

# MICROBIOLOGY LAB

## Module 6: Staining Methods

### OUTLINE

#### PRELAB:

1. Culture Media Preparation to Analysis
2. Preparation of Bacterial Smear
3. Fixation

Heat Fixation

Chemical Fixation

Preparation & Fixation of Smear

#### 4. Dyes

Basic Dyes

Acidic Dyes

#### 5. Staining

#### LAB INSTRUCTIONS:

6. Introduction
7. Making smears
8. Simple Stain
9. Gram Stain
10. Endospore Stain (Schaeffer-Fulton Method)
11. Acid Fast Stain

#### POST-LAB

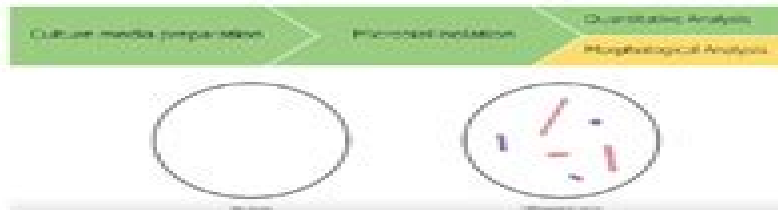
#### Legend:

Remember

Lecturer

Book

### CULTURE MEDIA PREPARATION TO ANALYSIS



### PREPARATION OF BACTERIAL SMEAR

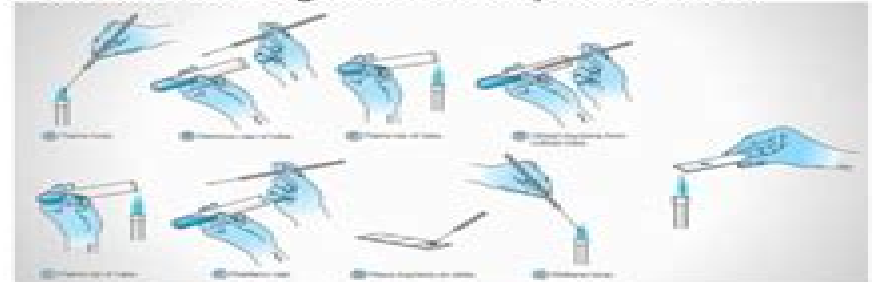
#### A. Steps

- Flame loop
- Remove cap of tube
- Flame tip of tube
- Obtain bacteria from culture tube
- Flame tip of tube
- Replace cap

- Place bacteria on slide
- Re-flame loop

#### B. Important steps in the preparation of bacterial smear from broth culture

- If using a broth culture, the liquid is placed directly on the slide.
- If a slant is used, a loopful of water is placed on the slide before adding the small sample of bacteria.



### FIXATION

- Is the process by which the internal and external structures of specimens are preserved and fixed in position.
- Inactivates the enzymes that might disrupt cell morphology and toughens cell structures so that they can do not change during staining and observation

#### A. Heat Fixation

- Firm of cells (smear) is gently heated as a slide is passed through a flame
- Preserves overall morphology but also destroys proteins that may be part of subcellular structures

#### B. Chemical Fixation

- Chemical Preservatives (e.g., ethanol, acetic acid, mercuric chloride, formaldehyde mixture) penetrate cells and react with cellular components
- Used to protect fine cellular substructure renders protein and lipids to be inactive, insoluble and immobile.

#### C. Preparation and Fixation of Smear & Heat

# Lab Module 6 Gram Staining Introduction Clark College

**RC Schank**



## **Lab Module 6 Gram Staining Introduction Clark College:**

## Unveiling the Magic of Words: A Overview of "**Lab Module 6 Gram Staining Introduction Clark College**"

In a world defined by information and interconnectivity, the enchanting power of words has acquired unparalleled significance. Their ability to kindle emotions, provoke contemplation, and ignite transformative change is actually awe-inspiring. Enter the realm of "**Lab Module 6 Gram Staining Introduction Clark College**," a mesmerizing literary masterpiece penned by way of a distinguished author, guiding readers on a profound journey to unravel the secrets and potential hidden within every word. In this critique, we shall delve into the book is central themes, examine its distinctive writing style, and assess its profound effect on the souls of its readers.

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