

How to make your own lava lamp

Material:



- clear plastic bottle with a tight seal,

- cooking oil,
- dye (eg. tomato puree)
- salt.

Instruction:

Fill the bottle to two-thirds with water. Add a few drops of food coloring.





Slowly pour in enough oil to form a layer on the surface of the water.





Squirt a few squirts of salt to the oil and see what happens! Next add more salt to do





Explanation:



Water and oil are immiscible. The molecules are composed of even smaller components - atoms
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Atoms
have an electric charge - positive, negative or neutral. One part of the water
molecule
has the advantage of positive charge and the other - negative. Such
molecules
are called polar
molecules
- they like to stick together. Oil molecules are different. The positive and negative charges are distributed fairly evenly - a non-polar
molecule
.



When you try to mix polar molecules (like water) and non-polar (such as oil), the polar water molecules adhere to each other, the oil molecules are pushed. Sprinkle salt on the surface of the oil sinks to the bottom carrying globs of oil. This is because the salt is more dense than water. However, unlike oil, the salt is soluble in water, so as soon as it is dissolved, the oil rises back to the surface.