Salts

Neutralisation and Formation of Salts

The reaction between an acid and a base is called neutralisation reaction. When such a reaction takes place, water and salt are formed. During neutralization, acid and base 'cancel' the effect of each other. In other words-

Salt is the product formed from the **neutralisation reaction** of acids and bases.
E.g.

HCl + NaOH → NaCl + H_2O

Hydrochloric Acid (acid) + Sodium Hydroxide (base) → Sodium Chloride (salt) + Water

In the reaction between hydrochloric acid and sodium hydroxide the salt formed is sodium chloride.

Salt can be acidic, basic or neutral in nature.

Properties of Salts

- Salt is made up of Sodium and Chlorine.
- Salt has negatively charged ions (OH-) and positively charged ions (H+).
- Due to their oppositely charged ions, the ions are attracted towards each other with an electrostatic force of attraction which is called an ionic bond.
- An equal number of opposite charges makes the ionic compounds neutral with no charge.
- Salt water is a good conductor of electricity.
- Salts are ionic in nature due to the presence of ions.
- They are brittle, hard and crystalline solids.
- Salt is white, odorless and it has a salty taste.
- All potassium (K), ammonium (NH4+) and sodium (Na) salts are soluble in water (H2O).

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- Nitrites, nitrates, and bicarbonates can be dissolved in water.
- All metallic oxides, metallic carbonates, hydroxides, phosphates, and sulphides are insoluble in water.

Uses of Salts

- Common salt is used as a raw material for making a large number of useful chemicals in the industry such as sodium hydroxide, sodium carbonate, sodium hydrogen carbonate, hydrochloric acid, chlorine, hydrogen and sodium metal.
- Common salt is used in cooking food.
- Common salt is used as a preservative in pickles, and in currying meat and fish.
- Common salt is used in the manufacture of soap.
- Washing soda is a transparent crystalline solid.
- Sodium carbonate is used in the manufacture of sodium compounds such as borax.
- Sodium hydrogen carbonate is used as an antacid in medicine to remove the acidity of the stomach.

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Flowchart of Acid, Bases and Salts