

Warm up 9.3.15

- **Give 5 examples (or evidence) of a chemical change**
- **look in your book to help you**
- **Page 24 will be Cornell notes...You probably will need two pages**

Solutions

What is a solution?

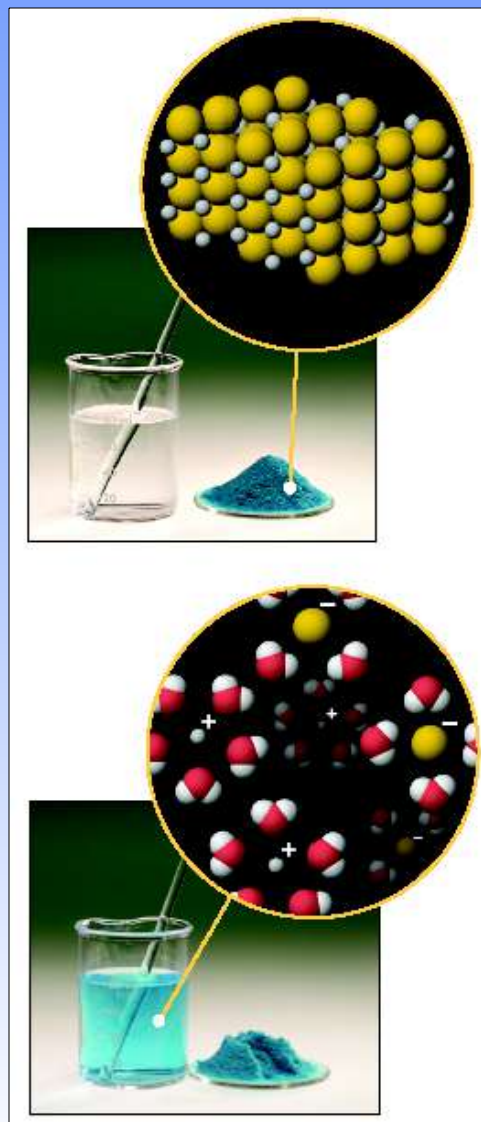


Some Definitions

A solution is a
homogenous
mixture of 2 or more
substances.

Made of two parts:

SOLVENT
SOLUTES

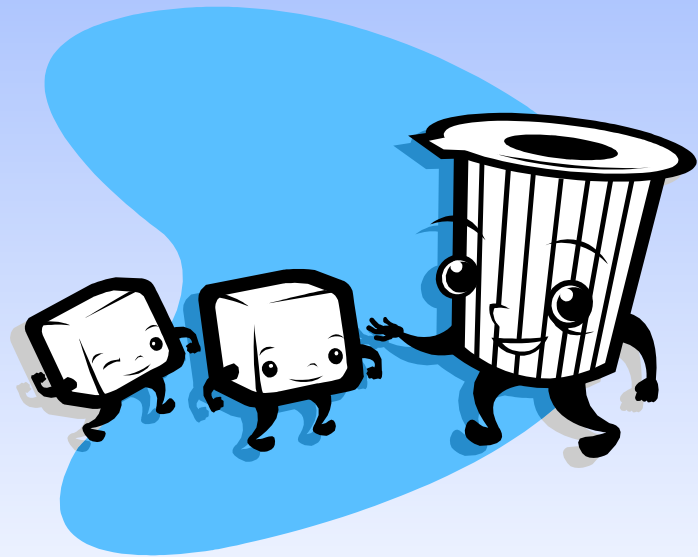


Parts of a Solution

- **SOLUTE** – the part of a solution that is being **dissolved** (usually the lesser amount)
 - **SOLVENT** – the part of a solution that **dissolves the solute** (usually the greater amount)
- **Solute + Solvent = Solution**

CHECKPOINT

- Mrs. Bradshaw is making lemonade for the class...YUMMMM...wouldn't it be nice!
- What is the solute?
- What is the solvent?



TYPES OF SOLUTIONS

- **Liquid - seawater**
- **Gas - air**
- **Solid – alloys**
- **Liquid/Gas-Soda**



Solubility

- Three (3) methods that affect solubility
 - Mixing, stirring, or shaking
 - Heating (increase temperature)
 - Crushing or grinding (increase surface area)



Rate of Dissolving Liquids and Gases

- 2L Coke from going flat?
- Increase the pressure (keep cap on it)
- Decrease the temperature (keep in the fridge)
- DON'T SHAKE



Definitions

Solutions can be classified as **saturated, unsaturated, or supersaturated.**

A **saturated** solution contains the maximum quantity of solute that dissolves at that temperature.

An **unsaturated** solution contains less than the maximum amount of solute that can dissolve at a particular temperature

Supersaturated solutions: is one that contains more solute than a saturated one at the same temperature



