

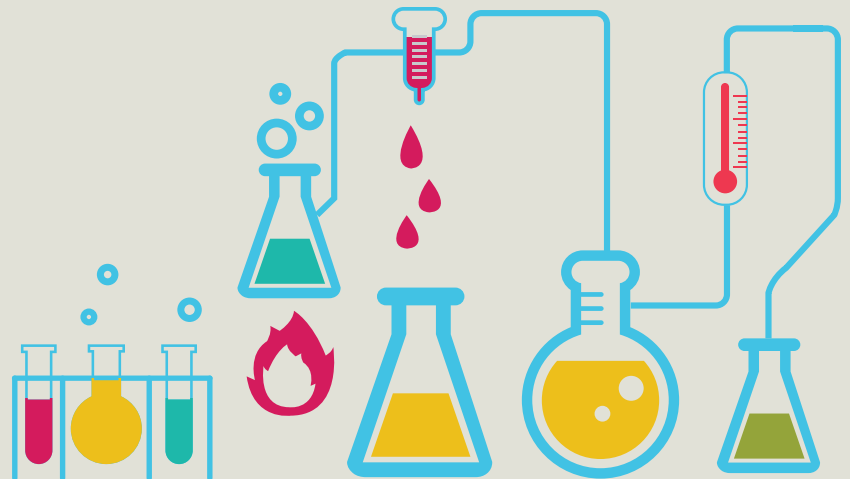
APPLE MUMMY

Salt has been used as a preservative since ancient times, to protect food against bacteria, mould, and spoiling. Have you ever noticed that you get thirsty when you eat salty food? Well, this is because salt is a desiccant - it helps remove water from things, including human bodies.

A mummy is the body of a person (or an animal) that has been preserved after death. The Ancient Egyptians used desiccants when they were mummifying bodies. Baking soda and salt are desiccants we're going to use to mummify an apple!

ENGINEERING CONNECTION

Chemical engineers examine chemicals like desiccants to understand how they interact with food and bacteria. Using concepts of preservation, engineers are able to provide new techniques to preserve and protect foods.



WHAT YOU WILL NEED

- A knife
- 2 plastic cups
- 1 apple
- 40 grams of baking soda
- 80 grams of table salt



HOW YOU CAN DO THIS

1. Cut the apple into quarters so that you have four similar size pieces.
2. Place two pieces in each cup.
3. Mix the baking soda and salt and add it to one of the cups. Make sure the apple is completely covered with the mixture.
4. Place the cups somewhere out of direct sunlight and let them rest for a week.
5. After a week, carefully pour the mixture out of the cup with the covered apple. Do not wash it. Compare the two halves. Which is better preserved?

WHAT ACTUALLY HAPPENED?

You will notice that the apple with baking soda and salt has shrivelled up – it has been preserved by the mixture. The other cup contains a rotting apple.

Bacteria that cause rotting and decay need water to survive. By drying out the apple with desiccants, we make it difficult for bacteria to grow.

