Veer Narmad South Gujarat University, Surat

M. Sc. Microbiology Semester-I

MBP-1005: PRACTICALS

1. Determination of burst size of coliphage lysate by One-step growth curve.
2. Extraction and detection (Electrophoretic & spectrophotometric) of bacterial genomic DNA.
3. Ligation of DNA fragments.
4. Amplification of gene by PCR.
5. Study of RFLP
6. Study of bacterial transformation
7. Extraction of total RNA from yeast.
8. Extraction of plasmid DNA from bacteria
9. Thin layer chromatography of sugars and amino acids.
10. Analysis of physico-chemical analysis of domestic water and wastewater.
    - Acidity
    - Alkalinity
    - Hardness –EDTA titrimetric method
    - Solids: TDS and TSS
    - Chlorine demand
    - Chloride
11. Analysis of aggregate organic constituents
    - Biochemical oxygen demand
    - Chemical oxygen demand
12. Enzyme substrate coliform test for drinking water.
13. Isolation and cultivation of cyanobacteria.
14. Study of bacterial growth curve.
15. Study of fungal growth by slide culture technique.
16. Decontamination of disposable and reusable lab materials.
17. Disinfection and validation test of laminar air flow cabinet.
18. Monitoring and validation of sterilization in autoclave.

- Note: A report has to be prepared for the industrial field visit/ educational tour undertaken during the semester.