DEPARTMENT OF BOTANY

DEVA MATHA COLLEGE, KURAVILANGAD

Affiliated to Mahatma Gandhi University, Kottayam



Report

on

ADD-ON COURSE

In **Plant Tissue**

Culture

Conducted for II DC Students

Academic Year: 2022-23

BROCHURE

DEPARTMENT OF BOTANY Add on Courses offered for Students: 2022-2023 Plant Tissue Culture DMCK/BOT/AD 01/2022 Department Coordinator: Ms. Varsha Maria Babu

DMCK/BOT/AD

ADD ON COURSE in

DMCK/BOT/AD 01/2022:Plant Tissue Culture

Academic year : 2022-2023

Title : DMCK/BOT/AD 01/2022: Plant Tissue Culture

Instructional Hours:30 HoursDuration:2 MonthsMode of Instruction:OfflineIntake Capacity:30

Eligibility : Plus Two or Equivalent Beneficiaries : II DC Botany Students

Date(s) on which program was conducted : February 2023- March 2023

Collaborating agency inside/outside the institute : NA

Organizing Dept : Dept. of Botany

Name of the Coordinator : Ms. Varsha Maria Babu

Number of students participated in the programme : 20

Number of students completed the programme : 20

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A BRIEF REPORT

The Botany Department of Deva Matha College, Kuravilangad has organized an Add-on Course in **Plant Tissue culture** for the II DC Botany students of the college.20 students registered and successfully completed the course. The course was conducted during the months of February and March of 2023. Resource Persons who engaged the classes were renowned in the respective area. The course is of 30 hours duration. The course is planned and executed as both theory and practical sessions. A tissue culture laboratory is also made familiar to the students. Evaluation process included attendance, test papers and spot tests.

OBJECTIVES

- 1. To enable students to be familiar with the process of Tissue Culture
- 2. To exercise creation of tissue cultured plantlets.
- **3.** To familiarize a tissue culture laboratory

SYLLABUS

1. Brief history of tissue culture

1 Hour

- a. Cellular totipotency
- b. Concept of dedifferentiation, redifferentiation and organogenesis

2. Tissue culture media

3 Hours

Media composition

Selection of media

Media preparation

3. Micropropagation

6 Hours

- a. Selection of suitable material
- b. Stock plant selection
- c. Parts of plant
- d. Size of explants
- e. Avoid diseased tissue

4. Types of plant tissue culture

3 Hours

Meristem culture

Callus culture

Anther culture

Embryo culture

Ovary culture

Ovule culture

Pollen culture

5. Benefits of plant tissue culture

4 Hours

Rapid multiplication of clones

Genetic uniformity

Aseptic condition

Controlled environment

6. Outline of procedure and technique – Slide show

1 Hours

7. Practical

12 Hours

ASSESSMENT PROCEDURES

Written examination – 60%

Practical involvement – 40%

Grading

| Sl. No | Marks | Grade |
|--------|-----------|-------|
| 1 | 90-100% | A+ |
| 2 | 75-90% | A |
| 3 | 60-75% | B+ |
| 4 | 50-60% | В |
| 5 | 40-50% | С |
| 6 | Below 40% | D |

COURSE OUTCOMES

- Understand the basic concepts in plant tissue culture
- Discuss the process involved in micropropagation
- Analyse the practical use of tissue culture in life

