

Density Ball



Purpose: To demonstrate that a metal sphere that barely floats in cold water will sink in hot water because it is less dense, therefore providing less buoyant force

Location: room 136, shelf O4

Fill the 2000 ml beaker high enough with cold water for the ball to float without touching bottom. Set it on a large hot plate and turn the temperature up. As the water heats, it expands, causing its density to decrease. Within minutes the water density will be too low for the ball to float and it will sink to the bottom. (Second beaker shown is not needed.)

Turn off the hot plate as soon as the ball sinks and don't touch it until it cools down (i.e. when orange light stops blinking).