

FACULTY DEVELOPMENT PROGRAMME (FDP) ON MICROBIAL ENZYME TECHNIQUES

*One Month Online
Training (Learn
Experiments Virtually)*

Certificate will be
provided to all candidates



PROGRAMME OUTCOME

1. Microbial isolation & screening for a particular enzyme production.
2. Lab scale enzyme production and purification.
3. Enzyme characterization & kinetics.
4. Industrial application of enzymes.

Who can join?

Any Biology, Chemistry, Biotechnology, Microbiology, Biochemistry, Agriculture, Food Science, Home Science, Pharmacy faculty can join

Key Features:

Live Session, Recorded Videos, Study Material, Online Assessment Test

TECHNIQUES TO BE COVERED

1. Industrial application of enzymes
2. Bacterial isolation & purification
3. Screening of purified cultures for Enzyme activity.
4. Identification of unknown microorganisms.
5. Fermentation.
6. **Downstream Processing.**
 - a. Extraction of Crude Enzyme.
 - b. **Purification of enzyme.**
 - I. Precipitation of Enzyme.
 - II. Dialysis.
 - III. Ion Exchange Chromatography.
 - IV. Thin Layer Chromatography (depending on enzyme).
9. **Characterization of Purified Enzyme**
 - a. **Total protein estimation**
 - I. Bradford's Method.
 - II. Lowry's Method.
 - b. **Enzyme Assay**
 - c. **Enzyme Kinetics**
 - I. Effect of pH on Enzyme Activity
 - II. Effect of Temperature on Enzyme Activity
 - III. Effect of Substrate Concentration on Enzyme Activity
 - IV. Effect of Activator on Enzyme Activity
 - V. Effect of Inhibitor on Enzyme Activity
 - d. **SDS PAGE**
10. Immobilization of Enzymes



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Institute of Transgene Life Sciences