



Key Features:

- Hands on Experience on various microbiology techniques
- Modules are designed to fulfill the requirement of quality control lab of Pharma /Food / Testing Labs etc
- Job Oriented

Module I : General Techniques:

- Sterilization of equipment and Culture Media (GLP)
- Lab QC
- Isolation of microbes from different sources
- Isolation and identification of fungal species
- Sterility Testing
- Various Staining Techniques
- Pure Culture Preparation
- Spore Counting

Module II : Characterization of Microbial Cultures

- Demonstration of sugar fermentation
- IMVIC Test
- Catalase activity for Hydrogen peroxide Production
- Oxidase activity test
- Carbohydrate metabolism test
- Determination of nitrate reduction by bacteria
- Starch hydrolysis test
- Gelatin liquification test(protein hydrolysis)
- Test for Lipase Activity
- Phenylalanine Deaminase production test
- Test for Lysine decarboxilase activity
- Degradation of sulphur containing amino acids for Hydrogen Sulphide Production
- Urea hydrolysis test
- Test for amylase production

ModuleIII : Pharmaceutical Microbiology

- Endotoxin Test - Strategies for detecting interference; validation of special treatments to overcome interference and validation of the test for endotoxins by performing the Pharmacopeial Test for Interfering Factors.
- MIC Test
- Testing of antibiotics
- Sterility testing of injectables
- Bioassay of Vitamins

Module IV : Water & Food Microbiology

- Total Plate Count
- Counts of Yeast and Molds
- Isolation and identification of E.coli , Salmonella , Shigella , Vibrio etc
- Pathogen Analysis: Proficiency To analyze Food & Water related microorganism
- Preservative Efficacy Test
- Quantitative analysis of milk by standard plate count method

- Estimation of bacteria in milk
- Enzymatic test of milk
- Determination of phosphatase activity
- Detection of Mastitis

Module V : Clinical Microbiology

- MIC Determination
- ESBL Detection
- Blood culture techniques
- Urine culture & analysis
- Isolation of microflora from sputum

Module VI : Soil microbiology

- Isolation of phosphate solubilizing microorganisms from soil
- Production of ammonia from organic compounds
- Bioconversion of ammonia into nitrate (nitrification test)
- Denitrification test
- Determination of nitrate production
- Isolation of antibiotic producer from soil
- Detection of siderophore producing microbes
- Measurement of microbial activity in soil by soil respiration method
- Isolation of fungal pathogens from soil

Module VII : Reporting :

- Maintenance of Data (BIS Std)
- Quality Audit Tool Kit (GMP , GLP, HACCP)
- Reporting of clinical samples

Module VIII : Project Work

Duration: Three Months

Service Charges: Rs 15,000/-