Chaudhari  
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**"Formulation and evaluation of polyphenolic tablets"**

**Thesis submitted to**

**The Faculty of**

**PHARMACOGNOSY DEPARTMENT**

**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



**By**

**Ms. Rutuja Vitthal Deshmukh (B. Pharm)**

**In partial fulfillment of the requirements for the degree**

**of**

**Bachelor of Pharmacy**

**Under the Guidance of**

**Dr. Bhushan Pimple(PhD)**

**Head of**

**Department**

**DEPARTMENT OF PHARMACOGNOSY**

**Progressive Education Society's Modern College of**

**Pharmacy, Nigdi, Pune (2022-2023)**

**(Accredited by NAAC and NBA)**



  
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DECLARATION

We are Ms. Rutuja Deshmukh declared that the thesis entitled "formulation and evaluation of polyphenolic tablets" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. BHUSHAN PIMPLE** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 8/6/2023

  
MS. Rutuja Deshmukh

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**Certificate by the Guide**

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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled "formulation and evaluation of polyphenolic tablets" is a record of bonafide research work carried out by Mr.Rutuja Deshmukh under the guidance of Dr.Bhushan Pimple at P.E.S Modern College of Pharmacy Nigdi, Pune.

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**Place: Nigdi, PUNE**

**Dr. P. D. Chaudhari**  
**Principal**



**Principal**  
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**Sector No.21, Yamunanagar, Nigdi,**  
**Pune - 411 044.**





**“FORMULATION AND EVALUATION OF HERBAL  
POLYPHENOLICTABLET”**

Project report submitted to

The faculty of  
**PHARMACOGNOSY**  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

**Mr. Ganesh Muktanna Kudke**  
Final Yr. B. Pharm (Semester-VIII)

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**Dr. Bhushan Pimple(M. Pharm, PhD)**


Head of Department

(Pharmacognosy)



**Progressive Education Society's**  
**Modern College of Pharmacy, Nigdi, Pune-44**  
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DECLARATION

I am Mr. Ganesh Muktanna Kudke declared that the thesis entitled "**Formulation and Evaluation Of Herbal Polyphenolic Tablet**" submitted by us for the award of degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of by **Dr. Bhushan Pimple (Guide)** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10/6/2023

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Mr. Ganesh Muktanna Kudke



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Progressive Education Society's Modern College of Pharmacy  
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Certificate by Guide

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Date: 10/06/2023  
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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled "**Formulation and Evaluation Of Herbal Polyphenolic Tablet**" is a record of bonafide research work carried out **Mr. Ganesh Muktanna Kudke** under the guidance of **Dr. Bhushan Pimple** (Guide), P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 10-06-2023  
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**Dr. P. D. Chaudhari**  
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#### ACKNOWLEDGEMENT

I am thankful to Dr. P. D. Chaudhari, Principal of PES's Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Dr. Bhushan Pimple for extending his valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

Date: 10-6-2023

Place: Nigdi, Pune

Mr. Ganesh Muktanna Kudke  
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Principal  
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Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Formulation And Evaluation of Herbal Hair Oil**

Project submitted to  
**THE FACULTY OF PHARMACOGNOSY  
SAVITRIBAI PHULE PUNE  
UNIVERSITY, PUNE.**



By  
**Pravin Bahir**

**UNDER THE GUIDANCE OF  
Dr. Bhushan Pimple**

**DEPARTMENT OF PHARMACOGNOSY**

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE - 44.  
(ACCREDITED BY NAAC)  
(2022 – 2023)**



*Pravin Bahir*

*[Signature]*  
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P. E. S. Modern College of Pharmacy  
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Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION


I Pravin Bahir declare that the thesis entitled, "formulation and evaluation of herbal hair oil", submitted by me for degree of 'Bachelor of Pharmacy' is the record of work carried out by me under the guidance of Dr. Bhushan Pimple and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 2-6-23

Place: pune



Pravin  
Pravin Bahir

  
Principal  
P. F. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



P. E. Society's  
**MODERN COLLEGE OF PHARMACY**  
Nigdi, Pune-44.



**CERTIFICATE BY THE GUIDE**


This is to certify that the thesis entitled, "**Formulation And Evaluation of Herbal Hair Oil**", submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 2-6-23

Dr. Bhushan Pimple

Place: Pune



  
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Pune - 411 044.





P. E. Society's  
**MODERN COLLEGE OF PHARMACY**  
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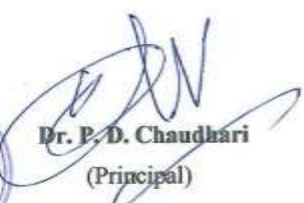
**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "**Formulation And Evaluation of Herbal Hair Oil**" is a record of bonafide research work carried out by **Pravin Bahir** under the guidance of **Dr. Bhushan Pimple** at Modern College of Pharmacy, Nigdi, Pune- 411044.

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**"FORMULATION AND EVALUATION OF ANTIFUNGAL CREAM"**

Project report submitted to

**The Faculty of  
PHARMACOGNOSY  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Ms Nikhita Dattatray Kumbhar  
B. Pharm (Semester-VIII)**

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of


**Dr. P. D. Chaudhari (M. pharm Ph. D)  
Department of Pharmaceutics**

**Dr. Bhushan Pimple (M. pharm Ph. D)  
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**Progressive Education Society's  
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DECLARATION

I am Ms. Nikhita Dattatray Kumbhar declared that the thesis entitled "Formulation and evaluation of herbal antifungal cream" submitted by me for the award of degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of by Dr. P.D. Chaudhari (Guide), Dr. Bhushan Pimple (Co-Guide) and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-6-23

Ms. Nikhita Kumbhar

Place: Nigdi, Pune



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Progressive Education Society's Modern College of Pharmacy  
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Certificate by Guide

This is to certify that the thesis entitled, "Formulation and evaluation of herbal antifungal cream" submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Ms Nikhita Dattatray Kumbhar** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date:

10 - 6 - 23

Place : Nigdi Pune

  
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Progressive Education Society's Modern College of Pharmacy  
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(Accredited by NAAC and NBA)

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **"Formulation and evaluation of herbal antifungal cream"** is a record of bonafide research work carried out **Ms.Nikhita Dattatray Kumbhar** under the guidance of **Dr.P.D Chaudhari(Guide)**, **Dr Bhushan Pimple(Co-Guide)** P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 10-6-23  
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### ACKNOWLEDGEMENT

I am thankful to Dr. P. D. Chaudhari, Principal of PES's Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Mr. Bhushan Pimple for extending his valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

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**“DESIGN, SYNTHESIS AND EVALUATION OF  $\text{Fe}_2\text{O}_3$   
NANOPARTICLES”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Aparna Patil**

(B. Pharm)

UNDER THE GUIDANCE OF

**Mr. Shubham Khade**

(M. Pharm)


DEPARTMENT OF PHARMACEUTICAL QUALITY  
ASSURANCE

Progressive Education Society's

Modern College of Pharmacy, Nigdi, Pune (2022-2023)

(Accredited by NAAC and NBA)



  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I APARNA PATIL declare that the thesis entitled “**Design, Synthesis and Evaluation of Fe<sub>2</sub>O<sub>3</sub> Nanoparticles**” submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Mr. Shubham Khade** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE : 14-06-2023

PLACE: pune



Aparna Patil

P. E. S. Modern College of Pharmacy  
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**PES's Modern College of Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**Mr. Shubham Khade**

Assistant Professor

Department of Pharmaceutics

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled "Design, Synthesis and Evaluation of  $\text{Fe}_2\text{O}_3$  Nanoparticles" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by Ms. Aparna Patil under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 14/06/23

**Place:** Pune



**Mr. Shubham Khade**

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**Principal**  
P. E. S. Modern College of Pharmacy  
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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Ms. Aparna Patil “**Design, Synthesis and Evaluation of Fe<sub>2</sub>O<sub>3</sub> Nanoparticles**” and under the guidance of Mr. Shubham Khade at P.E.S Modern College of Pharmacy Nigdi, Pune

**Date:** 14/06/23  
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**Dr. P. D. Chaudhari**  
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**Principal**  
P. E. S. Modern College of Pharmacy  
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Pune - 411 044.



**“SYNTHESIS AND CHARACTERIZATION OF  
MAGNETIC NANOPARTICLES ”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE.



Submitted by

**Balu Kailas Palekar**

(B. Pharm)

UNDER THE GUIDANCE OF

**Mr. Shubham Khade**

(M. Pharm)

DEPARTMENT OF PHARMACEUTICAL QUALITY  
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**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
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*(Accredited by NAAC and NBA)*



  
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**PES's Modern College of Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**SAVITRIBAI PHULE PUNE UNIVERSITY**



### DECLARATION


I **BALU KAILAS PALEKAR** declare that the thesis entitled **“Synthesis and characterization of magnetic nanoparticles”** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Mr. Shubham Khade** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**DATE :** 2-6-23

**PLACE:** pune



  
**Balu Palekar**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
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**PES's Modern College of Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**Mr. Shubham Khade**

Assistant Professor

Department of Pharmaceutical Quality Assurance

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled "Synthesis and characterization of magnetic nanoparticles" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by Mr. Balu Palekar under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 21/6/23

**Place:** pune



*Khade*

**Mr. Shubham Khade**

**(Assistant Professor)**

*Principal*

**Principal**

P.E.S. Modern College of Pharmacy  
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**Dr. P. D. Chaudhari**

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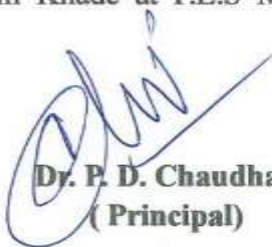
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**Ex-Deans, Faculty of Pharmaceutical Sciences**  
**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Mr. Balu Palekar “**Synthesis and characterization of magnetic nanoparticles**” and under the guidance of Mr. Shubham Khade at P.E.S Modern College of Pharmacy Nigdi, Pune

**Date:** 21/6/23  
**Place:** pune

  
**Dr. P. D. Chaudhari**  
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**“SYNTHESIS AND EVALUATION OF IRON OXIDE  
NANOPARTICLES WITH APPLICATIONS”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Niranjan Gulabsing Rajput**

(B. Pharm)

UNDER THE GUIDANCE OF

**Mr. Shubham Khade**

(M. Pharm)

DEPARTMENT OF PHARMACEUTICAL QUALITY  
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Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION


I **NIRANJAN GULABSING RAJPUT** declare that the thesis entitle  
“**SYNTHESIS AND EVALUATION OF IRON OXIDE NANOPARTICLES  
WITH APPLICATIONS**” submitted by us for the degree of Bachelor of  
Pharmacy is the record of work carried out by us under the guidance of  
**Mr. Shubham Khade** and has not formed the basis for the award of  
any degree or diploma or other titles in this or any other university.

DATE : 12/06/2023

PLACE: Nigdi

  
**Niranjn Rajput**



  
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**Mr. Shubham Khade**

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Department of Pharmaceutical Quality Assurance

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled "SYNTHESIS AND EVALUATION OF IRON OXIDE NANOPARTICLES WITH APPLICATIONS" submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by Mr. Niranjan Rajput under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 12/06/2023

**Place:** Nigdi

**Mr. Shubham Khade**  
(Assistant Professor)



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**Ex-Deans, Faculty of Pharmaceutical Sciences**

**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled is a record of bonafide research work carried out by Mr. Niranjan Rajput “SYNTHESIS AND EVALUATION OF IRON OXIDE NANOPARTICLES WITH APPLICATIONS” and under the guidance of Mr. Shubham Khade at P.E.S Modern College of Pharmacy Nigdi, Pune

**Date:** 12/06/2023

**Place:** Nigdi

**Dr. P. D. Chaudhari**

**(Principal)**



**P.E. S. Modern College of Pharmacy**  
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**"ECO-FRIENDLY METHOD DEVELOPMENT AND VALIDATION  
BY UV-VISIBLE SPECTROSCOPY"**

Project report submitted to  
The Faculty of  
PHARMACEUTICAL SCIENCE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

**Ms. Rane Tejashree Satish, Mr. Shinde Samarth Dattatraya and Mr. Wakale Akash  
Vaynkati.  
(B. Pharm) (Semester-VIII)**

In partial fulfillment of the requirements for the degree of

Bachelor of Pharmacy

Under the Guidance of

**Mrs. Sheetal Chaudhari**

**Department of Pharmaceutical Chemistry**



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Modern College of Pharmacy, Nigdi, Pune-44  
(Accredited by NAAC and NBA)**



  
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SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Ms. Rane Tejashree Satish, Mr. Shinde Samarth Dattatraya and Mr. Wakale Akash Vyankati, declared that the thesis entitled "ECO-FRIENDLY METHOD DEVELOPMENT AND VALIDATION BY UV-VISIBLE SPECTROSCOPY OF CHLORTHALIDONE" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **by Mrs. Sheetal Chaudhari** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 02/06/2023

Place: Nigdi, Pune

Ms. Rane Tejashree Satish.

Tejashree


Mr. Shinde Samarth Dattatraya.

Samarth

Mr. Wakale Akash Vyankati.

Aakash



  
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Endorsement by the Principal

This is to certify that the partial research work for the dissertation entitled "ECO-FRIENDLY METHOD DEVELOPMENT AND VALIDATION BY UV-VISIBLE SPECTROSCOPY OF CHLORTHALIDONE" is a record of bonafide research work carried out by Ms. Rane Tejashree Satish, Mr. Shinde Samarth Dattatraya and Mr. Wakale Akash Vyankati under the guidance of Mrs. Sheetal Chaudhari at P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 02/06/2023  
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Pune - 411 044.



**“DESIGN, SYNTHESIS AND MOLECULAR DOCKING OF  
SOME TACRINE DERIVATIVES AS ACETYLCHOLINE  
ESTERASE INHIBITORS”**

*Project Report submitted to*

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MS. NAIK SHREENIDHI GURUDAS  
MS. SHETE PRIYA KISAN  
MR. TAPKIR ROHIT GANESH**

*In partial fulfillment of  
The requirements for the degree of*

**BACHELOR OF PHARMACY**

Under the Guidance of

**MRS. RUPALI R. JINTURKAR  
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**Assistant Professor**

**Department of Pharmaceutical Chemistry**

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY, NIGDI, PUNE  
(2022-23)**



*Principal*  
**P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi  
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**“DESIGN, SYNTHESIS AND MOLECULAR DOCKING  
OF SOME TACRINE DERIVATIVES AS  
ACETYLCHOLINE ESTERASE INHIBITORS”**

Project Report submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MS. NAIK SHREENIDHI GURUDAS  
MS. SHETE PRIYA KISAN  
MR. TAPKIR ROHIT GANESH**

In partial fulfillment, of  
The requirements for the degree of  
**BACHELOR OF PHARMACY**  
(Semester – VIII )  
UNDER THE GUIDENCE OF  
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Pune - 411 044.





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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

We, **Ms. Naik Shreenidhi Gurudas**, **Ms. Shete Priya Kisan** and **Mr. Tapkir Rohit Ganesh** declare that the project report entitled, **"DESIGN, SYNTHESIS AND MOLECULAR DOCKING OF SOME TACRINE DERIVATIVES AS ACETYLCHOLINE ESTERASE INHIBITORS"** submitted by us for the Degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **MRS. RUPALI R. JINTURKAR** has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date : 10-6-23

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Place: Nigdi, Pune

*Priya*  
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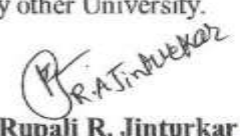
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**CERTIFICATE BY GUIDE**

This is to certify that the project report entitled, **“Design, Synthesis and Molecular docking of some Tacrine derivatives as Acetylcholine Esterase inhibitors”** submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Ms. Naik Shreenidhi Gurudas, Ms. Shete Priya Kisan and Mr. Tapkir Rohit Ganesh** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

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**ENDORSEMENT BY THE PRINCIPAL**

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**Date:** 10-6-23  
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### ACKNOWLEDGEMENT

We are thankful to Dr. P. D. Chaudhari, Principal of PES Modern College of Pharmacy for providing excellent library and internet facilities. We take this opportunity to express our sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Mrs. Rupali R. Jinturkar for extending her valuable guidance, instructions and timely support without which this project would not have assumed its shape.

We would like to thank Assistant Librarian of Modern College of Pharmacy and other non-teaching staff members for extending their support in providing all kinds of reference books whenever possible. We are grateful to all teaching and non-teaching staff of the college for their kind co-operation extended from time to time.

We express our deep sense of gratitude towards our parents for their constant support and valuable help throughout this work.

**Date :** 10-6-23 **Ms. Naik Shreenidhi Gurudas**

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**(Final year B. Pharm)**



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**“Formulation and Evaluation of Gunja Cream”**

Thesis submitted to  
**The Faculty of  
PHARMACEUTICAL SCIENCE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Ms. Dhanashree Nitin Yadav**

**Ms. Smita Gaikwad**

**Mr. Niraj Sonawane**

**(B. Pharm)**

In partial fulfillment of the requirements for the degree of  
Bachelor of Pharmacy  
Under the Guidance of

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**M. Pharm**

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**DEPARTMENT OF PHARMACEUTICAL CHEMISTRY**

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1



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DECLARATION

We are Ms. Dhanashree Nitin Yadav, Ms.Smita Gaikwad, Mr. Niraj Sonawane declared that the thesis entitled **"Formulation and Evaluation of Gunja Cream"** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Ms. Nikita Kale** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14-06-2023

Place: Nigdi, Pune

Ms. Dhanashree Nitin yadav

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**Certificate by the Guide**

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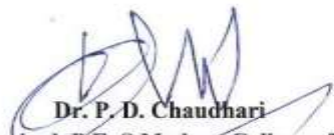
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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **"Formulation and Evaluation of Gunja Cream"** is a record of bonafide research work carried out by Ms. Dhanashree Nitin Yadav, Ms. Smita Gaikwad, Mr. Niraj Sonawane under the guidance of Ms. Nikita Kale at P.E.S Modern College of Pharmacy Nigdi, Pune.

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## **“Formulation and Evaluations of Polyherbal Chewable Tablet”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERCITY, PUNE



Submitted by

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**Varsha Shinde**

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DECLARATION

We Ms. Kadambari Shinde, MS. Varsha Shinde. declare that the thesis entitled "**Formulation and Evaluations of Polyherbal Chewable Tablet**" submitted by us for the degree of Bachelor of Pharmacy is the record work carried out by us under the guidance of **Ms. Anita Malusure** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE : 14/06/23

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**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "**Formulation and Evaluations of Polyherbal Chewable Tablet**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by Ms. Kadambari Shinde, MS. Varsha Shinde under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 14/06/23

**Place:** Nigdi, Pune



**Ms. Anita Malusare**  
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**Principal**  
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**Ex-Deans, Faculty of Pharmaceutical Sciences**  
**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“Formulation and Evaluations of Polyherbal Chewable Tablet”** is a record of bonafide research work carried out by by Ms. Kadambari Shinde, Ms. Varsha Shinde under the guidance of Ms. Anita Malusare at P.E.S Modern College of Pharmacy Nigdi, Pune.

**Date:** 14/06/23  
**Place:** Nigdi, Pune



**Dr. P. D. Chaudhari**  
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**Principal**  
P.E. S Modern College of Pharmacy  
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### ACKNOWLEDGEMENT:


The Almighty has been bestowing us with his blessing throughout our life. I thank from bottom of my heart for all that he has done for me and my friends. We are his disciples. Words are few to express the feeling of thanks and gratitude to the following persons.

I would like to grab the opportunity to thank my research guide Ms. Anita Malusare, Department of Pharmaceutical Chemistry Modern College of Pharmacy, Nigdi, Pune for her immense support for the project. Mam you have been a great support for me, enlightening my path of education and knowledge. Thanks for your unparallel and excellent guidance continuous encouragement for my project.

With a deep sense of gratitude and respect, I sincerely thank our esteemed principal Dr. P.D. Chaudhari sir, M.Pharm, Dean, Faculty of Pharmaceutical Sciences, University of Pune, for his inestimable support, valuable suggestions and constant encouragement during the course of this study. Continuous help, friendly affection, and constant source of inspiration during my project work.

I sincerely acknowledge the timely help rendered to me by all my colleagues during the course of my work.



  
Principal  
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Pune - 411 044.



I sincerely thank the librarian Mrs. Yadav Madam and Mr. Rajendra Chaudhari Sir. for providing me library facilities and their untiring and really appreciable help in my project.

I am completely short of words in describing the everlasting love and encouragement of my mother and father for their sincere inspiration throughout my research work and lifting me uphill in this phase of my life, I owe everything to them. Besides this, several people have knowingly and unknowingly helped me in the successful completion of the project. It was the blessing of all of them that gave me courage to face the challenges and make my path easier.



  
**Principal**  
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Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**“RP -HPLC METHOD DEVELOPMENT AND VALIDATION  
FOR DETERMINATION OF FELBINAC”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Ms. Anjali Wasule**

(B.Pharm)

UNDER THE GUIDANCE OF

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(M.Pharm)

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(2022-2023)**

*(Accredited by NAAC and NBA)*



  
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DECLARATION

I Ms. Anjali Wasule declare that the thesis entitled **“RP-HPLC METHOD DEVELOPMENT AND VALIDATION FOR DETERMINATION OF FELBINAC”** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Ms. Anita Malusare** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE : 14/06/23

PLACE: Nigdi.



*Anjali*  
**Anjali wasule**

*[Signature]*  
**Principal**  
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Sector No.21, Yamunanagar, Nigdi,  
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**PES's Modern College of Pharmacy Nigdi, Pune-44**

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**Ms. Anita Malusare**

Assistant Professor

Department of Pharmaceutics

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **“RP-HPLC Method development and validation for determination of Felbinac”** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Ms. Anjali Wasule under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 14/06/23

**Place:** Nigdi



**Ms. Anita Malusare**

**(Assistant Professor)**

**Principal**  
P.E. S. Modern College of Pharmacy  
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Pune - 411 044.



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**Dr. P. D. Chaudhari**

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**Ex-Deans, Faculty of Pharmaceutical Sciences**  
**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“RP-HPLC Method development and validation for determination of Felbinac”** is a record of bonafide research work carried out by MS.Anjali Wasule under the guidance of **Ms. Anita Malusare** at P.E.S Modern College of Pharmacy Nigdi, Pune

**Date:** 14/06/23  
**Place:** Pune



**Dr. P. D. Chaudhari**  
**( Principal )**

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**RP -HPLC METHOD DEVELOPMENT AND VALIDATION  
FOR DETERMINATION OF FELBINAC”**

**A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERCITY, PUNE**



Submitted by

**Akansha Telang**

**Nagesh Shirfule**

**Ashish Sakhare**

(B.Pharm)

UNDER THE GUIDANCE OF

**Ms. Arti Shingan**

(M.Pharm)

DEPARTMENT OF PHARMACEUTICS

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
(2022-2023)**

*(Accredited by NAAC and NBA)*



  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We Ms. Akansha Telang, Mr. Nagesh Shirfule, Mr. Ashish Sakhare declare that the thesis entitled “**RP-HPLC METHOD DEVELOPMENT AND VALIDATION FOR DETERMINATION OF FELBINAC**” submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Ms. Arti Shingan** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE : 14/6/23

PLACE: Nigdi



Akansha Telang

Nagesh Shirfule

Ashish Sakhare

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**PES's Modern College of Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**Ms. Arti Shingan**

Assistant Professor

Department of Pharmaceutics

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled **RP-HPLC Method development and validation for determination of felbinac** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Ms.Akansha Telang, Mr.Nagesh Shirfule, Mr. Ashish Sakhare under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date:** 14-06-23



**Ms. Arti Shingan**

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Nigdi,  
Pune - 411 044.



