

Density Lab: Floating and Sinking

Purpose: To find out if certain objects will float or sink in three liquids.

Materials: safety goggles, large test tube, rubbing alcohol (density = 0.8 g/cm^3)
Water (1.0 g/cm^3), glycerol (density = 1.3 g/cm^3)
Small pieces of rubber, wax, ice, appendix table of densities

- Procedure:**
1. Predict which objects will float or sink.
 2. Pour glycerol into the large test tube.
 3. Pour water into the same test tube.
 4. Pour alcohol into the same test tube.
 5. Gently drop each object into the test tube.
 6. Record if the object floats or sinks in the table provided.

Data and Observations:

Solid	Density (g/cm^3)	Will solid float or sink?		
		In rubbing alcohol	In water	In glycerol
Ice				
Wax				

Discussion Questions:

1. Explain how you can use density to predict whether or not a solid will float in a liquid.
2. All metals are solids at room temperature except one – mercury (Hg) which is a liquid. Find the density of mercury then find the density of at least three solids, such as aluminum, gold, and lead. Predict whether or not each of the solids will float in liquid mercury. Give reasons for your predictions.

