

# CHEMISTRY STUDY MATERIALS FOR CLASS 9

## (NCERT based Revision Notes on Chapter - 2)

**GANESH KUMAR**

**DATE:- 29/08/2020**

---

### Is Matter Around Us Pure

**Alloys:-** Alloys are homogeneous mixtures of metals or a mixture of a metal and another element that cannot be separated into their components by physical methods.

Examples:

- Steel, a combination of iron (metal) and carbon (non-metal).
- Bronze, a combination of copper (metal) and tin (metal).
- Brass, a mixture of copper (metal) and zinc (metal).

### **Concentration of Solutions**

#### **Solubility**

- Solubility is the property showing the ability of a given substance, which is the solute, to dissolve in a solvent.
- It is measured in terms of the maximum amount of solute dissolved in a solvent at equilibrium.
- The resulting solution is called a saturated solution.

#### **Factors Affecting Solubility:**

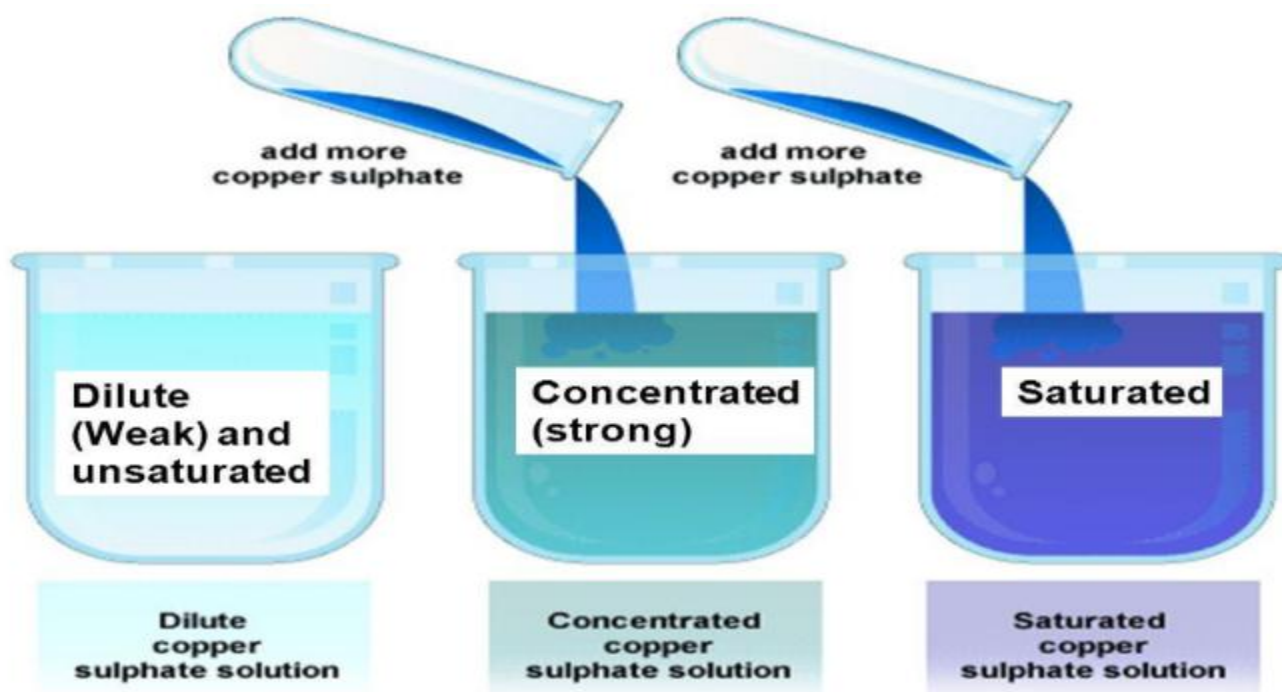
- **Temperature** – Solubility increases with temperature. The situation is different for gases. With the increase in temperature, they became less soluble in each other and in water, but more soluble in organic solvents.
- **Pressure** – For the majority of solid and liquid solutes, pressure does not affect solubility. The solubility of gas is directly proportional to the pressure of this gas.

## Types of solutions based on the concentration of the solution

- **Three types** of solutions exist based on the concentration of the solution:

(i) Dilute (ii) Concentrated (iii) Saturated solution and (iii) Unsaturated solution.

- **Dilute solution** – A solution in which the concentration of the solute is much less than that of the solvent. **For Example**, If we mix 1gm of salt in 500 ml of water, the salt solution thus obtained will be diluted. If we keep on adding the solute in a solution there comes a point when no more solute dissolves in the solution. This is called the **Saturation Point of a Solution**.
- **Unsaturated Solution** – A solution, in which we can add more amount of solute as it has not achieved its saturation level yet, is called an Unsaturated Solution. A dilute solution can be called as an **Unsaturated Solution**.
- **Concentrated Solution** – A solution with a large amount of solute is called a **Concentrated Solution**.
- **Saturated Solution** – A solution in which no more solute can be added since it has already dissolved the maximum amount of solute it can is called a **Saturated Solution**.



\*\*\*\*\*