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Physiology

Lab report 2

08/31/23

Laboratory 2 - Molecular Activity and Membrane Transport

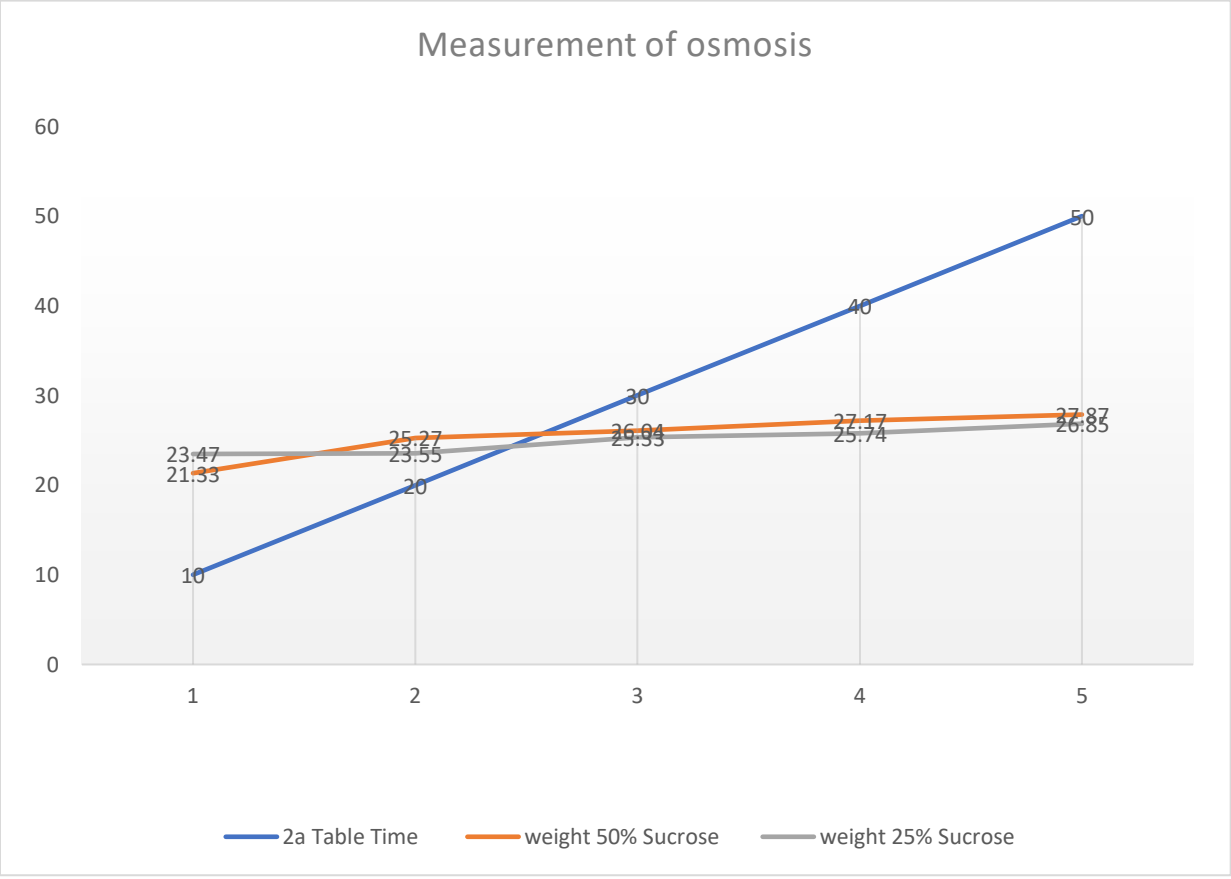
Purpose -The purpose of lab 2 is how osmosis the movement of water goes through water a semi permeable membrane from higher to lower water concentration.

Procedures –

1. Attach dialysis bags filled as much as possible with sucrose solutions securely to the bottom of two open, thin glass tubes. One bag should be filled with a25% sucrose solution and the other should be filled with a 50% sucrose solution. Make sure ends of the tubes are immersed in the solutions.
2. Insert both bags into separate beakers of distilled water making sure the dialysis bags are fully submersed but not touching the bottom of the beakers and suspend each by gently applying a ring stand clamp to the glass tubes. Check for solution leaking out of the bags.
3. 3. Allow five minutes for the systems to equilibrate. Then, mark the fluid levels of each glass tube with a felt pen. Record the time.
4. 4. Record the fluid level of the glass tubes in millimeters every 10 minutes for 50 minutes.

5. 5.If the fluid level rises to the top of the glass tube sooner than 50 minutes, record the time it took to get there, measure the length in millimeters from the equilibration line to the top of glass tube. Divide that length by the number of minutes to get your rate in mm/min.
6. 6.Determine the rate of osmosis for each system.

Results - For the 25% sucrose the first 10 minutes it weighs 23.47g throughout the next 5 times it increased. For the 50% sucrose the first 10 minutes weighs 21.33g the next 5 times it also increased. Like shown below in the graph.



Discussion - As the experiment went on every 10 minutes the water levels would rise to the top while the sucrose stays in the bottom. noticing the 50% sucrose was having more increase of water than the 25% sucrose.

Conclusion - In conclusion I determined the rate of osmosis for each sucrose. The one who had the fastest osmotic rate was the 50% sucrose, because it had a higher concentration.