

SOLUBILITY CURVES

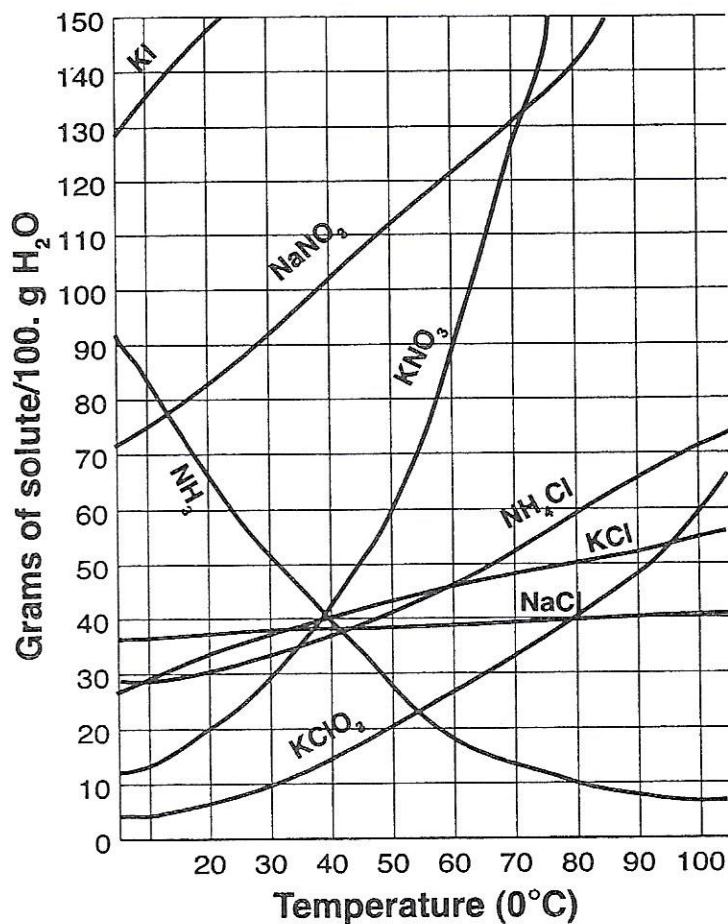
Name _____

Answer the following questions based on the solubility curve below.

- Which salt is least soluble in water at 20° C? _____
- How many grams of potassium chloride can be dissolved in 200 g of water at 80° C?

- At 40° C, how much potassium nitrate can be dissolved in 300 g of water? _____
- Which salt shows the least change in solubility from 0° - 100° C?

- At 30° C, 90 g of sodium nitrate is dissolved in 100 g of water. Is this solution saturated, unsaturated or supersaturated?



- A saturated solution of potassium chlorate is formed from one hundred grams of water. If the saturated solution is cooled from 80° C to 50° C, how many grams of precipitate are formed? _____
- What compound shows a decrease in solubility from 0° to 100° C? _____
- Which salt is most soluble at 10° C? _____
- Which salt is least soluble at 50° C? _____
- Which salt is least soluble at 90° C? _____

ELECTROLYTES

Name _____

Electrolytes are substances that break up (dissociate or ionize) in water to produce ions. These ions are capable of conducting an electric current.

Generally, electrolytes consist of acids, bases and salts (ionic compounds). Nonelectrolytes are usually covalent compounds, with the exception of acids.

Classify the following compounds as either an electrolyte or a nonelectrolyte.

