What causes yeast to ferment?

Background
Have you ever baked a fresh loaf of bread? Why is it so light and fluffy when it comes out of the oven? In this investigation, you will learn a little more about this chemical reaction that is facilitated by a living organism: yeast.

Safety
Food used in a lab is not to be consumed.

Procedure
Your teacher will show you a number of test solutions in Erlenmeyer flasks. You will add yeast to the solutions, place a balloon over the opening of the flask, and observe. Identify the variables and the control in this investigation.

Results/Data/Observations
Create a data table in the space below that allows you to record observations of each test solution.

Analysis
1. What is the independent variable in this experiment? The dependent variable? The control?

2. Which test solution produced the most inflated balloon? Why?
3. If you used twice as much test solution, how do you think the balloon would compare?

4. What caused the balloon to inflate? How can you test this?

5. Which solution produced the least inflated balloon? Why?

6. What are two other materials you could put in the flask that might cause the balloon to inflate if yeast were added? Use evidence from this experiment to justify your choices.

Conclusion
What did you learn from this investigation?