Corrections, Clarifications and Helpful Hints for Membranes, Diffusion, and Osmosis Lab
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Determination of Osmotic Concentration of Potato Parenchyma Handout

- Meticulous measuring of the potato cylinders, both when cutting them and after they have been in the sucrose solutions for two hours, is extremely important for good results.

Laboratory Manual - Lab Topic 4 - Membranes, Diffusion, and Osmosis

'Cell Walls Osmotically Protect' Section

- In the section called 'Cell Walls Osmotically Protect' instead of 25% sucrose you will use 4% NaCl (this is on your lab bench).

- Do the Elodea drawings on the drawing template and be sure to label the parts of the cell e.g. cell wall, chloroplasts, central vacuole, etc. You need only draw 5-6 adjacent cells so they fill the circular template.

- Measure the length of one of the Elodea cells on the slide using the calibrated ocular micrometer on your microscope and after converting the number of units to μm write this measurement in μm on your drawing above a line delineating which cell in your drawing is the one you measured on the slide. See example below.

- For faster results in the 'Cell Walls Osmotically Protect' section remove the cover slip from the Elodea after drawing it in plain water, blot up the water with a Kimwipe and add the 4% NaCl directly on the Elodea then replace the cover slip. There will still be a wait of several minutes to see plasmolysis. Also observing cells along the edge rather than in the center of the leaf will let you see faster results.
Final cleanup

- Before the microscopes are returned to the cabinet, clean the ocular and high power objective lenses with Windex and lens tissue (NOT KIMWIPES, which can scratch the lenses) and be certain the scanning objective is facing the stage.