

Pramukh Swami Science & H. D. Patel Arts College, Kadi
Biotechnology Department
B.Sc

Certificate Course in Applied Plant Tissue Culture Techniques

Course ware:

1. Principle subject

Introduction to plant tissue culture

Micropropagation

Application of Biotechnology to plant Tissue Culture

2. Research Work

3. Tissue Culture Industrial rendering

Duration: 6 month

Seats: 20

Fees structure: 2000 Rs. /Student

COURSE SYLLABUS

Paper I:

Introduction to Plant Tissue culture, Terms and definitions, Historical background, Laboratory organization, Tools and techniques, methods of sterilization, Nutrient media, Use of growth hormones, Role of Micro-, macro, vitamins and carbon source in tissue culture. Medium preparation, Maintenance of cultures : media, environmental factors, explants characteristics.

Paper II:

Culture initiation, Micropropagation-axillary bud, shoot tip and meristem culture. Embryo and Endosperm culture and their applications Techniques and significance of Androgenesis and Gynogenesis (ovary, ovule, egg, synergids culture). In vitro propagation for disease free plants.


Principal

P. S. Science & H. D. Patel
Art's College KADI (N.G)



CERTIFICATE COURSE
Dept. of Biotechnology
P. S. Science & H. D. Patel Arts
College, KADI-382715

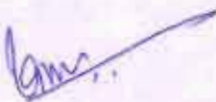


Practical III:

1. Demonstration-
 - a) Plant tissue culture laboratory equipments
 - b) Methods of Sterilization
 - a) Methods of decontamination
 - b) Properties of Laminar Airflow
 - c) Working of Laminar Airflow
2. Preparation of stock solutions for Plant Tissue Culture Media.
3. Preparation of Media- MS (1962), Nitsch (1969) and White's Medium
4. Production of Callus and suspension culture.
5. Plant Propagation through tissue culture (Shoot, leaf and nodal culture)

Project:-

Project work on Micropropagation of Plantation crops/Orchids/Medicinal Plants


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