



ELECTROLYSIS (1 OF 3)

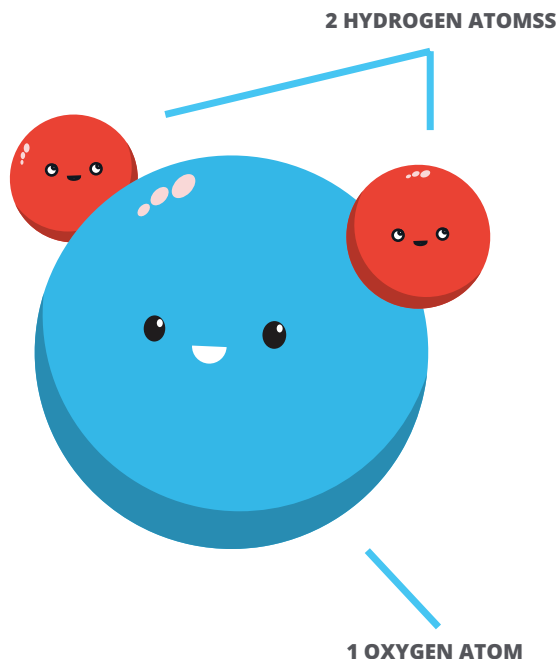
BACKGROUND

They've been seen everywhere together—at ice skating rinks, in hot tubs, standing on city sidewalks, or running through storm drains—hydrogen and oxygen atoms, bonded together to form molecules of water. Sure, they'd disappear into thin air for a while, even go underground. But they always returned—together. It's shocking to hear what's come between them: a chemical reaction called electrolysis.

Electrolysis is a decomposition reaction. A decomposition reaction is a type of chemical reaction in which a compound breaks down into its basic elements. Water is a compound made from the elements hydrogen and oxygen.

During electrolysis, electricity causes the hydrogen and oxygen atoms in water to dissociate, or split apart. Try the following experiment and watch these former partners go their separate ways.

WATER MOLECULE



MATERIALS

- 1 glass beaker or jar
- 2 test tubes or clear vials
- 6-volt battery
- two 8-inch pieces of coated wire (18-22 gauge) with ends stripped
- 2 cups tap water
- 2 tbsp. baking soda
- 1 measuring cup
- 1 measuring spoon
- wire cutters