Place:

(Assistant Professor)



**P.E.S Modern college of pharmacy, Nigdi, Pune-44**  
(Accredited by NAAC and NBA)

**Dr. P. D. Chaudhari**

**Principal**

**P.E. S Modern College of Pharmacy**  
**Nigdi, Pune – 44**

**Ex-Deans, Faculty of Pharmaceutical Sciences**  
**Savitribai Phule Pune University, Pune.**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“RP-HPLC method development and validation for determination of felbinac”** is a record of bonafide research work carried out by Ms.Akansha Telang, Mr.Nagesh Shirfule, Mr. Ashish Sakhare under the guidance of **Ms. Arti Shingan** at P.E.S Modern College of Pharmacy Nigdi, Pune

Date: 14-06-23

Place: pune



**Dr. P. D. Chaudhari**  
(Principal)

**Principal**

**P. E. S. Modern College of Pharmacy**  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"Method Development And Validation In Bulk And Pharmaceutical Dosage Form By HPTLC"**

Project report submitted to  
The Faculty of  
**PHARMACEUTICAL SCIENCE**  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

Ms. Zanwar Mansi Navalkishor Ms. Shinde Utkarsha Namdevrao Ms. More Mayuri  
Mangilal  
(B. Pharm) (Semester-VIII)

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of


Mrs. Vasudha Bavadekar

Department of Pharmaceutical Chemistry



Progressive Education Society's  
Modern College of Pharmacy, Nigdi, Pune-44  
(Accredited by NAAC and NBA)



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Ms. Zanwar Mansi Navalkishor, Ms. Shinde Utkarsha Namdevrao, Ms. More Mayuri Mangilal, declared that the project entitled "METHOD DEVELOPMENT AND VALIDATION IN BULK AND PARAMCEUTICAL DOSAGE FORM BY HPTLC" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of by Mrs. Vasudha Bavadekar and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 02/06/2023

Place: Nigdi, Pune

Ms. Zanwar Mansi Navalkishor.

Ms. Shinde Utkarsha Namdevrao.

Ms. More Mayuri Mangilal.



Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.






Progressive Education Society's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**Certificate by Guide**

This is to certify that the project entitled, "METHOD DEVELOPMENT AND VALIDATION IN BULK AND PARAMCEUTICAL DOSAGE FORM BY HPTLC" submitted for degree of bachelor of pharmacy, is the record of research work carried out by Ms. Zanwar Mansi Navalkishor, Ms. Shinde Utkarsha Namdevrao, Ms. More Mayuri Mangilal under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 02/05/2023  
Place: Nigdi Pune

  
Mrs. Vasudha Bavadekar  
Dept. of Pharmaceutical Chemistry



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Progressive Education Society's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled "METHOD DEVELOPMENT AND VALIDATION IN BULK AND PARAMCEUTICAL DOSAGE FORM BY HPTLC" is a record of bonafide research work carried out by Ms. Zanwar Mansi Navalkishor Ms. Shinde Utkarsha Namdevrao Ms. More Mayuri Mangilal under the guidance of Mrs. Vasudha Bavadekar at P.E.S Modern College of Pharmacy Nigdi, Pune.

Date:  
Place: Nigdi, PUNE



  
Dr. P. D. Chaudhari  
Principal

P.E. S Modern College of Pharmacy,  
Nigdi, Pune – 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"FORMULATION AND EVALUATION OF  
POLYHERBAL ANTI-INFLAMMATORY ANALGESIC  
LINIMENT FOR GOUTY ARTHRITIS AND  
OSTEOARTHRITIS"**

Project report submitted to  
The faculty of  
PHARMACEUTICAL SCIENCE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



**Ms. Sonali Nengule and Mr. Kartik Yenkure**

**(B. Pharm)(sem-VIII)**

In partial fulfillment of the requirements for the degree of

Bachelor of Pharmacy

Under the Guidance of

**Prof. Devendra L. Visokar**

**(M. Pharm)**

Assistant Professor

**DEPARTMENT OF PHARMACEUTICS**

**Progressive Education Society's Modern College of Pharmacy,**

**Nigdi, Pune (2022-2023)**

**(Accredited by NAAC and NBA)**



Formulation and Evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty  
arthritis and osteoarthritis

  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am **Ms. Sonali Nengule** declared that the project report entitled "**Formulation and evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis**" submitted by me for the degree of **Bachelor of Pharmacy** is the record of research work carried out by me under the guidance of **Prof. Devendra L. Visokar** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-06-23

Place: Nigdi, pune



  
Ms. Sonali Nengule

Formulation and Evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis

  
Principal

P. E. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULEPUNE UNIVERSITY



DECLARATION

I am **Mr. Kartik Yenkure** declared that the project report entitled "**Formulation and evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis**" submitted by me for the degree of **Bachelor of Pharmacy** is the record of research work carried out by me under the guidance of **Prof. Devendra L. Visokar** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10 - 6 - 23

Place: Nigdi, pune



*Kartik*

Mr. Kartik Yenkure

Formulation and Evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis

*[Signature]*  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
*(Accredited by NAAC and NBA)*

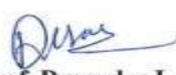
**Certificate by the Guide**

This is to certify that the project report entitled, "**Formulation and evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Ms. Sonali Nengule and Mr. Kartik Yenpure** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-06-23

Place: Nigdi, pune



  
**Prof. Devendra L. Visokar**  
(Dept. of pharmaceuticals)

**Formulation and Evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis**

  
**Principal**  
PES's Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
*(Accredited by NAAC and NBA)*

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“Formulation and evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis”** is a record of bonafide research work carried out by **Ms. Sonali Nengule** and **Mr. Kartik Yenpure** under the guidance of **Prof. Devendra L. Visokar** at P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 10-6-23  
Place: Nigdi, pune.



**Dr. P. D. Chaudhari**  
(Principal)

**Formulation and Evaluation of polyherbal Anti-inflammatory analgesics liniment for gouty arthritis and osteoarthritis**

Principal

P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



# FORMULATION AND EVALUATION OF POLYHERBAL ANTI-AGING CREAM

Project Report submitted to  
The faculty of  
PHARMACEUTICAL SCIENCE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE




**Mr. Mahesh Pekamwar**  
(B. Pharm) (Semester VIII)

In partial fulfillment of the requirements for the degree of  
Bachelor of Pharmacy

Under the Guidance of  
**Prof. Devendra L. Visokar**  
(M. Pharm)  
Assistant Professor

**DEPARTMENT OF PHARMACEUTICS**  
**Progressive Education Society's Modern College of Pharmacy,**  
**Nigdi, Pune (2022-2023)**  
*(Accredited by NAAC and NBA)*



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

Formulation and Evaluation of Polyherbal Anti-aging cream





## SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION


I am **Mr. Mahesh Pekamwar** declared that the project entitled **“Formulation and Evaluation of Polyherbal Anti-aging cream”** submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **Prof. Devendra L. Visokar** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 2 / 6 / 23

Place: Nigdi, Pune



  
**Mr. Mahesh Pekamwar**

  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

Formulation and Evaluation of Polyherbal Anti-aging cream



**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
*(Accredited by NAAC and NBA)*

**Certificate by the Guide**

This is to certify that the project entitled, "**Formulation and Evaluation of Polyherbal Anti-aging cream**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Mahesh Pekamwar under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 21/6/23  
Place: Nigdi, Pune



  
**Prof. Devendra L. Visokar**  
(Dept. of Pharmaceutics)

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

Formulation and Evaluation of Polyherbal Anti-aging cream



**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
*(Accredited by NAAC and NBA)*


**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **"Formulation and Evaluation of Polyherbal Anti-aging cream"** is a record of bonafide research work carried out by **Mr. Mahesh Pekamwar** under the guidance of **Prof. Devendra L. Visokar** at P.E.S. Modern College of Pharmacy Nigdi, Pune.

Date: 21/6/23  
Place: Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
**(Principal)**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

Formulation and Evaluation of Polyherbal Anti-aging cream



**"Formulation and Evaluation of Polyelectrolyte Complex Nanoparticles  
for Diabetes"**

Project report submitted to  
The Faculty of  
**PHARMACEUTICAL SCIENCES**  
**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By  
**Ms. Shweta Wagh**  
**(B. Pharm) (Semester-VIII)**

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of


**Dr. Sangita.A.Kale**  
**Department of Pharmaceutics**



**Progressive Education Society's**  
**Modern College of Pharmacy, Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*



  
**Principal**  
**P. E. S. Modern College of Pharmacy**  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am Ms. Shweta Wagh declared that the thesis entitled "Formulation and Evaluation of Polyelectrolyte Complex Nanoparticles for Diabetes" submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of by Dr. Sangita.A.Kale and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 3/6/23

Place: Nigdi, Pune



  
Ms. Shweta Wagh

  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Progressive Education Society's Modern College of Pharmacy Nigdi,  
Pune-44  
(Accredited by NAAC and NBA)


**Certificate by Guide**

This is to certify that the thesis entitled, "**Formulation and Evaluation of Polyelectrolyte Complex Nanoparticles for Diabetes**" submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Ms. Shweta Wagh** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 03/06/23

Place: Nigdi Pune



  
Dr. Sangita.A.Kale

(Department of Pharmaceutics)

  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Progressive Education Society's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **"Formulation and Evaluation of Polyelectrolyte Complex Nanoparticles for Diabetes"** is a record of bonafide research work carried out by Ms. Shweta Wagh under the guidance of Dr. Sangita.A.Kale at P.E.S Modern College of Pharmacy Nigdi, Pune.



Date: 31/6/23  
Place: Nigdi, Pune- 44

Dr. P. D. Chaudhari  
Principal

P.E. S Modern College of Pharmacy,  
Nigdi, Pune – 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**FORMULATION AND EVALUATION OF  
TRANSDERMAL PATCH FOR WOUND HEALING**

Project Report Submitted to

**The Faculty of**

**PHARMACEUTICAL SCIENCES**

**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Mr. Ajinkya P. Salve**

**(B.Pharm)**

In partial fulfilment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**Dr. SANGITA A. KALE**


**DEPARTMENT OF PHARMACEUTICS**



**Modern College of Pharmacy, Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am Mr. Ajinkya Salve declare that the thesis entitled **“Formulation and Evaluation of Transdermal Patch For Wound Healing ”** submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sangita A. Kale** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 2/6/23

Place: Nigdi, Pune



APS  
Mr. Ajinkya Salve

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Progressive Education Society's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
*(Accredited by NAAC and NBA)*


**Certificate by the Guide**

This is to certify that the thesis entitled, "**Formulation and Evaluation of Transdermal Patch For Wound Healing**" submitted for degree of bachelor of Pharmacy, is the record of research work carried out by Mr. Ajinkya Salve under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.


**Date: 21/6/23**

**Place: Nigdi**



  
**Dr. Sangita A Kale**

**Dept. of Pharmaceutics**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Progressive Education Society's Modern College of  
Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled "Formulation and Evaluation of Transdermal Patch For Wound Healing " is a record of bonafide research work carried out by Mr. Ajinkya Salve under the guidance of Dr. Sangita A. Kale at P.E.S Modern College of Pharmacy, Nigdi, Pune.



**Date:** 21/6/23

**Place:** Nigdi, Pune-44

**Dr. P.D. Chaudhari**

**Principal**

**P.E.S Modern college of Pharmacy,  
Nigdi, Pune-44**

**Ex-Deans, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.**

**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**“POLYSACCHARIDE BASED DRUG  
DELIVERY SYSTEM FOR PERIODONTITIS”**

Project Report Submitted to

**The Faculty of**

**PHARMACEUTICAL SCIENCES**

**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



**By Vasundhara Patil**

**(B.Pharm)**

In partial fulfilment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**Dr. SANGITA A. KALE**

**DEPARTMENT OF PHARMACEUTICS**



**Modern College of Pharmacy, Nigdi, Pune-44**

**(Accredited by NAAC and NBA)**



**Principal**

**P. E. S. Modern College of Pharmacy**  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

I am Ms. Vasundhara Patil declare that the thesis entitled **“Polysaccharide based Drug Delivery System for Periodontitis”** submitted by me for the degree of Bachelor of Pharmacy is the record of work carried out by me under the guidance of **Dr. Sangita A. Kale** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 02/06/23

Place: Nigdi, Pune



*V.P.Patil*  
Ms. Vasundhara Patil

*[Signature]*  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Progressive Education Society's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
*(Accredited by NAAC and NBA)*

**Certificate by the Guide**

This is to certify that the thesis entitled, **"Polysaccharide based Drug Delivery System for Periodontitis"** submitted for degree of bachelor of Pharmacy, is the record of research work carried out by Ms. Vasundhara Patil under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.


Date: 02/06/23

Place: Nigdi



  
Dr. Sangita A Kale

Dept. of Pharmaceutics

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Progressive Education Society's Modern College of  
Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **"Polysaccharide based Drug Delivery System for Periodontitis"** is a record of bonafide research work carried out by Ms Vasundhara Patil under the guidance of Dr. Sangita A. Kale at P.E.S Modern College of Pharmacy, Nigdi, Pune.



Date: 2 / 6 / 23


Place: Nigdi, Pune-44

  
**Dr. P.D. Chaudhari**

**Principal**

**P.E.S Modern college of Pharmacy,  
Nigdi, Pune-44**

**Ex-Deans, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**FORMULATION AND EVALUATION OF  
TERBINAFINE HYDROCHLORIDE  
NIOSOMAL NAIL LACQUER**

Thesis submitted to  
THE FACULTY OF PHARMACEUTICAL  
SCIENCES SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE.



BY

Ms. Thite Mohini Laxman  
(B.PHARM)

For the award of degree

**BACHELOR OF PHARMACY**

**UNDER THE GUIDANCE OF**

Dr.U.S.Desai (M Pharm,PhD)

Assistant Professor


(Dept of Pharmaceutics)

**DEPARTMENT OF PHARMACEUTICS**

PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE  
OF PHARMACY, NIGDI, PUNE - 44.

(ACCREDITED BY NAAC AND NBA)



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

I Ms. Thite Mohini Laxman declare that the thesis entitled, "Formulation and evaluation of terbinafine hydrochloride Niosomal Nail Lacquer ", submitted by me for degree of 'Bachelor of Pharmacy' is the record of work carried out by me under the guidance of Dr. U.S. Desai and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 03/06/2023

  
MS. Thite Mohini Laxman

Place: Nigdi, Pune



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.  
[ Accredited by NAAC and NBA]



CERTIFICATE BY THE GUIDE

This is to certify that the thesis entitled, "Formulation and evaluation of terbinafine hydrochloride Niosomal Nail Lacquer", submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

Date: 03/01/2023  
Place: Nigdi, Pune



*Desai*  
Dr.U.S.Desai  
(M.Pharm, PhD)

Research Guide

*[Signature]*  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamuna Nigdi,  
Pune-411 044.



P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.  
[ Accredited by NAAC and NBA]



**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and evaluation of terbinafine hydrochloride Niosomal Nail Lacquer" is a record of bonafide research work carried out by Ms. Thite Mohini Laxman under the guidance of Dr. U. S. Desai at Modern College of Pharmacy, Nigdi, Pune- 411044.

Date: 03/06/2023  
Place: Nigdi, Pune.



Dr. P.D. Choudary  
(Principal)

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



FORMULATION AND EVALUATION OF  
HERBAL FACEWASH AND EXFOLIATING  
TABLET

Thesis submitted to  
THE FACULTY OF PHARMACEUTICAL  
SCIENCES SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE.



By  
Ms. Vaishnavi Balkrushna Sonone  
(B. Pharm)


For the award of degree

BACHELOR OF  
PHARMACY

UNDER THE GUIDANCE OF  
Dr. U. S. Desai (M. Pharm, PhD)  
Assistant professor  
(Dept of Pharmaceutics)

PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE  
OF PHARMACY, NIGDI, PUNE - 44.  
(ACCREDITED BY NAAC)  
(2022 – 2023)



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 004





SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

I Ms. Vaishnavi Balkrushna Sonone declare that the thesis entitled, "Formulation and evaluation of Herbal facewash and Exfoliating tablet", submitted by me for degree of 'Bachelor of Pharmacy' is the record of work carried out by me under the guidance of Dr. U.S. Desai and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 21/6/23

Ms. Vaishnavi Sonone

V. B. Sonone

Place: Nigadi, Pune.



  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



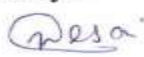
**P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.**



**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, "**Formulation and evaluation of Herbal Facewash and Exfoliating Tablet**", submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

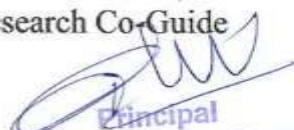
**Date:** 21/6/23

  
**Dr. U. S. Desai**

**Place:** Nigadi, Pune.



(M. Pharm, PhD)  
**Research Co-Guide**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.**



**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and evaluation of Herbal Facewash and Exfoliating Tablet" is a record of bonafide research work carried out by **Ms. Vaishnavi Balkrushna Sonone** under the guidance of Guidance of **Dr. U. S. Desai** at Modern College of Pharmacy, Nigdi, Pune- 411044.

**Date:** 21/6/23

**Place:** Nigadi, Pune.

  
**Dr. P. D. Chaudhari**

(Principal)



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**FORMULATION AND EVALUATION OF  
MEDICATED HERBAL CHEWING GUM FOR  
MOUTH INFECTION**

Thesis submitted to  
**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE.**



By  
**Mr. AJINKYA ANIL SARVADE**

For the award of degree  
**BACHELOR OF  
PHARMACY**

**UNDER THE GUIDANCE OF**  
**Dr. U. S. Desai (M. Pharm, PhD)**  
Assistant professor  
(Dept. of pharmaceuticals)  
**DEPARTMENT OF PHARMACEUTICS**

**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE  
OF PHARMACY, NIGDI, PUNE - 44.  
(ACCREDITED BY NAAC)  
(2022 – 2023)**



*[Signature]*  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Haryana





SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**


I Mr. Ajinkya Anil Sarvade declare that the thesis entitled, "Formulation and evaluation of medicated herbal chewing gum for mouth infection, submitted by me for degree of 'Bachelor of Pharmacy' is the record of work carried out by me under the guidance of Dr. U.S. Desai and has not formed the basis for the award of any degree or Diploma or Other titles in this or any other University.

Date: 3/6/23

Place: Nigdi, Pune

  
Mr. Ajinkya Sarvade



  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.**



**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, “**Formulation and evaluation of medicated herbal chewing gum for mouth infection**” submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by her under my guidance and supervision and that this has not formed the basis for the award of any degree or diploma or other titles in this or any other University.

**Date:** 3/6/23

**Place:** Nigdi, Pune

*Desai*

**Dr. U. S. Desai**  
(M. Pharm, PhD)  
Research Guide



*[Signature]*  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**P. E. Society's  
MODERN COLLEGE OF PHARMACY  
Nigdi, Pune-44.**



**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled, "Formulation and evaluation of medicated herbal chewing gum for mouth infection" is a record of bonafide research work carried out by Mr. Ajinkya Anil Sarvade under the guidance of Dr. U. S. Desai at Modern College of Pharmacy, Nigdi, Pune - 411044.

Date: 3/6/23

Place: pune



  
**Dr. P. D. Chaudhari**  
(Principal)

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



# **“Formulation Development And Evaluation Of Herbal Sunscreen Lotion”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE SAVITRIBAI  
PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Shrinath Waghmare**

**Harshita Waghmode**

**Sarvesh Yeole**

(B. Pharm)

UNDER THE GUIDANCE OF

**Prof. Shivraj Mane**


(M. Pharm)

DEPARTMENT OF PHARMACEUTICS

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
(2022-2023)

*(Accredited by NAAC and NBA)*



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We Shrinath Waghmare, Harshita Waghmode & Sarvesh Yeole declare that the thesis entitled "formulation development and evaluation of herbal sunscreen lotion" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of Prof. Shivraj Mane and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

DATE: 10-6-23

PLACE: pune



Shrinath Waghmare   
Harshita Waghmode   
Sarvesh Yeole 

  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**PES's Modern College of Pharmacy Nigdi, Pune-44**

*(Accredited by NAAC and NBA)*

**Prof. Shivraj Mane**

Assistant Professor

Department of Pharmaceutics

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled **“formulation development and evaluation of herbal sunscreen lotion”** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Shrinath Waghmare, Ms. Harshita Waghmode and Mr. Sarvesh Yeole under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**DATE:** 10-6-23

**PLACE:** pune



  
**Prof. Shivraj Mane**  
(Assistant Professor)

  
**Principal**  
PES's Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**P.E.S Modern college of pharmacy, Nigdi, Pune-44**  
**(Accredited by NAAC and NBA)**

**Dr. P. D. Chaudhari**

**Principal**

**P.E. S Modern College of Pharmacy**  
**Nigdi, Pune – 44**

**Ex-Deans, Faculty of Pharmaceutical Sciences**

**Savitribai Phule Pune University, Pune**

**Endorsement by the Principal**


This is to certify that the partial research work for the dissertation entitled “**formulation development and evaluation of herbal sunscreen lotion**” is a record of bonafide research work carried out by Mr. Shrinath Waghmare, Ms. Harshita Waghmode and Mr. Sarvesh Yeole under the guidance of **Prof. Shivraj Mane** at P.E.S Modern College of Pharmacy Nigdi, Pune

**DATE:** 10-6-23

**PLACE:** pune



  
**Dr. P.D. Chaudhari**  
**(Principal)**

  
**Principal**  
**P.E.S Modern College of Pharmacy**  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"THE FORMULATION, EVALUATION AND OPTIMIZATION OF  
ANTIFUNGAL UFASOMAL GEL"**

Project report submitted to  
The Faculty of  
**PHARMACEUTICAL SCIENCE**  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



By

Ms. Patil Utkarsha Chaitanya, Ms. Shinde Snehal Santosh and Ms. Pawar Nikita Ganpat.  
(B. Pharm) (Semester-VIII)

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of

**Mr. Rohit M Gurav.**  
Department of Pharmaceutics



Progressive Education Society's  
Modern College of Pharmacy, Nigdi, Pune-44  
(Accredited by NAAC and NBA)



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Ms. Patil Utkarsha Chaitanya, Ms. Shinde Snehal Santosh and Ms. Pawar Nikita Ganpat, declared that the thesis entitled "THE FORMULATION, EVALUATION AND OPTIMIZATION OF ANTIFUNGAL UFASOMAL GEL" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of by Mr. Rohit M Gurav and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/6/23

Place: Nigdi, Pune

Ms. Patil Utkarsha Chaitanya. *UPatil*

Ms. Shinde Snehal Santosh. *Snehal*

Ms. Pawar Nikita Ganpat. *N.Pawar*



*[Signature]*  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



Progressive Education Society's  
Modern College of Pharmacy Nigdi, Pune-44  
(Accredited by NAAC and NBA)

Certificate by Guide

This is to certify that the thesis entitled, **"THE FORMULATION, EVALUATION AND OPTIMIZATION OF ANTIFUNGAL UFASOMAL GEL"** submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Ms. Patil Utkarsha Chaitanya, Ms. Shinde Snehal Santosh and Ms. Pawar Nikita Ganpat** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/6/23

Place: Nigdi Pune

Mr. Rohit M Gurav.

Dept. of Pharmaceutics.



Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Progressive Education Society's  
Modern College of Pharmacy Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“THE FORMULATION, EVALUATION AND OPTIMIZATION OF ANTIFUNGAL UFASOMAL GEL”** is a record of bonafide research work carried out by Ms. Patil Utkarsha Chaitanya, Ms. Shinde Snehal Santosh and Ms. Pawar Nikita Ganpat under the guidance of Mr. Rohit M Gurav. at P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 14/6/23  
Place: Nigdi, Pune-44



Dr. P. D. Chaudhari  
Principal

P. E. S Modern College of Pharmacy,  
Nigdi, Pune - 44

Ex-Dean, Faculty of Pharmaceutical Sciences,  
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#### ACKNOWLEDGEMENT

I am thankful to Dr. P. D. Chaudhari, Principal of PES's Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Mr. Rohit M Gurav for extending her valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other nonteaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

I express my deep sense of gratitude towards my parents for their constant support and valuable help throughout this work.

Place: Nigdi, Pune-44

Date: 14/6/23



Ms. Patil Utkarsha Chaitanya. UPatil  
Ms. Shinde Snehal Santosh Snehal  
Ms. Pawar Nikita Ganpat. N. Pawar  
(Final year B. Pharm)

  
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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**“Formulation and Evaluation of Anti  
aging and Anti-acne herbal scrub based  
facewash.**

Final Year B-Pharm Project Report Submitted to  
**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



Mr.Shubham B. Vanve

Mr. Ajay kumar patel

Miss. Harshali sonwane

**(B. Pharm)**

Under the Guidance of  
Miss. Priyanka Bagade

**DEPARTMENT OF PHARMACEUTICS**

**Progressive Education Society's Modern College of Pharmacy,  
Nigdi, Pune -411044**

(2022-2023)

Formulation and Evaluation of Anti aging and Anti-acne herbal  
scrub based facewash.



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



**DECLARATION**

We are Mr. Shubham B. Vanve declares that the thesis entitled. “ **Formulation and Evaluation of Anti aging and Anti-acne herbal scrub based facewash.** submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Miss. Priyanka Bagade** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.



Mr. Ajaykumar patel *A. Patel*

Ms. Harshali sonwane *Harshali*

Date: 10-6-23

Place: Nigdi, Pune

Mr. Shubham B. Vanve *Shubham*

Formulation and Evaluation of Anti aging and Anti-acne herbal scrub based facewash.

*Principal*

P. E. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)**

**Certificate by the Guide**

This is to certify that the thesis entitled, **"Formulation and Evaluation of Anti aging and Anti-acne herbal scrub based facewash"** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Shubham B. Vanve under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 10-6-23

Place: Nigdi, PUNE



**Miss. Priyanka Bagade**

**(Assistant professor)**

**Department of Pharmaceutics PES'S  
Modern College of Pharmacy,  
Nigdi, Pune-44**

Formulation and Evaluation of Anti aging and Anti-acne  
herbal scrub based facewash.

**Principal**

Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
**(Accredited by NAAC and NBA)**

**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled. **"Formulation and Evaluation of Anti aging and Anti-acne herbal scrub based facewash"** is a record of bonafide research work carried out by Mr. Shubham B. Vanve under the guidance of at Miss. Priyanka Bagade P.E.S Modern College of Pharmacy Nigdi, Pune.

Date: 10-6-23



**Dr. P. D. Chaudhari**  
**Principal**

**P.E. S Modern College of Pharmacy**  
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**Ex-Dean, Faculty of Pharmaceutical Sciences,**  
**Savitribai Phule Pune University, Pune.**

Formulation and Evaluation of Anti aging and Anti-acne  
herbal scrub based facewash.

**Principal**  
**P.E.S. Modern College of Pharmacy**  
Sector No. 21, Yamunanagar  
Pune - 411 044.





# **“Formulation Development and Evaluation of Diclofenac Sodium Gel by using HPMC”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by  
**Tanmay Satkar**  
**Raviraj Shinde**  
**Ashish Shinde**

(B. Pharm)

UNDER THE GUIDANCE OF

**Ms. Alka Bhure**

(M. Pharm)

DEPARTMENT OF PHARMACEUTICS

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
(2022-2023)**

*(Accredited by NAAC and NBA)*



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**PES's Modern College of Pharmacy Nigdi, Pune-44**

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**Ms. Alka Bhure**

Assistant Professor

Department of Pharmaceutics

**PES'S Modern College of Pharmacy Nigdi, Pune-44**

**CERTIFICATE BY THE GUIDE**

This is to certify that the thesis entitled, **"Formulation Development and Evaluation of Diclofenac Sodium Gel by using HPMC"** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Mr. Tanmay Satkar, Mr. Raviraj Shinde and Mr. Ashish Shinde under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 13-05-2023**

**Place: Nigdi, Pune.**



**Ms. Alka Bhure**

**(Assistant Professor)**

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**P.E.S Modern college of pharmacy, Nigdi, Pune-44**  
**(Accredited by NAAC and NBA)**

**Dr. P. D. Chaudhari**

**Principal**

**P.E. S Modern College of Pharmacy**  
**Nigdi, Pune – 44**


**Ex-Deans, Faculty of Pharmaceutical Sciences**  
**Savitribai Phule Pune University, Pune.**


**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **“Formulation Development and Evaluation of Diclofenac Sodium Gel by using HPMC”** is a record of bonafide research work carried out by Mr. Tanmay Satkar, Mr. Raviraj Shinde and Mr. Ashish Shinde under the guidance of Ms. Alka Bhure at P.E.S Modern College of Pharmacy Nigdi, Pune

**Date:** 13-05-2023  
**Place:** Nigdi, Pune



  
**Dr. P. D. Chaudhari**  
**(Principal)**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"FORMULATION AND EVALUATION OF DICLOFENAC  
SODIUM NANOSUSPENSION."**

Project report submitted to  
**THE FACULTY OF PHARMACEUTICAL  
SCIENCES AVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By  
**MR. LALIT RAJARAM SARGAR,  
MISS. YASHASVI VIJAY PATIL,  
MISS. SNEHAL BABASAHEB PANHALKAR.**  
(B.Pharm) Sem-VIII

UNDER THE GUIDANCE  
OF  
**MISS. SURBHI GUPTA**  
(M.Pharm)  
Assistant Professor  
(Department of Pharmaceutics)

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE-44.  
(2022-23)**



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi  
Pune - 411 044





(BEST COLLEGE AWARDED BY SAVITRIBAI PHULE  
PUNE UNIVERSITY)

SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION

We, Mr. Lalit Rajaram Sargar, Miss. Yashasvi Vijay Patil, Miss. Snehal Babasaheb Panhalkar, declare that the thesis entitled, "FORMULATION AND EVALUATION OF DICLOFENAC SODIUM NANOSUSPENSION." submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of Miss. SURBHI GUPTA and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 05/06/2023

Place: Nigdi, Pune

Mr. Lalit R. Sargar *Sargar*  
Miss. Yashasvi V. Patil *Patil*  
Miss. Snehal B. Panhalkar *Panhalkar*



*[Signature]*  
Principal  
E. S. Modern College of Pharmacy  
Nigdi, Pune - 411 044.



**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE-44  
(ACCREDITED BY NAAC)**

**Miss. Surbhi Gupta**  
Assistant Professor,  
(Pharmaceutics)  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.

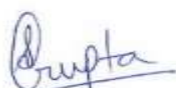
**CERTIFICATE BY THE GUIDE**

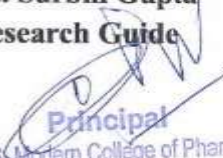
This is to certify that the thesis entitled **"Formulation and Evaluation of Diclofenac Sodium Nanosuspension."** submitted for degree of Bachelor of Pharmacy, is the record of research work carried out by **Mr. Lalit Rajaram Sargar, Miss. Yashasvi Vijay Patil, Miss. Snehal Babasaheb Panhalkar** under my guidance and supervision and that it has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Date: 05/06/2023**

**Place: Nigdi, Pune**



  
**Miss. Surbhi Gupta**  
**Research Guide**

  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE-44  
(ACCREDITED BY NAAC)**

**Dr. P. D. Chaudhari**  
Principal,  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Nigdi, Pune-44.  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the thesis entitled “**FORMULATION AND EVALUATION OF DICLOFENAC SODIUM NANOSUSPENSION**” is a record of bonafide research work carried out by **Mr. Lalit Rajaram Sargar, Miss. Yashasvi Vijay Patil, Miss. Snehal Babasaheb Panhalkar** under the guidance of **Miss. Surbhi Gupta** at Modern College of Pharmacy, Nigdi, Pune-411044.

**Date: 05/06/2023**  
**Place: Nigdi, Pune**



  
**Dr. P. D. Chaudhari**  
Principal

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"EVALUATION OF *In-vitro* ANTHELMINTIC ACTIVITY OF HERBL EXTRACTS"**

Project report submitted to  
**The Faculty of  
PHARMACOLOGY  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

**Ms.Shital Susar, Mr. Naveed Syed, Mr.Samadhan Tupe  
(B. Pharm) (Semester-VIII)**

In partial fulfillment of the requirements for the degree of

**Bachelor of Pharmacy**

Under the Guidance of


**Dr. P.S. Kore**

**Department of Pharmacology**



**Progressive Education Society's  
Modern College of Pharmacy, Nigdi, Pune-44  
(Accredited by NAAC and NBA)**



  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Ms. Ms.Shital Susar, Mr. Naveed Syed, Mr.Samadhan Tupe declared that the thesis entitled “ **EVALUATION OF *in vitro* ANTHELMINTIC ACTIVITY OF HERBAL EXTRACT**” submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Dr. P.S. Kore** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/06/2023

Place: Nigdi, Pune

  
Ms. Susar Shital

  
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Certificate by Guide

This is to certify that the thesis entitled, “ **EVALUATION *in vitro* ANTHELMINTIC ACTIVITY OF HERBAL EXTRACT**” submitted for degree of bachelor of pharmacy, is the record of research work carried out by **Ms. Susar Shital, Mr. Naveed Syed and Mr. Samadhan Tupe** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 14/06/2023

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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled **EVALUATION OF *in vitro* ANTHELMINTIC ACTIVITY OF HERBAL EXTRACT** is a record of bonafide research work carried out by Ms.Susar Shital, Mr. Navced Syed and Mr. Samadhan Tupe under the guidance of Dr.P.S.Kore at P.E.S Modern College of Pharmacy Nigdi, Pune.



Date: 14/06/2023  
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### ACKNOWLEDGEMENT

I am thankful to Dr. P. D. Chaudhari, Principal of PES's Modern College of Pharmacy for providing excellent library and internet facilities. I take this opportunity to express my sincere gratitude to principal of Modern college of Pharmacy Dr. P. D. Chaudhari, and my project guide Prof. Dr.P.S. Kore for extending her valuable guidance, instructions and timely support without which this project would not have assumed its shape.

I would like to thank Assistant Librarian of Modern College of Pharmacy and other nonteaching staff members for extending their support in providing all kinds of reference books whenever possible. I am grateful to all teaching and non-teaching staff of the college for their kind of co-operation extended from time to time.

I express my deep sense of gratitude towards my parents for their constant support and valuable help throughout this work.

  
Ms. Susar Shital

  
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Place: Nigdi, Pune-44

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**“Awareness and Assessment of Risk Factors  
Associated with Breast Cancer Among Indian Women:  
A Questionnaire Survey”**

A  
PROJECT REPORT  
SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



SUBMITTED BY

Neha Pandit

Pratik Suryawanshi

Prasenjit Sarwade

UNDER THE GUIDANCE OF

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(M.Pharm)

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Awareness and Assessment of Risk Factors Associated with Breast Cancer Among Indian Women: A Questionnaire Survey



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION

We are Miss. Neha Pandit, Mr. Pratik Suryawanshi and Mr. Prasenjit Sarwade declared that the thesis entitled "Awareness and Assessment of Risk Factors Associated with Breast Cancer Among Indian Women: A Questionnaire Survey" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of Mr. Prashant Pawar and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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Awareness and Assessment of Risk Factors Associated with Breast Cancer Among Indian Women: A Questionnaire Survey



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Awareness and Assessment of Risk Factors Associated with Breast Cancer Among Indian Women: A Questionnaire Survey



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Awareness and Assessment of Risk Factors Associated with Breast Cancer Among Indian Women: A Questionnaire Survey





**“DEVELOPMENT AND VALIDATION OF HPTLC  
METHOD FOR ESTIMATION OF DEFERIPRONE IN  
BULK AND MARKETING FORMULATION”**

Project report submitted to

**THE FACULTY OF PHARMACEUTICAL SCIENCES  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE**



By

**MR.SAURAV PAWAR  
MISS. SHRADDHA RAUT  
MISS.SHWETA SARNE  
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DECLARATION

We, Mr.Saurav Pawar, Miss.Shraddha Raut , Miss.Shweta Sarne, , declare that the thesis entitled, **"DEVELOPMENT AND VALIDATION OF HPTLC METHOD FOR ESTIMATION OF DEFERIPRONE IN BULK AND MARKETING FORMULATION** "submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Mrs. Priyanka Sarda** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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carried out by **Mr. Saurav Pawar, Miss. Shraddha Raut**  
**Miss. Shweta Sarne**, under my guidance and supervision and  
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**“Assessment Of Clinical Profile Data and Treatment  
Pattern Of Guillian-Barre Syndrome(GBS)”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Ms. Nikita Salunke**

**Ms. Priyanka Tandlekar**

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(B. Pharm)

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**Date:** 14-06-23

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**“Assessment of Knowledge and Awareness about Drug  
Food Interactions among General Public in India: A  
questionnaire survey”**

A PROJECT REPORT SEM VIII SUBMITTED TO THE SAVITRIBAI  
PHULE PUNE UNIVERSITY, PUNE



Submitted by

**Madhavi Vikharankar**

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We **Madhavi Vikharankar, Rutuja Wayal & Adwait Tole** declare that the thesis entitled "**Assessment of Knowledge and Awareness about Drug-Food Interactions among General Public in India: A questionnaire survey**" submitted by us for the degree of Bachelor of Pharmacy is the record of work carried out by us under the guidance of **Prof. Swateja Bhosale** and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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This is to certify that the thesis entitled **"Assessment of Knowledge and Awareness about Drug-Food Interactions among General Public in India: A questionnaire survey"** submitted for degree of bachelor of pharmacy, is the record of research work carried out by Ms. Madhavi Vikharankar, Ms. Rutuja Wayal and Mr. Adwait Tole under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**DATE:** 2-6-23

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**Endorsement by the Principal**

This is to certify that the partial research work for the dissertation entitled “**Assessment of Knowledge and Awareness about Drug–Food Interactions among General Public in India: A questionnaire survey**” is a record of bonafide research work carried out by Ms. Madhavi Vikharankar, Ms. Rutuja Wayal and Mr. Adwait Tole under the guidance of **Prof. Swateja Bhosale** at P.E.S Modern College of Pharmacy Nigdi, Pune

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**"COMPARATIVE EVALUATION OF HERBAL LIP BALMS DEVELOPED USING  
VARIOUS NATURAL BASES"**

Final Year B-Pharm Project Report Submitted to  
**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



By

Mr. Shivhar B. Shete, Ms. Shraddha D. Shingade and Mr. Nikhil R. Waghire

Under the Guidance of

**Mrs. Suvarna A. Vadge**

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DECLARATION

We are Mr. Shivhar Shete , Ms. Shraddha Shingade and Mr. Nikhil Waghire hereby declare that the thesis entitled "Comparative evaluation of herbal lip balms developed using various natural bases" and submitted by us for the degree of bachelor of pharmacy and the record of work carried out by us under the guidance of Mrs. Suvarna A. Vadge and has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 8/06/23

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Certificate by the guide

This is to certify that the thesis entitled, **"Comparative evaluation of herbal lip balms developed using various natural bases"** submitted for the degree of bachelor of pharmacy, is the refer of research work carried out by Mr. Shivhar Shete, Ms. Shraddha Shingade and Mr. Nikhil Waghire under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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Fifth Year Pharm-D Research Project work

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Approved by All India Council of Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
Directorate of Technical Education, Mumbai, Maharashtra, affiliated to  
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1.	Ms. Pratiksha Bhoite Mr. Swapnil Ghatule Mr. Atharva Nanday Mr. Sumet Udawant	Study of Onset Time, Risk Factors, and Prescription Pattern in Patients with Stroke.	Dr. Rahul Kulkarni, M.B.B.S. M.D. (Medicine), D.M. (Neurology), D.N.B. (Neurology), FAAN Department of Neurology, DMHRC	Dr. Rajani Mali Pharm. D. Assistant Professor Department of Doctor of Pharmacy, Modern College of Pharmacy.	Department of Neurology, DMHRC, Pune.
2.	Ms. Aparna Awhad Ms. Divya Haggwane Ms. Muskan Radhanpura Mr. Pranav Yelamkar	Assessment of Anti-Microbial agent usage pattern as per the given susceptibility testing report.	Dr. Ashwini Joshi, Consultant, M.B.B.S.D.N.B. (Medicine), CCEBDM D.N.B. (Medicine) Department of General Medicine, DMHRC	Dr. Mayuri Khaparde Pharm. D. Assistant Professor Department of Pharmacy Practice, Modern College of Pharmacy.	Department of General Medicine, DMHRC, Pune.
3.	Ms. Rachita Ranasubhe Mr. Sanket Talegaonkar Ms. Saloni Yadav Ms. Jagruti Yenpure	To study incidence, cost analysis and drug utilization pattern of anticoagulants in patient with VTE.	Dr. Narendra Javadekar : M.B.B.S.M.D. (Medicine), D.N.B. (Medicine), M.A. (Economics) Department of General Medicine, DMHRC	Dr. Rajani Mali Pharm. D. Assistant Professor Department of Pharmacy Practice, Modern College of Pharmacy.	Department of General Medicine, DMHRC, Pune.

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## Criteria 1: Curricular Aspects




4.	Ms. Shweta Kendre Mr. Shiva Khanal Ms. Pranali Mahajani Ms. Shraddha Nachane	Assessment of drugs dose adjustment in chronic kidney disease patients in tertiary care hospital.	Dr. Atul Mulay M.B.B.S. M.D., (Medicine), D.N.B. (Nephrology), M.Sc. (Epidemiology), Department of Nephrology, DMHRC, Pune	Dr. Rohini Chavan Pharm. D. Assistant Professor Department of Pharmacy Practice, Modern College of Pharmacy.	Department of Nephrology, DMHRC, Pune.
5.	Ms. Sukshamta Balure Mr. Satyawant Kumbhar Mr. Akash Mahamuni Ms. Sujata Thokal	To design, develop and validate the screening tool for minimizing prescription error in neonates.	Dr. Shilpa Kalane; M.B.B.S., D.N.B. (Pediatrics), Dr.N.B. (Neonatology), Department of Neonatology, DMHRC, Pune	Dr. Mayuri Khaparde Pharm. D. Assistant Professor Department of Pharmacy Practice,	Department of Neonatology, DMHRC, Pune.
6.	Ms. Vaishnavi Deshmukh Mr. Gaurav Memane Ms. Vaishnavi Panchariya Mr. Vedant Patil	Design, development and validation of screening tool for IV medications incompatibility in neonates.	Dr. Shilpa Kalane; M.B.B.S., D.N.B. (Pediatrics), Dr.N.B. (Neonatology), Department of Neonatology, DMHRC, Pune	Dr. Sunita Pawar M. Pharm (Pharmacy Practice), PhD Associate Professor, Head of Department of Pharmacy Practice, Modern College of Pharmacy.	Department of Neonatology, DMHRC, Pune.
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8.	Mr. Nitesh Agrawal Ms. Shruti Akhade Mr. Shubham Kudale Ms. Ashwini Vare	Development Of The Mobile Application For Digital Literacy Related To Cardiovascular Risk Factors In Sociological Factors.	Mr. Nitesh Agrawal Ms. Shruti Akhade Mr. Shubham Kudale Ms. Ashwini Vare	Mr. Siddhartha Savdekar M. Pharm (Pharmacy Practice) Assistant Professor Department of Pharmacy Practice, Modern College of Pharmacy.	Community Health Organisations  Principal P. E. S. Modern College of Pharmacy Sector No 21, Yamunanagar, Nigdi Pune - 411 044.

9.	Mr. Abhishek Khaire Ms. Esha Patel Ms. Sumedha Savane Mr. Avinash Shinde	Assessment of drug related problems among cervical cancer patients.	Dr. Asmita Pathan M.B.B.S M.D. (Medical Oncologist) Indrayani Hospital and Cancer Institute Ahandi, Pune	Dr. Anjali Kumbhar Pharm. D. Assistant Professor Department of Pharmacy Practice, Modern College of Pharmacy.	Department of Oncology Indrayani Hospital and Cancer Institute Ahandi Pune.
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*"STUDY OF ONSET TIME, RISK FACTORS, AND PRESCRIPTION  
PATTERN IN PATIENTS WITH STROKE."*

*Thesis submitted in the partial fulfillment for the degree of  
Pharm. D*

**(DOCTOR OF PHARMACY)**

**In the Faculty of Pharmaceutical Sciences  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



*Guided by*  
**Dr. Rajani B. Mali**

*Co-guided by*  
**Dr. Rahul V. Kulkarni**

*Submitted by*

**Ms. Pratiksha S. Bhoite  
Mr. Atharva P. Nanday**

**Mr. Swapnil P. Ghatule  
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**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF PHARMACY,  
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*Principal*  
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*"STUDY OF ONSET TIME, RISK FACTORS, AND PRESCRIPTION  
PATTERN IN PATIENTS WITH STROKE."*


LETTER OF APPROVAL


The topic has been discussed and approved by the departmental faculty members.


  
Dr. P. D. Chaudhari  
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PES's MODERN COLLEGE OF PHARMACY, NIGDI,  
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(ACCREDITED BY NBA & NAAC)

CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled "Study of Onset Time, Risk Factors, and Prescription Pattern in Patients with Stroke" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Ms. Pratiksha S. Bhoite, Mr. Swapnil P. Ghatule, Mr. Atharva P. Nanday, and Mr. Sumeet B. Udawant under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023

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ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled, "Study of Onset Time, Risk Factors, and Prescription Pattern in Patients with Stroke" for Doctor of Pharmacy is a record of bonafide research work carried out by Ms. Pratiksha S. Bhoite, Mr. Swapnil P. Ghatule, Mr. Atharva P. Nanday, and Mr. Sumeet B. Udawant under the guidance of Dr. R. B. Mali at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

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*CERTIFICATE BY CO- GUIDE*

This is to certify that the thesis entitled "Study of Onset Time, Risk Factors, and Prescription Pattern in Patients with Stroke" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by, Ms. Pratiksha S. Bhoite, Mr. Swapnil P. Ghatule, Mr. Atharva P. Nanday, and Mr. Sumeet B. Udawant under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023


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Dr. R. V. Kulkarni  
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ENDORSEMENT BY THE HEAD OF THE DEPARTMENT

This is to certify that the research presented in this thesis entitled, "Study of Onset Time, Risk Factors, and Prescription Pattern in Patients with Stroke" for Doctor of Pharmacy is a record of bonafide research work carried out by Ms. Pratiksha S. Bhoite, Mr. Swapnil P. Ghatule, Mr. Atharva P. Nanday, and Mr. Sumeet B. Udawant under the guidance of Dr. R. B. Mali at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

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DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "*STUDY OF ONSET TIME, RISK FACTORS, AND PRESCRIPTION PATTERN IN PATIENTS WITH STROKE*" for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of **Dr. R. B. Mali**, Assistant Professor, PES's Modern College of Pharmacy, Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

Date: 09/06/2023

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Mr. Sumet B. Udawant

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P. E. S. Modern College of Pharmacy  
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Pune - 411 044.



