

How to Use a Microscope

Microscopes are instruments that allow you to see things that are very small. The usefulness of a microscope is dependent on the condition and quality of the lenses used to make the eyepiece and the objectives. When using a microscope it is important to follow certain procedures to ensure that the lenses do not get damaged.

Carrying and storing the microscope

- Carry the microscope with two hands—one hand under the base and the other hand holding the arm of the microscope.

Using the microscope

- Plug the electric cord into an outlet.
- Be sure the cord is in a safe position—not near any sources of heat or flame. Make sure the cord is arranged so that it cannot accidentally become entangled or pulled.
- Turn on the light.

Focusing the microscope

- Use the low power or 10x objective first.
- Focus by slowly turning the coarse adjustment knob.
- Adjust the focus by slowly turning the fine adjustment knob.
- Adjust the amount of light by moving the diaphragm or the condenser.
- Center what you want to look at in the field of view.
- Turn the nosepiece to use the next higher power objective, usually 40x.
- Focus using only the fine adjustment—the object should quickly come into focus with very little adjustment.
- Adjust the amount of light, if necessary, using the diaphragm.
- Center what you want to look at in the field of view.

Using oil immersion

- Follow the preceding steps until the specimen is in focus with the 40x objective.
- Turn the nosepiece so that the 40x objective is no longer over the specimen and the 100x objective is not yet in place.
- Place one drop of oil onto the slide. Oil should be placed where the 100x objective will be once it is locked into position.
- Turn the nosepiece slowly to bring the 100x objective into position.
- Watch as the objective moves into position to ensure that it does not hit the slide and that it contacts the drop of oil.
- Focus using the fine adjustment.
- Adjust the amount of light, if necessary, using the diaphragm.