RESOURCE PERSONS

1. Ms. Varsha Maria Babu

Assistant Professor Department of Botany Deva Matha College, Kuravilangad

2. Dr. Varghese M.C.

Assistant Professor & HOD Department of Botany Deva Matha College, Kuravilangad

LIST OF STUDENTS

| Sl. No | Class no. | Name of the student |
|-----------|-----------|---------------------|
| • | 21110201 | NAVIH DAC V. D |
| 1. | 21UG301 | NAKULDAS K. P. |
| 2. | 21UG302 | YEDUKRISHNAN R. |
| 3. | 21UG303 | ABHIRAMI SHAJI |
| 4. | 21UG304 | ABHIRAMY PRABHULAN |
| 5. | 21UG305 | AISWARYA BINU |
| 6. | 21UG306 | ASWATHI MANOHARAN |
| 7. | 21UG308 | MEENU THANKACHAN |
| 8 | 21UG310 | AFTHAB A |
| 9 | 21UG311 | AJOMON MATHEW |
| 10 | 21UG312 | ALEX VINOD |
| 11 | 21UG313 | ARJUN JOSHY |
| 12 | 21UG314 | JAYAKRISHNA K. A. |
| 13 | 21UG315 | JAYAKRISHNAN. V. J |
| 14 | 21UG316 | N B ROSHIN |
| 15 | 21UG317 | ALAN MARIA |
| 16 | 21UG319 | ARCHANA C A |
| 17 | 21UG321 | ELIZABETH JOHNS |
| 18 | 21UG322 | JOSNA VARGHESE |
| 19 | 21UG323 | LISNA JOSE |
| 20 | 21UG324 | RADHIKA RAJU |

ATTENDANCE SHEET

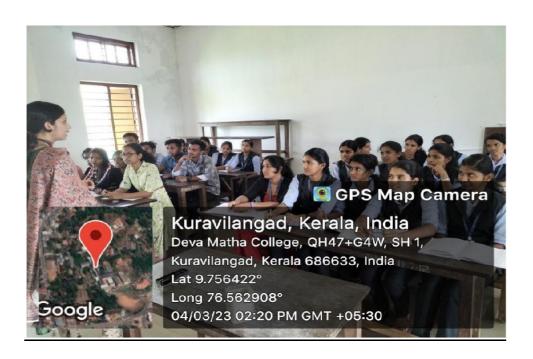
| | | Month 2022-23 | | | | | | | LLE 3. STU | | | | ATTI | | | CE F | | | | | | E | cui' | 7UR | (3 | | |
|-----------|--------|-------------------------------------|------|----------|-----------|-----------------------|----------|--------------|---------------|---------|--------------------|----|------|------|-----|------|----|----|------|-----|----|----|------|-----|----|----|---|
| CLASS No. | Year & | Month | | 1 | 2 | 3 4 | 4 5 | 6 | 7 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 2 |
| 2146 301 | | Nakuldas K.P. | a.m. | QL- | A | TAR GR | 1 | CALL | 9 | 17 | Q.L | | | | | | | _ | | | | | | | | | F |
| 2149302 | 0 | Yedukrishman R. | p.m. | 401 | weet up | a ye | to year | 2.112 | Act of | 4 | 2 year | | | | 1 | - 1 | | | | 1 | | | | | | - | + |
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| 2149 304 | A | Abhicanus Prathulas | p.m. | Allen | Miss | Mary H | AL-M | 1-87 | Ales M | Alex | Abhenn | | 1 | - | 100 | - | - | | | 1 | | | | | 1 | | 4 |
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| 2146313 | 11 | Jayakrishma KA. | a.m. | - Age | 1 | AND S | W-A | 00 | Char | + 4 | Congre | | | | | | 0 | | | | - | | | | | - | # |
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| 1149 324 | 20 | Radhika Raju | p.m. | Comme | Service C | No Con | 500 | The state of | 他这 | 200 | Good | | 1 | | | | | | 1534 | - | | - | - | | | | |
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| | | | p.m. | | | | Head | of the D | epartme | nt of B | otany | | 1 2 | | | - | - | | 1 | 100 | 1 | 1 | | | | | |
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| | | | p.m. | | | | Ku | ıravilan | gad P.O. | 686 6 | 33 | | | - | | | | - | 5 | | 1 | | | | | | Ħ |
| | | | a.m. | | | | | | | - | 0 000 | | | - 1 | | | 1 | | 1 | - | - | - | - | | | - | |

