

TESTING THE DENSITY OF VARIOUS LIQUIDS IN A DENSITY COLUMN



GOAL: Build a density column using different liquids and observe how their densities affect their positions.



MATERIALS

- Tall, clear cylinder or glass (at least 10–12 inches tall)
- Honey
- Dish soap
- Water
- Cooking oil
- Rubbing alcohol
- Lamp oil or mineral oil
- Food coloring (different colors for each liquid)
- Funnel (optional)
- Spoon or dropper
- Paper towels



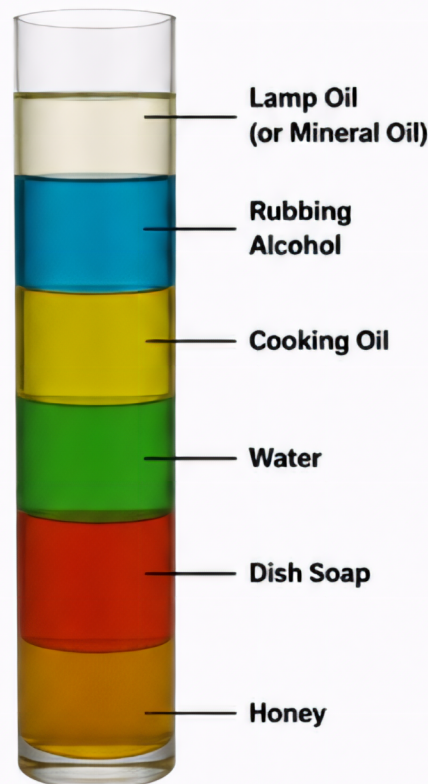
SAFETY FIRST

- Ask an adult for permission before starting.
- Do not taste any of the liquids.
- Be careful—spills can make surfaces slippery.
- Clean up any spills right away.



PROCEDURE

1. Gather all your materials.
2. Add about 2 tablespoons of honey to the bottom of the cylinder. Use a spoon to pour it in slowly.
3. Add a few drops of food coloring to the honey and let it settle.
4. Slowly pour about 2 tablespoons of dish soap down the side of the cylinder. Do not mix the layers. Add a few drops of a different food coloring.
5. Repeat the process, adding each liquid one at a time in this order: **Water, Cooking Oil, Rubbing Alcohol, Lamp Oil (or Mineral Oil).**
6. Pour each liquid slowly down the side of the cylinder.
7. Let the column sit for a few minutes so the layers can settle.
8. Observe the layers from bottom to top.
9. Record your results in the table below.



RESULTS

Layer	Liquid	Color Used	Position in Column (Bottom = 1)	What This Tells Us (Density: high or low)
1 (Bottom)				
2				
3				
4				
5				
6 (Top)				



REFLECTION

1. Which liquid was the most dense (highest density)? _____
2. Which liquid was the least dense (lowest density)? _____
3. How did the density of the liquids affect their order in the column? _____

4. If you mixed the liquids together, what would happen? _____



DID YOU KNOW?

Density is how much matter is in a certain amount of space. More dense liquids are heavier and sink. Less dense liquids are lighter and float.