## Measuring Volume Lab

How to read a graduated cylinder:

1. Read the cylinder at eye level, to get an accurate reading.
2. Measure the volume at the lowest point of the meniscus.
a. In image here, 19.70 mL is the correct measure; the view is level and straight
 across from the bottom of the meniscus.

## OBJECTIVES

- to practice measuring liquids with a graduated cylinder


## MATERIALS

- 6 test tubes - Labeled: A, B, C, D, E \& F
- test tube rack
- 50 mL cup with Red liquid
- 50 mL cup with Blue liquid
- 50 mL cup with Yellow liquid
- 5-25 mL graduated cylinder (LARGE)
- 2-10 mL graduated cylinder (SMALL)


## PROCEDURE

To COMPLETE this lab, WATCH the Volume Measurement Lab VIDEO (16:40)
https://www.youtube.com/watch?v=jixLuWnet_c\&t=5s
**this document had been adapted from the original used in the video

## Part 1: Use the LARGE cylinder for the next 3 measurements.

- Measure 25 mL of RED liquid, pour into test tube A
- Measure 17 mL of YELLOW liquid, pour into test tube C
- Measure 21 mL of BLUE liquid, pour into test tube E

Part 2: Use the SMALL graduated cylinder for the following measurements.

1. From test tube C, measure 4 mL and pour into test tube D.
2. From test tube $\mathbf{E}$, measure 7 mL and pour into test tube $\mathbf{D}$.
3. From test tube $\mathbf{E}$, measure 4 mL and pour into test tube $\mathbf{F}$.
4. From test tube $\mathbf{A}$, measure 7 mL and pour into test tube $\mathbf{F}$.
5. From test tube $\mathbf{A}$, measure 8 mL and pour into test tube $\mathbf{B}$.
6. From test tube $\mathbf{C}$, measure 3 mL and pour into test tube $\mathbf{B}$.
7. Measure EACH of your tubes using the graduated cylinder and write down the volume you have in each test tube.

| Test Tube | Color of Liquid | Amount of Liquid (mL) |
| :---: | :---: | :---: |
| A |  |  |
| B |  |  |
| C |  |  |
| D |  |  |
| E |  |  |
| F |  |  |
|  | Total liquid Test Tubes A-F |  |

## ANALYSIS QUESTIONS

1. What would have happened if you did NOT follow the directions exactly?
2. Give 2 reasons why it is important to be able to accurately measure out liquids.
