Lab Report

Objectives:

- Practice how to measure volumes.

- Learn how to handle some lab materials.

Materials: (everything you used)

- Test tube

- Beaker

- Graduated Cylinder (100 ml)

- Pippette

- Test tube holder

- Bunsen burner

Procedure:

1) Take a test tube, fill it with tap water, pour it in the graduated cylinder (trying not to spill). Measure the volume.

2) Take a beaker, fill it with tap water, pour it in the graduated cylinder (trying not to spill). Measure the volume. As the volume of water contained by the beaker was higher than the capacity of the graduated cylinder, step 2) must be repeated and then the volumes added to have the total volume of water that was in the beaker.

3) With a pipette measure 3 ml of water and put it in a test tube. Using a test tube holder get the tube near the burner flame and take it away when it gets hot.

Results:

1) The test tube can hold \_\_\_\_ ml of water.

2) The beaker can hold \_\_\_\_ ml of water.

Discussion:

- In activities 1) and 2), why were the materials you chose the most suitable for measuring, and not others?

In activities 1 and 2, we did not have the most suitable lab materials for measuring. Although a graduated cylinder is the adequate material to measure volumes of liquids, it is also very important to use the right size of graduated cylinder according to the volume that we want to determine. For example, if we want to measure a volume between 50 and 100 ml we can use a 100 ml graduated cylinder; but if the liquid volume is bigger than 100 ml we should use a 250 ml graduated cylinder. When measuring the volume of water in the test tube, we had a similar problem; for measuring that volume we should have used a 10 ml graduated cylinder.

- Why must you use a blue flame and not a yellow one for heating?

The Bunsen burner will give three different types of flame. The gas to air ratio will determine the intensity and type of flame produced. When the air inlet on a burner is closed, the flame will be a "safety flame", a yellow and much cooler flame. As the air inlet is opened, the flame becomes blue and significantly hotter because the combustion is complete which also means that much more energy is released. This is why the blue flame is used for heating.