PHOTOS OF SESSIONS











MARKLIST OF THE EXAMINATION

| Sl. No. | Class no. | Name of the student | Marks (Out of 25) |
|------------|-----------|---------------------|-------------------|
| 1. | 21UG301 | NAKULDAS K. P. | 20 |
| 2. | 21UG302 | YEDUKRISHNAN R. | 20 |
| 3. | 21UG303 | ABHIRAMI SHAJI | 23 |
| 4. | 21UG304 | ABHIRAMY PRABHULAN | 20 |
| 5. | 21UG305 | AISWARYA BINU | 25 |
| 6. | 21UG306 | ASWATHI MANOHARAN | 20 |
| 7. | 21UG308 | MEENU THANKACHAN | 20 |
| 8 | 21UG310 | AFTHAB A | 21 |
| 9 | 21UG311 | AJOMON MATHEW | 20 |
| 10 | 21UG312 | ALEX VINOD | 23 |
| 11 | 21UG313 | ARJUN JOSHY | 15 |
| 12 | 21UG314 | JAYAKRISHNA K. A. | 16 |
| 13 | 21UG315 | JAYAKRISHNAN. V. J | 16 |
| 14 | 21UG316 | N B ROSHIN | 16 |
| 15 | 21UG317 | ALAN MARIA | 25 |
| 16 | 21UG319 | ARCHANA C A | 19 |
| 17 | 21UG321 | ELIZABETH JOHNS | 25 |
| 18 | 21UG322 | JOSNA VARGHESE | 22 |
| 19 | 21UG323 | LISNA JOSE | 22 |
| 20 | 21UG324 | RADHIKA RAJU | 25 |

STUDENT'S FEEDBACK

| | | | STUDENT'S | FEEDBACK | | | |
|-----------------------|--------------|-----------------|--------------------|-----------------------|---|--------------------------------|--|
| Name of the student | Class number | 1. How will you | rate 2. Does the c | ourse h 3. Will you p | refer if t 4. Give one benefit you got from the course. | | |
| Abhirami Shaji | | Very good | Yes | Yes | Got an idea about the procedure | | |
| Abhiramy Prabhulan | | Good | Yes | Yes | Very simple and useful | | |
| Aiswarya Binu | | Good | Yes | No | Very simple and useful | | |
| Ajomon Mathew | | Very good | Yes | No | Got an idea about the procedure, Practical utility i | s high, Very simple and useful | |
| Alan Maria | | Very good | Yes | Yes | Got an idea about theprocedure, Practical utility is | high, Very simple and useful | |
| Alex Vinod | | Excellent | Yes | Yes | Very simple and useful | | |
| Archana. C. A | | | | | | | |
| Aswathi Manoharan | | Good | Yes | Yes | Got an idea about the procedure, Practical utility i | s high, Very simple and useful | |
| Jayakrishna Ka | | Good | Yes | Yes | Got an idea about the procedure | | |
| Lisna Jose | | Excellent | Yes | Yes | Got an idea about the procedure | | |
| Elizabeth Johns | | Very good | Yes | Yes | Got an idea about the procedure, Practical utility i | s high, Very simple and useful | |
| Meenu Thankachan | | Very good | Yes | Yes | Very simple and useful | | |
| Nakuldas K. P. | | Very good | Yes | Yes | Very simple and useful | | |
| Josna Varghese | | Excellent | Yes | No | Got an idea about the procedure | | |
| Radhika Raju | | Excellent | Yes | Yes | Very simple and useful | | |
| Roshin NB | | Excellent | Yes | Yes | Got an idea about the procedure | | |
| Yedukrishnan. R | | Very good | Yes | Yes | | | |
| Jayakrishnan V. J. | | Good | Yes | Yes | Very simple and useful | | |
| Afthab A. | | Excellent | Yes | Yes | Practical utility is high | | |
| Arjun Joshy | | Good | Yes | No | Got an idea about the procedure | | |

MODEL CERTIFICATE



CONCLUSION

The Add-on Course in **Plant Tissue culture** was provided by the Botany Department of Deva Matha College Kuravilangad for the II DC Botany students of the college. 20 students registered and successfully completed the course. The course was conducted during the months of February and March of 2023. Evaluation process included attendance, test papers and spot tests. Feedbacks were collected through Google forms. Certificates are distributed to the participants eligible as per the mode of evaluation including attendance, examination and spot tests.

Course Co ordinator

Varsha Maria Babu

Department of Botany

Dr. <u>Brincy</u> Mathew Add-on Course General Coordinator

Bring Mether



Principal
Deva Matha College
Kuravilangad - 686 633