

# Make an Easy Lava Lamp

Learn how to make a lava lamp using simple household items such as vegetable oil, food colouring, effervescent antacid tablets and a bottle to create chemical reactions and funky balls of colour that move around like a real lava lamp.

## You will need:

- Water, clear plastic bottle, vegetable oil, food colouring, effervescent antacid tablets

## Instructions:

- Pour water into the plastic bottle until it is around one quarter full. (You might want to use a funnel when filling the bottle so you don't spill anything.)
- Pour in vegetable oil until the bottle is nearly full.
- Wait until the oil and water have separated.
- Add about twelve drops of food colouring to the bottle (choose any colour you like).
- Watch as the food colouring falls through the oil and mixes with the water.
- Break an effervescent tablet into smaller pieces (around 5 or 6) and drop one of them into the bottle. Things should start getting a little crazy, just like a real lava lamp!
- When the bubbling stops, add another piece of effervescent tablet and enjoy the show again!

## What's happening?

Oil and water don't mix very well.

The oil and water you added to the bottle separate from each other, with oil on top because it has a lower density than water.

The food colouring falls through the oil and mixes with the water at the bottom.

The piece of effervescent tablet you drop in releases small bubbles of carbon dioxide gas that rise to the top and take some of the coloured water along with it. The gas escapes when it reaches the top and the coloured water falls back down.

The reason the tablet fizzes in such a way is because it contains citric acid and baking soda (sodium bicarbonate). The two react with water to form sodium citrate and carbon dioxide gas (those are the bubbles that carry the coloured water to the top of the bottle).

Adding more effervescent tablet to the bottle keeps the reaction going so you can enjoy your funky lava lamp for longer. If you want to show someone later you can simply screw on a bottle cap and add more tablets when you need to.

When you've finished all your effervescent tablets, you can take the experiment a step further by tightly screwing on a bottle cap and tipping the bottle back and forth. What happens then?



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