

Group # _____

Name _____

Period ____ Date ____/____/____

Lab Ch 1 • Rainbow lab

Lab Partners: _____

Purpose: 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, jacket 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
- ✓ 3 beakers
- ✓ Water (RED, YELLOW, BLUE liquids in beakers)
- ✓ 10 mL graduated cylinders
- ✓ 25 mL graduated cylinders
- ✓ Safety goggles
- ✓ Aprons

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Procedure:

Part 1

1. Label the six test tubes in order: **A, B, C, D, E** and **F**
2. Into test tube A, Measure 25 mL of **RED** liquid
3. Into test tube C, Measure 17 mL of **YELLOW** liquid
4. Into test tube E, measure 21 mL of **BLUE** liquid.

Part 2

1. For each step below, make sure you rinse out the graduated cylinders between each step.
2. From test tube C, measure 4 mL and pour into test tube D.
3. From test tube E, measure 7 mL and pour into test tube D. Swirl.
4. From test tube E, measure 4 mL and pour into test tube F.
5. From test tube A, measure 7 mL and pour into test tube F. Swirl.
6. From test tube A, measure 8 mL and pour into test tube B.
7. From test tube C, measure 3 mL and pour into test tube B. Swirl.
8. Save your results. Measure the contents of each test tube and record how many mL of liquid were found in each test tube.
9. Look at your hands. Do you have any stains on your hands? If so, those stains represent **chemicals** that would be on your skin **right now!**
10. Answer the Analysis/Result questions on the next page and write a Conclusion.

Disposal/Clean Up:

- Clean ALL equipment with soap, water, and brushes
- **Leave test tubes upside down so they can dry.**
- Return all materials and supplies to their proper place, as directed by your teacher.
- Clean Lab BENCH with small soap bottle and sponge.
- Dry lab bench with paper towels.
- Wash hands with hand soap.
- Let me know when you are ready. **Do not get unprotected until dismissed.**

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Data:

Table 1: Test Tube Results

Test tube	Color of liquid	Amount of liquid (mL)
A		
B		
C		
D		
E		
F		
	Total liquid in test tubes A-F	mL

Analysis Questions:

1. Name the colors that you created.
2. How many mL of liquid (Red, Yellow, Blue) were in each test tube at the **start** of this lab?
3. Why is it important to follow directions **exactly**?
4. What would have happened if your measurements were not correct?
5. How many mL of liquid did you have at the end of the lab?
6. How many should you have? What are some reasons why you may have more or less than when you started?
7. **Conclusion:** Write 2-3 sentences on what you have learned from this lab.