# Experiment 4.3 Post Lab Questions

**Show all work for calculations. Answer in complete sentences.**

1. Did one sample of solid appear to be more soluble in water than the other? Which sample? How could you tell? Use your data to support your answer.

2. Mario wishes to construct a table that lists the solubility in water of several substances. From various sources he finds the following data for solubilities at 0°C

| | |
|---|---|
| a. Boric Acid | 0.20 g in 10 mL of water |
| b. Bromine | 25 g in 600 mL of water |
| c. Washing Soda | 220 g in 1,000 mL of water |
| d. Baking Soda | 24 g in 350 mL of water |

What is the solubility of each substance in g/100mL?

3. From your answers to number 2 find the largest mass of each substance that would dissolve in 60 mL of water.

4. Suppose that 200 mL of a saturated solution of potassium nitrate were left standing in an open beaker on your desk for three weeks. During this time most of the water evaporated. Would the mass of the potassium nitrate dissolved in the solution change? Would the concentration of the potassium nitrate solution change over the course of the three weeks? Explain your answer.

5. Suppose we did the same experiment but with a different solvent. Do you believe your solubility would change? Why or why not?