Fungus Fizz

Nancy Varian

INTRODUCTION

Fungus plants, like mushrooms, molds, and *yeasts*, don't have the leaves, the flowers, or green color other plants have. Yeast is a fungus used to help make bread rise. How does the yeast do it? The yeast cells "breathe" and release carbon dioxide *gas*. You can prove it. Just try this experiment and see!

TIME NEEDED

Preparation: 15 min.
Completion: 2 days

WHAT YOU NEED

- package of dry yeast
- warm water
- 1 tbsp. sugar
- 1-liter plastic bottle
- large measuring cup
- large balloon
- small mixing bowl

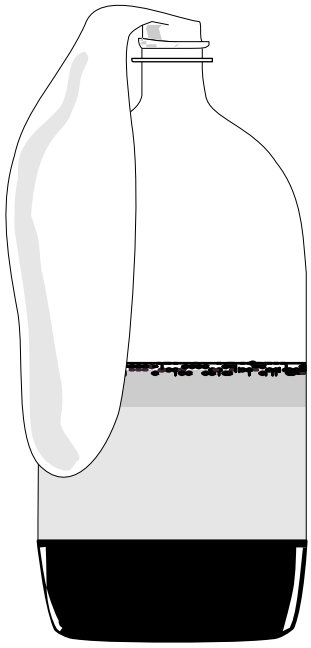
Safety Precautions

Adult supervision required. Don't drink the yeast mixture. Also, please click on the checkmark to view the safety guidelines.

WHAT YOU DO

1. **Mix** sugar and dry yeast in bowl.
2. **Pour** 1 cup warm water into measuring cup.
3. **Add** yeast mixture and **stir** until mixture is dissolved.

4. **Pour** into plastic bottle.
5. **Secure** balloon over neck of bottle.



6. **Place** bottle in warm, dark place.
7. **Observe** bottle every 15 minutes for next few hours to compare size of balloon.
8. **Check** balloon next day and **observe** changes.

OBSERVATIONS

1. How did the balloon change?
2. What happened to the liquid mixture?
3. How does the mixture smell?
4. How does this prove yeast gives off gases?

OUR FINDINGS

Click on the above link to see what we found.

Follow-Up

Did carbon dioxide gas really blow up that balloon? Experiment with something else that has carbon dioxide in it. Get a bottle of soda that has not been refrigerated...it must be warm. Pop off the top and immediately place a balloon over the mouth of the bottle.

Just wait and watch. Soon the balloon should begin to inflate. Why? The carbon dioxide gas bubbles in the soda came to the top but they couldn't get out into the air. So, they went into the balloon instead!

Words To Know

fungus — plants that do not have leaves, flowers, or green color
gas — a substance that is neither liquid nor solid
yeast — plant cells or fungi used to make baked goods rise

Our Findings

4. LIFE SCIENCE

4.11 FUNGUS FIZZ

1. It got bigger.
2. It was bubbly and it rose up in the bottle.
3. It smells like bread.
4. The gases inflated the balloon.

SAFETY GUIDELINES

Special Safety Note To Experimenters

Some activities in this book have special safety rules to follow. The special rules are on the page with that activity. But even if every safety rule in the world is not listed with an experiment, you have to know how to be safe when doing science projects. So it's very important that you read, copy, and follow the Everyday Safety Rules that follow.

Sometimes science experiments can be dangerous. Things can spill, break, or even catch fire. You have to know what to do. . . fast. So be prepared. Read the directions for each experiment carefully, and follow any special safety rules listed with it, then be careful.

Always follow common-sense safety rules like NEVER RUN WITH SCISSORS IN YOUR HAND or BE CAREFUL WITH HOT THINGS! You already know a lot of common-sense safety rules …so remember to follow them, and have fun!

Everyday Safety Rules

PREPARE

- Clear off your work space.
- Read all directions.
- Know what problems might happen, and be prepared.

PROTECT YOURSELF

- Follow directions step-by-step.
- Do just one experiment at a time.
- Locate exits, fire extinguisher, eye wash, and first-aid kit before you start. Ask an adult to show you how to use a fire extinguisher.
- Be sure there's fresh air in the room.
- Wear an apron and safety goggles.
- Don't wear contact lenses, have bare feet, or wear very loose clothing.
- Keep work space and floor clean.
- Clean up spills immediately,
- Don't drink or eat around the experiment work space.
- Don't eat or drink any stuff tested, unless a grown-up says it's OK.

USE EQUIPMENT CAREFULLY

- Don't set up equipment too near the edge of your work space.

- Be cautious when using pointed or sharp instruments, like scissors, screwdrivers, or knives.
- Unplug any electric device by pulling out the plug, not pulling on the cord.
- Use only low voltage batteries, like those used in flashlights or smaller.
- Be careful when using chairs or step-stools.

USING CHEMICALS

- Have an adult help you with all experiments requiring chemicals.
- Don't inhale or taste chemicals.
- Read all labels carefully.
- Label all chemicals.
- Wear goggles, apron, and gloves so chemicals don't touch your skin.
- Wash hands before and after using solutions.
- Wipe up spills thoroughly.

HEATING THINGS

- Wear goggles, apron, and gloves when boiling water.
- Use safety tongs and heat-resistant mitten or hot pads.
- Never leave heated things unattended.
- Turn off hot plates and oven burners when you're finished.
- Keep flammable things away from heat and flames.
- Have a fire extinguisher ready.

IN THE FIELD

- Never go on a field trip alone: follow the Buddy System.
- Tell a responsible grown-up where you're going.
- Know the area and be aware of dangers, like poisonous plants and deep water.
- Dress for the weather conditions.
- Bring along a first-aid kit.
- Don't drink water or eat plants in the wild, unless the grown-up you're with says it's OK.

FINISHING UP

- Clean up the equipment and your work space.
- Return chemicals to the proper containers.
- Don't throw stuff down the drain unless instructed to.
- Wash your hands.
- To protect the environment, get rid of chemicals according to local, state, and federal laws.