

Name: _____

Date: _____

Practice Stencil: Solubility

1. Solute or solvent?

- a) The substance present in smaller quantities in a solution solute
- b) The substance present in larger quantities in a solution solvent
- c) Substance which dissolves another substance solvent
- d) The substance that dissolves solute

2. What is solubility? What unit do we use to measure solubility?
Name two factors that can change the solubility of a substance.

g/100 mL - Amount of solute which can be dissolved in solvent.
Depends on temperature + nature

3. The solubility of sugar is 179.2 g/100 mL. What does this mean?
B) What will happen if we try to dissolve more sugar in 100 mL of water?

A) 179.2g is the maximum that will dissolve in 100 mL of water.
B) It won't dissolve because it is saturated + will leave residue at the bottom

4. True or false?

- a) In general, the colder a substance is, the more capable of dissolving a solute it is. F
- b) If we leave a solution of sugar and water in the fridge, sugar will crystallize out of solution and fall to the bottom of the glass T

temp ↓ - solubility ↓, particle movement ↓

5. What is the solubility of a substance that can dissolve up to 75 g in 225 mL of water at 0°C? Show your work.

$$\frac{75}{225} = \frac{x}{100} = 33\text{g}/100\text{mL} \quad \frac{75}{225} = 0.33\text{g}/\text{mL} \quad (\text{or } 33\text{g}/100\text{mL})$$

6. Name 3 factors that influence the rate of dissolution and explain each one.

Contact Surface - Crushing = more contact with water
Stirring - speeds up particle collisions
Heat - ↑ temp = more collisions more agitation
more space