- 6) Then add the remaining 5.75 FL.OZ of Welch's White Grape (thawed) frozen juice concentrate and add 60mL of sugar and 250mL of water. Mix all of the contents together.
- 7) Then transfer the contents to a 500mL water bottle.
- 8) Place a balloon over the opening of the water bottle so that any air that would escape from the solution would then go into the balloon and ultimately inflate it. Secure the balloon in place with 1 rubber band. Set the Solution 2 water bottle aside alongside the Solution 1 water bottle.
- 9) Check on the amount of inflation within the balloons every couple of hours to tell whether or not the solution was fermented and the experiment worked or failed.
- 10) Record your results and observations.

Results:

Solution 1 (Main)



Conclusion: The hypothesis made was indeed correct as the control, the solution without the yeast, had no change in the inflation of the balloon which leads us to the conclusion that the control solution did not get fermented. This explains how yeast is needed to ferment a solution if you want to make an alcoholic beverage. As I stated before, sugar is yeast's main food source and once the yeast feeds on the sugar, it releases carbon dioxide which is the gas that would ultimately inflate the balloon. Being that the control didn't include yeast in the solution, the balloon did not inflate because the sugar/juice concentrate/ and water solution did not release any carbon dioxide gas that's needed for balloon inflation. Our balloon did not inflate that much and didn't inflate over about 17.5 centimeters so, our wine was not the most fermented of the class. A big error that we made in which I think really affected the inflation of our balloon is the amount of yeast that we put into Solution 1. The largest balloon inflation in 2nd Block Bio Honors was Brendan Chan and his partner's alcoholic solution (a thick beer), and I believe their success was due to the fact that they included more yeast in their solution, one packet of active yeast and another packet of fast acting yeast. There is no other explanation because we put about the same amount of sugar for the yeast to feed off of but, with more yeast combined with the sugar, the more carbon dioxide that was released therefore inflating the balloon more.

Resources Used: http://www.ehow.com/how_5386919_make-cheap-homemade-wine.html http://www.ehow.com/how_5386919_make-cheap-homemade-wine.html