

Dissolve an Egg!

Experiment:

To show that different liquids can have different weights and densities.

Materials:

You will need:

- Two raw egg
- Clear vinegar
- Water
- Two jars

Method:

1. Place one egg in a jar and cover with vinegar.
2. Place the other egg in a jar filled with water. Observe over the course of a week.

Leave it and check it out in about a week. Just let it soak away in the vinegar. After a week, the egg should be see through but still pretty much egg-shaped. The vinegar completely dissolves away the shell (which is mostly calcium), leaving the membrane intact.

Why?:

Vinegar is, in fact an acid - acetic acid to be exact. It's the same stuff found in tomato ketchup and brown sauce. That's why a coin will become nice and shiny what placed in either of these sauces.

Some of the vinegar actually enters the membrane of the egg, and since this vinegar takes up more space, the membrane stretches to accommodate it. This is why the egg can look a little bigger. If you shake the egg, you can see the yolk sloshing around in the white. If the membrane tears, the contents will spill out just the same as with any raw egg.

If you do this with a hard boiled egg, the shell will dissolve in the same way, and you will be left with a rubbery egg that should actually bounce (if not dropped from too great a height!).

Try soaking a chicken bone in vinegar for several days to a week. If the bone is fresh enough, you should be able to bend it; even tie a knot in it. This is because most of the calcium has been dissolved, leaving behind other less rigid parts of the bone.