



“बेटी बचाओ, बेटी पढ़ाओ”

JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

(Format for Preparing E Notes)

Faculty of Education and Methodology

Faculty Name- **JV'n Shalini Devi Prajapati**

Program- **M.Sc. Microbiology First Semester**

Course Name - **Microbial Physiology & Biochemistry (PRACTICAL)**

Session No. & Name – **Study Of Micro-Biota Of Mouth And Skin; Isolation, Identification & And Preservation Of Microorganisms.**

Academic Day starts with –

- Greeting with saying 'Namaste' by joining Hands together following by 2-3 Minutes Happy session, Celebrating the birthday of any student of the respective class and the National Anthem

Lecture Starts with-

Topic to be discussed today- Today I will discuss about Study Of Micro-Biota Of Mouth And Skin; Isolation, Identification & And Preservation Of Microorganisms.

Lesson deliverance (ICT, Diagrams & Live Example)-

- PPT (4 Slides)
- Diagrams
- Tables

PRACTICAL- 1

OBJECTIVE: STUDY OF MICRO-BIOTA OF MOUTH AND SKIN; ISOLATION, IDENTIFICATION & AND PRESERVATION OF MICROORGANISMS.

REQUIREMENT:

- Sterile cotton swabs
- Tongue depressors
- Desiccator jar with a candle
- Microscope
- Glass slides
- Bunsen burner
- Glassware marking pencil
- Disposable gloves
- Mannitol salt agar
- Crystal violet
- Gram's iodine
- Safranin
- 1% *p*-amino dimethylaniline oxalate
- lactophenol–cotton-blue.

PROCEDURE:

SPECIMEN FROM THE MOUTH:

- Place a tongue depressor on the extended tongue and with a sterile cotton swab, obtain a specimen from the palatine tonsil by rotating the swab vigorously over its surface without touching the tongue.
- Inoculate the swab in a tube of sterile saline and mix until uniform suspension is obtained.
- Using a sterile inoculating loop, inoculate mannitol salt agar, streak inoculation.

SPECIMEN FROM THE SKIN:

- Using a sterile cotton swab moistened in sterile saline, obtain a specimen from the skin by rubbing the swab vigorously against the palm of the hand.
- Inoculate a tube of sterile saline with the swab and mix the solution.
- Inoculate plate each of mannitol salt agar.
- Incubate the inverted plate in a CO₂ incubator, in a CO₂ incubation bag, or in a candle jar for 48 hours at 37°C.
- For fastidious organisms like *Neisseria* 5% to 10% CO₂ environment is required
- Incubate the inverted Sabouraud agar plate for 48 hours at 25°C.
- Incubates the remaining culture plates mannitol agar, for 48 hours at 37°C.

STAINING AND MORPHOLOGICAL CHARACTERISTICS

- Observe microscopically for the Gram reaction and the size, shape, and arrangement of the cells.
- Record the observations in the Lab Report and attempt to identify each isolate.
- Prepare two lactophenol–cotton-blue–stained smears of organisms obtained from discrete colonies that differ in appearance on the Sabouraud agar culture.
- Observe microscopically, draw a representative field in the Lab Report, and attempt to identify the fungi.

OBSERVATION AND RESULTS:

- Examine the mannitol salt agar plate for the presence of growth that is indicative of staphylococci. Then examine the colour of the medium surrounding the growth. A yellow colour is indicative of *S. aureus*.
- Record your observations in the Lab Report and indicate the types of organisms that may be present in each specimen

University Library Reference-

- **Suggestions to secure good marks to answer in exam-**
 - Principle, requirement, procedure, diagram, observation, result.
- **Questions to check the understanding level of students-**
 - Isolate the microorganism from the skin.
 - Isolate the microorganism from saliva.

- **Next Topic-MTTC culture for *Staphylococcus aureus***

- **Academic Day ends with-**
National song 'Vande- Mataram'