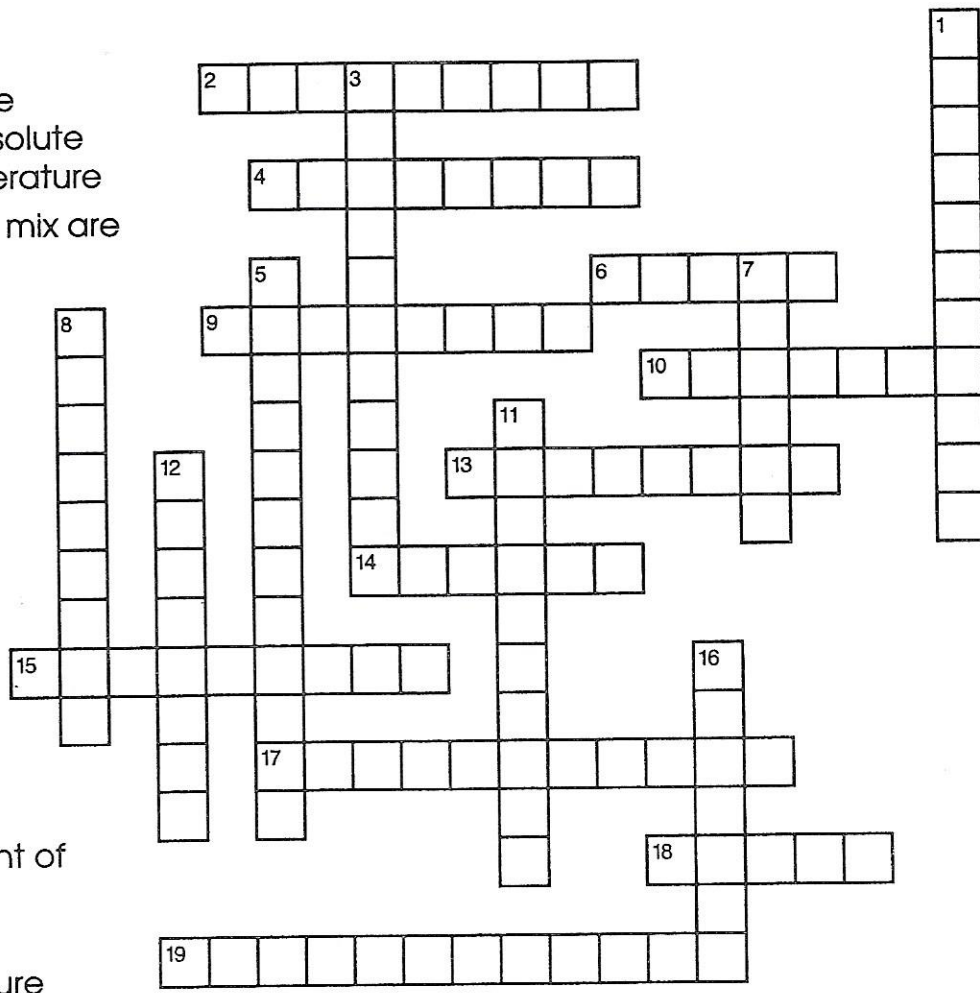
Compound	Electrolyte	Nonelectrolyte
1. NaCl		
2. CH ₃ OH (methyl alcohol)		
3. C ₃ H ₅ (OH) ₃ (glycerol)		
4. HCl		
5. C ₆ H ₁₂ O ₆ (sugar)		
6. NaOH		
7. C ₂ H ₅ OH (ethyl alcohol)		
8. CH ₃ COOH (acetic acid)		
9. NH ₄ OH (NH ₃ + H ₂ O)		
10. H ₂ SO ₄		

SOLUTIONS CROSSWORD

Name _____

Across

2. Solution containing the maximum amount of solute possible at that temperature
4. Two liquids which can mix are said to be _____.
6. The presence of a nonvolatile solute will _____ the boiling point of a solvent.
9. A homogeneous mixture
10. Substance present in larger amount in a mixture
13. Moles of a solute per kilogram of solvent
14. Solution containing a relatively large amount of solvent
15. The solubility of gases _____ as temperature increases.
17. State in which the rate of dissolving is equal to the rate of precipitation
18. The presence of a nonvolatile solute will _____ the freezing point of a solvent.
19. These substances dissociate or ionize in water and are then able to conduct an electric current.



Down

1. Properties that depend on the number of particles in solution
3. Solution in which more solute can be dissolved
5. Solution containing a relatively large amount of dissolved solute
7. Substance present in smaller amount in a mixture
8. The solubility of most solids _____ as temperature increases.
11. Maximum amount of solute that can dissolve in a stated amount of solvent at a given temperature
12. Moles of solute per liter of solution
16. Solutions in which water is the solvent are called _____.