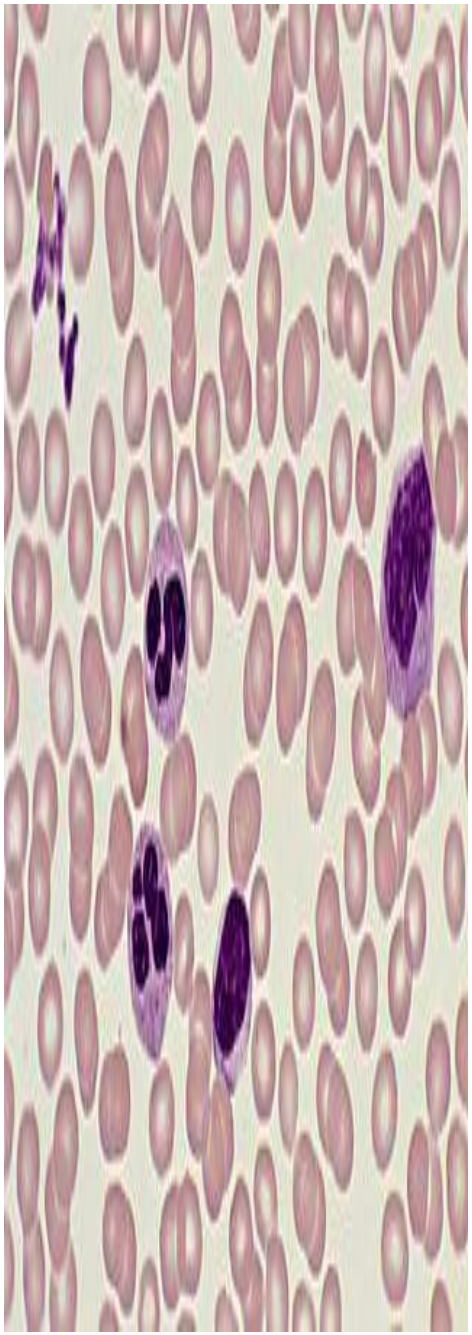
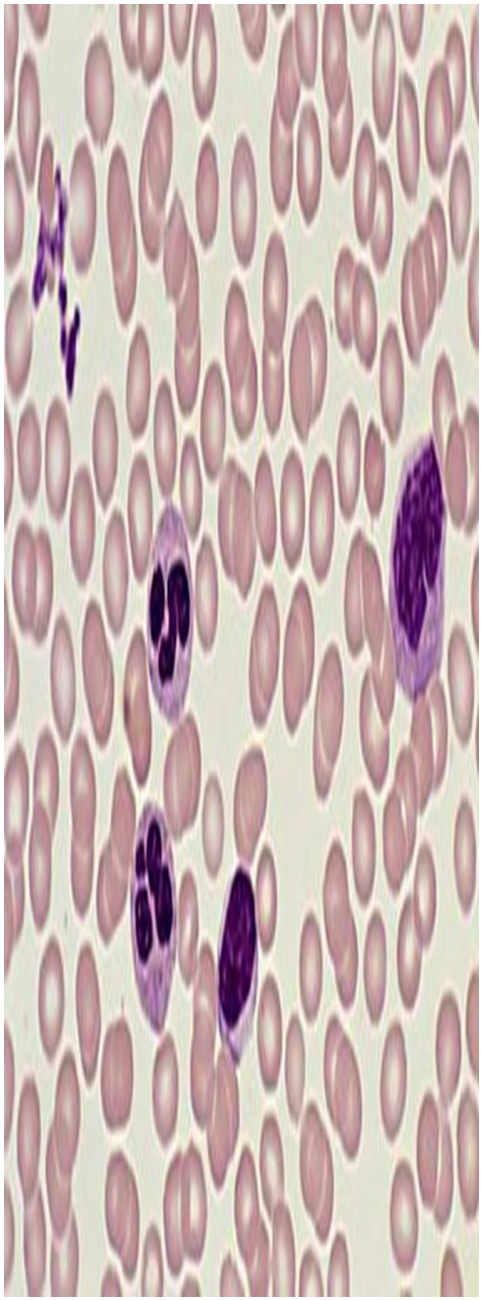


