

Kitchen Science

Yeast Experiment

What is yeast and what does it like to eat? Find out in this guided at-home experiment.

What is Yeast?

Yeast is a fungus, an organism that produces spores and consumes organic materials. When yeast eats sugar, it releases carbon dioxide. By putting a balloon on top of the bottle, we are able to measure how much carbon dioxide gas is produced.



01 – Materials Needed

You will need 2 empty bottle, 2 balloons, 2 Tbsp. each of different types of sugar*, 1/4 oz of yeast for each sugar you want to test (1/2 oz for two types), 1 marker, 1 spoon, and an optional funnel.

*We tested regular **white cane sugar** and **light corn syrup**, but you can also try: brown sugar (light or dark), honey, raw sugar, or sprinkles.

02 – Sugar

Begin by adding **2 tablespoons** of your first sugar to its bottle and label with a marker. Repeat this with the second sugar and bottle.

Note:

Make sure to wash the measuring spoon and funnel (if you are using one) in between each sugar to avoid cross-contamination.

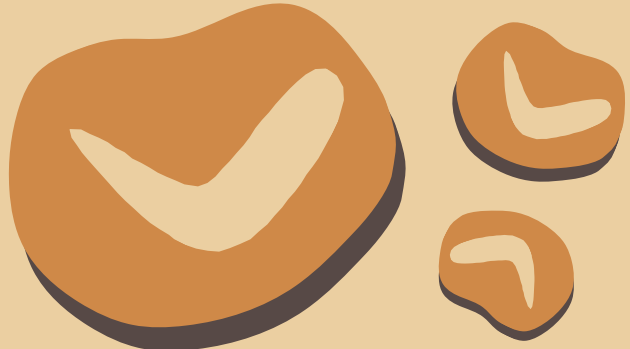


03 – Water

Fill each bottle half full with **warm water**. The water should feel warm to touch, but not too hot.

04 – Yeast

Add **1/4 oz of yeast** to each bottle.



05 – Mix

Recap the bottle and shake, or simply swirl the contents of the bottle until well mixed.

06 – Balloon

Attach a **balloon** to the top of each bottle. Observe the balloons over 5 to 10 minutes.



Which sugar does yeast prefer?



What happened?

Did one of your balloons inflate more than the other? We found that the bottle containing corn syrup inflated the balloon more.

What does it mean?

When yeast eats sugar it produces gaseous carbon dioxide or CO₂ that inflates the balloon. Even though we measured the same amount of sugar (2 Tbsp. each) they contain different amounts of sugar. Corn syrup is more sugary by volume than cane sugar and creates more CO₂.