



California State University of Bakersfield, Department of Chemistry

Easy Lava Lamps

Standards: HS/MS-PS1-2

Introduction:

This easy-to-make “lava lamp” demonstrates the hydrophobic and hydrophilic properties of water and oil in a visual presentation reminiscent of the classic lava lamp!

Materials:

- Water
- A clear plastic bottle
- Vegetable oil
- Food coloring
- Alka-Seltzer

Safety:

- Always have an adult with you to help you during your experiment.
- Always wear eye protection and gloves when doing chemistry experiments

Procedure:

1. Pour water into the plastic bottle until it is around one quarter full.
2. Pour in vegetable oil until the bottle is nearly full.
3. Wait until the oil and water have separated.
4. Add around a dozen drops of food coloring to the bottle.
5. Watch as the food coloring falls through the oil and mixes with the water.
6. Cut an Alka-Seltzer tablet into smaller pieces and drop one of them into the bottle, things should start getting a little fizzy and crazy, just like a real lava lamp!
7. When the bubbling stops, add another piece of Alka-Seltzer and enjoy the show!

Data and Observations:

Record your observations in this space

What did you see? Describe it here.

Questions:

1. What effect does the Alka-Seltzer have on the water and oil?
2. What do you think would happen if you substituted another liquid, like juice, in place of the water?

References:

SteveSpanglerScience.com. <http://www.stevespanglerscience.com/experiment/bubbling-lava-lamp> (accessed Aug 6, 2012).