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Chemistry

Research Question: How are density units determined? What is the real world application of density?

Introduction: Density is defined mathematically as the ratio of a substance's mass and volume

$$P = \text{mass/volume}$$

It uses derived units; in chemistry, the derived units are g/mL or g/cm squared. The latter is equivalent to the former because 1 mL = 1 cm squared.

Procedure: First, we measured the mass of the gray PVC sample using an electronic scale. We filled our graduated cylinder with 50 mL of water, and then slid the sample into the cylinder. We then measured the new volume of the water, being careful to measure at the meniscus. Next, we subtracted these two volumes to obtain the sample's volume. The sample's mass was divided by its volume to obtain density. Each lab group then announced their findings and a comparison of these were made.

Data/Observations: 1-Mass of the pvc was 5.30g 2-The volume of water in the cylinder was 50 mL
3-The new volume of water in the cylinder was 53.5g.

Conclusion: The units Of density are determined by the units used for mass and volume, and then dividing units with their units with their respective quantities. These are derived units, renowned by computation. density is a physical trait that determines if an object will sink or float in a liquid. if the object's density is greater than the liquid density, it sinks. if the object's density is less than the liquid's density it floats. The PBC had a greater density so it sank.