

# Solubility

## What is Solubility?

Solubility is the measure of how well one substance (solute) dissolves into another (solvent).

If salt is dissolved into water: Salt is the \_\_\_\_\_. Water is the \_\_\_\_\_.

If a solute dissolves into a solvent, then it is: \_\_\_\_\_.

If the solute will not dissolve, then it is: \_\_\_\_\_.

A \_\_\_\_\_ is created when a solute dissolves into a solvent.

When a solution cannot dissolve any more solute, it is a \_\_\_\_\_.

If more solute can still dissolve, the solution is \_\_\_\_\_.

**Example:** If you try to stir sugar into iced tea, but no more will dissolve, then the solution is \_\_\_\_\_. If you can still dissolve more lemonade mix into the pitcher of water, then the solution is \_\_\_\_\_. Oil will not dissolve in water because it is \_\_\_\_\_.

## What if the solute is insoluble?

A \_\_\_\_\_ is created when large, undissolved particles are in the solvent. These particles can be filtered out, or will eventually settle.

A \_\_\_\_\_ is created when the solvent contains very small, undissolved particles. These particles are too small to see, and will not settle.

## Why do some things dissolve better than others?

There are many factors that affect solubility.

[Materials, Stirring/Mixing, Temperature, Surface Area/Size of Particle, and Already Dissolved Solute]

## How does the material/substance affect the solubility?

Some materials are more soluble than others.

As a general rule, like dissolves like. Substances must have similar characteristics to be soluble. If these characteristics are different, then they are insoluble. [Ex: Alcohol dissolves easily into water, but oil and water will never mix.]

## The affect of stirring on solubility.

The more we stir, mix, or shake a mixture, it will make the solute dissolve \_\_\_\_\_.

## The affect of temperature on solubility.

For most mixtures, if we \_\_\_\_\_ the temperature, the solute will dissolve much easier.

## How does size particle affect solubility?

If the particles of the solute are larger, then it will take much \_\_\_\_\_ for them to dissolve.

## How will it affect solubility if the solution already has dissolved solute?

If a solution already contains dissolved material, it will be much more \_\_\_\_\_ for a solute to be dissolved.