Solubility

Daily Goal: Determine what affects the rate of dissolving in a solution.

Solubility

- Solutions Review
  - A solution is a homogeneous mixture in which one substance dissolves another
    - The substance that does the dissolving is the solvent
    - The substance that gets dissolved is the solute
- "Like Dissolves Like"
  - Substances can only be dissolved in similar substances
    - Polar solvents will dissolve ionic & polar solutes
    - Non-polar solvents will dissolve non-polar solutes

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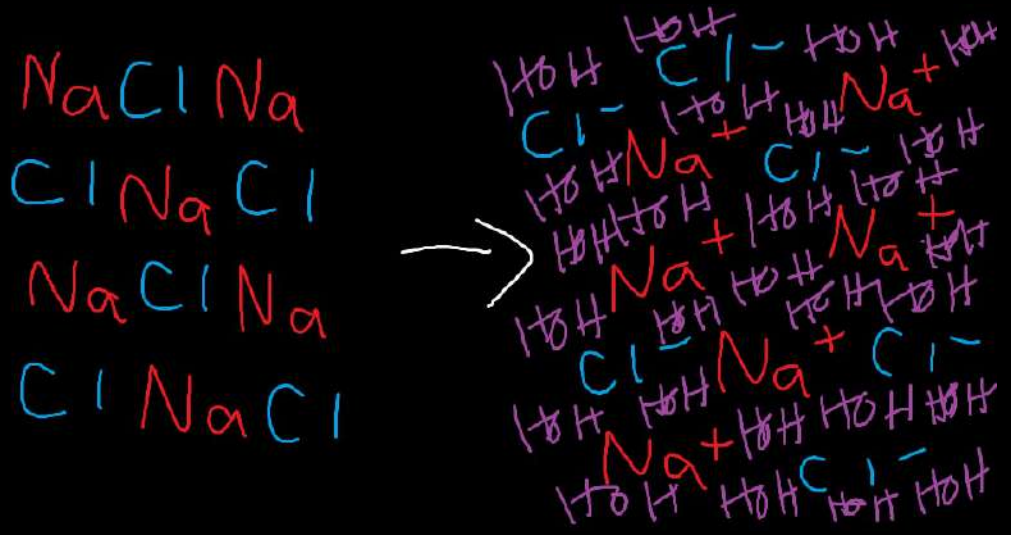
Solubility

- Methods of Dissolving
  - Ionic compounds dissociate, breaking up into their individual ions
    - Physical change



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- Methods of Dissolving
  - Covalent compounds disperse, breaking into smaller and smaller pieces of themselves
    - Physical change

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- Methods of Dissolving
  - Unlike the other two methods of dissolving, ionization is a chemical change that occurs when neutral compounds become charged

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Solubility

- Factors that affect the rate of dissolving
  - Temperature
    - Increased Temperature = Faster Dissolving
  - Agitation
    - More Agitation = Faster Dissolving
  - Surface Area
    - More Surface Area = Faster Dissolving
- When we compare the amount of solute to the temperature, we can create a solubility curve

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- The concentration of a solution is the amount of solute dissolved in the solvent
  - Unsaturated: Solution with less than the maximum amount of solute dissolved in it
  - Saturated: Solution with the maximum amount of solute dissolved in it
  - Supersaturated: Solution with more solute dissolved in it than it should be able to hold at a given temperature and pressure

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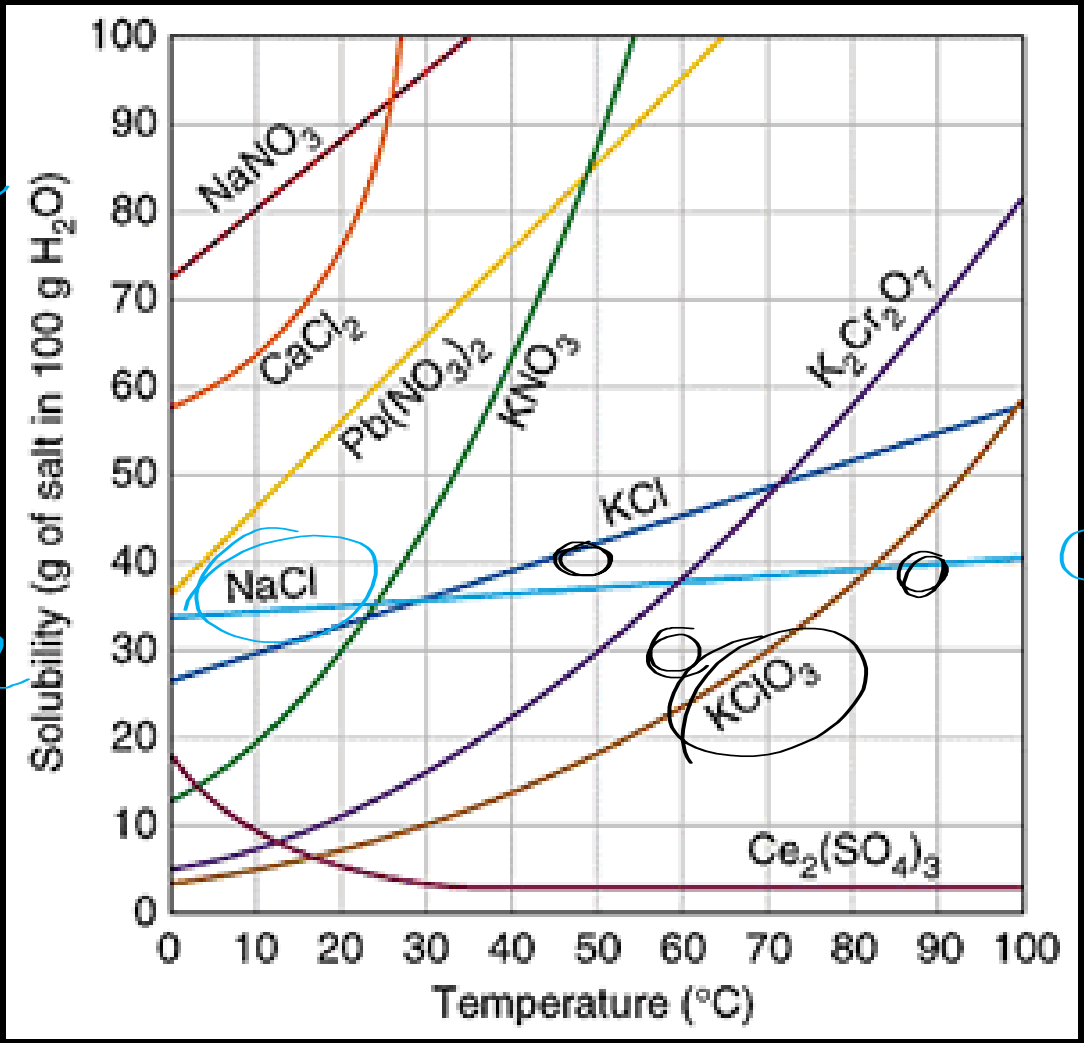
above line super sat.

under line unsat



Most = steepest
least = flattest

online = saturated