

## Introduction:

The purpose of this lab is to help you practice safe use of lab materials. You must follow the directions exactly, so make sure you read them carefully.

## Safety:

- ✓ GOGGLES must be worn at all times when using glassware, chemicals, or fire.
- ✓ Make sure your backpacks, binders, jackets etc. are all stowed away before you begin.
- ✓ When mixing chemicals, remember to avoid cross contamination by cleaning your equipment every time you use a new chemical.
- ✓ Always carry lab equipment with two hands, to avoid accidentally dropping it.

## Objectives:

- ✓ to develop your skills measuring chemicals with a graduated cylinder.
- ✓ to practice using the metric system.
- ✓ to test precision and your ability to follow directions.
- ✓ to practice lab safety procedures.

## Materials:

- ✓ 6 test tubes
- ✓ 1 test tube rack
- ✓ 3 pipettes
- ✓ 1 beaker with RED liquid
- ✓ 1 beaker with YELLOW liquid
- ✓ 1 beaker with BLUE liquid
- ✓ 2 - 10 mL graduated cylinders
- ✓ 1 - 25 mL graduated cylinder
- ✓ safety goggles
- ✓ aprons

## Procedure:

### Part 1:

1. Label the six test tubes in order: **A, B, C, D, E,** and **F**.
2. Fill one of the empty beakers half full with water. Use this beaker to rinse your graduated cylinder and your test tubes as needed.
3. The second empty beaker is to be used for contaminated waste water.
4. Into test tube A, measure 25 mL of **RED** liquid.
5. Into test tube C, measure 17 mL of **YELLOW** liquid.
6. Into test tube E, measure 21 mL of **BLUE** liquid.

### Part 2:

1. From test tube C, measure 4 mL and pour into test tube D.
2. From test tube E, measure 7 mL and pour into test tube D. Swirl.
3. From test tube E, measure 4 mL and pour into test tube F.
4. From test tube A, measure 7 mL and pour into test tube F. Swirl.
5. From test tube A, measure 8 mL and pour into test tube B.
6. From test tube C, measure 3 mL and pour into test tube B. Swirl.
7. Save your results. Measure the contents of each test tube and record how many mL of liquid were found in each test tube.
8. Answer the Analysis/Result questions on the next page and write a Conclusion.