



ST. EDMUND'S COLLEGE
SHILLONG

CENTRAL INSTRUMENT AND RESEARCH FACILITY

ST. EDMUND'S COLLEGE, SHILLONG

MEGHALAYA 793003



Report on Research and Innovation Training for Undergraduate Students (RITUS)

The Central Instrument and Research Facility (CIRF), St. Edmund's College, conducted a 12-week Research and Innovation Training for Undergraduate Students (RITUS) programme. The training on **Molecular Biology Techniques** commenced from September 2023 for undergraduate students of St. Edmund's College currently pursuing different B.Sc. programmes in Life Sciences in the College. Students were provided hands-on training in advanced bench-based laboratory skills as well as soft skills expected of a 21st century graduate in biological sciences. Under the current RITUS programme, training was provided in areas of **i) Analytical protein chemistry, ii) Gene cloning** and **iii) Short-term research project execution, analyses and report writing**. A total of 43 applications were received from the 3rd and 5th Semester students of which 10 students were selected for the training programme.

Training instructors :

Ms. Ophilia Ibapalei Lyngdoh Mawphlang and Dr. Eros Vasil Kharshiing

Programme Co-ordinator :

Dr. Eros Vasil Kharshiing

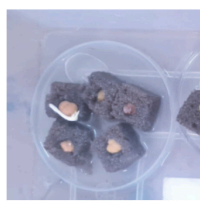
Student trainees :

Name	Department	Semester	Student Roll No.
Nikchera T Sangma	Botany	5	21/BOTA/278
Kyntiewhun Nongbak	Botany	5	21/BOTA/256
Treferous Shylla	Zoology	5	21/ZOOL/301
Ng Anisha Singha	Botany	3	22/BOTA/013
Anjelina Laipubam	Botany	3	22/BOTA/005
Adam Wangsu	Botany	3	22/BOTA/024
Drema Lhamu	Biotechnology	3	22/BIOT/002
Mallovika Singh Kharbhih	Biotechnology	3	22/BIOT/007
Tressy Ranglong	Biotechnology	3	22/BIOT/035
Lalnuthluangi Renthei	Biotechnology	3	22/BIOT/008

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2.3.OBSERVATION AND RESULTS:



A. Germination of seeds in Phenolic foam



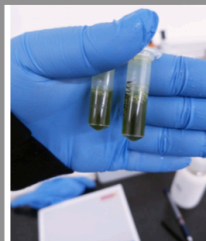
B. Transferred of sprouted seeds to light



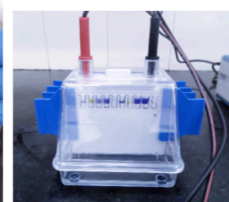
C. Transfer to Hydroponics



D. Hydroponically grown *Cicer arietinum*



E. Sample after centrifugation



F. Running the gel

1.3 OBSERVATION AND RESULT –

After running the gel, multiple bands show up.

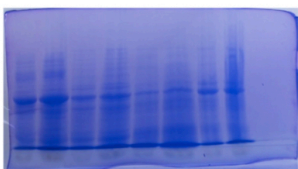


FIG : Electrophoresis gel



Fig : Plants germinating



Fig : Plant after transferred to light



Fig : Plants in hydroponic solution

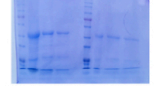


Fig : Soluble protein profile

3.4 OBSERVATION AND RESULT –

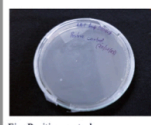


Fig: Positive control

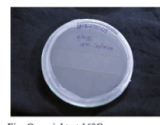


Fig: Overnight at 16°C

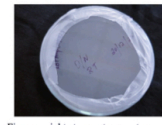


Fig: overnight at room temperature

Research and Innovation course
Undertaking

Name: Ringlal Tressy Ranglong
Department: Biotechnology
Mobile Number: 8415895391
Address: Upper Lummaurie, Laitumkhrah

I hereby declare that I will be sincere in completing the 12 week course regularly and will maintain the decorum of the curriculum.

Signature: Tressy
Date: 07.10.23

Research and Innovation course
Undertaking

Name: ANI ANISHA SINGHA
Department: BOTANY
Mobile Number: 6000283687
Address: RENBERZYONS GIRLS HOSTEL, BDN, BOSCO RD, LAITUMKHAH

I hereby declare that I will be sincere in completing the 12 week course regularly and will maintain the decorum of the curriculum.

Signature: Anisha Singha
Date: 07/10/23