

Basic Microscopy

Köhler Illumination

In this video, we're going to talk about setting Köhler illumination for your microscope. The first thing that needs to occur is the 10X objective is moved into place above the stage. A slide containing a specimen is placed on the stage, centered under the 10X objective. If there is a swing out or flip condenser, be sure it's in the light path.

Adjust the intensity of the illumination to a comfortable level using the light source knob. Open the field diaphragm all the way and close the condenser diaphragm all the way. Move up or rack up the stage to its highest position using the stage controls. Adjust the oculars for interpupillary distance. So, when looking with both eyes, only one circle of light is seen.

This should be done for the particular individual reading since the interpupillary distance can vary from person to person. Move the stage as high as possible with the height adjustment knob. Close the field diaphragm halfway and focus on the specimen at 10X using the coarse adjustment knob. Close the field diaphragm until the diameter of the illuminated image is smaller than the field of view.

Please note: if there is a flipped condenser, it may need to be swung out at this time to achieve this view of the illuminated image. Lower the condenser diaphragm with a positioning knob until a sharp, focused image of the edges of the field diaphragm is achieved. Using the centering screws on the side of the condenser, center the edge of the circle of light in the center of the field of view.

Open the field diaphragm until the illuminated image is just larger than the field of view. If more light is needed, use the light source knob. Köhler illumination is now set.