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# 18BP037 PHARMACEUTICAL MICROBIOLOGY LABORATORY

## LABORATORY EXPERIMENTS

1. Introduction and study of different equipments and processing, e.g., B.O.D. incubator, laminar flow, aseptic hood, autoclave, hot air sterilizer, deep freezer, refrigerator, microscopes used in experimental microbiology.
2. Sterilization of glassware, preparation and sterilization of media.
3. Sub culturing of bacteria and fungus. Nutrient stabs and slants preparations.
4. Staining methods- Simple, Grams staining and acid fast staining (Demonstration with practical).
5. Isolation of pure culture of micro-organisms by multiple streak plate technique and other techniques.
6. Microbiological assay of antibiotics by cup plate method and other methods.
7. Motility determination by Hanging drop method.
8. Sterility testing of pharmaceuticals.
9. Bacteriological analysis of water.
10. Biochemical test.

## RECOMMENDED BOOKS (LATEST EDITION)

1. W.B. Hugo and A.D. Russell: Pharmaceutical Microbiology, Black well scientific publications, Oxford London.
2. Prescott and Dunn. Industrial Microbiology, 4<sup>th</sup> edition, CBS Publishers & Distributors, Delhi.
3. Pelzer, Chan Krieg, Microbiology, Tata McGraw Hill end.
4. Malcolm Harris, Balkier Tindal and Cox: Pharmaceutical Microbiology.
5. Rose: Industrial Microbiology.
6. Frobisher, Hinsdale et al: Fundamentals of Microbiology, 9th ed. Japan
7. Cooper and Gunn's: Tutorial Pharmacy, CBS Publisher and Distribution.
8. Pepper: Microbial Technology.
9. I.P., B.P., U.S.P. - latest editions.
10. Ananthnarayana : Text Book of Microbiology, Orient- Longmann, Chennai.
11. Edward: Fundamentals of Microbiology.
12. N.K.Jain: Pharmaceutical Microbiology, Vallabh Prakashan, Delhi.
13. Bergeys manual of systematic bacteriology, Williams and Wilkins- A Waverly company.

