

Do-it-Yourself Lava Lamp

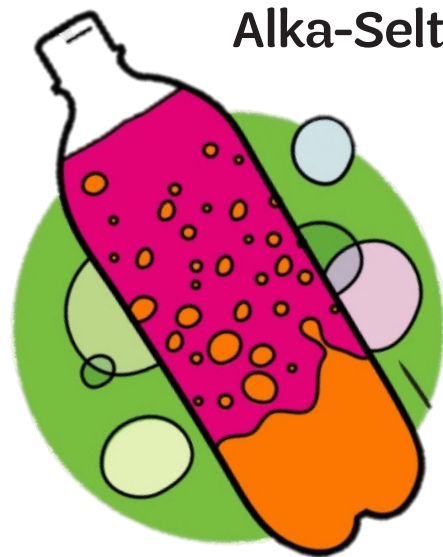


INSTRUCTIONS

1. Fill the bottle most of the way with vegetable oil.
2. Fill the remainder of the bottle with water (the water will sink to the bottom).
3. Add a few drops of food coloring – this will sink to the bottom with the water!
4. Break an Alka-Seltzer tablet into a few small pieces
5. Drop the Alka-Seltzer pieces into the bottle one at a time.
6. Watch your lava lamp erupt into activity! If the reaction slows down, you can add more Alka-Seltzer.

MATERIALS

Empty clear bottle
Vegetable oil
Water
Food Coloring
Alka-Seltzer



HOW IT WORKS

Alka-Seltzer

Alka-Seltzer powers the lava lamp by reacting with the water to form little gas bubbles, which makes the water less dense than the oil, so it rises up to the top of the bottle. Once it reaches the top, the gas escapes and the water sinks back to the bottom.

Polarity

Water molecules are “polar” because they have a lopsided charge that attracts other atoms. Oil molecules are “non-polar”, meaning they don’t have a positive or negative charge, so they are not attracted to the water molecules at all, which means they don’t mix!

Density

Because water is more dense than oil, it will sink to the bottom when the two are combined. Water is more dense than oil because the water molecules are packed together more tightly!