



Report On VTC: Protein Purification Techniques

Title: VTC Protein Purification techniques

Date of Start: 2nd February 2024

Date of Complete: Ongoing

No of Days: Ongoing

Duration: 1 Year

Mode: Self-paced Laboratory Work, Department of Biochemistry.

Syllabus: Techniques: Salt fractionation, SDS PAGE, Western Blot and Column Chromatography.

Course module: Purely Practical Based.

Collaborators (if any) : None

Objective:

1. To train students in the field of Protein Purification via hands-on training
2. To prepare students for higher studies in Protein Biochemistry

Outcome:

1. Students will be able to handle protein purification steps independently

Feedback: Ongoing

Resource Persons:

Dr. Banteiskhem Kharwanlang

Dr. James Wahlang

Dr. K. H. Hadem

Techniques To Be Covered:



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Salt fractionation
SDS PAGE
Western Blot
Column Chromatography.

Techniques Covered Till June 2024

Salt fractionation
SDS PAGE
Western Blot

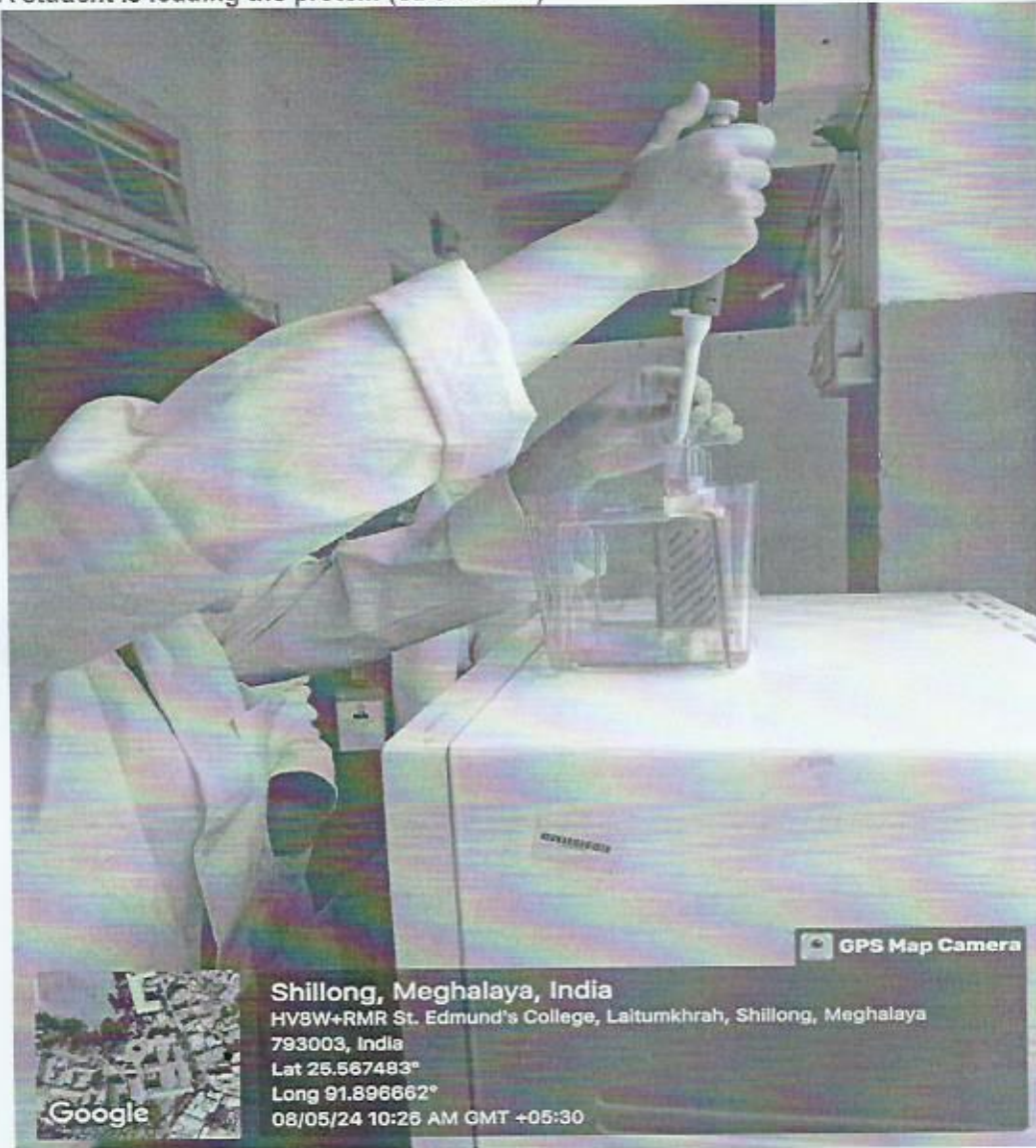


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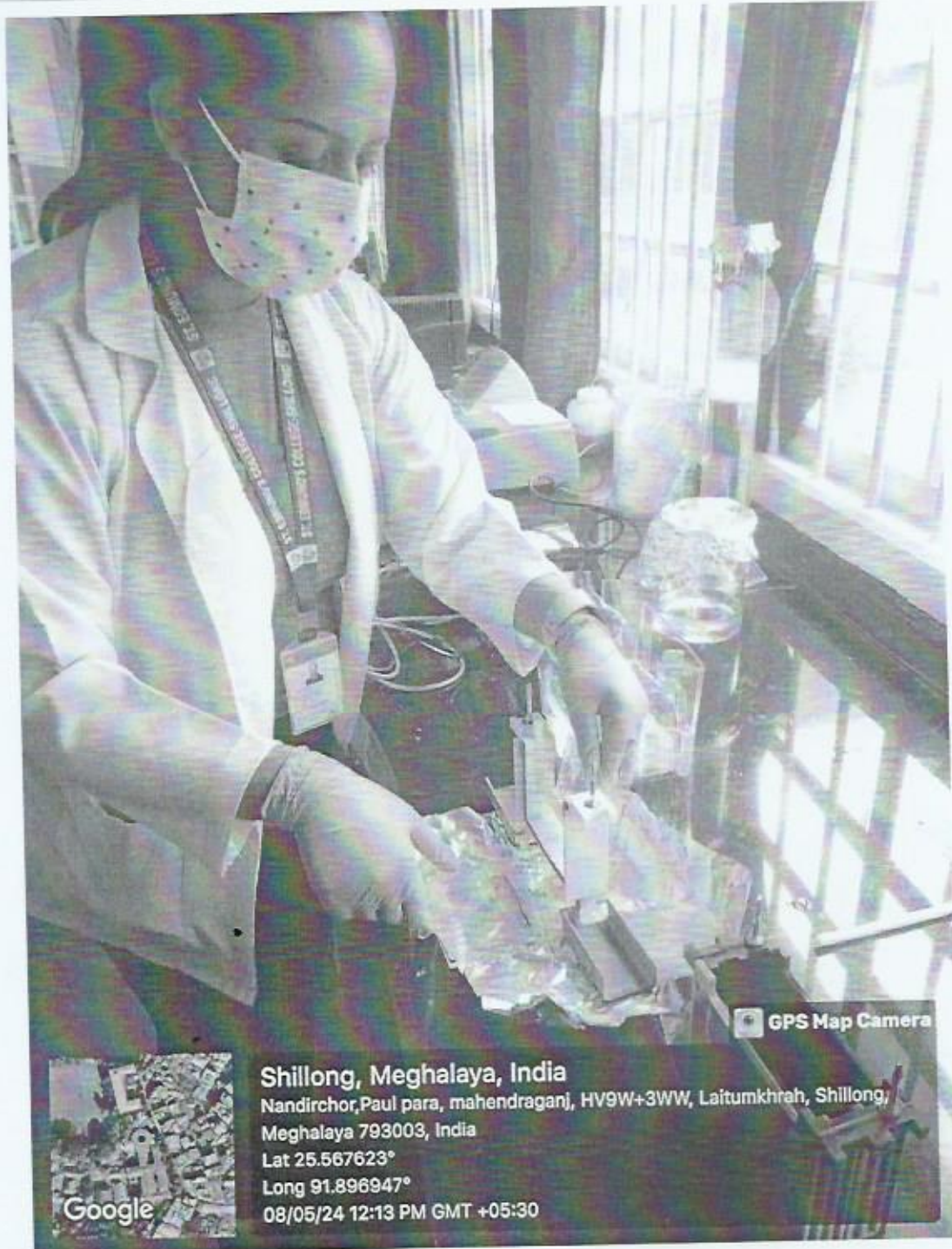
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A student is loading the protein (SDS-PAGE)





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GPS Map Camera



Shillong, Meghalaya, India
Nandirchor, Paul para, mahendraganj, HV9W+3WW, Laitumkhrah, Shillong,
Meghalaya 793003, India
Lat 25.567623°
Long 91.896947°
08/05/24 12:13 PM GMT +05:30



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A student is preparing the gel cassette for transferring the protein to the nitrocellulose membrane (Western Blot)



