

PRACTICALS (HARD CORE COURSES)

BTP 506 MICROBIAL BIOTECHNOLOGY

Course outcomes:

After successful completion of the course, students will be able to:

- CO 1. Develop hands-on and practical skills in fermentation
- CO 2. Perform microbial assays,
- CO 3. Develop pilot scale production of beverages
- CO 4. Analyse microbial uses in agriculture

Submerged and solid state fermentation

Estimation of microbial biomass

Estimation of microbial enzymes, mycotoxins, organic acids and antibiotics
Microbiological assays (antibiotics, amino acids and vitamins)

Properties of microbial exopolysaccharides (e.g. cell immobilization)

Uses of Chitin and its derivatives

Pilot scale production of alcoholic beverages

Microbial interactions with plants (rhizobia, mycorrhizas) and plant production
Assessment of nitrogen fixation (acetylene reduction test)

Phosphate solubilization in bacteria, fungi and actinomycetes
Qualities of biofuels (e.g. biodiesel, biogas)