Lap 3

Blood smear



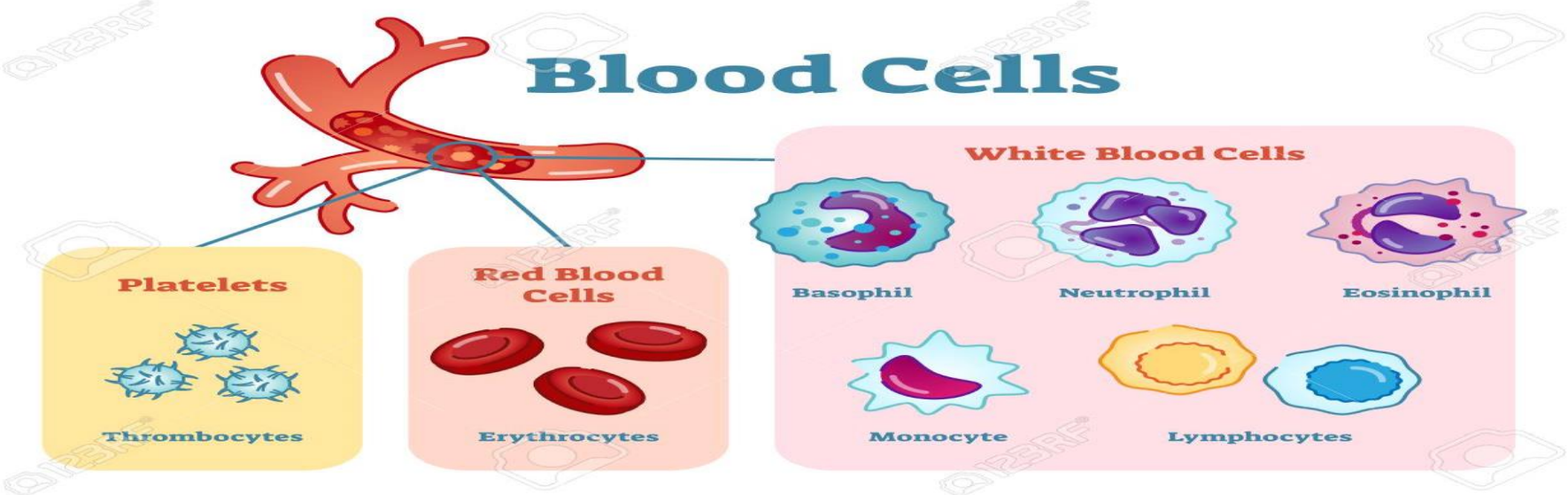
Blood smear

A blood smear is a blood test used to look for abnormalities in blood cells. The three main blood cells that the test focuses on are:

