

# Protecting Eggs in Acid

## Overview and Objective

We want to test the effect that acid has on egg shells, and see what a layer of toothpaste does to the results.

## What you will need:

- 2 cups of cola soda
- 2 cups of lemon juice
- 4 glasses
- 4 sticky notes, or write on glasses
- Marker to write on sticky notes or glasses
- Bowl
- Toothpaste
- 4 eggs
- Paper towels/towel
- Gloves

## Process:

1. Label the 4 cups with the following labels: Cola 1, Cola 2, Lemon Juice 1, Lemon Juice 2.
2. Place the glasses on a row in a counter or somewhere they can be unbothered for 12 hours.
3. Fill the two Cola-labeled glasses halfway with cola.
4. Fill the two Lemon Juice-labeled glasses halfway with lemon juice.
5. Take one egg and place it in the bowl. Squirt a generous amount of toothpaste on the egg and rub to coat the entire surface with a thick layer. Place this egg in glass Cola 1.
6. Repeat the process and place the coated egg in glass Lemon Juice 1.
7. Place an egg in Cola 2 and in Lemon Juice 2.
8. Leave the glasses unbothered for 12 hours.
9. (12 hours later). Carefully remove the eggs and rinse and dry them off.
10. Observe the differences!



**Share your experiment results with us!**

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## Observations:

- What texture and colors do the egg shells have after soaking?
- Could you try rubbing something besides toothpaste on the egg to test how it works?
- What is another acidic liquid you could try and compare?