Name: _____ Group: _____ Date: _____

LAB 6
TECHNIQUE

MEASURING SOLUBILITY

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Goal

Measure the solubility of a solid in water.

Materials

- marker
- 4 test tubes (16 mm × 150 mm) and stoppers (No. 1)
- test-tube rack
- balance (accurate to 0.01 g)
- wash bottle of distilled water
- 10-mL graduated cylinder
- container of a solid soluble in water (sugar, table salt, etc.)
- spatula

Procedure

1. Weigh the empty test tube and stopper. Record the mass.
2. Measure into the graduated cylinder exactly 5 mL of distilled water.
3. Pour the water into the test tube and close it with the stopper. Weigh and record the mass.
4. Calculate the mass of the water.
5. Add a small quantity of the soluble solid into the test tube.
6. Stopper the test tube and shake until dissolution is complete.
7. Repeat steps 5 and 6 until solute does not dissolve.
8. Weigh the empty graduated cylinder. Record the mass.
9. Decant the solution into the graduated cylinder. Measure and record the volume.
10. Measure and record the mass of the graduated cylinder and solution.
11. Calculate the mass of the dissolved solute.
12. Calculate the solubility of the solid.
13. Clean up and put away materials.

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Results

Record your results in the table below. Give the table a title.

Title:

Solid	Mass of solvent (g)	Volume of solution (mL)	Mass of solute (g)	Solubility of solid (g/mL)

Calculations

Write down your calculations in the boxes below.

Calculation of solvent mass

Calculation of solute mass

Calculation of solubility

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Reflecting on the lab technique

1. What is the solubility of each solid tested?

2. Is the solubility calculated equal to that indicated in tables of characteristic properties? If not, what are the possible sources of error?