Name(s)

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Project Number

S1530

Project Title

The Effect of Amount of Dextrose Sugar on the Carbon Production of Bakers, Brewers, and Champagne Yeast

Abstract

Objectives/Goals
To learn how the amount of dextrose sugar given to bakers, brewers, and champagne yeasts affects their carbon production.

Methods/Materials
I put the three different yeasts into test tubes along with the desired amount of dextrose and 100 ml of warm water. I measured their carbon output by placing a balloon over the top of the test tube and calculating the volume based on it's diameter after 30 minutes.
Materials: yeast, water, dextrose, round balloons, tape measure, test tubes...

Results
I found that the the champagne yeast was the most productive when given 1% and 5% dextrose, and that the bakers yeast was the most productive when given 20% dextrose. As I expected, the brewers yeast was the least productive for all amounts of dextrose. All of the yeast were most productive when given 20% dextrose, except for the champagne yeast, which was most productive with 5% dextrose.

Conclusions/Discussion
My hypothesis was that the bakers yeast would be all around the most productive, and that all of the yeast-except the champagne yeast- would produce the most carbon when given 20% dextrose. The trends indicate that bakers and champagne yeast produced much more carbon than the brewers yeast. I got these results for several reasons. First, the active yeasts (bakers and champagne) were much more productive than the inactive yeasts. Second, the populations of the champagne yeast appeared to exceed the carrying capacity due to exponential growth in the 20% solution. Third, the increase of food source generally increased productivity Also, the type of yeast and what their purpose is.

Summary Statement

To learn how the amount of dextrose sugar given to bakers, brewers, and champagne yeasts affects their carbon production.

Help Received

Advised by teacher, mom helped gluing poster board