

# Crystal Growing Lab

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Hour: \_\_\_\_

**Purpose:** Observe different crystals. Distinguish between unknown substances using crystal shape to identify them.

**Materials:** graduated cylinder      eyedropper      balance      measuring paper  
3 small containers      glass stirring rod      filter paper  
2.5 grams of each substance      warm distilled water

## Procedure:

- A. Determine the mass of each small container and measuring paper and record.
- B. Mix Solutions and set aside to allow crystal growth
  - 1. Observe each substance: A, B, C, and record color, texture and any other properties in data table below.
  - 2. Measure 2.5 grams of substance A (use measuring paper on balance)
  - 3. Measure 5 mL of warm, distilled water
  - 4. Label a small container with your initials and the substance letter, A, B, C
  - 5. Pour the 5 mL of warm distilled water in the small container
  - 6. Stir the measured amount of substance A into the water with a glass stirring rod until it is completely dissolved.
  - 7. Thoroughly clean stirring rod after substance is dissolved
  - 8. Repeat steps 2-7 for substance B and substance C.
  - 9. Set each small container aside, away from any commotion for 2-3 days.
  - 10. Cover with filter paper so dust and debris does not contaminate crystals solution.
- C. Two- three days later
  - 1. Observe all sets of crystals with a hand-lens
  - 2. Draw and label the crystals in the space provided below.
  - 3. Describe each set of crystals: color, shape, texture
  - 4. Answer the questions provided and write a conclusion paragraph about the lab.

## Data:

B. Substance Descriptions BEFORE crystal Growth (#1)

A. \_\_\_\_\_

B. \_\_\_\_\_

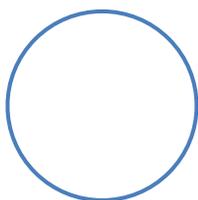
C. \_\_\_\_\_

**Results:**

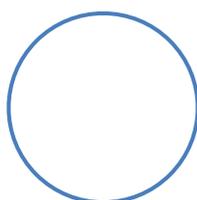
	Masses (g)		
1. Measuring paper			
2. Small container			
3. Measuring paper & substance			
4. Actual chemical mass (#3-#1)			
5. Small container & crystal			
6. Mass of crystal alone (#5-#2)			

**Part C Sketches:**

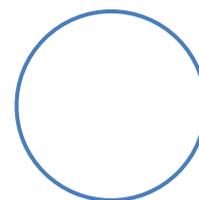
Crystal A



Crystal B



Crystal C



Crystal Shape \_\_\_\_\_  
Mineral Name \_\_\_\_\_

**Analysis Questions:**

1. Compare all three substances BEFORE they were mixed with water.
2. Compare the colors of the solutions before the crystals formed.
3. Are any of the crystals the same mineral? What is one reason to support your answer?
4. Were you able to use crystal shape to distinguish one crystal from another?

**Conclusion (RERUN):**