

BCP: 510: BIOPROCESS TECHNOLOGY: SOFT CORE

PRACTICAL: 8 Hours/Week

Total Credits: 04

Course objectives

- To study industrially important organisms
- To understand the improvement of microorganisms to increase byproduct
- To study the industrially important enzymes from microorganisms
- To study the production of commercial products from microorganisms

EXPERIMENTS

1. Isolation of industrially important microorganisms for citric acid production and improvement of strain for increase yield by mutation.
2. Isolation of industrially important microorganisms for Lactic acid production and improvement of strain for increase yield by mutation.
3. Isolation of industrially important microorganisms for alpha amylase production and improvement of strain for increase yield by mutation.
4. Isolation of industrially important microorganisms for ethanol production and comparison of ethanol production using various Organic wastes /raw Material (Free cells/ immobilized cells).
5. Isolation of industrially important microorganisms for production of glutamic acid.
6. Isolation of industrially important microorganisms for production of antibiotics.

Course outcome:

- Students gain the knowledge of industrially and economically important microorganisms and their products.
- Students gain the knowledge of producing cost effective products from cheaper resources.

References

1. Principles of Fermentation Technology, Peter F Stanbury, Allan Whitaker, Stephen J Hall,
2. Industrial Microbiology by L.E.J.R. Casida, New Age International publishers, Delhi.
3. Food Microbiology by William C. Frazier , Dennis C. Westhoff , N.M. Vanitha, 4th edition, New Age International publishers, Delhi.