



# Chemical Changes and Conservation of Mass

**CONSERVATION OF MASS** is one of the laws of science. “Conserved” means something stays the same. So this law says that no mass is lost or gained during a chemical change. This is also true of physical changes. You can do experiments to show that this is true.

## Experiment 1

For the first experiment you will need a piece of fresh bread, a tablespoon of water and a container. You must be able to see through the container and be able to seal it very tightly. You will also need a scale or balance that can tell very small differences in weight. Ask your teacher if there is an “analytical balance” in your school. Ask if someone could weigh some things for you.

### Steps:

1. Put the bread and water in the container and seal it tightly.
2. Weigh the container with the bread and water in it.
3. Put the container in a sunny window or other warm place.
4. Wait until the bread is covered with mold. (Getting moldy is a chemical reaction.)
5. Weigh the container again.

## Experiment 2

For the second experiment you will need a few small iron nails or some iron filings. The nails should be plain iron and not coated with anything. Iron filings will work better.

### Steps:

1. Weigh the iron nails or filings carefully.
2. Put the nails or filings outside in a place where they will get sunlight and where dew and rain can get on them.
3. Wait until the iron is covered with rust. (Remember rusting is a chemical reaction.)
4. Bring the nails or filings inside. When you are sure they are dry, weigh them again.

- A. Did the weight change in the first experiment?
- B. Did the weight change in the second experiment?
- C. If the results were different in the two experiments, explain the difference.
- D. Do you think mass was conserved in both experiments? Explain your answer.