

Smear Preparation

Introduction

In the microbiology laboratory, the first step in most staining procedures is preparing the smear. It is important to do this correctly because the quality of the smear will affect the quality of the staining procedure. Smear preparation steps will vary with the specimen and the culture.

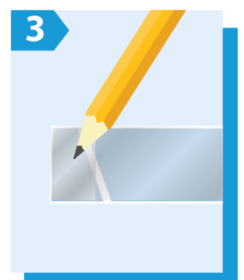
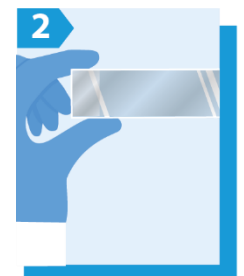
Supplies

1. Personal protective equipment
2. Sharps disposal container
3. Biological waste container
4. Microscope slides with frosted-edge
5. Pencil or wax pencil
6. Sterile saline or water
7. Sterile pipettes
8. Loops or applicator sticks
9. Slide warmer, Bunsen burner, or methanol



Instructions

1. Put on personal protective equipment (PPE) as directed in your laboratory SOPs and safety manual. PPE may include gloves, laboratory coat, and face and eye protection.
2. Get a clean microscope slide with a frosted edge.
3. Label the frosted edge appropriately with the sample identification as the specimen plate.



4. Transfer specimen or culture to the center of the slide.
 - a. Clinical specimen: Prepare a thin layer of cells on the slide. Refer to your laboratory's procedure according to different specimen types.
 - b. Broth culture: Using a sterile pipette, transfer 1-2 drops to the slide. Spread the drop(s) into a thin, even smear.
 - c. Culture from solid media: Using a sterile pipette, add one drop of sterile saline or sterile water to the center of the microscope slide. Sterilize your loop and grab a small amount of an isolated colony with a loop and gently mix into the drop of sterile saline or water using circular motions. Mix evenly to make a thin smear.

5. Allow the smear to air dry completely.

6. Fix the smear to the slide using heat fixation or methanol fixation according to your laboratory's procedure.

7. Allow the slide to cool to room temperature or air dry.