1- Red cells, which carry oxygen throughout your body

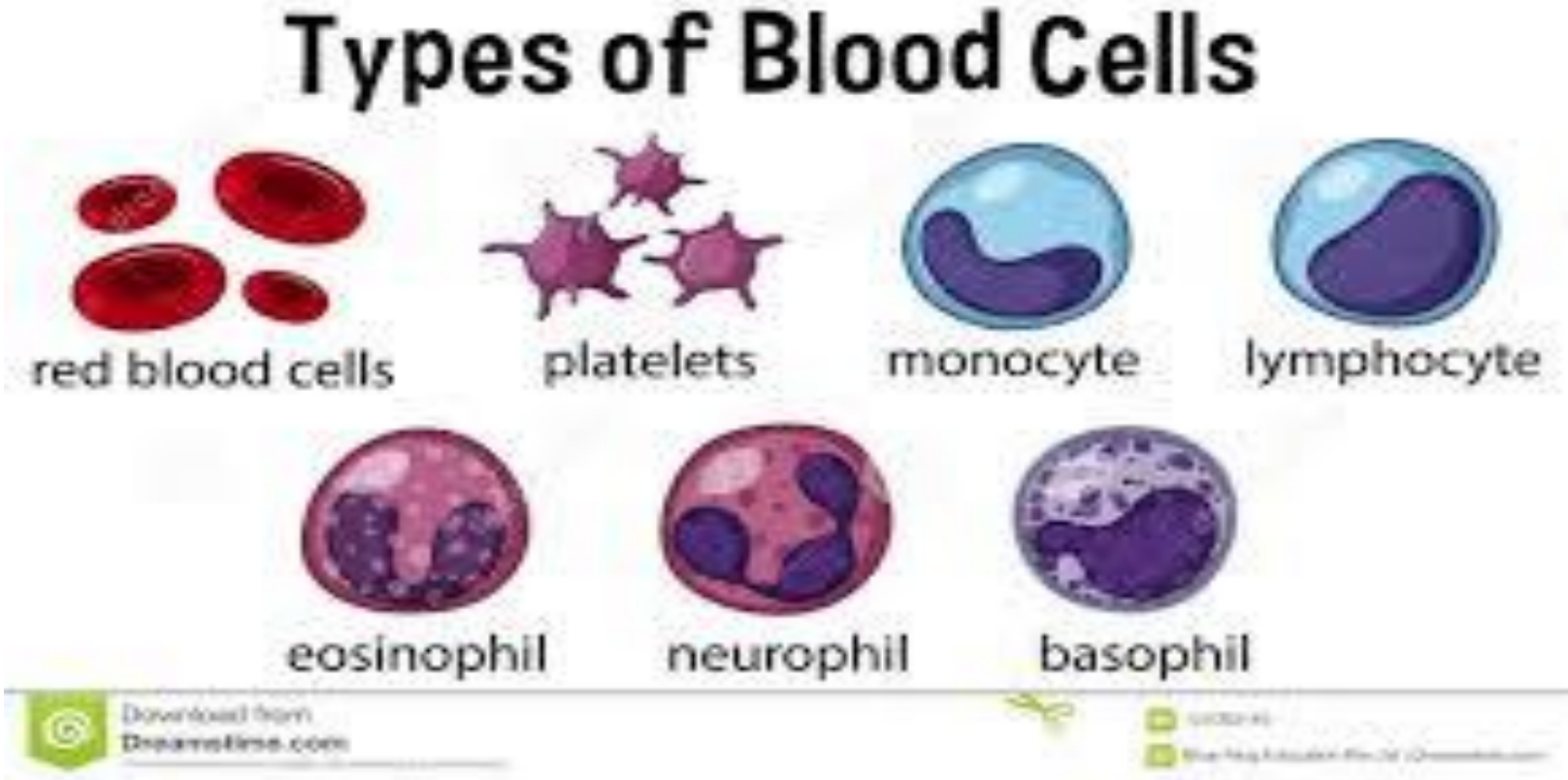
2-White cells, which helps the body to fight infections and other inflammatory diseases.

3- Platelets, which are important for blood clotting



Blood smear

- The test provides information on the number and shape of these cells, which can help the doctors to diagnose certain blood disorders or other medical conditions.



Blood smear

Why is a blood smear done?

The blood smear test is often done to diagnose conditions that are causing:

- unexplained jaundice
- unexplained anemia (low levels of normal red blood cells)
- sudden weight loss
- severe infection
- skin rashes or cuts
- bone pain

SUPPLIES and MATERIAL

- Clean and degreased microscopic slides with frosted ends
- Disposable gloves
- Capillary blood collection set (tissue or gauze, alcohol swabs, sterile lancets)
- Clean water
- Giemsa mother solution
- Staining bath or staining rack
- Drying rack
- Timer
- Methanol, Ethanol
- Microscope, objective 100x, Immersion oil

METHOD

1- Label pre-cleaned slides with patient's name ,date and time of collection.

2. Wear gloves.

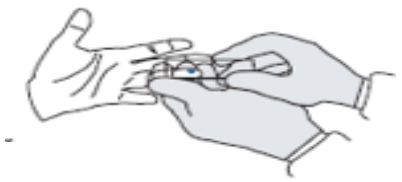
3. Clean slides with 70 to 90% alcohol and allow drying.

