Density lab 1

PRE-LAB DISCUSSION

Chemistry is the study of matter, which is defined as anything that has mass and volume. In this experiment, you will measure volumes of water at different temperatures, using graduated cylinder and mass using scale balance. You will then use the relationship between the mass and volume of a substance to find its density.

Volumes of liquids are measured directly in a graduated cylinder. Liquid quantities dealt with in the laboratory are usually expressed in milliliters (ml), although larger quantities may be expressed in liters (L).

Density is an important property of matter. By itself, or in conjunction with other properties, density can be used to identify substances.
Density is defined as the quantity of matter in a given unit of volume. This relationship, expressed mathematically, is

$$\text{Density} = \frac{\text{mass}}{\text{Volume}}$$

PURPOSE

Learn and practice techniques and calculations for determining volume, mass and density of a substance at different temperature.

EQUIPMENT
Laboratory balance;

Graduated cylinder, 10-mL

Material
water

Problem statement

Which has a higher density, cold, warm or hot water?

Do the following before beginning your experiment.

1) Title of lab
1) State your hypothesis.
2) In a tabular format, list your dependent variable, independent variable and constant variables.
3) Using equipments and material listed above, present a procedure to verify your hypothesis.
4) Present your observations and calculations after conducting the experiment.
5) Conclusion.