**"Assessment of Anti-Microbial Agent Usage Pattern as Per  
the Given Susceptibility Testing Report"**

*Thesis submitted in the partial fulfillment for the degree of  
Pharm. D*

**(DOCTOR OF PHARMACY)**

In the faculty of pharmaceutical sciences  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



*Guided by*  
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*Co-guided by*  
**Dr. Ashwini Joshi**

*Submitted by*


**Ms. Divya Hagawane  
Ms. Aparna Awhad**

**Ms. Muskan Radhanpura  
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**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF PHARMACY,  
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**“Assessment of Anti-Microbial Agent Usage Pattern as Per  
the Given Susceptibility Testing Report”**

**LETTER OF APPROVAL**

The topic has been discussed and approved by the departmental faculty members.

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CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled "Assessment of Anti-Microbial agent usage pattern as per the given susceptibility testing report" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Ms. Divya Hagawane, Miss Muskan Radhanpura, Miss Aparna Awhad and Mr. Pranav Yelamkar under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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CERTIFICATE BY CO- GUIDE

This is to certify that the thesis entitled "*Assessment of Anti-Microbial agent usage pattern as per the given susceptibility testing report*" submitted for degree of **Doctor of Pharmacy**, is the record of research work carried out by, **Ms. Divya Hagawane, Miss Muskan Radhanpura, Miss Aparna Awhad and Mr. Pranav Yelamkar** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, "*Assessment of Anti-Microbial agent usage pattern as per the given susceptibility testing report*" for Doctor of Pharmacy is a record of bonafide research work carried out by Ms. Divya Hagawane, Miss Muskan Radhanpura, Miss Aparna Awhad and Mr. Pranav Yelamkar under the guidance of Dr. Mayuri Khaparde at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-23.

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**ENDORSEMENT BY THE HEAD OF THE DEPARTEMENT**

This is to certify that the research presented in this thesis entitled, "*Assessment of Anti-Microbial agent usage pattern as per the given susceptibility testing report*" for Doctor of Pharmacy is a record of bonafide research work carried out by Ms. Divya Hagawane, Miss Muskan Radhanpura, Miss Aparna Awhad and Mr. Pranav Yelamkar under the guidance of Dr. Mayuri Khaparde at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-23.

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SAVITRIBAI PHULE PUNE UNIVERSITY



### DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "*Assessment of Anti-Microbial agent usage pattern as per the given susceptibility testing report*" for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of Dr Mayuri Khaparde, Assistant Professor, PES's Modern College of Pharmacy, and Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

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*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants  
in Patients with VTE"*

*Thesis submitted for the partial fulfilment of the degree of*  
**Pharm D**  
**(DOCTOR OF PHARMACY)**

In the Department of Clinical Pharmacy  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Guided By  
**Dr. Rajani Mali**

Co-Guided By  
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Submitted By

**Ms. Rachita Sanjeev Ranasubhe**  
**Ms. Saloni Anirudha Yadav**

**Mr. Sanket Prashant Talegaonkar**  
**Ms. Jagruti Umesh Yenpure**



**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF  
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NIGDI, PUNE (2022-23)  
(ACCREDITED BY NAAC)**

*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients with VTE"*



**Principal**  
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*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients with VTE"*

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*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients with VTE"*




PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44  
(ACCREDITED BY NBA & NAAC)


CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled "*TO STUDY INCIDENCE, COST ANALYSIS AND DRUG UTILIZATION PATTERN OF ANTICOAGULANTS IN PATIENTS WITH VTE*" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Ms. Rachita Sanjeev Ranasubhe, Mr. Sanket Prashant Talegaonkar, Ms. Saloni Anirudha Yadav and Ms. Jagruti Umesh Yenpure under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients with VTE"*




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CERTIFICATE BY THE CO-GUIDE

This is to certify that the research work presented in this thesis entitled "*TO STUDY INCIDENCE, COST ANALYSIS AND DRUG UTILIZATION PATTERN OF ANTICOAGULANTS IN PATIENTS WITH VTE*" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Ms. Rachita Sanjeev Ranasubhe, Mr. Sanket Prashant Talegaonkar, Ms. Saloni Anirudha Yadav and Ms. Jagruti Umesh Yenpure under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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**Endorsement By The Principal**

This is to certify that the research work presented in this thesis entitled ***"TO STUDY INCIDENCE, COST ANALYSIS AND DRUG UTILIZATION PATTERN OF ANTICOAGULANTS IN PATIENTS WITH VTE"*** submitted for degree of Doctor of Pharmacy is a record of bonafide research work carried out by Ms. Rachita Sanjeev Ranasubhe, Mr. Sanket Prashant Talegaonkar, Ms. Saloni Anirudha Yadav and Ms. Jagruti Umesh Yenpure under the guidance of Dr. R. B. Mali at P.E.S. Modern college of pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

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*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients with VTE"*



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**Endorsement By Head Of Department**

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*"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients with VTE"*



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "*TO STUDY INCIDENCE, COST ANALYSIS AND DRUG UTILIZATION PATTERN OF ANTICOAGULANTS IN PATIENTS WITH VTE*" for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of **Dr. Rajani Mali**, Assistant Professor, PES's Modern College of Pharmacy, Pune and co- guide **Dr. Narendra Javadekar**, MBBS M. D. (MED), D.N.B. (MED), M.A. (ECONOMICS) (DMHRC - PI). Such materials as obtained from the other sources have been duly acknowledged in the thesis.

Date: 09/06/2023

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Ms. Rachita Sanjeev Ranasubhe

  
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Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

"To Study Incidence, Cost Analysis and Drug Utilization Pattern of Anticoagulants in Patients With VTE"



*"Assessment Of Drugs Dose Adjustment In Chronic Kidney Disease Patients In Tertiary Care Hospital"*

**Thesis Submitted In The Partial Fulfilment For The Degree Of  
Pharm D  
(DOCTOR OF PHARMACY)**

In the faculty of pharmaceutical sciences  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



*Guided by:*  
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(Assistant Professor)

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**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF PHARMACY,**

**NIGDI, PUNE (2022-23)**

**(ACCREDITED BY NAAC)**

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*"Assessment Of Drug Dose Adjustment In Chronic Kidney Disease Patients In Tertiary Care Hospital"*

**LETTER OF APPROVAL**

The topic has been discussed and approved by the departmental faculty members.

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*"Assessment of drug dose adjustment in chronic kidney disease patients in tertiary care hospital"*



**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44**

**(ACCREDITED BY NBA & NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled "**Assessment Of Drugs Dose Adjustment In Chronic Kidney Disease Patients In Tertiary Care Hospital**" submitted for degree of **Doctor of Pharmacy**, is the record of research work carried out by **Miss. Shweta R. Kendre, Mr. Shiva L. Khanal, Miss. Pranali S. Mahajan and Miss. Shraddha J. Nachane** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

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*"Assessment of drug dose adjustment in chronic kidney disease patients in tertiary care hospital"*



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**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, *"Assessment Of Drugs Dose Adjustment In Chronic Kidney Disease Patients In Tertiary Care Hospital"* for **Doctor of Pharmacy** is a record of bonafide research work carried out by **Miss. Shweta R. Kendre, Mr. Shiva L. Khanal, Miss. Pranali S. Mahajan and Miss. Shraddha J. Nachane** under the guidance of **Dr. Rohini Chavan** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023

Date: 09/06/2023

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DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "*Assessment Of Drugs Dose Adjustment In Chronic Kidney Disease Patients In Tertiary Care Hospital*" the degree of Pharm.D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of **Dr. Rohini Chavan**, Assistant Professor, PES's Modern College of Pharmacy, Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

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Miss. Pranali S. Mahajan

*Nachane*

Miss. Shraddha J. Nachane



*[Signature]*  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
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*"Assessment of drug dose adjustment in chronic kidney disease patients in tertiary care hospital"*





**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44**  
**(ACCREDITED BY NBA & NAAC)**

**Dr. S. B. Pawar**

HOD Pharm D,

Associate Professor,

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**Endorsement By Head Of Department**

This is to certify that the research work presented in this thesis entitled "*Assessment Of Drugs Dose Adjustment In Chronic Kidney Disease Patients In Tertiary Care Hospital*" submitted for degree of **Doctor of Pharmacy** is a record of bonafide research work carried out by **Miss. Shweta R. Kendre, Mr. Shiva L. Khanal, Miss. Pranali S. Mahajan and Miss. Shraddha J. Nachane**, under the guidance of **Dr. Rohini Chavan** at P.E.S. Modern college of pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

Place: Nigdi, Pune.



**Dr. Sunita B. Pawar**

Associate Professor  
Head of Department  
Clinical Pharmacy

**Principal**

P.E.S. Modern College of Pharmacy  
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Pune - 411 044.



*"TO DESIGN, DEVELOP AND VALIDATE THE SCREENING TOOL FOR MINIMIZING  
PRESCRIPTION ERROR IN NEONATES"*

*Thesis submitted in the partial fulfillment for the degree of*  
**Pharm. D**  
**(DOCTOR OF PHARMACY)**

In the Faculty of Pharmaceutical Sciences  
SAVITRIBAI PHULE PUNE UNIVERSITY,  
PUNE



*Guided by*

Dr. Mayuri S. Khaparde

*Co-guided by*

Dr. Shilpa Kalane

*Submitted by*

Mr. Satywan Rajendra Kumbhar

Mr. Akash Rajesh Mahamuni

Ms. Sujata Hanumant Thokal

Ms. Sukshamta Digambar Balure



PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE (2022-23)  
(ACCREDITED BY NBA & NAAC)

*To design, develop and validate the screening tool for minimizing prescription errors in neonates*



*Principal*  
P.E.S. Modern College of Pharmacy  
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*"TO DESIGN, DEVELOP AND VALIDATE THE SCREENING TOOL FOR  
MINIMIZING PRESCRIPTION ERROR IN NEONATES"*

LETTER OF APPROVAL

The topic has been discussed and approved by the faculty member.

Dr. S. B. Pawar  
Head & Associate Professor  
Department of Clinical pharmacy

Dr. A.R. Kumbhar  
Assistant Professor,  
Department of Clinical Pharmacy

Dr. R. P. Chavan  
Assistant Professor,  
Department of Clinical Pharmacy

Dr. R. B. Mali  
Assistant Professor  
Department of Clinical Pharmacy

Dr. M. S. Khaparde  
Assistant Professor,  
Department of Clinical Pharmacy

Mr. S. R. Savadkar  
Assistant Professor  
Department of Clinical Pharmacy



*To design, develop and validate the screening tool for minimizing prescription  
errors*

Principal  
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**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44**

**(ACCREDITED BY NBA & NAAC)**

**CERTIFICATE BY THE GUIDE**

This is to certify that the research work presented in this thesis entitled **"To design , develop and validate the Screening tool for minimizing prescription error in neonates "** submitted for degree of **Doctor of Pharmacy**, is the record of research work carried out by **Mr. Satywan Rajendra Kumbhar, Mr. Akash Rajesh Mahamuni, Ms. Sujata Hanumant Thokal, Ms. Sukshamta Digambar Balure** under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023

Place: Nigdi

**Dr. Mayuri. S. Khaparde**

**(Pharm . D)**

**Research Guide**



**Principal**  
**P.E.S. Modern College of Pharmacy**  
**Sector No.21, Yamunanagar, Nigdi,**  
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*To design, develop and validate the screening tool for minimizing prescription errors in neonates*





**MODERN COLLEGE OF PHARMACY NIGDI, PUNE-44**

(ACCREDITED BY NBA & NAAC)

**CERTIFICATE BY CO-GUIDE**

This is to certify that the thesis entitled "To design, develop and validate the screening tool for minimizing Prescription error in Neonates" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by, by Mr. Satywan Rajendra Kumbhar, Mr. Akash Rajesh Mahamuni, Ms. Sujata Hanumant Thokal, Ms. Sukshamta Digambar Balure under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023

Place: Pune

*S. Kalane*

**Dr. Shilpa Kalane**  
MBBS.D.N. B(PAED)  
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**Dr. Shilpa Kalane**  
DNB Pediatrics, DNB Neonatology  
Reg. No. :- 2005/02/0941



*To design, develop and validate the screening tool for minimizing prescription errors in neonates*

*[Signature]*  
**Principal**  
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**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44**  
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**Dr. P. D. Chaudhari**

Principal,

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Ex-Dean, Faculty of Pharmaceutical Sciences, Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, **"To design, develop and validate The screening tool for minimizing prescription errors in neonates"** is a record of bonafide research work carried out by **Mr. Satywan Rajendra Kumbhar, Mr. Akash Rajesh Mahamuni, Ms. Sujata Hanumant Thokal, Ms. Sukshamta Digambar Balure** under the guidance of **Dr. Mayuri S. Khaparde** at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

Place: Nigdi



  
**Dr. P. D. Chaudhari**  
**Principal**  
**P.E.S. Modern College of Pharmacy**  
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Nigdi, Pune-411044

*To design, develop and validate the screening tool for minimizing prescription errors in neonates*



**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44**  
(ACCREDITED BY NBA & NAAC)

**Dr. S. B. Pawar**

HOD, Pharm D

P.E.S. Modern College of Pharmacy, Yamunanagar, Nigdi, Pune- 44.

**ENDORSEMENT BY THE HEAD OF THE DEPARTMENT**

This is to certify that the research presented in this thesis entitled, "To design, develop and validate The screening tool for minimizing prescription errors in neonates" is a record of bonafide research work carried out by Mr. Satywan Rajendra Kumbhar, Mr. Akash Rajesh Mahamuni, Ms. Sujata Hanumant Thokal, Ms. Sukshamta Digambar Balure under the guidance of Dr. Mayuri S. Khaparde at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

Place: Nigdi

**Dr. S. B. Pawar**

**Head of Department**  
**Clinical Pharmacy**



**Principal**  
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Pune - 411 044.

*To design, develop and validate the screening tool for minimizing prescription errors in neonates*



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION BY THE CANDIDATES

This is to state that the research work entitled *"TO DESIGN, DEVELOP AND VALIDATE THE SCREENING TOOL FOR MINIMIZING PRESCRIPTION ERROR IN NEONATES"* for the degree of PharmD has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of Dr. Mayuri S. Khaparde, Assistant Professor, PES's Modern College of Pharmacy, Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

Date: 09/06/2023

Place: Pune


  
Mr. Satywan R. Kumbhar

  
Mr. Akash R. Mahamuni

  
Ms. Sujata H. Thokal

  
Ms. Sukshamta D. Balure



  
Principal  
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Pune - 411 044.

*To design, develop and validate the screening tool for minimizing prescription errors in neonates*





**"DESIGN, DEVELOPMENT AND VALIDATION OF SCREENING TOOL FOR  
IV MEDICATIONS INCOMPATIBILITY IN NEONATES"**

***Thesis submitted in the partial fulfillment for the degree of  
Pharm. D***

**(DOCTOR OF PHARMACY)**

**In the faculty of Pharmaceutical Science**

**SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



***Guided by  
Dr. S. B. Pawar***

***Co-guided by  
Dr. Shilpa Kalane***

***Submitted by***

**Ms. Vaishnavee Deshmukh  
Ms. Vaishnavi Panchariya**

**Mr. Gaurav Memeane  
Mr. Vedant Patil**



**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF  
PHARMACY,  
NIGDI, PUNE (2022-23)  
(ACCREDITED BY NAAC)**



**Principal**  
**P. E. S. Modern College of Pharmacy**  
**Sector No.21, Yamunanagar, Nigdi,**  
**Pune - 411 044.**

**"Design, development and validation of screening tool for IV medications incompatibility  
in neonates."**



**"DESIGN, DEVELOPMENT AND VALIDATION OF SCREENING TOOL FOR IV  
MEDICATIONS INCOMPATIBILITY IN NEONATES"**

**LETTER OF APPROVAL**

The topic has been discussed and approved by the departmental faculty members

**Dr. S. B. Pawar**  
Head & Associate Professor  
Department of Clinical Pharmacy

**Dr. A. R. Kumbhar**  
Assistant Professor,  
Department of Clinical Pharmacy

**Dr. R. P. Chavan**  
Assistant Professor,  
Department of Clinical Pharmacy

**Dr. R. B. Mali**  
Assistant Professor,  
Department of Clinical Pharmacy

**Dr. M. S. Khaparde**  
Assistant Professor,  
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**Mr. S. R. Savadekar**  
Assistant Professor  
Department of Clinical Pharmacy



**Principal**  
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Pune - 411 044.

**"Design, development and validation of screening tool for IV medications incompatibility  
in neonates."**




PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44  
(ACCREDITED BY NBA & NAAC)


CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled "*Design, Development and Validation of Screening Tool for IV medications incompatibility in Neonates*" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Miss. Vaishnavi Deshmukh, Mr. Gaurav Memane, Miss. Vaishnavi Panchariya, and Mr. Vedant Patil under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023  
Place: Nigdi

  
Dr. S. B. Pawar  
(Head & Associate Professor  
Department of Clinical Pharmacy)  
Research Guide



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

"Design, development and validation of screening tool for IV medications incompatibility in neonates."



MODERN COLLEGE OF PHARMACY NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)

*CERTIFICATE BY CO- GUIDE*

This is to certify that the thesis entitled "*Design, Development and Validation of Screening Tool for IV medications incompatibility in Neonates*" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by, Miss. Vaishnavee Deshmukh, Mr. Gaurav Memane, Miss. Vaishnavi Panchariya, and Mr. Vedant Patil under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023  
Place: Pune

*for*  
Dr. Shilpa Kalane  
MBBS, D.N.B. (PAED)  
Dr. N. B. (NEONATOLOGY)  
DMHRC - PI  
Research Co-guide



"Design, development and validation of screening tool for IV medications incompatibility in neonates."

*Principal*  
P. E. S. Modern College of Pharmacy  
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PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
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Yamuna Nagar, Nigdi, Pune- 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.


ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled, "*Design, Development and Validation of Screening tool for IV medications incompatibility in neonates*" for Doctor of Pharmacy is a record of bonafide research work carried out by Miss. Vaishnavee Deshmukh, Mr. Gaurav Memane, Miss. Vaishnavi Panchariya, and Mr. Vedant Patil under the guidance of Dr. S. B. Pawar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date : 09/06/2023

Place: Nigdi



  
Dr. P. D. Chandhari  
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"Design, development and validation of screening tool for IV medications incompatibility in neonates."



PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
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Associate Professor,

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Pune- 44.

ENDORSEMENT BY THE HEAD OF DEPARTMENT

This is to certify that the research presented in this thesis entitled, "*Design, Development and Validation of Screening tool for IV medications incompatibility in neonates*" for Doctor of Pharmacy is a record of bonafide research work carried out by Miss. Vaishnavee Deshmukh, Mr. Gaurav Memane, Miss. Vaishnavi Panchariya, and Mr. Vedant Patil under the guidance of Dr. S. B. Pawar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

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Dr. S. B. Pawar

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"Design, development and validation of screening tool for IV medications incompatibility in neonates."

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Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "Design, Development and Validation of Screening Tool for IV Medications Incompatibility in Neonates" for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of Dr. S. B. Pawar, Head & Associate Professor, Department of Pharm D, PES's Modern College of Pharmacy, Pune and co-guide Dr. Shilpa Kalane, MBBS D.N.B (PAED), Dr. N. B. (NEONATOLOGY) (DMHRC-PI). Such materials, as obtained from the other sources, have been duly acknowledged in the thesis.

Date: 09/06/2023  
Place: Pune

Miss. Vaishnavee Deshmukh

Mr. Gaurav Memane

Miss. Vaishnavi Panchariya

Mr. Vedant Patil

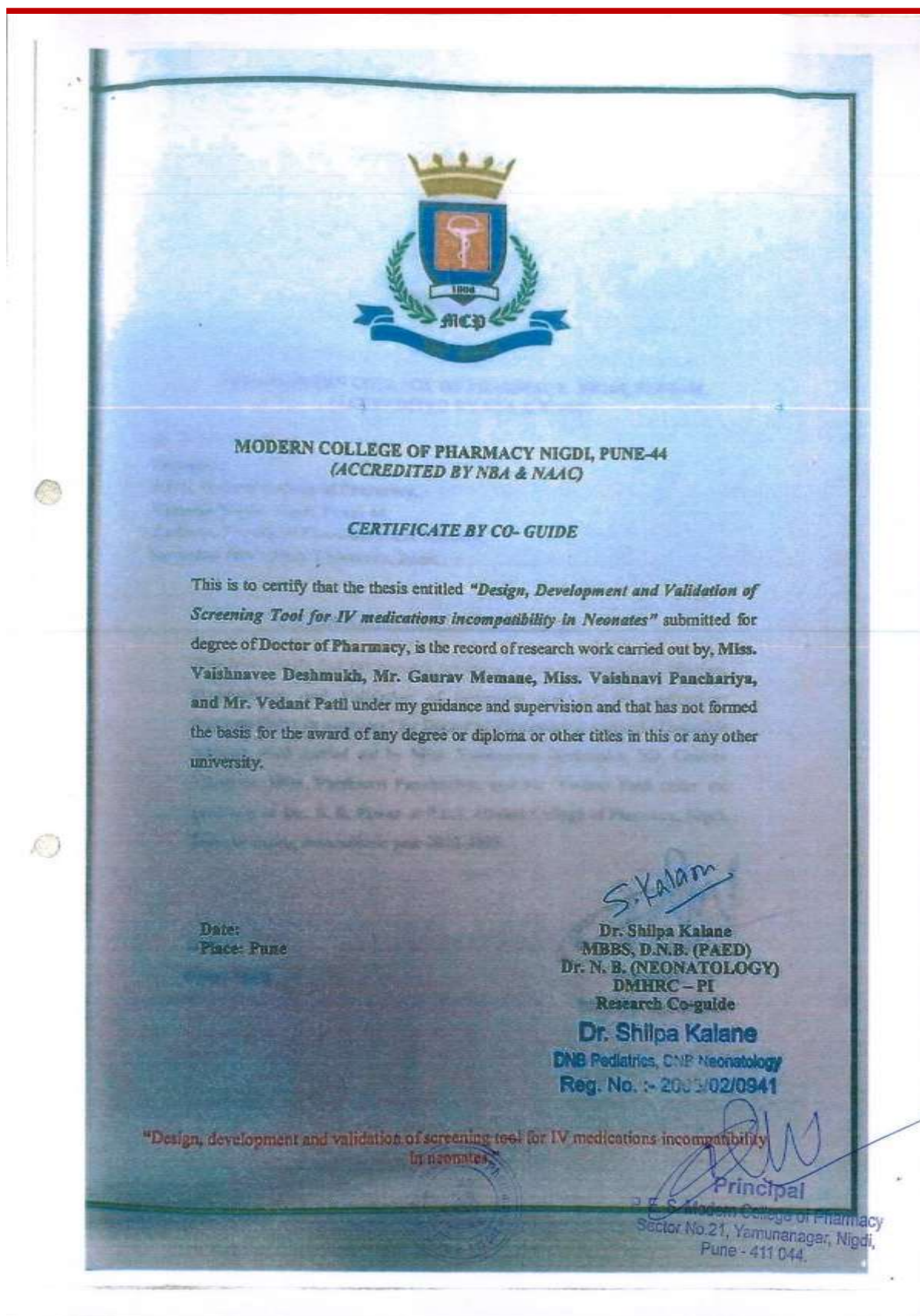


Principal

"Design, development and validation of screening tool for IV medications incompatibility in neonates."

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.









*Assessment of Drug Related Problems Among Uterine  
Cervix Carcinoma Patients*

*Thesis submitted in the partial fulfillment for the degree of Pharm. D  
(DOCTOR OF PHARMACY)*

*In the faculty of pharmaceutical sciences  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE*



*Guided by*  
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*Co-guided by*  
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Mr. Abhishek H. Khaire  
Miss. Esha A. Patel

*Submitted by*

Miss. Sumedha A. Savane  
Mr. Avinash S. Shinde



PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE (2022-23)  
(ACCREDITED BY NAAC)

*Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients*



*Principal*  
P.E. S. Modern College of Pharmacy  
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*Assessment of Drug Related Problems Among Uterine  
Cervix Carcinoma Patients*

LETTER OF APPROVAL

The topic has been discussed and approved by the departmental faculty members.

