

Experiment 2.2: Measuring Mass-To-Volume Ratio

Data:

When I added the liquids to the glass, there were three layers: honey at the bottom, water in the middle, and oil at the top.

When I dropped the coin in the glass, it sank to the bottom. The ice cube sank through the oil but floated on top of the water layer. The match floated on top, and the grape sank to the bottom of the water layer but floated on top of the honey layer.

Summary:

In this experiment, I poured enough honey into a tall glass so that it formed a layer about an inch thick. I then poured in enough water to make an equally-thick layer of water. I poured it down the side of the glass so that it was added gently. I then did the same with vegetable oil.

I then dropped a penny, an ice cube, a wooden match, and a grape in the glass.

Conclusion:

In this experiment, I saw the effect of density, which is the ratio of a substance's mass to its volume. The liquids settled into the glass in the order of their density. Honey is the most dense, while water is the least dense. The other items also ordered themselves according to density. The penny is the most dense, the grape is more dense than water but less dense than honey. The ice cube is more dense than vegetable oil but less dense than water, and the match was the least dense.