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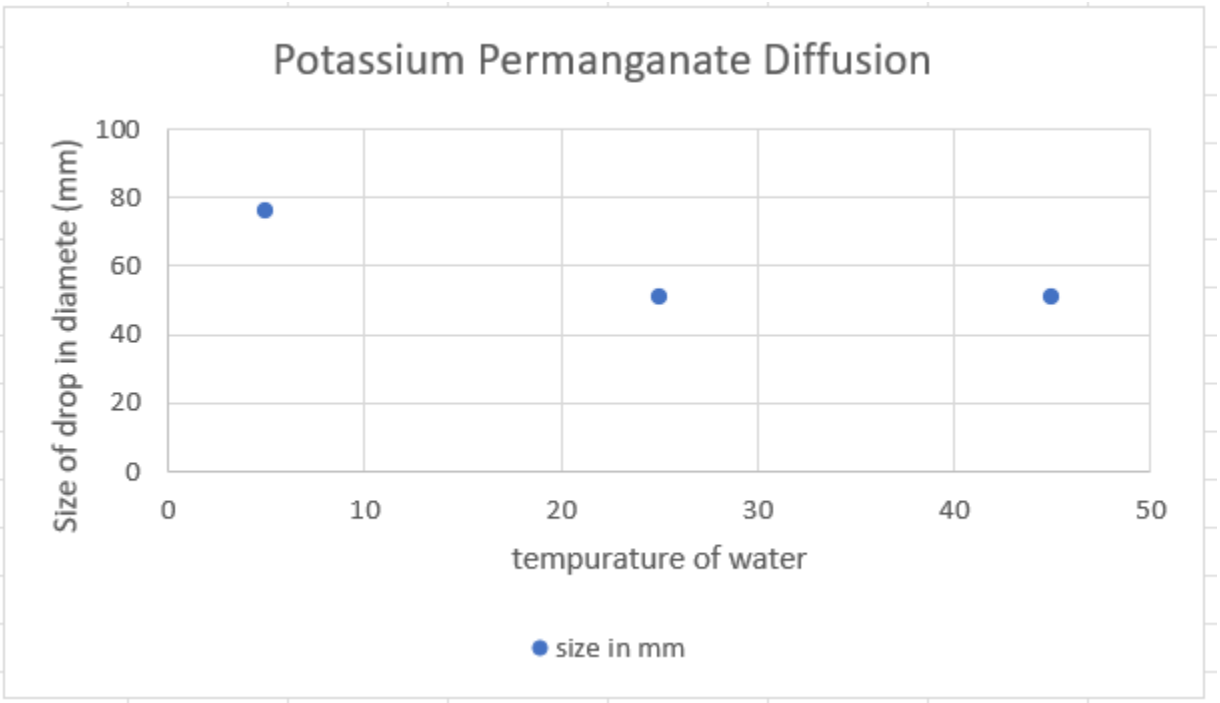
Lab report 2-B

Diffusion Lab

Purpose: Today's labs' purpose is to find the rate of diffusion of Potassium Permanganate between a mix of different water temperatures in three Petri dishes.

Procedure: We fill three Petri dishes with 40 ml of 25 degrees celsius water, then we drop a crystal of potassium permanganate in each dish. After that we record the time and measure in millimeters and record the largest diameter of the spot after 5 minutes. We repeat the same steps with 5 degrees celsius and 45 degrees celsius water. After we've gathered our data we can assume which water causes the fastest rate of diffusion for our solution. The largest diameter measured for the 25 degrees celsius dish was 50.8 mm. The largest for the 5 degrees celsius was 76.2 mm. And for the 45 degrees celsius the largest was 50.8 mm.

Result:



Discussion: With this procedure and the help of having three different trials for each temperature of water we are able to compare and contrast the different rates of diffusions. By choosing the largest diameter for each trail I feel, doesn't really help with finding the fastest diffusion of each trail, I feel that finding the average diffusion rate would've better helped us in this process rather than picking the fastest one without doing the math first. There are factors that could've also caused the drastic differences between each trail due to the distance of the dropper to the Petri dish.

Conclusion: With this experiment, we are able to find which water temperature had the fastest diffusion rate for the test substance, potassium permanganate. The largest diameter of all trials was the 5 degree celsius water with a measure of 76.2 mm after 5 minutes post dropping the substance in the dish. We learn that the slowest diffusion was the water with the temperature of both 25 and 45 degrees celsius with a measure of 50.8 mm.