Dr. S. B. Pawar  
Head & Associate Professor  
Department of Pharm. D

Dr. A. R. Kumbhar  
Assistant Professor,  
Department of Pharm. D

Dr. R. P. Chavan  
Assistant Professor,  
Department of Pharm. D

Dr. R. B. Mali  
Assistant Professor  
Department of Pharm. D

Dr. M. S. Khaparde  
Assistant Professor,  
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Mr. S. R. Savadekar  
Assistant Professor  
Department of Pharm. D



Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

*"Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients"*



PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44

(ACCREDITED BY NBA & NAAC)

CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled "Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Mr. Abhishek H. Khaire, Miss. Esha A. Patel, Miss. Sumedha A. Savane and Mr. Avinash S. Shinde under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 03/06/2023

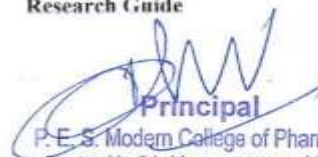
Place: Nigdi

  
Dr. Anjali Kumbhar

(Assistant Professor)

Research Guide



  
Principal

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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044

Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients



MODERN COLLEGE OF PHARMACY NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)

**CERTIFICATE BY CO- GUIDE**

This is to certify that the thesis entitled "Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by, Mr. Abhishek H. Khaire, Ms. Esha A. Patel, Ms. Sumedha A. Savane and Mr. Avinash S. Shinde under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

**Dr. Asma Pathan**  
M.P.S., MD (General Medicine)  
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**Dr. Asma Pathan**  
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"Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients"





PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
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Dr. P. D. Chaudhari  
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Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, "Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients" is a record of bonafide research work carried out by Mr. Abhishek H. Khaire, Miss. Esha A. Patel, Miss. Sumedha A. Savane and Mr. Avinash S. Shinde under the guidance of Dr. Anjali Kumbhar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

Place: Nigdi



Dr. P. D. Chaudhari  
Principal  
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Yamunanagar, Sector No. 2,  
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*Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients"*



PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)

Dr. S. B. Pawar  
HOD, Pharm D  
Associate Professor,  
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Yamuna nagar, Nigdi, Pune-44

CERTIFICATE BY HEAD OF DEPARTMENT

This is to certify that the research presented in this thesis entitled, "Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients" is a record of bonafide research work carried out by Mr. Abhishek H. Khaire, Miss. Esha A. Patel, Miss. Sumedha A. Savane and Mr. Avinash S. Shinde under the guidance of Dr. Anjali Kumbhar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

Dr. S. B. Pawar  
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Place: Nigdi



Principal

Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients  
P.E.S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "*Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients*" for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of **Dr. Anjali Kumbhar**, Assistant Professor, PES's Modern College of Pharmacy, Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

Date: 09/06/2023

Place: Pune

Mr. Abhishek H. Khair

Miss, Esha A. Patel

Miss, Sumedha A. Savane

Mr. Avinash S. Shinde

*Assessment of Drug Related Problems Among Uterine Cervix Carcinoma Patients*



**Principal**  
P. E. S. Modern College of Pharmacy,  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SHREE NARSIMHA SARASWATI MEDICAL FOUNDATION  
INDRAYANI HOSPITAL & CANCER INSTITUTE



To,

Dr. Anjali R. Kumbhar,  
Assistant Professor,  
Dept. of Doctor of Pharmacy,  
Modern College of Pharmacy,  
Nigdi, Pune-44.

Date:

**Subject:** Approval letter to collect research data from Indrayani Hospital And Cancer Institute for thesis.


Dear Dr. Anjali,

With reference to your email, seeking permission to collect data from Indrayani Hospital And Cancer Institute for a study titled "Assessment of drug related problems among cervical cancer patients." for your proposed thesis, I would like to inform you that your students

Mr. Abhishek H. Khaire,  
Ms. Sumedha A Savane  
Ms. Esha A Patel

Mr. Avinash S Shinde are allowed to collect the required information from patients and their relatives by adhering to the following Conditions.

- 1) Your research proposal is accepted by the University authorities.
- 2) Your research work should not cause any disturbance in the functioning of hospital and treatment of patients.
- 3) Participants will be informed about the purpose and procedures involved in the research.
- 4) Written consent will be obtained from the participants.
- 5) Research procedure should not be causing any physical, emotional or psychological harm to the participants.
- 6) Participants are allowed to withdraw their participation at any point of study.
- 7) Debriefing will be done at the end of the data collection.


  
Dr. Sanjay Deshmukh  
Managing Trustee  
Indrayani Hospital and Cancer Institute  
Alandi-Chakan Road, Alandi,  
Pune, Maharashtra.



Shree Narsimha Saraswati Medical Foundation  
Indrayani Hospital & Cancer Institute

Assessment of Drug Related Problems Among Cervine Cancer Patients



  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune- 411 014.





**"DEVELOPMENT OF THE MOBILE  
APPLICATION FOR DIGITAL LITERACY  
IN SOCIOLOGICAL FACTORS  
RESPONSIBLE FOR CARDIOVASCULAR  
RISKS."**

*Thesis submitted in the partial fulfillment for the degree of  
Pharm. D*

**(DOCTOR OF PHARMACY)**

**In the faculty of pharmaceutical sciences  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE**



*Guided by*  
**Mr. Siddhartha R. Savdekar**

*Co-guided by*  
**Dr. Sunita Pawar**

*Submitted by*  
**Mr. Nitesh R. Agrawal      Ms. Shruti C Akhade**  
**Mr. Shubham R Kudale      Ms. Ashwini A. Vare**



**PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF  
PHARMACY,  
NIGDI, PUNE (2021-22)  
(ACCREDITED BY NAAC)**

*"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY  
RELATED TO CARDIOVASCULAR RISK FACTOR IN SOCIOLOGICAL FACTORS"*



*[Signature]*  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**"DEVELOPMENT OF THE MOBILE  
APPLICATION FOR DIGITAL LITERACY  
IN SOCIOLOGICAL FACTORS  
RESPONSIBLE FOR CARDIOVASCULAR  
RISKS."**

**LETTER OF APPROVAL**

The topic has been discussed and approved by the departmental faculty members.

Dr. S. B. Pawar  
Head and Associate Professor  
Department of Clinical Pharmacy

Dr. A. R. Kumbhar  
Assistant Professor  
Department of Clinical Pharmacy

Dr. R. P. Chavan  
Assistant Professor  
Department of Clinical Pharmacy

Dr. R. B. Mali  
Assistant Professor  
Department of Clinical Pharmacy

Dr. M. S. Khaparde  
Assistant Professor  
Department of Clinical Pharmacy

Mr. S. R. Savdekar  
Assistant Professor  
Department of Clinical Pharmacy

"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY  
RELATED TO CARDIOVASCULAR RISK FACTORS IN SOCIOLOGICAL FACTORS"



Principal  
P. E. S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's MODERN COLLEGE OF PHARMACY, NIGDI,  
PUNE- 44

(ACCREDITED BY NBA & NAAC)

CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled  
"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL  
LITERACY IN SOCIOLOGICAL FACTORS RESPONSIBLE FOR  
CARDIOVASCULAR RISKS." submitted for degree of Doctor of Pharmacy,  
is the record of research work carried out by Mr. Nitesh R. Agrawal, Ms. Shruti  
C. Akhade, Mr. Shubham R. Kudale and Ms. Ashwini A. Vare under my  
guidance and supervision and that has not formed the basis for the award of any  
degree or diploma or other titles in this or any other university.

Date : 09/06/2023

Place : Nigdi, Pune

  
Mr. S. R. Savdekar

Assistant Professor, Department of  
Pharm D

Research Guide

"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN SOCIOLOGICAL FACTORS RESPONSIBLE FOR CARDIOVASCULAR RISKS"



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



MODERN COLLEGE OF PHARMACY NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)

**CERTIFICATE BY CO- GUIDE**

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degree or diploma or other titles in this or any other university.

  
Dr. S. B. Pawar

Head and Associate Professor

Department of Pharm D

Research Co-Guide

Date: 09/06/2023

Place: Nigdi, Pune.



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)**

**Dr. P. D. Chandhari**

Principal,

P.E.S. Modern College of Pharmacy, Yamunanagar,

Nigdi, Pune- 44.

Ex-Dean, Faculty of Pharmaceutical Sciences, Savitribai Phule  
Pune University, Pune.


**ENDORSEMENT BY THE PRINCIPAL**

This is to certify that the research presented in this thesis entitled, "DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN SOCIOLOGICAL FACTORS RESPONSIBLE FOR CARDIOVASCULAR RISKS." for Doctor of Pharmacy is a record of bonafide research work carried out by Mr. Nitesh R. Agrawal, Ms. Shruti C. Akhade, Mr. Shubham R. Kudale and Ms. Ashwini A. Vare under the guidance of Mr. S. R. Savdekar and Dr. S. B. Pawar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date:

Place: Nigdi, Pune



  
Dr. P. D. Chandhari  
Principal,  
P.E.S. Modern College of Pharmacy,  
Yamunanagar, Sector No.21  
Nigdi, Pune-411 044

"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN CVD."



**PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)**

**Dr. S. B. Pawar,**

**HOD, Department of Pharm D  
P.E.S. Modern College Pharmacy Nigdi, Pune-44**

**ENDORSEMENT BY THE HEAD OF DEPARTMENT**

This is to certify that the research presented in this thesis entitled, "DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN SOCIOLOGICAL FACTORS RESPONSIBLE FOR CARDIOVASCULAR RISKS." for Doctor of Pharmacy is a record of bonafide research work carried out by Mr. Nitesh R. Agrawal, Ms. Shruti C. Akhade, Mr. Shubham R. Kudale and Ms. Ashwini A. Vare under the guidance of Mr. S. R. Savdekar and Dr. S. B. Pawar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

**Date:** 09/08/2023

**Place:** Nigdi, Pune

**Dr. S. B. Pawar**

**Head and Associate Professor**

**Department of Pharm D**

**Research Co-Guide**



**Principal**

**P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.**

"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN CVD."



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN SOCIOLOGICAL FACTORS RESPONSIBLE FOR CARDIOVASCULAR RISKS." for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of Mr. S. R. Savdekar, Assistant Professor, PES's Modern College of Pharmacy, Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

Date: 09/06/2023

Place: Pune

Mr. Nitesh R. Agrawal

Ms. Shruti C. Akhade

Mr. Shubham R. Kudale

Ms. Ashwini A. Vare



Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

"DEVELOPMENT OF THE MOBILE APPLICATION FOR DIGITAL LITERACY IN CVD."



**"TO EVALUATE THE DRUG UTILIZATION AND ANALYSIS OF  
ANTI-EPILEPTIC DRUG AT TERTIARY CARE HOSPITAL"**

Thesis submitted in the partial fulfillment for the degree of  
Pharm. D

**(DOCTOR OF PHARMACY)**

In the faculty of pharmaceutical sciences

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE



Guided by

Dr. Anjali Kumbhar

Co-guided by

Dr. Rahul Kulkarni

Submitted by

Miss. Pranali Anil Kumbhar

Mr. Harshad Nandu Jadhav

Miss. Vaishnavi Vajinath Chavan

Mr. Shubham Vinthal Shewale



PROGRESSIVE EDUCATION SOCIETY'S MODERN COLLEGE OF PHARMACY,  
NIGDI, PUNE (2022-23)  
(ACCREDITED BY NAAC)

*"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"*



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**"TO EVALUATE THE DRUG UTILIZATION AND ANALYSIS OF ANTI-  
EPILEPTIC DRUG AT TERTIARY CARE HOSPITAL."**

**LETTER OF APPROVAL**

The topic has been discussed and approved by the departmental faculty members.

Dr. S. B. Pawar  
Head & Associate Professor  
Department of Pharm. D

Dr. A. R. Kumbhar  
Assistant Professor,  
Department of Pharm. D

Dr. R. P. Chavan  
Assistant Professor,  
Department of Pharm. D,

Dr. R. B. Mali  
Assistant Professor  
Department of Pharm. D,

Dr. M. S. Khaparde  
Assistant Professor,  
Department of Pharm. D

Mr. S. R. Savadkar  
Assistant Professor  
Department of Pharm. D

*"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"*



**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.




PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE- 44

(ACCREDITED BY NBA & NAAC)

CERTIFICATE BY THE GUIDE

This is to certify that the research work presented in this thesis entitled "To evaluate the drug utilization and analysis of Anti-epileptic drugs at tertiary care hospital" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by Miss. Pranali A Kumbhar, Mr. Harshal N Jadhav, Miss. Vaishnavi V Chavan, Mr. Shubham V Shewale under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date: 09/06/2023  
Place: Nigdi, Pune.

  
Dr. Anjali Kumbhar  
(Assistant professor)  
Research Guide

*"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"*



  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



MODERN COLLEGE OF PHARMACY NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)

CERTIFICATE BY CO-GUIDE

This is to certify that the thesis entitled "To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital" submitted for degree of Doctor of Pharmacy, is the record of research work carried out by, Miss. Pranali A Kumbhar, Mr. Harshal N Jadhav, Miss. Vaishnavi V Chavan, Mr. Shubham V Shewale under my guidance and supervision and that has not formed the basis for the award of any degree or diploma or other titles in this or any other university.

Date 09/06/2023

Place: Nigdi, Pune

Dr. Rahul Kulkarni  
M.D. (MED).  
D.M. (NEURO).  
D.N.B (NEURO)  
(DMHRC PUNE)  
Research Co-Guide  
M.D. (Medicine) D.M.D.N.B. (Neurology)  
Reg. No. - 072903

"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"



Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)

Dr. P. D. Chaudhari

Principal,

P.E.S. Modern College of Pharmacy, Yamunanagar, Nigdi,

Pune- 44.

Ex-Dean, Faculty of Pharmaceutical Sciences, Savitribai Phule

Pune University, Pune.

ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research presented in this thesis entitled, "To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital" is a record of bonafide research work carried out by Miss. Pranali A. Kumbhar, Mr. Harshal N Jadhav, Miss. Vaishnavi V Chavan, Mr. Shubham V Shewale under the guidance of Dr. Anjali Kumbhar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

Date: 09/06/2023

Place: Nigdi



  
Principal  
P. E. Society's  
Modern College of Pharmacy  
Yamunanagar, Sector No. 21  
Nigdi, Pune - 44

"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"





PES's MODERN COLLEGE OF PHARMACY, NIGDI, PUNE-44  
(ACCREDITED BY NBA & NAAC)


Dr. S. B. Pawar  
HOD PHARM D,  
ASSOCIATE PROFESSOR  
P.E.S. Modern College of Pharmacy, Yamunanagar, Nigdi,  
Pune- 44.

ENDORSEMENT BY HEAD OF DEPARTMENT

This is to certify that the research presented in this thesis entitled, "To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital" is a record of bonafide research work carried out by Miss. Pranali A. Kumbhar, Mr. Harshal N Jadhav, Miss. Vaishnavi V. Chavan, Mr. Shubham V Shewale under the guidance of Dr. Anjali Kumbhar at P.E.S. Modern College of Pharmacy, Nigdi, Pune 44 during the academic year 2022-2023.

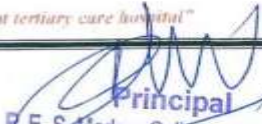
Date: 09/06/2023

Place: Nigdi Pune

  
Dr. Sunita B. Pawar  
HOD Pharm. D

"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"



  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



SAVITRIBAI PHULE PUNE UNIVERSITY



DECLARATION BY THE CANDIDATES

This is to state that the research work entitled "To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital" for the degree of Pharm. D has not been submitted in parts or full to any other university by us. This is original work undertaken by us under the guidance of **Dr. Anjali Kumbhar**, Assistant Professor, PES's Modern College of Pharmacy, Pune. Such materials as obtained from the other sources have been duly acknowledged in the thesis.

Date: 09/06/2023  
Place: Pune

Miss. Pranali Anil Kumbhar

Mr. Harshal Nandu Jadhav

Miss. Vaishnavi Vaijnath Chavan

Mr. Shubham Vitthal Shewale

"To evaluate the drug utilization and analysis of anti-epileptic drugs at tertiary care hospital"



Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



First Year B. Pharm Environmental Science Project



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'Best College Award' by Savitribai Phule Pune University



Approved by All India Council for Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
Directorate of Technical Education, Mumbai (MS), Permanently affiliated to  
Savitribai Phule Pune University, Pune & Approved under Section (2 (f) & 12 (B) of UGC Act, 1956

Sector No. 21, Yamunanagar, Nigdi, Pune - 411 044. (M.S.) Tel. : 020-27661314 / 15

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Prof. Dr. P. D. Chaudhari  
M.Pharm., Ph.D.  
Principal

Prof. Dr. Gajanan R. Ekbote  
M.S., M.N.A.M.S.  
Chairman, Business Council  
P.E.Society, Pune

Ref :

Date :

**B. PHARM FIRST YR. ENVIROMENTAL PROJECT DETAILS -2022-23**

Roll No.	Name of the Students	Title of project
1001	AMRUTKAR SACHIN EKNATH	London Smog
1002	ANDRE DISHA YASHWANT	
1003	ATTARKAR YASH GANESH	
1004	BANSODE PAYAL ANGAD	
1005	BHAKAD DARSHAN LAXMAN	Chernobyl Disaster
1006	BHARAMBE BHAKTI CHANDRAKANT	
1007	BHARAMBE MIHIR SHIVAJI	Bhopal Gas Tragedy
1008	BHATANE CHAITANYA GOVIND	
1009	BHOI NEERAJ KISHOR	The Exxon Valdez Oil Spill
1010	BHOPALE SANIKA RAJESH	
1011	BHOSALE SURABHI RAMESH	
1012	BHOSLE RUSHIKESH KRISHNA	
1013	BHURKUNDE SHUBHAM NARAYAN	The Seveso Disaster
1014	CHENDKE VAISHNAVEE ANAND	
1015	CHOUGULE RAJWARDHAN DIGAMBAR	Minamata Disease
1016	DAHIPHALE ADITYA ADINATH	
1017	DALAVI SNEHA SANTOSH	Southern Leyte Rock Slide/Avalanche
1018	DALVI SAKSHI AMAR	
1019	DATE SNEHAL KHANDU	Deepwater Horizon/ Gulf of Mexico Oilspill
1020	DATIR SARTHAK DEEPAK	
1021	DHANAVADE SHUBHAM CHANDRAKANT	
1022	DHANDE SWARAJ GANPAT	
1023	DHORE HARSHAL LALASAHEB	Baia Mare Cyanide Spill
1024	GAIKWAD ROHIT RAOSAHEB	
1025	GAVHANE SHRAVANI BHAIKAVNATH	
1026	GAWARI GAYATRI SHIVAJI	
1027	GHODAKE SAVITRI VISHWANATH	

*(Tawji Jadhar)*  
SUBJECT INCHARGE



*(Signature)*  
PRINCIPAL

**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

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Prof. Dr. P. D. Chaudhari  
 M.Pharm., Ph.D.  
 Principal

Prof. Dr. Gajanan R. Ekbote  
 M.S., M.N.A.M.S.  
 Chairman, Business Council  
 P.E.Society, Pune

Ref : \_\_\_\_\_ Date : \_\_\_\_\_

**B. PHARM FIRST YR. ENVIROMENTAL PROJECT DETAILS -2022-23**

Roll No.	Name of the Students	Title of project
1028	GHUGE POONAM SHARAD	Love Canal Tragedy
1029	GIDYE PRASHANTI RAMESH	
1030	GOVEKAR VAIDEHI KHRINTWAS	
1031	GULAV PRATHMESH RAJARAM	The North Pacific Garbage Patch
1032	HOLE AISHWARYA DILEEP	
1033	INGALE DARSHIL SANJOG	
1034	JADAR TRUPTI ASHOK	E-waste in Guiyu, China
1035	JADHAV ANUSHKA	
1036	JADHAV MANIK SOMDEV	
1037	JADHAV PRACHI EKNATH	Dust Bowl in Canada and United States
1038	JADHAV ROHAN RAJENDRA	
1039	JAGALPURE SANSKRUTI SANJAY	
1040	JAGDALE TANMAY BHARAT	The Great Sparrow Campaign (China)
1041	JAGTAP VAIBHAV ANNASAHEB	
1042	JAMADAR YASHPAL MANSING	
1043	JANE ACHAL SUDHAR	Decline of Vultures in India due to Diclofenac leading to increased incidences of rabies
1044	JUMADE KHUSHBOO DEEPAK	
1045	KACHARE VAISHNAVI GOVIND	
1046	KAMBALE VRUNDA LI BHAI SAHEB	Deforestation of Easter Island
1047	KAMBLE SAINATH PANDURANG	
1048	KARALE VAISHNAVI TARUN	
1049	KARANDE SNEHAL RAMCHANDRA	Environmental Threats to The Great Barrier Reef
1050	KASHID PRATIKSHA PRADIP	
1051	KATE VAISHNAVI SHANKAR	
1052	KATKHEDE JANHAVI SUNIL	Dioxin Strug
1053	KHANDARE RUTUJA JAGANNATH	
1054	KHEDKAR SHRAVANI SANDEEP	
1055	KHERDE ADITI RAJESH	Fukushima Daiichi Nuclear Disaster
1056	KOKATE SHILPA DNYANESHWAR	
1057	KOTHE MRUNMAY	
1058	KULKARNI KAUSTUBH MILIND	Melbourne Dust Storm
1059	KULKARNI VISHAL VINAYAK	
1060	KURHE SHREYAS BABASAHEB	
1061	LOKHANDE PRIYA NAVNATH	Keweenaw Oil Fires
1062	LONDHE NINAD RAJENDRA	
1063	MADAKE NICHIL BHAGWAN	
1064	MAHAKE OMKESH VENKAT	Burning of Amazon Forest-2019
1065	MAIND PRASAD PRAVIN	
1066	MANIARE HARSHAL RAHUL	

  
 (Tanvi Jadhav)  
 SUBJECT INCHARGE

  
 PRINCIPAL

  
**Principal**  
 P. E. S. Modern College of Pharmacy  
 Sector No.21, Yamunanagar, Nigdi,  
 Pune - 411 044.

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Prof. Dr. P. D. Chaudhari  
M.Pharm., Ph.D.  
Principal

Prof. Dr. Gajanan R. Ekbote  
M.S., M.N.A.M.S.  
Chairman, Business Council  
P.E.Society, Pune

Ref :

