

Tuljaram Chaturchand Collage of Arts , Science and Commers( Autonomous ) ,Baramti.

## **CERTIFICATE**

This is to project certify that the entitled

# "ISOLATION AND CHARACTERIZATION OF PHOSPHATE SOLUBILISING BACTERIA"

Submitted by,

- 1. Garde Sakshi Sudhakar
- 2. Sorate Anuja Ambadas
- 3. chaudhari Ankita Hanumant
- 4. Kamble Pratiksha Tukaram

In partial fulfilment of the requirement of the award of degree B.SC.( Microbiology) to Savitribai Phule Pune University, Pune has Been carried out by them under my guidance satisfactorily during the academic year 2023 -2024.

Date:

Examiner

Department of Microbiology Tuljaram Chaturchand College

Baramati, Dist. Poona



### Anekant Education Society's, Tuljaram Chaturchand College (Autonomous), Baramati

Affiliated to Savitribai Phule, Pune University

Academic Year 2023-24

## Certificate

# Department of Microbiology

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

"Isolation and identification of phosphate solubilizing fungi from soil" submitted by microbiology group for the fulfilment of partial course micro- 3609 for degree of bachelor of science in microbiology The project was carried out excellent / satisfactorily manner under my supervision in department of microbiology; Tuljaram chaturchand collage Baramati.

(Prof. Dhawal .V. Doshi)

Project guide

(Dr . S. T. Pawar) HOD,

Dept.of microbiology

External examiner



## Anekant Education Society's

# Tuljaram Chaturchand College of Arts, Science and Commerce(Autonomous), Baramati.

#### CERTIFICATE

is to project certify This that the entitled " PHOSPHATE SOLUBILIZING ACTINOMYCETES "

submitted by

Surve Priti Pitambar - 11520

Bhosale Sakshi Jitendra - 11664

Kare Sayali Jagannath – 11701

Thigale Mrunali Ganesh - 11711

in partial fulfillment of the requirement of the award of degree

B.Sc.(Microbiology) to Savitribai Phule Pune University, Pune has

been carried out by them under my guidance satisfactorily during the

academic year 2023-2024.

Date:

Project Guide

Examiner

Internal

Examiner

Department

Head Microbiology

HEAD

Department of Microbiology Tuljaram Chaturchand College

Baramati, Dist. Poona



#### Certificate

This is to certify that, the work incorporated in the dissertation entitled "Isolation and characterization of Phosphate solubilizing bacteria" by Miss Shaikh Shirin Salim, Miss Tiwari Kajal Narendra, Miss Bankar Prema Anil and Miss Bankar Shruti Anil,

were carried out under my supervision at the Department of Microbiology ,as a partial fulfilment of B.Sc. degree in Microbiology under Tuljaram Chaturchand College, Baramati affiliated by Savitribai Phule Pune University Pune.

All the information in this dissertation is genuine to the best of my knowledge.

Date:-

Research Guide

External Examiner



### Anekant Education Society's

Tuljaram Chaturchand College of Arts, Science and Commerce(Autonomous), Baramati.

#### CERTIFICATE

project certify that the entitled "Isolation and characterization of phosphate solubilizing fungi"submitted by

1. Godase Ashvini Anil-11531

2.Khartode Pratiksha Ramesh-11532

3.Khartode Kajal Sambhaji-11667

4.Gore Sakshi Bapu-11680

in partial fulfillment of the requirement of the award of degree B.Sc.(Microbiology) to Savitribai Phule Pune University, Pune has been carried out by them under my guidance satisfactorily during the academic year 2023-2024.

Date:

Microbiology Dept.



Anekant Education Society's, Tuljaram Chaturchand College (Autonomous), Baramati Affiliated to Savitribal Phule, Pune University Academic Year 2023-24

#### CERTIFICATE

# Department of Microbiology

This is to project certify that the entitled " Isolation and identification of phosphate solubilizing fungi from soil" submitted by submitted by microbiology group for the fulfilment of partial course micro- 3609 for degree of bachelor of science in microbiology. The project was carried out excellent / satisfactorily manner under my supervision in department of microbiology, Tuljaram collage ,Baramati .

**Project Guide** 

External

Examiner

Head

Microbiology Dept.

### CERTIFICATE

This is to certify that the work incorporated in project entitled Isolation and characterization of Phosphate Solubilizing Actinomycetes submitted by Aditya Anant Jadhav, Omkar Dilip Rupnawar, Vyankatesh Vinod Solankar, Omakr Vilas Kharat, Abhijeet Popat Khartode . under my supervision in the Post Graduate Research Centre Department of Microbiology, Tuljaram Chaturchand College of Arts, Science and Commerce (Autonomous). Baramati-413102 Dist: Pune for the degree of B.Sc Microbiology.

Date: 13/4/24

Project Guide

Internal Examiner

rnal Exter

External Examiner Head Of Dept. Microbiology

#### CERTIFICATE

This is to certify that the work incorporated in project entitled Solubilizing Isolation and characterization of Phosphate Vjaykumar Yogeshwar submitted by Actinomycetes Mane, Sanket Vikram Shelar, Aditya Bapu Thombare, Vaman Narayan Gholve . under my supervision in the Post Graduate Microbiology, Tuljaram Department of Centre Research Commerce Science and of Arts, College Chaturchand (Autonomous).Baramati-413102 Dist: Pune for the degree of B.Sc Microbiology.

Date:

Project Guide

fixaminer

Examiner

Microbiology



Anekant Education Society's Tuljaram Chaturchand College of Arts, Science and Commerce(Autonomous), Baramati.

#### CERTIFICATE

This is to project certify that the entitled "Isolation and identification of phosphate Solubilizing bacteria" submitted by

- Nimbalkar pranali Ganesh Roll No -11614
- Pawar pooja Nanaso Roll No -11738
- Raut Rupali Popat Roll No -11686
- Gawade Sayali Sanjay Roll No -11793

in partial fulfillment of the requirement of the award of degree B.Sc.(Microbiology) to Savitribai Phule Pune University, Pune has been carried out by them under my guidance satisfactorily during the academic year 2023-2024.

Date:

Project Guide

Examiner



Anekant Education Society's

## Tuljaram Chaturchand College of Arts, Science and

Commerce(Autonomous), Baramati.

#### CERTIFICATE

is to project certify SOLUBILIZING the entitled PHOSPHATE that ACTINOMYCETES "

submitted by

Surve Priti Pitambar - 11520

Bhosale Sakshi Jitendra - 11664

Kare Sayali Jagannath - 11701

Thigale Mrunali Ganesh - 11711

in partial fulfillment of the requirement of the award of degree

B.Sc.(Microbiology) to Savitribai Phule Pune University, Pune has

been carried out by them under my guidance satisfactorily during the

academic year 2023-2024.

Date:

Project Guide

Examiner

Examiner

Department

Head Microbiology

HEAD

Department of Microbiology fuljaram Chaturchand College Baramati, Dist. Poona