

PRACTICAL SYLLABUS

OBJECTIVE: To enable the student to

- Apply the different principles of Biotechnology in preparation of different industrial products.
- Be proficient in characterizing the water samples of industrial origin.
- Design the protocols for the significant enzymes and beverages.

COURSE OUTCOMES: Students will

- **CO1:** Get hands-on training to evaluate the quality of water samples from industries.
- **CO2:** Proficient in production of active strains from soil.
- **CO3:** Expertise in production and characterization of enzymes and industrial beverages.

COURSE:

1. Detection of coliforms for determination of the purity of potable water.
2. Determination of total dissolved solids of water
3. Determination of Hardness and alkalinity of water sample.
4. Determination of dissolved oxygen concentration of water sample
5. Determination of biological oxygen demand of sewage sample
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Isolation of industrially important microorganisms from soil.
8. Isolation of amylase producing organisms from soil.
9. Production of α – amylase from Bacillus Spp. By shake flask culture.
10. Production of alcohol or wine using different substrates.
11. Estimation of citric acid by titrimetry.

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