**B. PHARM FIRST YR. ENVIROMENTAL PROJECT DETAILS -2022**

ROLL NO.	NAME OF THE STUDENTS	TITLE OF PROJECT
1067	MANKAR MOHINI ISHWARDAS	Coral Bleaching
1068	MARNE PAYAL SUNIL	
1069	MASNE PRAJAKTA BHAGWAN	
1070	MIHASKE RUTUJA TANAJI	Ocean Acidification
1071	MORE BHAKTI RAJESH	
1072	MORE OMKAR SUDAM	
1073	MULE UTKARSHA CHANDRAKANT	Sacred Groves in the Western Ghats
1074	NAVALE PRATIK RAJENDRA	
1075	NAVIRE SHARAYU DAYANAND	
1076	NIKAM OMKAR VIJAY	The Gulf War Spill
1077	PACHKHANDI RUSHIKESH SANTOSH	
1078	PANWAR NARAYANI MANOHARLAL	
1079	PATE APURVA VIJAYKUMAR	The Libby Montana Asbestos Contamination
1080	PATIL ADITYA VIJAY	
1081	PATIL PRANAV RAJESH	
1082	PATIL VAISHNAV DADARAO	Australian Bush fires 2019-2020
1083	PATIL YUVRAJ HARISH	
1084	PAYSE DURGADevi MAHESH	
1085	POLE RUTUJA DASHRATH	Oil spill In Russia's Arctic region
1086	POTDAR CHINMAYEE RAHUL	
1087	RANE MANISH GAJANAN	
1088	RATOD KAJAL JITENDRA	Cyclone Nisarga, MH
1089	RAUT ATHARVA NANDKISHOR	
1090	ROHIDA YASHIKA	
1091	SABNE KUNAL SURESH	Jaitapur Nuclear Power Plant
1092	SHARMA HARISH DWARKAPRASAD	
1093	SHEKH ARSHIYA NAVED	
1094	SHELAR PRIYA DIPAK	Assam Gas and oil leak
1095	SHENDGE GANESH DADASAHEB	
1096	SHEREGAR DISHA RAJANAND	
1097	SHINDE AAYUSH UMESH	Man and animal Conflict
1098	SHINDE ANKITA ATUL	
1099	SHINDE SHRIKANT MININATH	
1100	SINGH PRANAV SANDEEP	Western Ghats - UNESCO World Heritage site
1101	SONAWANE ROHIT RAJU	
1102	SUDKE VEDANTI RAJESH	
1103	TAMBOLI KHATUJA KONDAJI	California Wild Fires
1104	TAPSALE AARYAN ARUN	
1105	THOMBARE SANIKA DNYANESHWAR	
1106	THORAT KIRTI BABULAL	Kazs Plateau- UNESCO World Heritage site
1107	VAIRAT UDDHAV BHANUDAS	
1108	VAYAL SHREYA SANDEEP	
1109	VERULKAR SANCHAY SHALIGRAM	Cheetah Reintroduction in Kuno National Park
1110	WADGAVE DNYANESHWAR CHANDRAKANT	
1111	WADHAI GAURANG ANANT	
1112	WAGHMODE HARSHAD DHANAJI	

*(Tannu Jadhav)*  
SUBJECT INCHARGE

*(Principal)*  
PRINCIPAL



STRIVING TOWARDS EXCELLENCE FOREVER

Principal  
S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**The London Smog.**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Mr. Sachin Amrutkar (1001)

Ms. Disha Andre (1002)

Mr. Yash Attarkar (1003)

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE


Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



  
PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**CERTIFICATE**

This is to certify that, "Mr.Sachin Amrutkar, Ms.Disha Andre, Mr.Yash Attarkar "student of class "First Year B.pharm" has successfully completed their EVS project on "The London Smog" under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/23  
Place: Nigdi, Pune

  
Miss Tanvi Jadhav  
(Subject In charge)

  
Dr. P.D. Chaudhari  
Principal  
P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

3



CHERNOBYL DISASTER

Environment science project submitted To

Progressive Education Society's  
**Modern College of Pharmacy**  
YAMUNANAGER NIGDI,PUNE-44



By

Mr.Darshan Bhakad

Ms.Bhakti Bharambe

Ms.Payal Bansode

(B. Pharm first Year )

In partial fulfillment of the requirements for the First Year B.Pharm

Course in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Science, Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

SAVITRIBAI PHULE PUNE UNIVERSITY

2

  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
**(Accredited by NAAC and NBA)**

## CERTIFICATE

This is to certify that, "Darshan Bhakad" "Bhakti Bharambe" "Payal Bansode" student of class " FY B.pharm " has successfully completed their EVS project on the "Chernobyl disaster" under the guidance of "Miss Tanvi Jadhav"

Date : 31/5/23

Place: Nigdi, Pune

Miss Tanvi Jadhav  
(Subject Incharge)

DR. P.D Chaudhari  
Principal

P.E. S Modern College of Pharmacy, Nigdi, Pune - 44

Ex-Dean, Faculty of Pharmaceutical Science,



Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## **Bhopal Gas Tragedy**

Environmental Science Project Submitted to

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**



By  
Mihir Bharambe  
Neeraj Bhoi  
Chaitanya Bhatane

(B. Pharm firstYear )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc, Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**


**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)**

*(Accredited by NAAC and NBA)*



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Mihir Bharambe, Neeraj Bhoi, Chaitanya Bhatane" student of class " F.Y.BPharm (DIV:- A) " has successfully completed their EVS project on "Bhopal Gas Tragedy" under the guidance of "Miss Tanvi Jadhav"

Date: 31<sup>st</sup> May 2023

Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In charge)

Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
SavitribaiPhule Pune University, Pune.



P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## The Exxon Valdez Oil spill

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune – 44



By

Ms. Sanika Bhopale (B. Pharm first Year)

Ms. Surabhi Bhosale (B. Pharm first Year)

Mr. Rushikesh Bhosle (B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year  
2022-2023

Under the Guidance of


**Ms. Tanvi Jadhav**

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE



  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify the "Ms. Sanika Bhopale , Ms. Surabhi Bhosale, Mr. Rushikesh Bhosle" student of class " F.Y.B.pharm " has successfully completed their EVS project on "The Exxon Valdez Oil Spill " under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In charge)



Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Society of Pharmaceutical Sciences,

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**The seveso disaster**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Mr. Shubham bhurkunde

Ms. Vaishnavee chendke

Mr. Rajwardhan chougule

(B. Pharm firstYear )

In partial fulfillment of the requirements for the First Year B.Pharm Course in

Acedemic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

Assistant Professor

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-

2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Mr. Shubham bhurkunde, Ms. Vaishnavee chendke, Mr. Rajwardhan chougule" student of class " fy b pharm" has successfully completed their EVS project on "The seveso disaster" under the guidance of "Miss Tanvi Jadhav"

Date: 31st May 2023  
Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In charge)

Dr. P.D. Chaudhari

Principal



P.E.S Modern College of  
Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical  
Sciences,  
Savitribai Phule Pune University,  
Pune

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## MINAMATA DISEASE

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Mr. Aditya Dahiphale , Ms.Sneha Dalavi , Ms Sakshi Dalvi  
(B. Pharm first Year )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic  
year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav  
MSc. Environmental Sciences  
Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE


Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Mr. Aditya Dahiphale , Ms. Sneha Dalavi , Ms. Sakshi Dalvi" student of class " FY.Bpharm Div A " has successfully completed their EVS project on "Title of the Project" under the guidance of "Miss Tanvi Jadhav"

Date:

Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In charge)

Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44

Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.



Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**SOUTHERN LEYTE ROCK SLIDE / AVALANCHE**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms SNEHAL DATE , Mr SARTHAK DATIR , Mr SHUBHAM DHANAWDE

(B. Pharm first Year )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**


Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that.

" SNEHAL DATE , SARTHAK DATIR  
SHUBHAM DHANAWDE " student of class "F.Y.B PHARM " has successfully completed  
their EVS project on "SOUTHERN LEVTE ROCK SLIDE / AVALANCHE " under the  
guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

  
Dr. P.D. Chaudhari  
Principal



P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44

Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University.

**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## Deepwater Horizon Oil spill in Gulf of Mexico

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune – 44



By

Mr. Dhande Swaraj (B. Pharm first Year)

Mr. Dhore Harshal (B. Pharm first Year)

Mr. Gaikwad Rohit (B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year  
2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**



  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify the **“Mr. Swaraj Dhande , Mr.Harshal Dhore, Mr. Rohit Gaikwad”** student of class **“ F.Y.B.pharm ”** has successfully completed their EVS project on **“Deepwater Horizon Oil Spill ”** under the guidance of **“Miss Tanvi Jadhav”**

Date: 31/05/2023

Place: Nigdi, Pune

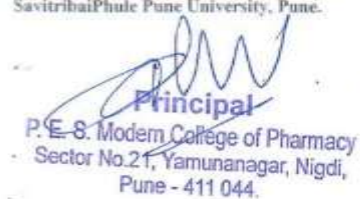
  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.B Chaudhari  
Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune – 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
SavitribaiPhule Pune University, Pune.



  
Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## Baia Mare Cyanide Spill

Environmental Science Project Submitted to  
Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune – 44



By

Miss Shravni Gavhane (B. Pharmfirst Year)  
Miss Gayatri Gawari (B. Pharmfirst Year)  
Miss Savitri Ghodake (B. Pharmfirst Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year  
2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**  
MSc. Environmental Sciences  
Assistant Professor  
DEPARTMENT OF ENVIRONMENTAL



  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify the "Ms. SHRAVANI Gavhane , Ms. Gayatri Gawari , Ms. Savitri Ghodake " student of class " F.Y.B.pharm " has successfully completed their EVS project on "Baia Mare Cyanide Spill " under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In charge)



Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## LOVE CANAL TRAGEDY

Environmental Science Project Submitted to  
Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Poonam Ghuge  
Ms. Prashanti Gidye  
Ms. Vaidehi Govekar  
(B. Pharm First Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in  
Academic year 2022-2023  
Under the Guidance of

Ms. Tanvi Jadhav  
MSc. Environmental Sciences  
Assistant Professor

### DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)  
(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Ms.Poonam Sharad Ghuge, Ms.Prashanti Ramesh Gidye, Ms.Vaidehi Shriniwas Govekar" student of class "F.Y.B.Pharm" has successfully completed their EVS project on "Love Canal Tragedy" under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D Chaudhari  
Principal

P.E.S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**NORTH PACIFIC GARBAGE PATCH**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Mr.Prathmesh Gurav (1031)

Ms.Aishwarya Hole (1032)

Mr.Darshil Ingale (1033)

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in

Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune

(2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Mr.Prathmesh Gurav, Ms.Aishwarya Hole, Mr.Darshil Ingale" student of class " DIV- A " has successfully completed their EVS project on **"NORTH PACIFIC GARBAGE PATCH"** under the guidance of **"Miss Tanvi Jadhav"**

Date: 31-5-2023

Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In charge)

Dr. P.D Chaudhari

Principal



P.E. S Modern College of Pharmacy  
Nigdi, Pune – 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



E-WASTE IN GUIYU, CHINA

Environmental Science Project Submitted To

**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY**

**YAMUNANAGAR NIGDI, PUNE-44.**



By

**Ms. Trupti Jadar.**

**Ms. Anushka Jadhav.**

**Mr. Manik Jadhav.**

(B.Pharm First Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic  
Year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**Msc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2022-2023)

1

  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.






**PES's Modern College of Pharmacy**  
**Nigdi, Pune-44**  
**(Accredited by NAAC and NBA)**

**CERTIFICATE**

This is to certify that, "Ms. Trupti Jadar, Ms. Anushka Jadhav, Mr. Manik Jadhav" student of class "First Year B.Pharm" has successfully completed their EVS project on "E-Waste in Guiyu, China" under the guidance of "Miss Tanvi Jadhav"

Date : 01/06/23

Place : Nigdi, Pune

  
Miss Tanvi Jadhav  
(Subject in Charge)



  
Dr. P. D. Chaudhari  
Principal

Principal  
P. E. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**DUST BOWL IN CANADA & U.S.**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Prachi Jadhav (1037)

Mr. Rohan Jadhav (1038)

Ms. Sanskruti Jagalpure (1039)

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Ms. Prachi Jadhav, Mr. Rohan Jadhav, Ms. Sanskruti Jagtap" student of class "DIV-A" has successfully completed their EVS project on "DUST BOWL IN CANADA & U.S." under the guidance of "Miss Tanvi Jadhav"

Date:

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D. Chandhari

Principal



P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Decline of vultures in India due to diclofenac leading incidence rabies**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Achal Jane

Ms. Khushboo Jumade

Ms. Vaishnavi Kachare

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2022-2023)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "**Achal Jane, Khushboo jumade and Vaishnavi kachare**" student of class " First Year B Pharm" has successfully completed their EVS project on "**decline of vultures in India due to diclofenac leading incidence rabies**" under the guidance of "**Miss Tanvi Jadhav**"

Date: 31-05-2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P. D. Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
SavitribaiPhule Pune University, Pune.



Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Deforestation of Easter island**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Mr. Sainath kamble(1046)

Ms. Vrundali kamble(1047)

Ms. Vaishnavi karale(1048)

(B. Pharm firstYear )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Vaishnavi karale, Vrundali kamble and Sainath kamble" student of class "First Year B.Pharm" has successfully completed their EVS project on "Deforestation of Easter island" under the guidance of "Miss Tanvi Jadhav"

Date: 31/5/23

Place: Nigdi, Pune


  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D. Chaudhari  
Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Environmental Threats to The Great Barrier Reef**  
Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Snehal Ramchandra Karande (1049)

Ms. Pratiksha Pradip Kashid (1050)

Ms. Vaishnavi Shankar Kate (1051)

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B. Pharm Course in Academic  
year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "SNEHAL KARADE, PRATIKSHA KASHID, VAISHNAVI KATE" student of class "First Year B.Pharm Div- A" has successfully completed their EVS project on "Environmental Threats to The Great Barrier Reef" under the guidance of "Miss Tanvi Jadhav"

Date: 31-05-2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**Donora Smog**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Janhavi Katkhede (1052)

Ms. Rutuja Khandare (1053)

Ms. Shravani Khedkar (1054)

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Janhavi Katkhede, Rutuja Khandare and Shravani Khedkar" student of class "First Year B.Pharm" has successfully completed their EVS project on "Donora Smog" under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune.

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D. Chaudhari  
Principal



P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**FUKUSHIMA DAIICHI NUCLEAR DISASTER**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Mrunmay Kothe, Aditi Kherde, Shilpa Kokate

(B. Pharm first Year )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE


Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, " **Mrunmay Kothe, Aditi Kherde, Shilpa Kokate**" student of class "F Y B PHARM" has successfully completed their EVS project on "**Fukushima Daiichi Nuclear disaster**" under the guidance of "**Miss Tanvi Jadhav**"

Date:

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D. Chaudhari

Principal

P.E.S Modern College of Pharmacy  
Nigdi, Pune - 44

Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal

P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**Melbourne Dust Storm: A Phenomenon of Environmental Impact**

Environmental Science Project Submitted to

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**



By

\* Mr. Vishal Kulkarni  
Mr. Kaustubh Kulkarni  
Mr. Shreyas Kurhe  
(B. Pharm First Year)

In partial fulfilment of the requirements for the First Year B. Pharm Course in Academic Year  
2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**  
**MSc. Environmental Sciences**  
**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)**

*(Accredited by NAAC and NBA)*



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Mr. Vishal Kulkarni, Mr. Kaustubh Kulkarni, & Mr. Shreyas Kurhe" student of class "F. Y. Bpharm." has successfully completed their EVS project on "Melbourne Dust Storm: A Phenomenon of Environmental Impact" under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/23

Place: Nigdi, Pune

Miss Tanvi Jadhav

(Subject In-charge)



Dr. P.D. Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Kuwaiti Oil Fires**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Priya Lokhande

Mr. Ninad Londhe

Mr. Nikhil Madake

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic  
Year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Ms.Priya Lokhande, Mr.Ninad Londhe, Mr.Nikhil Madake student of class "FY BPharm" has successfully completed their EVS project on "Kuwaiti Oil Fires" under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav


(Subject In charge)

  
Dr. P.D Chaudhari

Principal



P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**Burning of Amazon Forest-2019**

Environmental Science Project Submitted to

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**



By

Mr.Omkesh Mahake

Mr.Prasad Maind

Mr.Marshal Manjare

(B. Pharm firstYear )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic  
Year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**


**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)**

*(Accredited by NAAC and NBA)*



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Mr.Omkesh Mahake, Mr.Prasad Maind, Mr.Harshal Manjare"  
student of class "FY BPharm" has successfully completed their EVS project on "Burning of  
Amazon Forest-2019 under the guidance of "Miss Tanvi Jadhav"

Date: 31-05-23

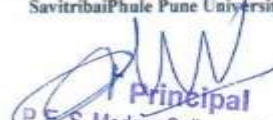
Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D Chaudhari  
Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
SavitribaiPhule Pune University, Pune.

  
Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**PROGRESSIVE EDUCATION SOCIETY'S  
MODERN COLLEGE OF PHARMACY  
NIGDI, PUNE-44 (ACCREDITED BY NAAC AND NBA)  
SAVITRIBAI PHULE PUNE UNIVERSITY  
ENVIRONMENTAL STUDIES PROJECT  
ON  
CORAL BLEACHING**

**BY**

MS. MOHINI MANKAR


MS. PAYAL MARNE

MS. PRAJAKTA MASNE

IN YEAR 2022-23



**UNDER THE GUIDANCE OF  
MS. TANVI JADHAV MA'AM**

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.





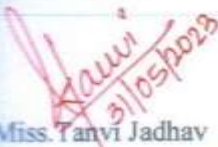
### CERTIFICATE

This is to certify that Ms. Mohini mankar , Ms . Payal marne , Ms Prajakta masne Students of first year bpharmacy has successfully completed the research on project of CORAL BLEACHING under the guidance of Ms .Tanvi Jadhav ma'am

(ENVIRONMENTAL STUDIES -SUB TEACHER) During the year of 2022-23 .

Date : 31/05/2023

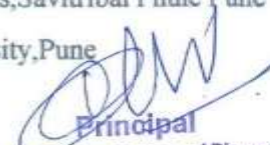
Place: nigdi ,pune

  
Miss. Tanvi Jadhav



  
Dr. P.D. Chaudhari  
PRINCIPAL

PES.Modern college of  
Pharmacy nigdi ,pune-44  
Ex-Dean, faculty of pharmaceutical  
Sciences, Savitribai Phule Pune  
University, Pune

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



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**Ocean Acidification**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune.



By

Miss. Rutuja Mhaske

Miss. Bhakti More

Mr. Omkar More

(B. Pharm First Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023.

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



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PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**CERTIFICATE**

This is to certify that, "Miss Rutuja Mhaske , Miss Bhakti More , Mr .Omkar More" student of class " First Year BPharm Div B " has successfully completed their EVS project on "Ocean Acidification " under the guidance of "Miss Tanvi Jadhav".

Date: 31 / 5 / 23  
Place: Nigdi, Pune .

  
Miss Tanvi Jadhav  
(Subject In charge)

  
Dr. P.D. Chandhari  
Principal  
P. E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**SACRED GROOVES IN WESTERN GHATS.**

Environmental Science Project Submitted to

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**

• By

• **Ms. Utkarsha Mule**

• **Ms. Sharyu Navgire**

• **Mr. Pratik Navale**

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B. Pharm Course  
in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

• **MSc. Environmental Sciences**

• **Assistant Professor**

• **DEPARTMENT OF ENVIRONMENTAL SCIENCE**

**Progressive Education Society's Modern College of Pharmacy, Nigdi,  
Pune (2022-2023)**

• *(Accredited by NAAC and NBA)*

• **SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**  
R.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)**

**• CERTIFICATE**

- This is to certify that, We Ms. Utkarsha Mule, Ms. Sharyu Navgire & Mr. Pratik Navale student of class "F.Y. Bpharm" has successfully completed their EVS project on **"SACRED GROOVES IN WESTERN GHATS,"** under the guidance of **"Miss Tanvi Jadhav"**

- Date: 31/05/2023
- Place: Nigdi, Pune
- Ms. Tanvi Jadhav
- (Subject In Charge)

*Tanvi*  
31/05/2023



*[Signature]*  
**Dr. P.D Chaudhari**  
(Principal)

**PES's Modern College of Pharmacy  
Nigdi, Pune-44**

Ex-Dean, Faculty of Pharmaceutical Sciences,

Savitribai Phule Pune University, Pune.

*[Signature]*  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



### THE GULF WAR SPILL

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune

• By

• Mr. Onkar Nikam

• Mr. Rushikesh Pachkhande

• Ms. Narayani Panwar

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B. Pharm Course  
in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

• MSc. Environmental Sciences

• Assistant Professor

• DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi,  
Pune (2022-2023)

• (Accredited by NAAC and NBA)

• SAVITRIBAI PHULE PUNE UNIVERSITY



Principal

P. E. S. Modern College of Pharmacy  
Sector No. 21, Yamunanagar, Nigdi,  
Pune - 411 044.



**The libby Montana Aesbestos Contamination**

Environmental Science Project Submitted to

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**



By

Miss Apurva Pate, Mr. Aaditya Patil, Mr. Pranav Patil

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B. Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune  
(2021-2022)**

*(Accredited by NAAC and NBA)*



**SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**

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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Miss Apurya Pate, Mr. Aaditya Patil, Mr. Pranav Patil" student of class "First Year B Pharm Div B" has successfully completed their EVS project on "The Lobby Montana Aesbestos Contamination" under the guidance of "Miss Tanvi Jadhav".

Date: 31/05/2023

Place: Nigdi, Pune.

Miss Tanvi Jadhav

(Subject In charge)

Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.



Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





***Australian bushfires 2019-2020***  
***Environment Science Project Submitted to***

***Progressive Education Society's MODERN COLLEGE OF PHARMACY, NIGDI***  
***Pune***



***By***

***Ms . Durgadevi Mahesh pavse , Yuvradni Harish Patil and Mr. Vaishnav Dadaravo Patil***

***( B.Pharm First Year)***

***In partial Fulfillments of Requirements of First year B. Pharm***

***In academic year 2022 – 2023***

***Under the guidance of***

***Ms. Tanvi Jadhav***

***MSc. Environmental sciences***

***Assistant professor***



**Principal**

**P. E. S. Modern College of Pharmacy**  
**Sector No.21, Yamunanagar, Nigdi,**  
**Pune - 411 044.**



3



PES's Modern College of Pharmacy  
Nigdi, pune 44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, " Ms . *Durgadevi Mahesh pavse, Yuvradni Harish Patil and Mr. Vaishnav Dadaravo Patil*" student of class " *F.Y Bpharm* "successfully completed their EVS project on "*Australian bushfires 2019 -2020* " under the guidance of "*Miss Tanvi Jadhav*"

Date: 31 / 05 / 2023

Place: Nigdi, Pune

*Tanvi*  
31/05/2023  
Miss Tanvi Jadhav  
(Subject In charge)



*Dr. P. D. Chaudhari*  
(Principal)

P.E. S Modern College of Pharmacy  
Nigdi, Pune – 44 Savitribai Phule Pune University, Pune.  
Ex-Dean, Faculty of Pharmaceutical Sciences

*Principal*  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## OIL SPILL IN RUSSIA ARTIC REGION

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Rutuja Pole

Ms Chinmayee Potda

Mrs Manish Rane

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



Principal

P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## CERTIFICATE

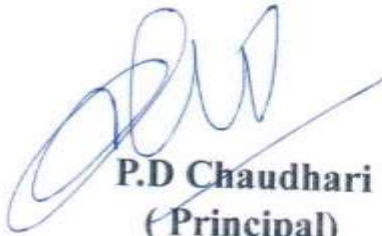
This is to certify the **“ Ms. Rutuja Pole ,MS. Chinmayee Potdar,Mr. Manish Rane”** Student of class Has Successfully Completed their EVS peoject on **“OILSPILL IN RUSSIA ARTIC REGION”** under the guidance of **Ms . “Tanvi Jadhav”**

Date: 31/05/2023.


Place: Nigdi, Pune.

  
Miss Tanvi Jadhav

( subject incharge )

  
P.D Chaudhari  
(Principal)



  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**CYCLONE NISARGA MH**

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Miss Kajal Rathod, Mr. Atharva Raut, Miss. Yashika Rohida  
(B. Pharm First Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic  
year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**  
MSc. Environmental Sciences  
Assistant Professor


DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)  
(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

## CERTIFICATE

This is to certify that, "Miss.Kajal Rathod, Mr.Atharva Raut, Miss.Yashika Rohida" student of class "First Year B Pharm Div B " has successfully completed their EVS project on "CYCLONE NISARGA MH" under the guidance of "Miss Tanvi Jadhav".