4. Select the finger to puncture, usually the middle or ring finger. In infants, puncture the heel.

5. Clean the area to be punctured with 70% alcohol; allow drying, and puncturing the ball of the finger, or in infants puncture the heel

6. Wipe away the first drop of blood with clean gauze.

7. Touch the next drop of blood with a clean slide. Repeat with several slides (at least two thick and two thin smears should be made). If blood does not well up, gently squeeze the finger.



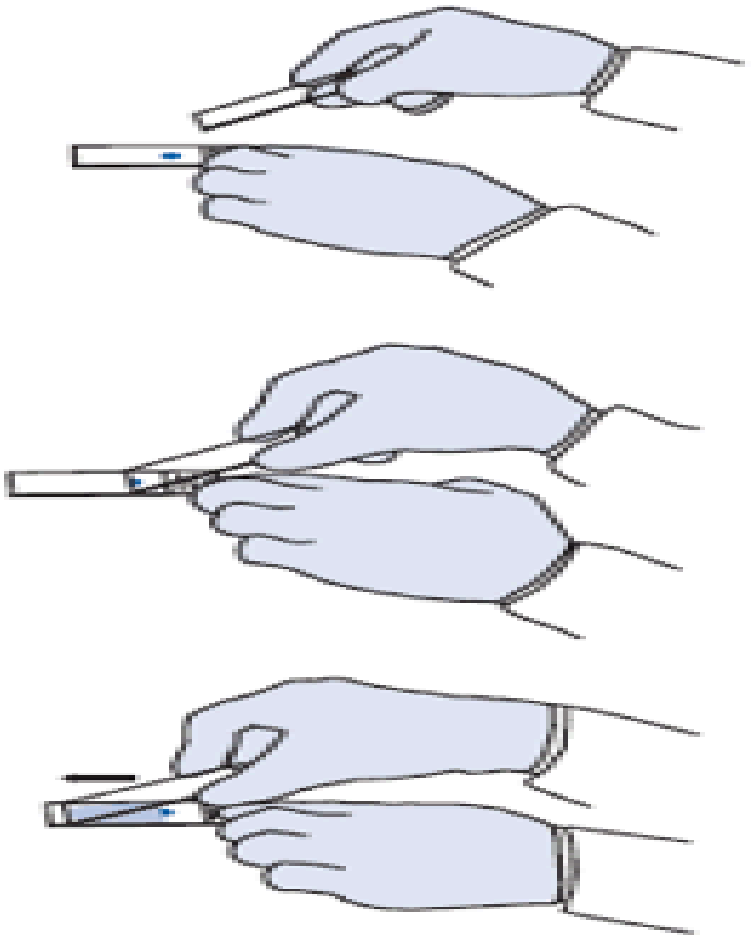
MAKE THICK AND THIN SMEAR

1. Whenever possible, use separate slides for thick and thin smears.

2. Thin film (a): Bring a clean spreader slide, held at a 45° angle, toward the drop of blood on the specimen slide.

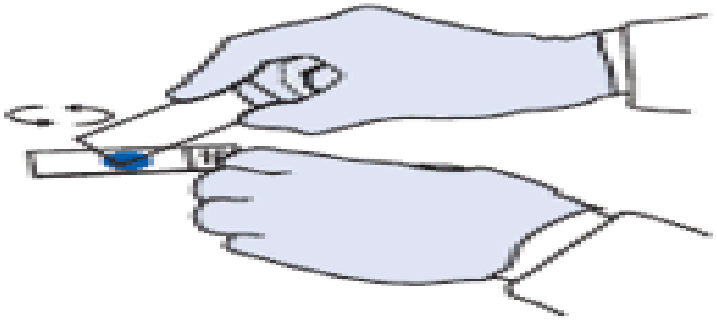
3. Thin film (b): Wait until the blood spreads along the entire width of the spreader slide.

