



Microscope Cell Lab 4: Plastids



Part A: Potatoes

1. Make a wet mount slide of a thin piece of potato or potato scraping. Examine it.
2. Describe the appearance and shape of the cells.
3. Add a couple drops of iodine stain to the edge of the coverslip and draw the stain through to stain the cells.
4. Describe what happens to the cells when you stain them with the iodine.
5. What are the large blue-black structures called? (hint: use your notes about plastids and iodine.)
6. What do the blue-black structures contain?
7. Make a good microscope drawing of these cells (after they are stained) under high power. Label the cell wall and the blue-black structures (but you must label it with their real name.) Do not forget your scale bar.

Part B: Tomatoes

1. Make a wet mount slide of a small piece of tomato skin. Examine it.
2. Is the tomato skin more than one cell thick?
3. Are the cells the same shape and size?
4. What is the pigment color in the cells?
5. What type of plastid do these cells contain? (hint: use your notes about plastids)
6. Make a good microscope drawing of these cells under high power. Label the cell wall and the pigmented organelle structures (but you must label it with their real name.) Do not forget your scale bar.
7. Make a wet mount slide by smearing a small of tomato pulp onto the slide. Examine the slide.
8. Compare the cell wall of the pulp cells with that of the skin cells.
9. Compare the distances between the pulp cells with that of the skin cells.
10. Make a good microscope drawing of these cells under high power. Label the cell wall, cytoplasm, and the pigmented organelle structures (but you must label it with their real name.) Do not forget your scale bar.

Part C: Elodea

1. Make a wet mount slide of a thin leaf of an elodea plant. Examine it.
2. Describe the appearance and shape of the cells.
3. What are the small green structures? (hint: use your notes about plastids.) What do the these structures contain?
4. Make a good microscope drawing of these cells (after they are stained) under high power. Label the cell wall, cytoplasm, and the green structures (but you must label it with their real name.) Do not forget your scale bar.