

Rainbow Lab

Glue this side
down into
your Science
Notebook using only
4 dots of glue

“A dot is a lot.”

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What are solutions made of?

- Liquids mixed with other liquids
- Solids dissolved in liquids
- Gases dissolved in liquids or mixed with other gasses



If you mix things up and they stay at an even distribution, it is a solution. A simple solution is basically two substances that are going to be combined. One of them is called the **solute**. A solute is the substance to be dissolved. The other is a **solvent**. The solvent is the one doing the dissolving. As a rule of thumb, there is usually more solvent than solute. (www.Chem4kids.com)

Procedure Part 1:

1. Label 6 test tubes in order: **A, B, C, D, E & F**.
2. Fill a beaker half full with water. Use this to rinse your graduated cylinder and test tubes.
3. The second beaker is 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.

Procedure 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.

Save your results. Measure the contents of each test tube and record how many mL were found in each test tube.

Data Table: 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 and Results:

Answer the following questions in complete sentences.

1. Name the three different solutes in this experiment and the one solvent.
2. The solutions you made are also mixtures. Is mixing the colors together a physical change or a chemical change? Explain.
3. How many mL of liquid (total) did you have at the end of the lab? How many should you have? (Hint, look at the procedures)
4. What are some reasons why you may have more or less liquid compared to what you started out with?
5. 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!**

Conclusion:

Write 2 – 3 complete sentences on what you learned in this lab.