4-Thin film (c): While holding the spreader slide at the same angle, push it forward rapidlyand smoothly

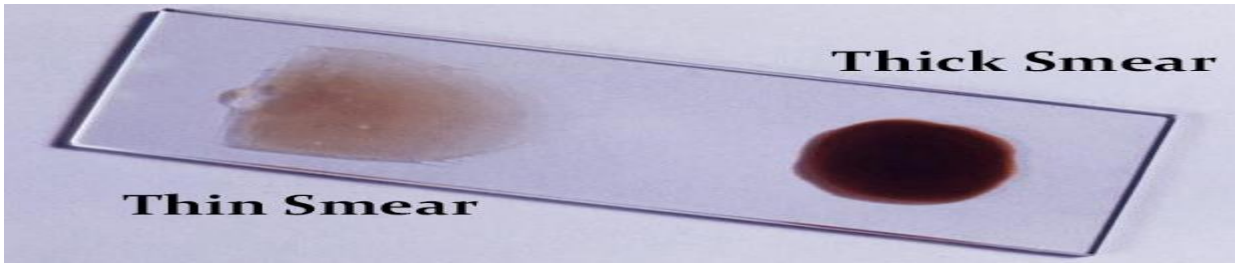


MAKE THICK AND THIN SMEAR

5. Thick film: Using the corner of a clean slide spread the drop of blood in a circle the size of a dime (diameter 1-2 cm). Do not make the smear too thick or it will fall off the slide. (You should be able to read newsprint through it.).



6. Wait until the thin and thick films are completely dry before staining. Fix the thin film with methanol (100% or absolute) and let it dry completely before staining. The thick film should not be fixed



GIEMSA STAIN PROCEDURE

1- Prepare Giemsa working solution (MM SOP-04), and place it in a small container.

2- Using a Pasteur pipette, and fix the thin film by carefully dropping methanol onto the thin film only.

3- Let the blood film dry in air on a drying rack or tray. 4- Place slides for staining blood films face down on a curved staining tray or face up on a staining rack.

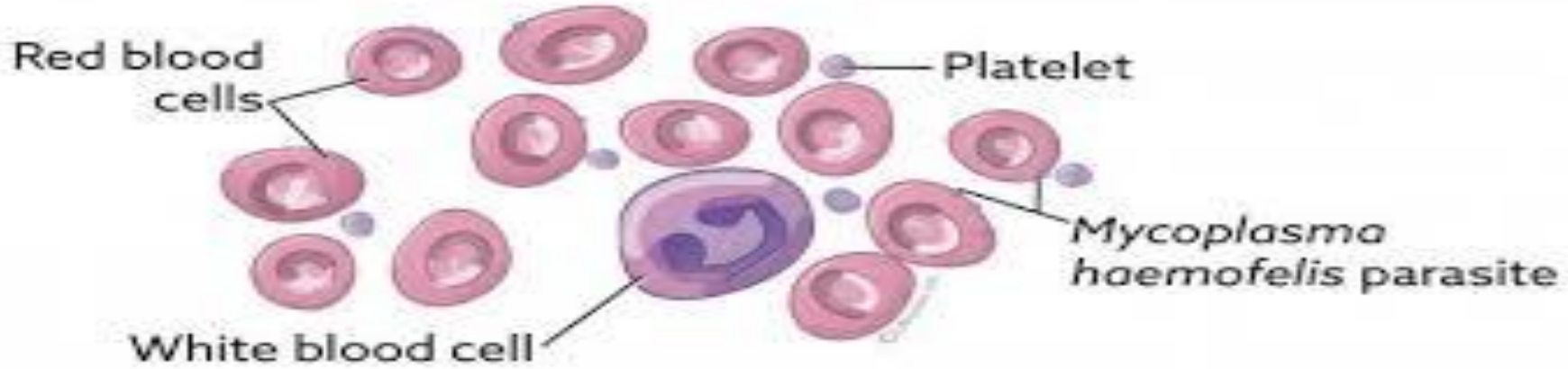
5- Pour stain slowly on or under the slide until the blood films are covered.

