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# **ILLUMINATION**

*The Mercury Burner*



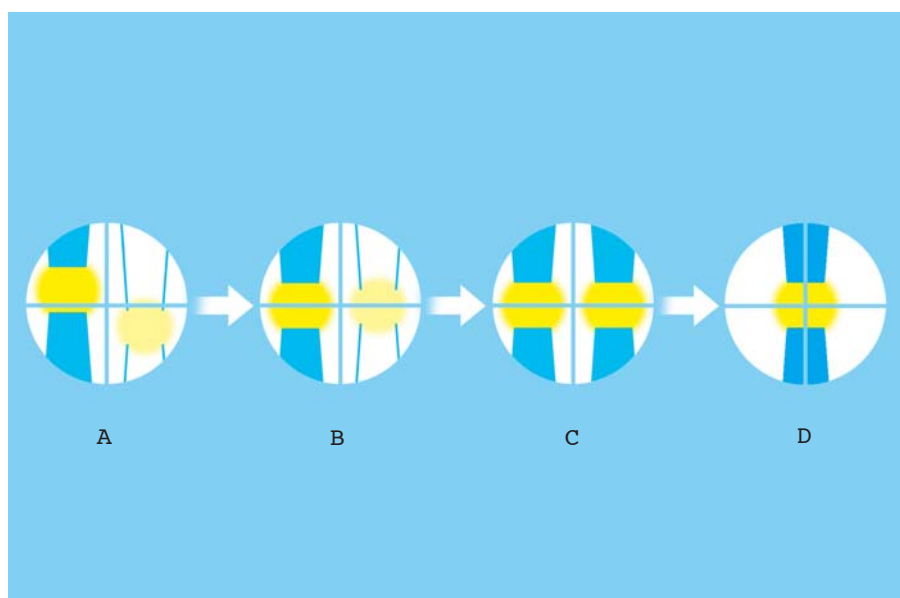
# SETTING UP THE MERCURY BURNER

## Requirements

**Complete fluorescence system, including Universal lamphouse fitted with burner.**  
**Relevant fluorescence cubes and objectives.**  
**Piece of white card.**

## Using the collector lens focus

Adjust the collector lens focus knob, located just in front of the lamphouse, during specimen observation. Turn the knob to obtain the brightest image for a particular objective.



1. Switch on the system and leave for 5 - 10 minutes to stabilise.
2. Slide ND filters into the light path (initially at least).
3. Engage a fluorescence cube, e.g. green or blue but not UV.
4. Turn the nosepiece to a vacant position and place the card on the stage.
5. Pull out the field stop (open) and push in the aperture stop (open).
6. Open the shutter near the cube cassette (if closed).
7. Viewing the image of the arc on the card, carry out the following:
  8. Adjust the burner centering knobs on the right hand side of the lamphouse to bring the image to the left of centre.
  9. Focus the mirror image of the arc by turning the screw in the rear of the lamphouse with an Allen key.
  10. Overlay the two images using the burner centering knobs.

## Minimising bleaching

- Reduce the area of specimen which is being illuminated by using the field stop. This is usually a circular stop but a rectangular stop is available which will allow you to match the illuminated area exactly to the CCD in the camera.
- Reduce the intensity of the illumination to obtain the best balance between background and signal. ND filters are ideal for this, or use the aperture stop. Some objectives have an iris, but closing this will reduce image brightness and resolution as well as intensity of illumination

For further advice on Olympus microscopes and imaging systems visit:  
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