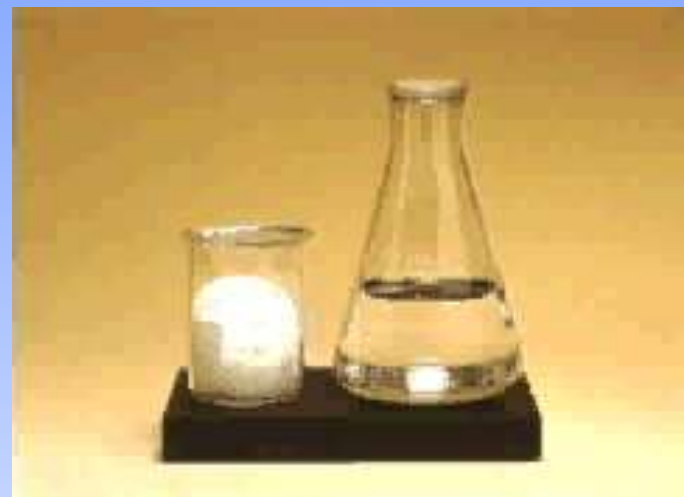
Definitions

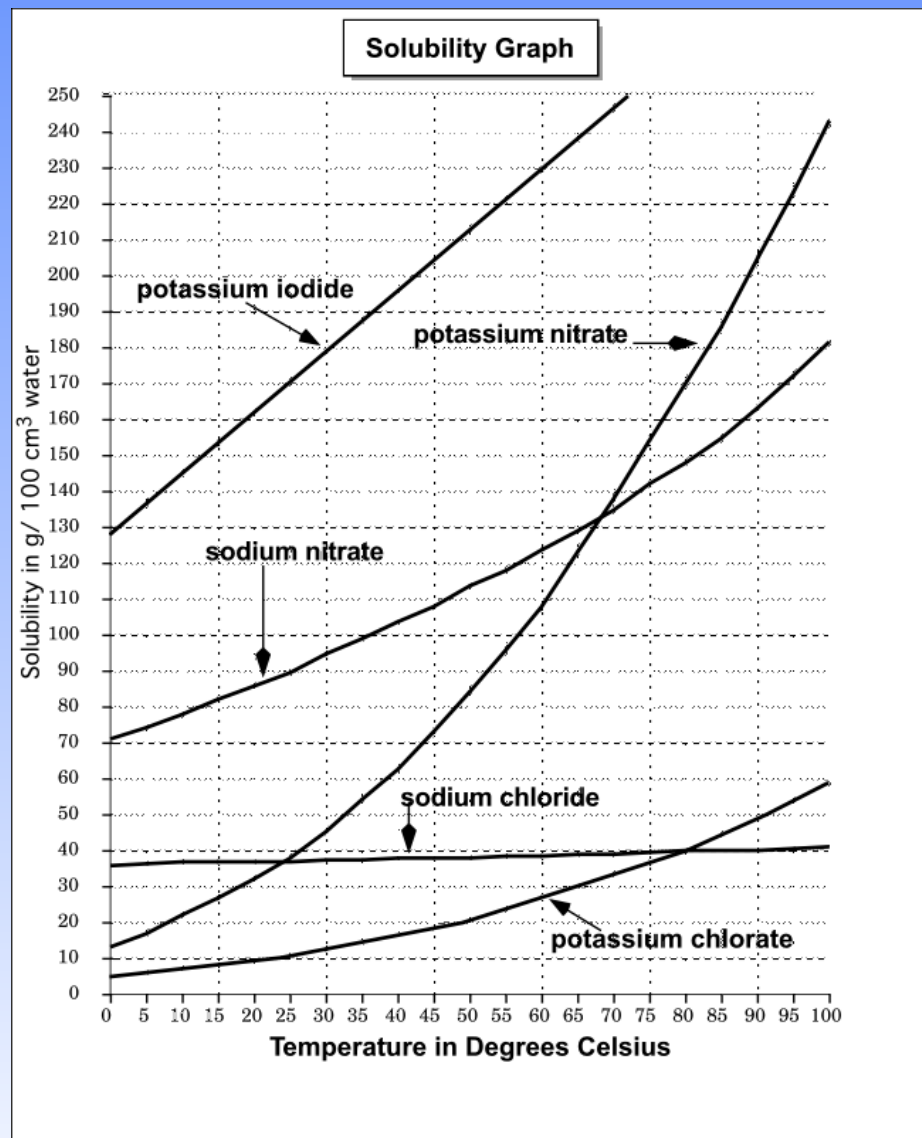
SUPERSATURATED SOLUTIONS

contain more solute than is possible to be dissolved

Supersaturated solutions are unstable. The supersaturation is only temporary, and usually accomplished in one of two ways:

- 1. Warm the solvent so that it will dissolve more, then cool the solution**
- 2. Evaporate some of the solvent carefully so that the solute does**





- What is the solubility of Potassium Iodide at 30 degrees Celsius?
- If 50 g of Sodium Chloride is dissolved in 100g water at 45 degrees Celsius, what type of solution is formed? (saturated, unsaturated, supersaturated)

Today

Review Catch up 1/2 day

- **MAKE SURE!!!**
- **Vocabulary is complete in Interactive Notebook**
- **Solubility Curve has been turned in (DUE TODAY)**
- **Finish anything from lab yesterday**
- **NOTEBOOK CHECK THURSDAY**
 - Vocabulary (pg 4)
 - Notes (pg 6)
 - quick write (pg 7)

Page 22

Solutions Quick Write based on Standards—3 short paragraphs

- **Summarize solutions**
 - Solute and solvent
 - IN our sugar lab, the sugar was the _____ and the water was the _____
- **Factors affecting Solubility**
 - Relate to Demo.
 - » What were the three ways?
 - » Which one did you observe as the fastest
- **Solubility Curve**
 - How do you read a solubility curve?
 - What happens to solubility as the temperature increases?
 - What is a saturated, supersaturated, and unsaturated solution?

TOD---Quiz

- Everyone takes it,
- Do you best,
- Use your notebook
- If you do bad, I will replace with your test grade.