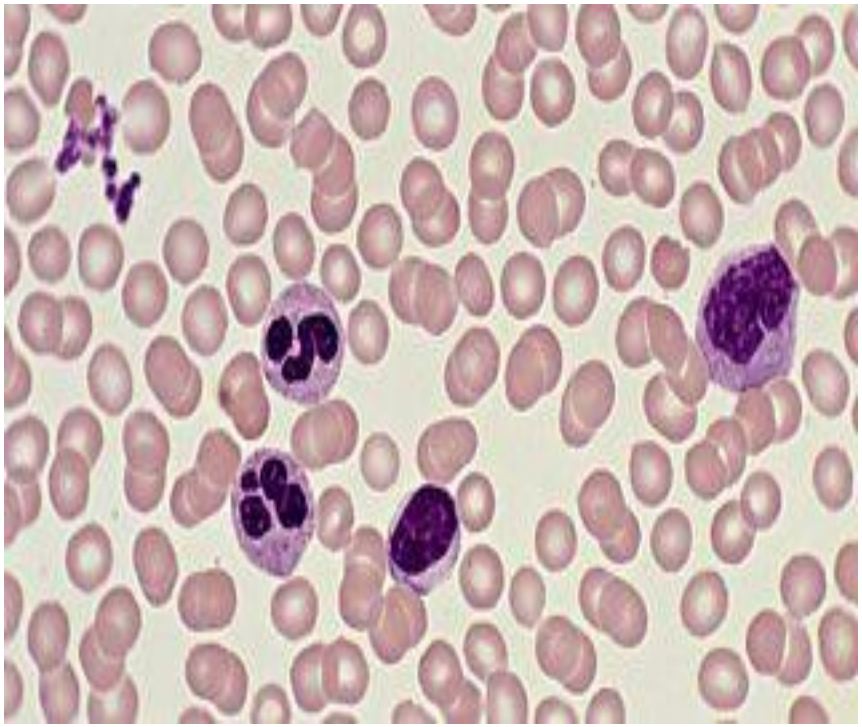
6- Set the timer to 3-5 minutes for the staining.

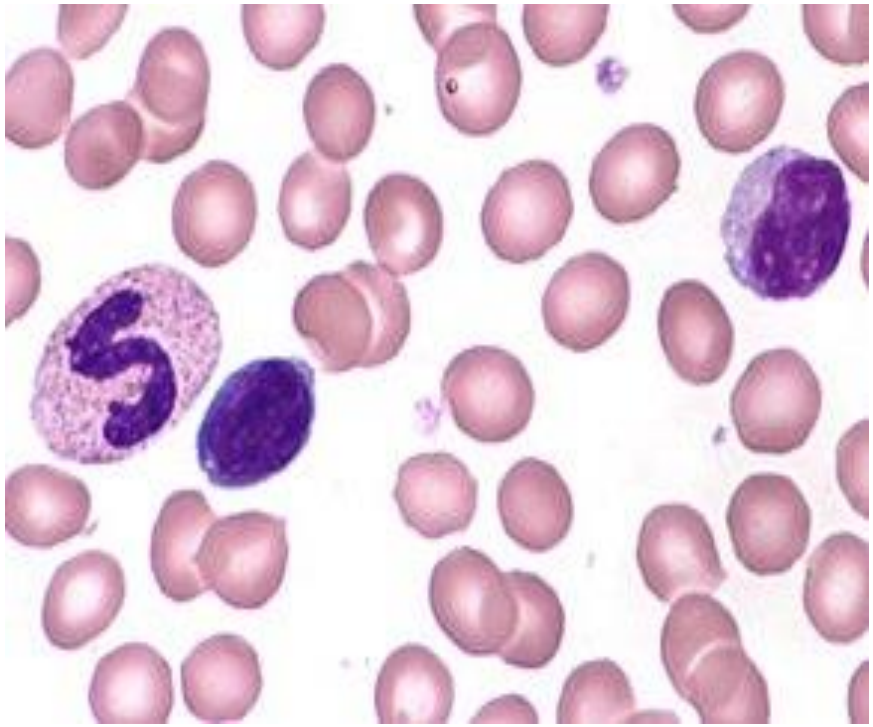
7- Gently flush all the stain from the slides by dropping clean water over it.

8- Allow the slides to air-dry.

Observations Under microscope







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