

Unit 8: Solutions Chapter 12 & 13

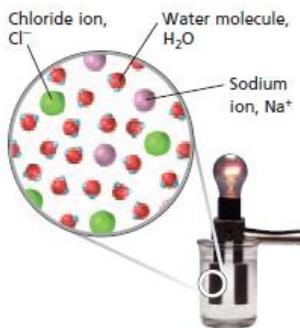
Draw the dissolution process, include solute and solvent

Parts of a Mixture: (pg 402)

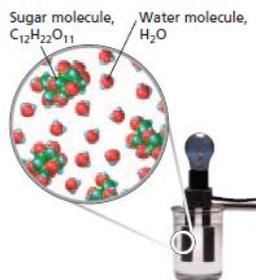
- Solute:
- Solvent:

Electrolytes (Pg 406 & 442)

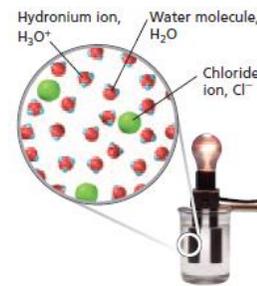
- Label each being an electrolyte or as a nonelectrolyte



(a) Salt solution—



(b) Sugar solution—



(c) Hydrochloric acid solution—

- Strong electrolyte:
- Weak electrolyte:

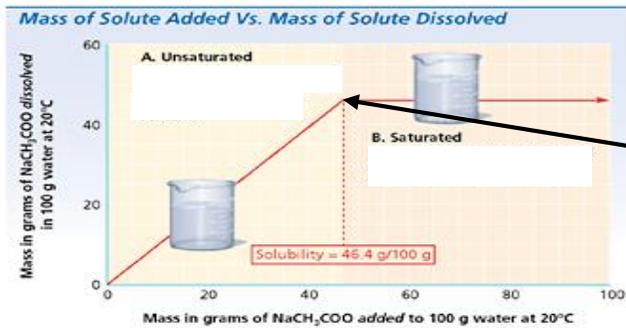
Factors that affect rate of Dissolution (Pg 407)

- Where does dissolution occur?
- **Label** the beakers below as small or large surface area and note if the size of particles are big or small.
- _____ the **surface area** of the solute = _____
particle size of the solute = _____ contact of the solute to
the solvent = _____ rate of dissolution.
- Increasing **agitation** = increasing _____ or _____ helps to disperse the solute particles =
_____ contact of the solute to the solvent = _____ rate of dissolution.
- Higher **temperature** = _____ frequency of collisions between solvent and solute = _____ energy = _____
rate of dissolution because there is _____ energy to separate the _____ and to _____ them in among
the solvent molecules.
- However, in gases (pg 414) generally the _____ temperature _____ the solubility of the gas
in the liquid.
- How does **pressure** effect the rate of dissolution? Explain. (pg 413)



Solubility (pg 408-409)

- At a given temperature, there is a _____ to the amount of solid solute that can be dissolved in a solvent.
- _____ in the amount of that solid dissolves = _____ in the concentration of dissolved molecules = _____ collisions between solvent and solute.
- A dynamic equilibrium is established between dissolution and _____ when the amount of molecules that are crystallizing is the _____ the amount that are going into solution.



This is the point in which....

- Saturated:
- Unsaturated:
- Supersaturated:
- How long will a supersaturated solution last?

Solute-Solvent Interactions (pg 410-413)

- Describe the statement "likes dissolve likes"
- Describe what is going on in the picture
- miscible:
- immiscible:
- Describe what is going on in the pictures (Pg 412)