Date: 31/05/2023

Place: Nigdi, Pune.

Miss Tanvi Jadhav

(Subject In charge)

Dr. P.D Chaudhari  
Principal



P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Jaitapur nuclear power plant

Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

MR.KUNAL SABNE,MR.HARISH SHARMA,MISS.ARISHYA SHIEKH

(B. Pharm FirstYear )

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "MR.KUNAL SABNE,MR.HARISH SHARMA,MISS.ARISHYA SHIEKH" student of class "First Year B Pharm DivB " has successfully completed their EVS project on "Jaitapur nuclear power plant" under the guidance of "Miss Tanvi Jadhav".

Date: 31/05/2023

Place: Nigdi, Pune.

  
Miss Tanvi Jadhav

(Subject In charge)

  
Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44

Ex-Dean, Faculty of Pharmaceutical Sciences,  
SavitribaiPhule Pune University, Pune.



  
Principal

P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





## Assam Gas and oil Leak

Environmental Science Project Submitted to  
Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune

By

Ms. Priya Shelar

Mr. Ganesh Shendge

Ms. Disha Sheregar

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year Pharm Course in Academic year  
2022-2023

Under the Guidance of

Ms. Tanvi Jadhav

MSc. Environmental Sciences

Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE


Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



SAVITRIBAI PHULE PUNE UNIVERSITY



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, **"Ms.Priya Shelar, Mrs. Ganesh Shendge, and Ms.Disha Sheregar"**  
Student of class "F.Y.B Pharm" has successfully completed their EVS project on  
**"Assam Gas and Oil leak"** under the guidance of **"Miss Tanvi Jadhav"**

Date: 31/05/2023


Place: Nigdi, Pune

  
Miss Tanvi Jadhav  
(Subject in charge)



  
Dr. P.D. Chaudhari  
Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P.E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## MAN AND ANIMAL CONFLICT

Environmental Science Project Submitted to  
Progressive Education Society's Modern College of Pharmacy,  
Nigdi, Pune



By  
Mr Shrikant Shinde  
Ms Ankita Shinde  
Mr Ayush Shinde

**(B. Pharm first Year)**

In partial fulfillment of the requirements for the First Year B.Pharm  
Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**  
**MSc. Environmental Sciences**  
**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**  
**Progressive Education Society's Modern College of Pharmacy,**  
**Nigdi, Pune (2021-2022)**  
**(Accredited by NAAC and NBA)**



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi Pune -44  
( Accredited by NAAC and NBA)

CERTIFICATE

This is to certify that Shrikant Shinde, Ankita Shinde, Ayush Shinde student of class "First year Bpharm" successfully completed their EVS project on "**Man and Animal conflict**" under the Guidance of **Miss Tanvi Jadhav**

DATE: 31/05/2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav

(subject incharge)

  
Dr P.D Chaudhari

( principal)




**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**The great sparrow campaign in China**  
Environmental Science Project Submitted to


**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**




By  
Mr. Tanmay jagdale (1040)  
Mr. Vaibhav jagtap (1041)  
Mr. Yashpal jamadar (1042)  
(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in  
Academic year 2022-2023  
Under the Guidance of  
Ms. Tanvi Jadhav  
MSc. Environmental Sciences  
Assistant Professor

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**  
**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**  
(2021-2022)  
(Accredited by NAAC and NBA)




**SAVITRIBAI PHULE PUNE UNIVERSITY**



**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

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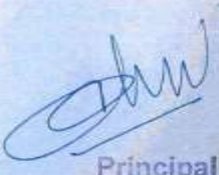
  
**DECLARATION**

We are Mr. Tanmay jagdale, Mr. Vaibhav jagtap, Mr. Yashpal jamadar declared that the thesis entitled "The great sparrow campaign In China" submitted by us in First year B.Pharm degree course. The record of work carried out by us under the guidance of Ms. Tanvi Jadhav as a guide in completion of Environmental Science project

Date: 31/5/2023

Place: Nigdi, Pune

Mr. Tanmay jagdale  
Mr. Vaibhav jagtap  
Mr. Yashpal jamadar

  
**Principal** Page | 1  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411044

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**PES's Modern College of Pharmacy**  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

**CERTIFICATE**

This is to certify that, "Mr. Tanmay jagdale, Mr. Vaibhav jagtap, Mr. Yashpal jamadar" student of class " DIV-A " has successfully completed their EVS project on  
"The great sparrow campaign in China" under the guidance of "Miss Tanvi Jadhav"

Date: 31/5/2023  
Place: Nigdi, Pune

  
Miss Tanvi Jadhav  
(Subject In charge)

  
Dr. P. S. Chaudhari  
Principal  
P.E.S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunapagar, Nigdi,  
Pune - 411 044.

Page | 2

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**WESTERN GHATS – UNESCO WORLD HERITAGE SITE**

1

Environmental science projects submitted to  
Progressive Education Society's Modern College of pharmacy in Nigdi, Pune



By

Mr Pranav Singh  
Mr Rohit Sonawane  
Mrs Vedanti Sudke  
(B. Pharm firstYear )

In partial fulfillment of the requirements for the  
First Year B.Pharm Course in Academic year 2022-  
2023

Under the Guidance of

**Ms. Tanvi Jadhav**  
**MSc. Environmental Sciences**  
**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**  
**Progressive Education Society's Modern College**  
**of Pharmacy, Nigdi, Pune (2021-2022)**  
(Accredited by NAAC and NBA)



**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

**SAVITRIBAI PHULE PUNE UNIVERSITY**





3

PES's Modern College of Pharmacy  
Nigdi Pune 44  
( Accredited by NAAC and NBA)

## CERTIFICATE

This is to Certify that " Mr Pranav Singh , Mr Rohit Sonawane , Vedanti Sudke "  
Student of class "FY Bpharm " And successfully  
completed their EVS project on **"WESTERN GHATS - UNESCO  
WORLD HERITAGE SITE"** Under the guidance of Miss Tanvi Jadhav

DATE : 31-5-23

Place : Nigdi , Pune

Miss Tanvi Jadhav

( Subject In charge)



Dr P.D Chaudhari

( Principal )

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



**CALIFORNIA WILDFIRE**  
Environmental Science Project Submitted to

Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune



By

Ms. Khatija Tamboli

Mr. Aaryan Tapsale

Ms. Sanika Thombare

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**


Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)

(Accredited by NAAC and NBA)



**SAVITRIBAI PHULE PUNE UNIVERSITY**



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



EVS PROJECT  
ON  
KAAS PLATEAU  
UNESCO WORLD HERITAGE SITE



By

Miss.Kirti Thorat  
Mr.Uddhav Vairat  
Miss.Shreya vayal

Progressive Education Society  
MODERN COLLEGE OF PHARMACY  
Yamunanagar, Nigdi, Pune-44

In partial fulfillment of the requirements for the  
First Year B.Pharm Course in Academic year (2022-2023)

UNDER THE GUIDANCE OF  
Ms. TANVI JADHAV MA'AM

MSc. Environmental Science  
Assistant Professor

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Progressive Education Society'

Modern College of Pharmacy, Nigdi, Pune (2021-2022)  
(Accredited by NAAC & NBA)

SAVITRIBAI PHULE PUNE UNIVERSITY

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Miss Kirti Thorat, Uddhav Vairat, Shreya Vayal" student of class "First Year B.Pharm DivB" has successfully completed their EVS project on "KASS PLATEAU- UNESCO WORLD HERITAGE SITE" under the guidance of "Miss Tanvi Jadhav".


Date: 31/05/2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav  
(Subject In charge)



  
Dr. P.D. Chaudhari  
Principal  
P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.

  
Principal  
P.E. S Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





**Reintroduction of Cheetah in Kuno National Park**

Environmental Science Project Submitted to

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune**



By

Mr. Sanchay Verulkar

Mr. Gaurang Wadhai

Mr. Harshad Waghmode

(B. Pharm first Year)

In partial fulfillment of the requirements for the First Year B.Pharm Course in Academic year 2022-2023

Under the Guidance of

**Ms. Tanvi Jadhav**

**MSc. Environmental Sciences**

**Assistant Professor**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

**Progressive Education Society's Modern College of Pharmacy, Nigdi, Pune (2021-2022)**

*(Accredited by NAAC and NBA)*



**SAVITRIBAI PHULE PUNE UNIVERSITY**



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Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES's Modern College of Pharmacy  
Nigdi, Pune-44  
(Accredited by NAAC and NBA)

### CERTIFICATE

This is to certify that, "Mr.Sanchay Verulkar, Mr.Gaurang Wadhav, Mr.Harshad Waghmode" student of class " F.Y.Bpharm " has successfully completed their EVS project on "Reintroduction of Cheetah in Kuno National Park" under the guidance of "Miss Tanvi Jadhav"

Date: 31/05/2023

Place: Nigdi, Pune

  
Miss Tanvi Jadhav


(Subject In charge)

  
Dr. P.D Chaudhari

Principal

P.E. S Modern College of Pharmacy  
Nigdi, Pune - 44  
Ex-Dean, Faculty of Pharmaceutical Sciences,  
Savitribai Phule Pune University, Pune.



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



## FIELD WORK

### Third Year B. Pharm Industrial Visit to Haffkine Bio-Pharmaceutical LTD

4/8/23, 11:54 AM Gmail - Regarding permission for visit to your esteemed laboratories/ Research Centre

**Gmail** Dr. Vitthal Chopade <vitthalchopade@gmail.com>

**Regarding permission for visit to your esteemed laboratories/ Research Centre**

Dr. Vitthal Chopade <vitthalchopade@gmail.com> Mon, Apr 3, 2023 at 3:50 PM  
To: ats@vaccinehaffkin.com, devendra.visokar@gmail.com

**To**  
**The Director/Manager**  
**Haffkine Bio-Pharmaceutical Corporation Limited**  
**Vallabh Nagar, Pimpri Colony, Pimpri-Chinchwad,**  
**Maharashtra 411018**

**Subject: Regarding permission for visit to your esteemed laboratories/ Research Centre**

Dear Sir/Madam,

The modern college of pharmacy nigdi Pune was established in 1998 by P. E. Society at Yamunanagar, Nigdi in the close proximity of the industrial belt of Pimpri - Chinchwad. Our College is approved by Government of Maharashtra (DTE), All India Council for Technical Education (AICTE) and Pharmacy Council of India. It is permanently affiliated to Savitribai Phule Pune University. College is accredited by NAAC, NBA and recognized under 2f and 12(B) by UGC, New Delhi. College offers B. Pharmacy, Pharm. D and M. Pharmacy courses.

As part of the curriculum of Savitribai Phule Pune University, industrial visit is mandatory for pharmacy student, so as to provide with them the real insight of working procedure of esteemed organization such as yours and to fulfill the curriculum demand, we request you for the industrial visit

Kindly accord permission to visit your esteemed organization either in the forenoon or afternoon session as per your convenience as on any dates between 03/04/2023 to 10/04/2023

Your co-ordination in this regard will not only help the cause of education but will also strengthen the youth of the nation.

Waiting with Anticipation

With regards

**Dr V. V. Chopade**  
**Industry visit In-charge**  
**Mobile no 9545452767**  
**Email: vitthalchopade@gmail.com**

**Dr. P. D. Chaudhari**  
**Principal**

Dr. Vitthal V. Chopade,  
M.Pharm PhD  
Professor in Pharmaceutical Chemistry,  
Modern College of Pharmacy Nigdi Pune-44,  
Approved as PG Teacher and PhD Guide from University of Pune  
Phone No: 9545452767

  
**Principal**  
**P. E. S. Modern College of Pharmacy**  
**Sector No.21, Yamunanagar, Nigdi,**  
**Pune - 411 044.**

<https://mail.google.com/mail/u/0/?ui=0&as=005142825c&view=pt&search=at&permmsgid=msg-a:42900012429540&siml=msg-a:42900012429540&siml=msg-a:42900012429540> 1/2



4/3/23, 4:35 PM

Gmail - Fwd: Regarding Industrial visit at your esteemed organization



Dr. Vitthal Chopade <vitthalchopade@gmail.com>

**Fwd: Regarding Industrial visit at your esteemed organization**

modern college nigdi training and placement <mcopnigdi.tpo@gmail.com>  
To: vitthalchopade@gmail.com

Mon, Apr 3, 2023 at 4:19 PM

----- Forwarded message -----

From: ats <ats@vaccinehaffkine.com>  
Date: Mon, Apr 3, 2023 at 4:14 PM  
Subject: Re: Regarding Industrial visit at your esteemed organization  
To: modern college nigdi training and placement <mcopnigdi.tpo@gmail.com>

!!!Greeting from Haffkine!!!

This is with reference to your e mail dated 03.04.2023 regarding industrial visit , we are pleased to inform that you can visit to our organization on 11.04.2023

Thanking you ,

Dr. B. P. Kurhe ✓  
Manager ATS,  
Haffkine Bio-pharmaceutical Corporation Ltd.  
old Mumbai Pune Highway  
Pimpri Pune- 411018  
8830646498

From: modern college nigdi training and placement <mcopnigdi.tpo@gmail.com>  
Sent: Saturday, April 1, 2023 4:08 PM  
To: ats <ats@vaccinehaffkine.com>  
Subject: Regarding Industrial visit at your esteemed organization

Greetings from Modern College of Pharmacy Nigdi Pune!!!


Respected sir,

Good afternoon sir, This is in reference to our telephonic conversation. we request you to kindly give us permission to visit your production facility for our B.Pharmacy Third year Students. Total strength of our students is 126 . Apart from that four Faculty members will visit the plant.  
Dear Sir, we will be grateful to you for your kind help in this regard. We are comfortable with any dates from 10th April to 13th April even whatever dates you can provide us.

Thanking you

Asst.Prof.Devendra L Visokar  
TPO CELL  
MODERN COLLEGE OF PHARMACY NIGDI PUNE44  
9096694212



  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

<https://mail.google.com/mail/u/0/?ik=606142825c&view=pt&search=all&permmsgid=msg-f:1762151859311302412&simpl=msg-f:1762151859311302412> 1/1





P. E. Society's  
Modern College of Pharmacy Nigdi-44

Industry Visit 2022-23

Notice

Date: 08/04/2023

All Teaching faculty, Non-teaching staff and students of B Pharm/M Pharm are hereby informed that, our college has organized industry visit for students, the details of visit are as follows

Name of Place: Haffkine Bio-Pharmaceutical Corporation Ltd, Pimpri Pune

Name of class : T Y B Pharm Div A & B, S Y M Pharm Cology

Date: 11 /04/2023 (Tuesday)

Time for Visit: 9:45 am

Contact persons during visit

Dr Smita Pimple

Dr V V Chopade: 9545452767

Prof. Prashant Pawar : 7875562252

Mrs. Priyanka Sarda: 72496 52496

Prof Shivraj Mane

Dr. P. D. Chaudhari  
Principal

Copy to

1. Academic section
2. Class teachers
3. Office



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES Modern College of Pharmacy, Nigdi, Pune-44

Attendance of students for Industry Visit

Name of Place: Haffkine Bio-Pharmaceutical Corporation Ltd, Pimpri Pune

Name of class : T Y B Pharm Div B

Date: 11/04/2023 (Tuesday)

Time for Visit: 9:45 am

Sr No	Name of Students	Signature of students
1.	Abhishek Gokul Shendurkar	
2.	Aditi Sadanand Nagle	
3.	Ajit Vishvanath Saini	
4.	Akash Baburao Pawar	
5.	Chaitanya Madhukar mali	
6.	Deveshree kiran Patil	
7.	Ganesh Pandurang Survase	
8.	Hrshikesh Anil Nikam	
9.	Ishwari Shaligram Masram	
10.	Jay Dashrath Rajgor	
11.	Kajal Ganpat Thete	
12.	Komal D Wankhade	
13.	Mohammad Sameer Rafik Shaikh	
14.	Neha Vijay Nevse	
15.	Pawan Ramrao Pawar	
16.	Prajakta Vikas Sathc	
17.	Pranaya Ramdas Nawale	
18.	pratham umesh pawar	
19.	Prathamesh Rajesh Panzade	
20.	Pratiksha Mahadev Pawar	
21.	Prerna Dadasaheb Pardeshi	
22.	Prerna Manohar Patil	
23.	Riya Shivaji Shirke	
24.	Sakshi Pravin Palve	
25.	Sandesh Bhausaheb Pawar	
26.	Sanika Anand Shelar	
27.	Sarode Vishal Shripati	
28.	Sarvesh Dilip Kulkarni	
29.	Shadab Abdul Kadar Shaikh	
30.	Shreyas Raghunath Mohite	
31.	Shrushti Ananda Landge	

Principal  
P. E. S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Nigdi,  
Pune - 411 044



## Criteria 1: Curricular Aspects



32.	Siddhi Sudhir Waghule	<i>Siddhi</i>
33.	Srushti Dinesh Magade	<i>Srushti</i>
34.	Srushti Samir Phand	<i>Srushti</i>
35.	Sukanya Kalyan Vyavahare	<i>Sukanya</i>
36.	Swapnali Laxman Shedge	<i>Swapnali</i>
37.	Tanuja Ravindra Patil	<i>Tanuja</i>
38.	Vaishnavi Dadarao More	<i>More</i>
39.	Vaishnavi Machindra Shingade	<i>Vaishnavi</i>
40.	Vaishnavi Prakash Zond	<i>Vaishnavi</i>
41.	Vaishnavi Sunil Lokhande	<i>Vaishnavi</i>
42.	Vijay Uttam Shinde	<i>Vijay</i>
43.	Vinayakashish Pradiptao Kulkarni	<i>Vinay</i>
44.	Yash Dattatray Kudale	<i>Yash</i>
45.	Tanuja Aijankar	<i>Tanuja</i>
46.	<i>Srushti</i>	
47.	Anjali Rajurwar	<i>Anjali</i>
48.	Rutwik Pawar	<i>Rutwik</i>
49.		
50.		

Faculty: Mr. Prashant Pawar, Mrs. Priyanka Sarda, Ms Sweteja Bhosle, Snehal Gojare

*Dr. V V Chopade*  
Dr. V V Chopade  
Incharge



*Dr. P. D. Chaudhari*  
Dr. P. D. Chaudhari  
Principal  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No 21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES Modern College of Pharmacy, Nigdi, Pune-44

## Attendance of students for Industry Visit

Name of Place: Haffkine Bio-Pharmaceutical Corporation Ltd, Pimpri Pune

Name of class : T Y B Pharm Div A

Date: 11 /04/2023 (Tuesday)

Time for Visit: 9:45 am

Sr No	Name of Students	Signature of students
1.	Piyush Mahesh Adhav	
2.	Sahil Anil Amble	
3.	Hitesh Yashwant Attarde	
4.	Pradnya Kailyan Autade	
5.	Aditya laxman babhalkar	
6.	Snehal Sanjay Bagade	
7.	Rohit Anil Baheti	
8.	Sakshi Ashok Barangule	
9.	Sayali Narayan Bhagawat	
10.	Trupti Sudhir Bhangare	
11.	Sohan Narendra Bharambe	
12.	Vrushali Ravindra Bharate	
13.	Ashwini Jijaram Bharmal	
14.	Sakshi Sandip Bharti	
15.	Aniket Vinod Bhisre	
16.	Devang Ramesh Bhokare	
17.	Bhumika Kishor Bhole	
18.	Rutuja Subrao Bhosale	
19.	Sneha Satish Bhusare	
20.	Aditi Sanjay Bonde	
21.	Anushka Dilip Boraste	
22.	Vidya Dilip Chaudhari	
23.	Chinmayee yuvraj chavan	
24.	Pratik Arun Chavan	
25.	Siddhi Sangram Chavan	
26.	Arti Anil Choudhari	
27.	Prachi Keshav Dadewad	
28.	Yashraj Ravindra Dhamale	
29.	Akanksha krishna dhanawade	
30.	Sanket Sanjay Dhangare	
31.	Om Kalu Dhengale	
32.	Gayatri Yogesh Dhepe	

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





## Criteria 1: Curricular Aspects



33.	Swamini Santosh Dhere	<i>S. Dhere</i>
34.	Soham Shekhar Doshi	<i>SD</i>
35.	Shruti Bharat Gadhave	<i>Gadhave</i>
36.	Sudhir Giridhar Gaikwad	<i>Gaikwad</i>
37.	Vishal Sachin Gangawane	<i>Gangawane</i>
38.	Ashish Vishnu Garkal	<i>Garkal</i>
39.	Shreyash Arun Ghuikar	<i>Shreyash Ghuikar</i>
40.	Dipak Pandurang Gonde	<i>Gonde</i>
41.	Gore vikas madhukar	<i>Gore</i>
42.	Bhargavi Govind Govardhan	<i>Bhargavi</i>
43.	Deepti machindra gunjal	<i>Gunjal</i>
44.	Rajesh Munja Gutte	<i>Gutte</i>
45.	Pooja Shankar Hatkar	<i>Hatkar</i>
46.	Onkar Gajanan Jadhav	<i>Jadhav</i>
47.	Pranav Pramod Jadhav	<i>Jadhav</i>
48.	Aditi Pratap Jagtap	<i>Jagtap</i>
49.	Chaitali navnath jedhe	<i>Jedhe</i>
50.	Sushil krishna Jha	<i>Jha</i>
51.	Rutuja Changdeo Kadam	<i>Kadam R</i>
52.	Rajashree Dnyandeo Kale	<i>Kale</i>
53.	Siddhi Siddharth Kamble	<i>Kamble</i>
54.	Harshda Bholesankar kamthe	<i>Kamthe</i>
55.	Gauri Pradip karande	<i>Karande</i>
56.	Akshay chandrakant karpe	<i>Karpe</i>
57.	Aditya Kumar Kasar	<i>Kasar</i>
58.	Gaurav pavan kela	<i>Kela</i>
59.	Sakshi Ravindra Khadse	<i>Khadse</i>
60.	Ankita Pralhad Khaire	<i>Khaire</i>
61.	Prathamesh Nitin Khandge	<i>Khandge</i>
62.	Purva Munjaji Korde	<i>Korde</i>
63.	<i>Deep Kishorkumar Bisen</i>	<i>Bisen</i>
64.	Gautami Santosh Khinvasar	<i>Khinvasar</i>

Faculty: Mr. Prashant Pawar, Mrs. Priyanka Sarda, Ms Sweteja Bhosle, Snehal Gojare

*Dr. V V Chopade*  
Incharge



*Dr. P. D. Chaudhari*  
Principal



## Criteria 1: Curricular Aspects



PES Modern College of Pharmacy, Nigdi, Pune-44

### Attendance of students for Industry Visit

Name of Place: Haffkine Bio-Pharmaceutical Corporation Ltd, Pimpri Pune  
Name of class : S Y M PHARM PHARMACOLOGY  
Date: 11/04/2023 (Tuesday)  
Time for Visit: 9:45 am

Sr No	Name of Students	Signature of students
1.	Pratiksha Mujore	
2.	Dhruvashree Kattkar	
3.	Kajal Pawade	
4.	Pranali Bhuradare	
5.	Pradnya Khatbule	
6.	Surabhi Shinde	
7.	Nikita Pawar	
8.	Guravti Gadekar	
9.	Akanksha Amolkar	
10.	Pratiksha Dhanbe	
11.	Vinod Galkwad	
12.	Ganesh Pote	
13.	Shriyanka Deshmukh	
14.	Mohsin Mansoori	
15.		
16.		
17.		
18.		
19.		
20.		

