



**ATMIYA
UNIVERSITY**

**Morpho-Physiological Studies on Micropropagated
Rose as Influenced by Liquid Culture System and
Culture Vessels Environment**

A
Thesis
Submitted to the
Atmiya University,
For the Degree
of

DOCTOR OF PHILOSOPHY

in

BIOTECHNOLOGY

by

NIRMAL DHAVAL ATULKUMAR

Enrolment No. 191681001

Under the Guidance of
DR. PREETAM JOSHI
Department of Biotechnology

ATMIYA UNIVERSITY
Yogidham Gurukul, Kalawad Road,
Rajkot-360005, Gujarat (India)
December 2024