

Phase Change Lab

Purpose: To see the phase change between solids to liquids and liquids to gas.

Materials:

- Hot plate
- Timer
- “Ice cubes” of juice, shampoo, mouth wash and water
- 100 mL beaker
- Thermometer

Procedure:

1. Begin timing your melting for your solid ‘ice’ cubes as soon as you have them spread out. Place all of your solid cubes on a paper towel to minimize mess.
2. Have someone keep an eye on your melting liquid as your other partner gathers the other materials.
3. Heat 50 mL of the two liquids with your hot plate on medium heat. Take measurements every thirty seconds. Make sure the thermometer doesn’t touch the beaker because it will not be an accurate temperature. Record the temperature that the substance boils at. You will need to do this one liquid at a time.
4. When finished wash the water down the drain. The vinegar can be poured back into the container. The paper towel can go in the waste basket, and your lab area needs to be cleaned and dried.

Substance	Juice	Shampoo	Mouth Wash	Water
Start time				
End time				
Total melt time				

3. What is happening to the water during the slanted areas in the graph?

4. In what areas of the graph is there more than one phase of water present?

5. Which solid melted first?

6. Which solid melted last?

7. Did any of the solids melt at the same time?

8. Why are the solids melting at different times?

9. What other liquids could you use?