Dr. V V Chopade  
Incharge



Dr. P. D. Chaudhari  
Principal

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Progressive Education Society's  
**MODERN COLLEGE OF PHARMACY**  
Accredited by NAAC & NBA  
DST FIST Funded College  
'Best College Award' by Savitribai Phule Pune University

Approved by All India Council for Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
Directorate of Technical Education, Mumbai (MS), Permanently affiliated to  
Savitribai Phule Pune University, Pune & Approved under Section (2 f) & 12 (B) of UGC Act, 1956

Sector No. 21, Yamunanagar, Nigdi, Pune - 411 044. (M.S.) Tel. : 020-27661314 / 15  
E-mail : mcpnigdi44@gmail.com Website : www.mcop.org.in

Prof. Dr. P. D. Chaudhari  
M.Pharm., Ph.D.  
Principal

Prof. Dr. Gajanan R. Ekbote  
M.S., M.N.A.M.S.  
Chairman, Business Council  
P.E. Society, Pune

Ref: MCP/TL/2022-23/330 Date: 10/04/2023

To  
The Manager  
Haffkine Bio-Pharmaceutical Corporation Ltd,  
Pimpri Pune

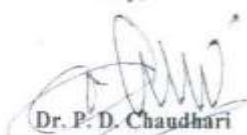
Dear Sir,


We are thankful to you for accepted our request for Industry visit to our students and faculty members. It was a great pleasure for us to have provided the real insight of working procedure of your esteemed organization for our students on 11/04/2023


We again thank you for sparing your valuable time with us. We are sure that you will always be there to help us at every critical turn and we look forward to continuous association with you in future.


Thanking You.

Yours truly,

  
Dr. P. D. Chaudhari  
Principal



  
प्रमुख, गुण १८.  
Principal



P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

STRIVING TOWARDS EXCELLENCE FOREVER



P.E. Society's  
Modern College of Pharmacy, Nigdi, Pune-44

REPORT OF INDUSTRY VISIT 2022-23

1.	Name of activity:	Industry visit for Students and Staff
2.	Name of Industry	Haffkine Bio-Pharmaceutical Corporation Ltd, Pimpri Pune
3.	Date of activity	11 /04/2023
4.	Total no students participate	M Pharm - 14 B Pharm - 111 Total - 125
5.	Occasion of activity	Industry Academic Interaction
6.	Place of visit	Anti Venom Production Department
7.	Objectives of activity	1. To get analytical knowledge, planning abilities, problem analysis, modern tool usage, professional identity, pharmaceutical ethics, life-long learning 2. To get importance of accuracy in practical's experiments 3. How to operate equipments in lab.
8.	Outcome of activity	1. This visit gives information & a chance to upgrade their knowledge regarding the current practices, instruments and techniques used in manufacturing of biologicals.
9.	Training given by	Dr. B P Kurhe
10.	Name of faculty with students	Dr. Smita Pimple Dr. V V Chopade Prof Prashant Pawar Prof Priyanka Sarda Prof Shivraj Mane
11.	Activity co-coordinator	: Dr. Vitthal V Chopade

Dr. V. V. Chopade

Industry Visit In-charge



Dr. P. D. Chaudhari

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





P. E. Society's Modern College of Pharmacy, Nigdi, Pune.  
Academic Year 2022-23

Date: 13/05/2023

Notice

All students of S.Y. B. Pharm are hereby informed that your botanical garden visit is schedule on 15-05-2023 at Wanwadi, Pune. All should report to college sharp at 9.30 am. Attendance is Mandatory.

  
Ms. A.V. Shingan  
Incharge


  
Dr. P.D. Chaudhari  
Principal

CC to:-  
Academic Section  
HOD's  
Class Teachers



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



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Second Year B. Pharm Botanical Garden Visit



Following faculties are nominated by principal-

Dr. Mohini Kuchekar

Dr. Kalyani Kakad



Mr. Devendra Visokar

Ms. Aarti Shingan

Ms. Anita Malusare

Ms. Swateja Bhosale



  
  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.




Progressive Education Society  
**Modern College of Pharmacy**  
Yamuna Nagar, Nigdi, Pune- 44

Date- 15/05/2023

**REPORT OF BOTANICAL GARDEN VISIT**

1.	<b>Name of activity:</b>	<b>Students Visit</b>
2.	<b>Topic of Visit</b>	Botanical Garden Visit
3.	<b>Date of activity</b>	15/05/2023
4.	<b>Total no Students participated</b>	60
5.	<b>Name of faculty visited</b>	1. Mr. D. L. Visokar 2. Ms. S. S. Bhosale 3. Ms. A. V. Malusare 4. Ms. A. V. Shingan
5.	<b>Occasion of activity</b>	Field Visit
6.	<b>Place of Visit</b>	Empress Gardan, Wanwadi
7.	<b>Scope &amp; Objectives of Visit</b>	1. To promote the awareness, study, and conservation of plant species diversity. 2. To support education and research in the field of plant science. 3. To observe and collect plant species from study site. 4. To study natural habitat and characters of plants found in area.
9.	<b>Outcome of Visit</b>	1. Students realised natural flora and fauna in its natural form. 2. Students studied natural habitat and characters of plants found in area. 3. Students were made to identify the plants with their scientific name, family, identifying characters along with their importance.
10.	<b>Activity Incharge</b>	Ms. Aarti Shingan

  
Ms. A. V. Shingan  
Name & sign of Incharge



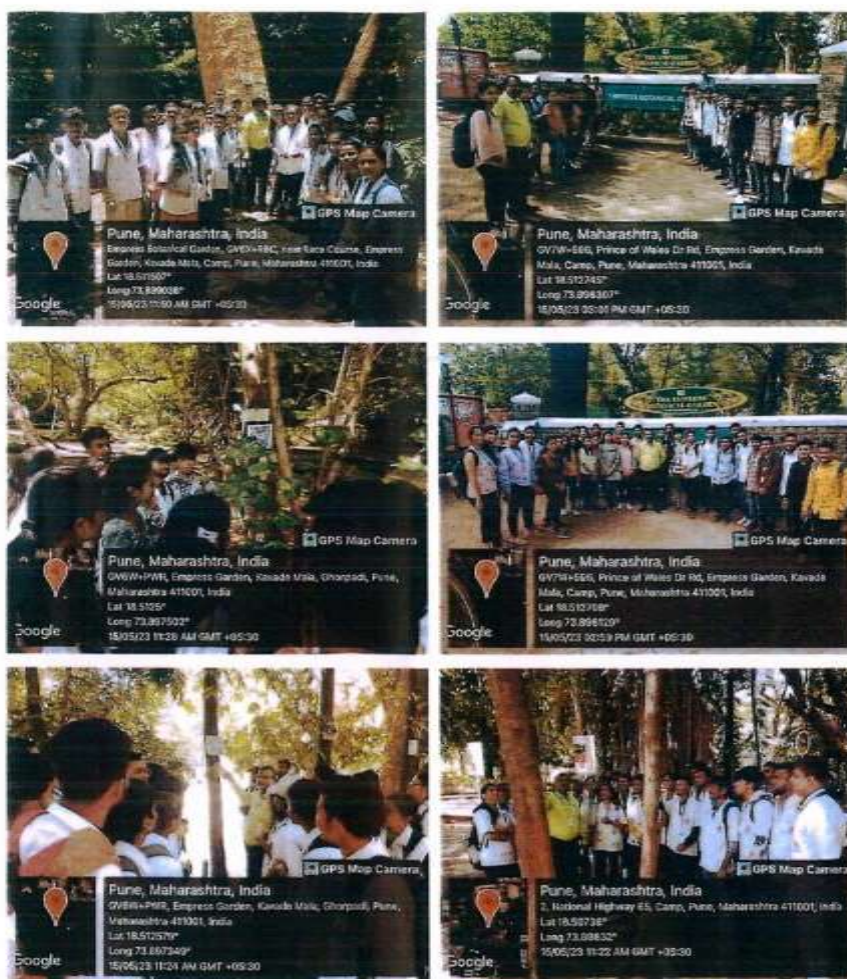
  
Principal  
E. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar Nigdi,  
Pune - 411 044





Progressive Education Society  
**Modern College of Pharmacy**  
Yamuna Nagar, Nigdi, Pune- 44

Activity Photos  
Botanical Garden Visit



Name & sign of Incharge

Shriyan Jarkhi V.  
*Shriyan*



*[Signature]*  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No 31, Yamuna Nagar, Nigdi,  
Pune - 411004



Progressive Education Society  
**Modern College of Pharmacy**  
 Yamuna Nagar, Nigdi, Pune- 44

Date- 15/05/2023

**ATTENDANCE SHEET**  
**BOTANICAL GARDEN VISIT**

Sr. No.	Name of Students	Sign
1.	CHAUKATE PRERANA ADINATH	
2.	CHAVAN ARATI SANTOSH	
3.	DHUMEKAR VEDASHREE ANIL	
4.	DUDHADE DEVENDRA SANJAY	
5.	GALANDE SHUBHAM VIJAY	
6.	GHOARE NILESH BALAJI	
7.	GOSAVI DEEPAI SHRIKRUSHNA	
8.	HIREMATH NIRAJ SHARANAYYA	
9.	ISHTI KIRTI DATTATRAY	
10.	JADHAV RUPESH RAMRAO	
11.	JOSHI ATHARVA PRAFUL	
12.	KAMBLE ANUSHKA ANIL	
13.	KAMBLE ANUSHKA ARVINDKUMAR	
14.	KANDEKAR TEJAS VIJAY	
15.	KAPSE YASH RAJU	
16.	KHAIRE POOJA SUNIL	
17.	KULKARNI YASH BALKRUSHNA	
18.	MANE DIGVIJAY BHARAT	
19.	MATHAPATI TUSHAR MALLINATH	
20.	MHETRE SHWETA MOHAN	
21.	MULLA TAUFIK USMAN	
22.	NIGADE NIKITA NANASAHEB	
23.	PANDE AISHWARYA NARHARIRAO	
24.	PATHADE ADITI AMBADAS	
25.	PHALKE PRATIK KIRAN	
26.	RAUT MAHESH DIGAMBAR	
27.	REDDY MAHESH RAJKUMAR	
28.	SABALE SAHIL MARUTI	
29.	SAMBARE DATTATRAY SHRIKRUSHNA	



**Principal**  
 P. E. S. Modern College of Pharmacy  
 Sector No.21, Yamunanagar, Nigdi,  
 Pune - 411 044.



## Criteria 1: Curricular Aspects



30.	SAPKAL TUSHAR SHRIMANT	<i>Sapk</i>
31.	SAWANT OMKAR RAVINDRA	<i>SA</i>
32.	SHENDAGE ROHIT JANARDAN	<i>Shendage</i>
33.	SHINDE ROHIT ANANDA	<i>Shinde</i>
34.	SHIRKE VAISHNAVI VISHNU	<i>Shirke</i>
35.	SHIRUDE ATHARVA BHAGWAN	<i>Shirude</i>
36.	SONTAKKE RUTUJA KIRAN	<i>RKS</i>
37.	TALEKAR SANIKA SANJAY	<i>Talekar</i>
38.	VARAT TUSHAR RAJABHAU	<i>Varat</i>
39.	WAKUDE SHRIKRUSHNA SANTOSH	<i>Sh. Wakude</i>
40.	WANKHEDE KHUSHI KAILAS	<i>Wankhede</i>
41.	YADAV AMIT RAJBALI	<i>Yadav</i>
42.	YEOLE MRUGAJA RAJENDRA	<i>Yeole</i>
43.	ZINJURKE SIDDESH KALYAN	<i>Zinjurke</i>
44.	BHAGWAT DNYANOBA BOCHARE	<i>Bhagwat</i>
45.	BHOSALE SANKET DATTATRAY	<i>Bhosale</i>
46.	FUNDE GIRISH PRAMOD	<i>Funde</i>
47.	GHADAGE BHAGYASHREE BABASAHEB	<i>Ghadage</i>
48.	GORE VIKAS AJINATH	<i>Gore</i>
49.	HATEKAR JYOTI DADASAHEB	<i>Hatekar</i>
50.	JADHAV PRATIKSHA VILAS	<i>Jadhav</i>
51.	JAGTAP SAYALI SUNIL	<i>Jagtap</i>
52.	JAMADADE DHANASHRI SANTOSH	<i>Jamada</i>
53.	LASHKARE SANTOSHI LAKSHMAN	<i>Lashkare</i>
54.	NAVHALE SAYALI JIVAN	<i>Navhale</i>
55.	PATHAK ADITYA SANTOSHRAO	<i>Pathak</i>
56.	PATIL GIRISH SUDESH	<i>Patil</i>
57.	SHELMUKAR ROHIT PRASHANT	<i>Shelmukar</i>
58.	SONAWANE SWEETY ASHOK	<i>Sonawane</i>
59.	TAVHARE OMKAR SHANTARAM	<i>Tavhare</i>
60.	ZORE JAIE RAMDAS	<i>Zore</i>



*[Signature]*  
**Principal**  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





Fourth Year Pharm-D Industrial Visit at Bio-Radius Therapeutics Research

Progressive Education Society's  
**MODERN COLLEGE OF PHARMACY**  
Accredited by 'NAAC'  
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Approved by All India Council for Technical Education, New Delhi, Pharmacy Council of India, New Delhi,  
Directorate of Technical Education, Mumbai (MS), Permanently affiliated to  
Savitribai Phule Pune University, Pune & Approved under Section (2(f) & 12(B) of UGC Act, 1956)

Sector No. 21, Yamunanagar, Nigdi, Pune - 411 044. (M.S.) Tel. : 020-27661315 Fax : 020-27661314  
E-mail : mcdp@nigdi44@gmail.com Website : www.mcdp.org.in

Prof. Dr. P. D. Chaudhari  
M.Pharm., Ph.D.  
Principal

Prof. Dr. Gajanan R. Ekoote  
M.S., M.N.A., M.S.  
Chairman, Business Council  
P.E. Society, Pune

Ref: MCDP/Indvisit/2022-23/180-1  
Date: 28/11/2022

To  
The Director/ Manager  
BioRadius Therapeutic Research Pvt Ltd  
phase I, Hinjawadi, Pune, Maharashtra 411057.

Subject: Seeking permission to one day hands on training and visit to your esteemed  
Laboratories

Dear Sir/Madam,

The modern college of pharmacy nigdi Pune was established in 1998 by P. E. Society at Yamunanagar, Nigdi in the close proximity of the industrial belt of Pimpri - Chinchwad. Our College is approved by Government of Maharashtra (DTE), All India Council for Technical Education (AICTE) and Pharmacy Council of India. It is permanently affiliated to Savitribai Phule Pune University. College is accredited by NAAC, NBA and recognized under 2f and 12(B) by UGC, New Delhi. College offers B. Pharmacy, Pharm. D and M. Pharmacy courses.

As part of the curriculum of Savitribai Phule Pune University, industrial visit is mandatory for pharmacy student, so as to provide with them the real insight of working procedure of esteemed organization such as yours and to fulfill the curriculum demand, we request you for the industrial visit.

Kindly accord permission to visit your esteemed organization either in the forenoon or afternoon session as per your convenience as on any dates between 28/11/2022 to 10/12/2022

Your co-ordination in this regard will not only help the cause of education but will also strengthen the youth of the nation.  
Waiting with Anticipation

With regards

Dr V. V. Chopade  
Industry visit In-charge  
Mobile no 9545452767  
Email: vithalchopade@gmail.com

Dr. P. D. Chaudhari  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





Dr. Vitthal Chopade <vitthalchopade@gmail.com>

Seeking permission for visit to your esteemed Laboratories

Sachin Deokar <sachindeokar@bioradiuscro.com>

Mon, Dec 5, 2022 at 12:13 PM

To: "Dr. Vitthal Chopade" <vitthalchopade@gmail.com>

Cc: "Dr. Krishnaveni Gadiraju" <drkrishnaveni@bioradiuscro.com>, "Dr. Senthil Thyagarajan" <head@bioradiuscro.com>

Dear Sir,

This is to confirm you that your industrial visit can plan on 06 Dec 2022, 11:00 AM.

Thanks and regards,

Sachin Deokar, ✓

Chief Scientific Officer,

BioRadius Therapeutic Research Private Limited,

Plot No.8, IndiaLand Global Industrial Park, Hinjewadi Phase I, Pune Maharashtra, INDIA - 411057.

Email: sachindeokar@bioradiuscro.com

Phone: 020-67789113 Mobile: 9049989561

Web: www.bioradiuscro.com

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*Handwritten notes:*  
PharmD IV<sup>th</sup> year  
Mpharm P'ology S.Y.  
Savdekar, Kore modkar / Swarnja / Sardar  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



P. E. Society's  
Modern College of Pharmacy Nigdi-44

Industry Visit 2022-23

Notice

Date: 05/12/2022

All Teaching faculty, Non-teaching staff and students of B Pharm/ M Pharm/ Pharm D are hereby informed that, our college has organized one day hands on training and industry visit for students, the details of visit are as follows

Name of Place: BioRadius Therapeutic Research Pvt Ltd phase I, Hinjawadi, Pune, Maharashtra 411057.

Time for reach at Industry: 10:40 am

Name of class: Pharm D IV year and M Pharm (Pharmacology) Second year

Date: 06/12/2022 (Tuesday)

Time for departure from college: 9:30 am

Contact persons during visit

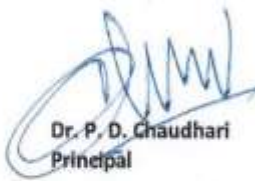
Dr Padmaja Kore: 82082 72961

Dr V V Chopade 9545452767

Prof Swateja Bhosle: 70583 66393

Prof Siddhat Sawdekar 99607 22672

Prof. Priyanka Sarda: 72496 52496

  
Dr. P. D. Chaudhari  
Principal



Copy to

1. Academic section
2. Class teachers
3. Office

  
Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES Modern College of Pharmacy, Nigdi, Pune-44

Attendance of students for Industry Visit

Name of Place: BioRadius Therapeutic Research Pvt Ltd phase I, Hinjawadi, Pune, Maharashtra 411057.

Name of class: M Pharm (Pharmacology) Second year

Date: 06/12/2022 (Tuesday)

Roll no	Name	Signature of students
COL201	Akansha Amritkar	
COL202	Pranali Bhandare	
COL203	Abhijit Deshmukh	
COL204	Gayatri Gadekar	
COL205	Vinod Galkwad	
COL206	Pratiksha Hajare	
COL207	Dhanashri Katkar	
COL208	Pradnya Khelbude	
COL209	Mohsin Mansoori	
COL210	Kajal Pawade	
COL211	Nikita Pawar	
COL212	Ganesh Pore	
COL213	Surabhi Shinde	
COL214	Prajakta Tambe	

Dr. V.V. Chopade  
Incharge



Dr. P. D. Chaudhari  
Principal

Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



PES Modern College of Pharmacy, Nigdi, Pune-44

Attendance of students for Industry Visit

Name of Place: BioRadius Therapeutic Research Pvt Ltd phase I, Hinjawadi, Pune, Maharashtra 411057.

Name of class: Pharm D IV year

Date: 06/12/2022 (Tuesday)

Roll No.	Name Of Student	Signature of students
401	Bakale Sayali Shivraj	
402	Bendga Tushar Santya	
403	Bhange Shardul Santoshrao	
404	Chachar Mihir Sunil	
405	Chaturvedi Aakansha Devendra	
406	Dalvi Aditya Navnath	
407	Deokar Saakshi Shrikant	
408	Desai Sumedh Sanjay	
409	Dhade Savata Sanjay	
410	Dhas Vishal Khandu	
411	Dhawade Siddhi Rajendra	
412	Gaikwad Abhijit Atmaram	
413	Holmukhe Payal Ganpat	
414	Jadhav Pratiksha Anil	
415	Jagtap Aishwarya Krishna	
416	Jha Tushar Sanjeev Kumar	
417	Kale Gauri Jagdish	
418	Kamble Padmaja Deepak	
319	Khape Payal Sudhakar	
420	Lavate Rutika Tukaram	
421	Lokhande Tallini Dhananjay	
422	Manocha Vinay Tarun	
423	Meher Akshaya Suresh	
424	Mirani Mihir Bharatbhai	
425	Pande Omkar Harihar	
426	Parkhe Tejas Santosh	
427	Patil Ninad Bharat	
428	Patil Pradnya Prakash	
429	Patil Yash Anil	
430	Rane Pritish Vijay	
431	Shelke Kanchan Arvind	
432	Undale Akanksha Kishor	

  
Dr. V V Chopade  
Incharge



  
Dr. P. D. Chaudhari  
Principal

Principal

P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.





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Savitribai Phule Pune University, Pune & Approved under Section (2 (f) & 12 (B) of UGC Act, 1956)

Sector No. 21, Yamunanagar, Nigdi, Pune - 411 044. (M.S.) Tel.: 020-27661315 Fax.: 020-27661314  
E-mail: mcoopnigdi44@gmail.com Website: www.mcoop.org.in

Prof. Dr. P. D. Chaudhari  
M. Pharm., Ph.D.  
Principal

Prof. Dr. Gajanan R. Ekbote  
M.S., M.N.A.M.S.  
Chairman, Business Council  
P.E. Society, Pune

Ref: MCoP/TL/2022-23/192 Date: 05/12/2022

To  
The Director/ Manager  
BioRadius Therapeutic Research Pvt Ltd  
phase I, Hinjawadi, Pune, Maharashtra 411057.

Dear Sir,


We are thankful to you for accepted our request for one day hands on training and  
Industry visit to our students and faculty members


It was a great pleasure for us to have provided the real insight of working procedure of  
your esteemed organization for our students on 06/12/2022


We again thank you for sparing your valuable time with us. We are sure that you will  
always be there to help us at every critical turn and we look forward to continuous association  
with you in future.


Thanking You.

Yours truly,

  
Dr V. V. Chopade  
Incharge



  
Dr. P. D. Chaudhari  
Principal

  
Principal  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.

Received by  
Sachin D. DORAR


STRIVING TOWARDS EXCELLENCE FOREVER



P.E. Society's  
Modern College of Pharmacy, Nigdi, Pune-44


REPORT OF INDUSTRY VISIT 2022-23

1.	<b>Name of activity: Industry visit for students and Staff</b>	
2.	<b>Name of Industry</b>	Bio Radius Therapeutic Research Pvt Ltd Phase I, Hinjawadi, Pune, Maharashtra
3.	<b>Date of activity</b>	06/12/2022
4.	<b>Total no students participate</b>	M Pharm -13 Pharma D - 31 Total - 44
5.	<b>Occasion of activity</b>	Industry Academic Interaction
6.	<b>Place of visit</b>	Therapeutic Research \ Clinical research Lab
7.	<b>Objectives of activity</b>	1. To get analytical knowledge, planning abilities, problem analysis, modern tool usage, professional identity, pharmaceutical ethics, life-long learning 2. To get importance of accuracy in practical's experiments 3. How to operate equipment's in lab.
8.	<b>Outcome of activity</b>	1. This visit gives information & a chance to upgrade their knowledge regarding the current practices, instruments and techniques used in clinical research industry  2. Students found it very helpful in understanding the actual working of clinical research and various studies conducted in Bioavailability and bioequivalence studies as per ICH-GCP guidelines.
9.	<b>Training given by</b>	Mr Sachin Deokar
10.	<b>Name of faculty with students</b>	Dr. P. Kore Dr. V V Chopade Prof Swateja Bhosale Prof Siddhat Sawadekar Prof Priyanka Sarda
11.	<b>Activity co-coordinator</b>	: Dr. Vitthal V Chopade

  
Dr. V. V. Chopade  
Industry Visit In-charge



  
Dr. P. D. Chaudhari  
Principal

  
Principal  
P.E.S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.



Photo



Dr. V. V. Chopade  
Industry Visit In-charge



Dr. P. D. Chaudhari  
Principal

Principal 1  
P. E. S. Modern College of Pharmacy  
Sector No.21, Yamunanagar, Nigdi,  
Pune - 411 044.