

Report of the Field Work/ Project Work/ internship/ Summer Project

1. Name of the Course: <sup>M.Sc in</sup> Biophysics
2. Course Code: SPBPDW
3. Name of the Department: Biophysics
4. Affiliating University: Gauhati University
5. Year of Conduct: 2020-21
6. Number of students Involved: 03
7. Places where it is conducted: 1. Institute of Advanced Study in Science & Technology (IASST), Gauhati  
2. Biophysics dept., Biotech hub, Pub Kamrup College.
8. Objectives:

- (i) Polyoxometalates (POMs) interaction with cyclodextrin (CDs) in various concentration.
- (ii) A greener approach and extracted sericin using ionic liquids.
- (iii) Cold atom atmospheric plasma (CAP) and its effect on Protein Fibrinogen.

9. Methodology:

1. SEM, Zeta Potential & DLS studies
2. FTIR, zeta and dynamic light scattering analysis, SDS-Page.
3. DLS & zeta, UV Spectroscopy, Fluorescence.

10. Details the of the Field Work/ Project Work/ internship/ Summer Project:

Name of the topic	No. of the students	Name of the supervisor	Signature of the Supervisor
Aqueous ionic liquid solutions for efficient extraction of sericin from mulberry and non mulberry silk	01	Dr. Prantu Dutta	<i>[Signature]</i>
Cold atmospheric plasma and its effect on proteins	01	Dr. Prantu Dutta	<i>[Signature]</i>
Polyoxometalates based novel drug delivery system.	01	Dr. Prantu Dutta.	<i>[Signature]</i>

11. Outcome of field work/ Project Work

- On successful completion of the project work, students will be able to:
- (1) understand the interaction of M<sub>132</sub> capsules and M<sub>130</sub> capsules with cyclodextrins for drug delivery system.
  - (2) understand the use of greener solvents in the textile applications and extraction of sericin, paving way for the alternatives to chemical based extraction.
  - (3) understand, a promising direction of utilizing plasma radiation in creation of biomaterials.

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P.O. Balthata Chariali

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Signature of HoD  
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