

Wet Mount of Potato

Potatoes are storage tubers. Energy, in the form of complex carbohydrates is stored in the tuber until needed by the plant.

1. Obtain a clean slide and cover slip.
2. Place a drop of water on the slide.
3. Use a scalpel or razor blade to make a very thin slice of potato. Remember light needs to pass through the specimen. Only a small piece is needed; your slice should fit under the coverslip (no more than 1 cm x 1 cm)
4. Cover the wet mount with a coverslip. Remember to angle the coverslip as you drop it onto the wet mount.
5. Add a drop of iodine* to the slide, adjacent to the coverslip. To draw the stain (iodine) across the slide, place a piece of absorbent paper along the opposite side of the coverslip. Touch the edge of the coverslip with the absorbent paper to draw the iodine across the potato slice. Do not worry if the entire potato does not appear to stain.
6. Place the slide on the microscope stage. Move the potato slice over the light source. The edges of the slice are typically thinner than the middle. That is where you want to view the sample, at the thinnest part of the section.
7. Rotate the 4X objective over the stage. Grasp the coarse adjustment knob and focus down. Fine adjust the image. Adjust the light levels.
8. Rotate the 10X objective over the stage. Fine adjust the image. Adjust the light levels.
9. Rotate the 40X objective over the stage. Fine adjust the image and adjust the light levels. Draw** (in color) at least 2 cells observed in the sample in the circle below. Label at least 3 structures in your drawing.
10. Wash and reuse this slide and coverslip.

*Iodine is a common household chemical. Iodine also stains biological structures. The nuclei and cell walls of plants will typically take on a yellow hue. Iodine is also used as an indicator for starch. In the presence of iodine starch will turn a blue-black color.

**It is important when drawing images viewed through the microscope that you exaggerate the size of the structures. Drawing what you see exactly, the same size as you see it, is not helpful when you are trying to remember this slide in the future.

Potato (400X)

Description: _____

