

Preparation of Slides

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There are two types of preparation of Slides

1-The temporary mount

2-The permanent mount

A temporary mount is one intended for a brief period of examination after which it may be discarded .

Prepare such amount in the following way :

1-Take a clean glass slide and place (a material) near the center (small apportion of scale leaf onion) *Allium cepa* by remove the surface layer of cells epidermis , from the concave surface of piece of onion bulb scale leaf and mount the transparent tissue , from side down in drop of water or such Acetocarmine clean slid or (vice vis).

2- Cover the material with glass cover slip (lower cover slip slowly at angle).

3- The cover slip should be leand over the material rather than dropped flat,for dropping it flat on the material tends to trap much small air bubble .

4- Study the tissue under low power to determine the shape and the arrangement of the cell and then under high power to observer the details of cell structure .

Parts of microscope:

The following are the parts of microscope:-

1- **Eyepiece or ocular lens:** Eyepiece is the lens, present at the top and is used to see the objects under study. Eyepiece lens contains a magnification of 10X or 15X.

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2-Tube: connects the eyepiece to the objective lenses .

3- Resolving nosepiece: It is also known as the Turret. It allows the rotation of the lenses while viewing.

4- Objective lenses: Generally, three or four objective lenses are found on a microscope, with ranges of 10X, 40X, 100X powers.

5- Diaphragm: Diaphragm helps in controlling the amount of light that is passing through the opening of the stage.

6- Coarse adjustment knob: Used for focus on scanning .

7- Fine adjustment knob: Used for focus on oil.

8-Arm: It supports the tube of the microscope and connects to the base of the microscope.

9- Stage: The platform that is flat used for placing the slides under observation.

10- Stage clip: Stage clips hold the slides in proper place.

11- Condenser: The main function of condenser lens is focusing the light on the specimen under observation.

12-Base: Provides basal support for the microscope.

13- Power switch: The main power switch that turns the illumination on or off.

Microscope Parts

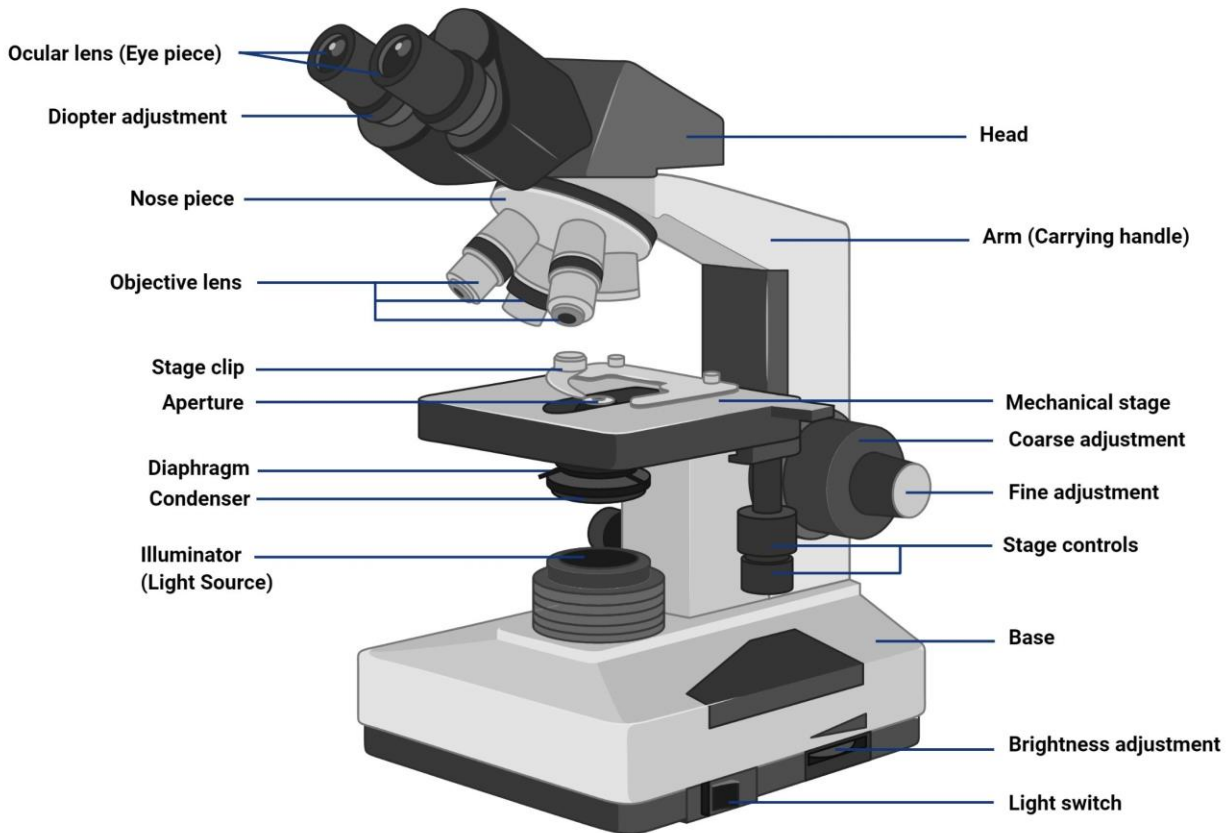


Figure: Parts of a microscope, Image Copyright © Sagar Aryal, www.microbenotes.com

Rules for microscope use .:

1-Always carry the microscope with both hands , holds the arm with one hand and place the other hand under the base.

2- Put the microscope on the table gently towards you and the stage facing alight source.

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3- Never leave microscope near the edge of a table.

4- Never focus with the coarse adjustment when the high-power objective is in place to-avoid smashing the slide and cover slip and damage the high power objective .

5- Use only special lens paper to clean lenses .Because the use of paper towels, facial tissue scratched the glass and the lens.

6- Before puling the microscope away ,always turn the low power into place over the stage.

Total Magnification:



X



= 40 X

4X Scanning Objective 10X Eyepiece



X



= 100 X

10X Objective

10X Eyepiece



X



= 400X

40X Objective

10X Eyepiece