GPS Map Camera

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793003, India
Lat 25.567584°
Long 91.896728°
08/05/24 12:20 PM GMT +05:30

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VOCATIONAL TRAINING COURSE

**AIM: PURIFICATION ON LACTATE
DEHYDROGENASE.**

**COLLECTIVE WORK BY THE 4TH
SEMESTER STUDENTS OF
BIOCHEMISTRY DEPARTMENT**

TRAINING MENTOR:

Dr. BANTEISKHEM KHARWANLANG

Dr. JAMES WAHLANG

Dr. KHETBADEI L. HYANNIEWTA HADEM

Year 2023-Present



OBJECTIVE

Our aim is to purify lactate dehydrogenase (LDH) by using multiple steps.

By the means of using multiple steps, we get more purified protein which in this experiment is LDH.

Our goal is also to get a better and good bands of LDH in the membrane.



STEPS INVOLVED

1. Preparation of cytosol and homogenization.
2. Ammonium precipitation. (salt precipitation)
3. Protein estimation and calculation of protein volume for loading.
4. Preparation and running of western blot.
5. Result and discussion.



Result:



Western blot analysis of LDH using anti-LDH antibody. equal amount of protein is loaded in each lane. the relative amount of LDH increases at each step of purification.

LANE 1: cytosolic extract

LANE 2: 40% salt saturated extract

LANE 3: pellet precipitated at 80% salt saturation and redissolved 16ml of tris buffer.



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(Signature of all members)

- 1) Dr. B. KHARLANCANG
- 2) Dr. K. Hosten Hosten
- 3) Mr. J. Manlang

(Signature of HOD)

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