

# HOW TO ELECTRIFY YOUR KETCHUP

## Want to make a condiment conduct a current?

### What you'll need:

- 1 brass picture hook  
(note: any small brass or copper object like an old penny will work)
- Aluminum foil
- Ketchup
- Plate or saucer

### 1. Prepare:

Tear a strip of foil about an inch wide and 3 inches long. Place it on the plate.

Put the brass picture hook on one end of the strip.

### 2. Assemble:

Squirt the ketchup on top of the hook and then fold the other end of the foil over so that it squishes the ketchup.

Crease the fold so your foil and hook sandwich stays put.

### 3. Wait:

Set the plate in a warm place and leave it overnight.

### 4. Examine:

The next day, rinse the ketchup off the foil and examine it carefully. See the holes? They're caused by a combination of electricity and acid!

### What's happening?

The ketchup is connecting the brass in the hook and the aluminum foil, acting as a conducting fluid that allows the hook to pull electrons (very tiny, electrically-charged bits of atoms from the aluminum).

The moving electrons are the electric current! It's not a big enough current to light a light bulb (about  $\frac{1}{2}$  volt), but the loss of electrons is enough to change the composition of the aluminum so that weak acid (vinegar) in the ketchup can start to dissolve it. That's where the holes come from.

