

Declaration by Research Scholar

I declare that the thesis entitled "*Detection of Adulteration in Herbal Formulation Containing Phyllanthus emblica, Terminalia bellirica and Terminalia chebula using DNA Based Approach*" is my own work conducted under the supervision of **Dr. Preetam Joshi**, Associate Professor at Department of **Biotechnology**, Faculty of **Science**, Atmiya University, Rajkot, Gujarat, India, and **Dr. Madhvi Joshi**, Scientist-D and Joint Director, at **Gujarat Biotechnology Research Centre**, Gandhinager, Gujarat, India and approved by the Director of Research, Atmiya University, Rajkot, Gujarat, India.

I further declare that, to the best of my knowledge, the thesis does not contain any part of any work which has been submitted for award of any degree either in this University or any other University.

Date: 10/01/2025

Place: Rajkot



Tasnim Hunedbhai Travadi

Research Scholar

Certificate of Supervisor

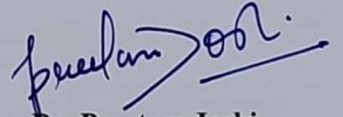
This is to certify that work entitled “*Detection of Adulteration in Herbal Formulation Containing Phyllanthus emblica, Terminalia bellirica And Terminalia chebula Using DNA Based Approach*” is a piece of research work done by **Travadi Tasnim Hunedbhai** under my supervision for the degree of Doctor of Philosophy at Department of **Biotechnology**, Faculty of **Science**, Atmiya University, Rajkot, Gujarat, India.

To the best of my knowledge and belief the research work and thesis

- I. Embodies the work of candidate herself,
- II. Has duly been completed,
- III. Fulfils the requirement of ordinance related to Ph.D. degree of the University & is up to the standard both in respect of content and language for being referred to the examiner.

Date: 10/01/2025

Place: Rajkot



Dr. Preetam Joshi

Supervisor

Certificate of Co-Supervisor

This is to certify that work entitled "***Detection of Adulteration in Herbal Formulation Containing Phyllanthus emblica, Terminalia bellirica and Terminalia chebula using DNA Based Approach***" is a piece of research work done by **Travadi Tasnim Hunedbhai** under my supervision for the degree of Doctor of Philosophy at the Department of **Biotechnology**, Faculty of **Science**, Atmiya University, Rajkot, Gujarat, India. It is further certified that the work was carried out as a part of the research project "**Development of assay kit for detection of biological adulteration in highly traded herbal products through DNA tags and Barcoding**" funded by **Gujarat State Biotechnology Mission**, Gandhinagar, for their financial support under the Research Support Scheme (Grant ID: GSBTM/JDRD/584/2018/204).

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Date: 10/01/2025

Place: Gandhinagar

Dr. Madhvi Joshi

Co-Supervisor



ATMIYA UNIVERSITY

(Established under the Gujarat Private University Act II, 2018)

Yogidham Gurukul, Kalawad Road, Rajkot - 360005, Gujarat (INDIA)

Certificate

Pre Thesis Submission Presentation

This is to certify that **Travadi Tasnim Hunedbhai** has made Pre Ph.D. presentation on the research work entitled **Detection of Adulteration in Herbal Formulation Containing *Phyllanthus emblica*, *Terminalia bellirica* and *Terminalia chebula* using DNA Based Approach** in the Faculty of Science, Atmiya University, Rajkot on 30/11/2024 before Departmental Research Committee for getting feedback and comments.

This is also to certify that all the suggestions and comments given by the Doctoral Progress Review Committee are incorporated. Moreover the presented research work was appreciated and recommended by all attendees.

Date: 30/11/2024

Place: Rajkot



Director

Center for Research, Innovation & Translation

Thesis Approval Form

The Viva-Voce of the Ph.D. thesis entitled "*Detection of Adulteration in Herbal Formulation Containing Phyllanthus emblica, Terminalia bellirica and Terminalia chebula using DNA Based Approach*" submitted by **Travadi Tasnim Hunedbhai (Enrolment No. 190681002)** was conducted on **03/01/2025 (Thursday)** at Atmiya University, Rajkot, Gujarat

Based on the Performance of the Candidate, We, the panel of examiners, recommend that
(Please tick any of the following)

1. He / She be awarded Ph.D. Degree
 2. He / She be awarded Ph.D. Degree with minor modification

Please Suggest Modification

3. The following modifications are to be incorporated in the thesis within one month and viva-voce be re-conducted by the same panel of examiners

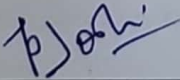

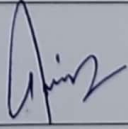
Please Suggest Modification

4. He / She should not be awarded Ph.D. Degree

Please mention Reason for Rejection

Date: 03/01/2025

Place: Rajkot

Signature			
	Research Supervisor	University Nominee	External Examiner

Acknowledgment

I am profoundly grateful to my research supervisors, **Dr. Preetam Joshi**, Associate Professor, Department of Biotechnology, Atmiya University, Rajkot and **Dr. Madhvi Joshi**, Joint director-1, Gujarat Biotechnology Research Centre, Gandhinagar for their invaluable guidance, encouragement, and moral support, which enriched my knowledge and propelled my research forward. Their inspiring mentorship and blessings will continue to guide my scientific career.

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Date: 10/01/2025

Place: Rajkot


Tasnim Hunedbhai Travadi
Research Scholar