

Chemistry in Everyday life

1. Chemicals play a very important role in improving the **quality of human life**.

Many substances which are used in our daily life situations are chemical compounds.

2. **Drugs** are chemicals of low molecular masses (-100- 500 u). These interact with macromolecular targets and produce a biological response.

3. If taken in doses higher than those recommended, most of the drugs used as medicines are potential poisons. Use of chemicals for therapeutic effect is called **chemotherapy**.

4. **Antacids** are the substances that remove the excess acid and raise the pH to appropriate level in the stomach.

5. **Antihistamines** are the drugs used to treat allergy such as skin rashes.

6. **Tranquilizers** are the chemical compounds that are used for the treatment of stress and mental diseases. Also known as **psychotherapeutic drugs**.

7. **Analgesics** are the drugs used for relieving pain.

8. **Antibiotics** are the chemical substances which are produced as metabolic products by some specific organisms (bacteria, fungi and moulds) and can destroy or inhibit growth of some other micro-organisms.

9. **Antiseptics** are those chemical compounds that prevent the growth of micro-organism or may even kill them, e.g., dettol.

10. **Disinfectants** kill micro-organisms. They are not safe to be applied to living human tissues.

11. **Artificial sweeteners** are the chemical compounds that are added to foods to make them sweet.

12. **Food preservatives** are the chemical substances that are added to the food to prevent their decaying and to retain their nutritive value for longer period of time. Sodium benzoate is the most commonly used preservative.

13. **Soaps** are sodium or potassium salts of long chain fatty acids, e.g., stearic, oleic and palmitic acids. Soaps containing sodium salts are formed by heating fat (i.e., glyceryl ester of fatty acid) with aqueous sodium hydroxide solution. This process is called **saponification**.

14. **Synthetic detergents** are sodium salts of alkylbenzene sulphonic acids. They

are better cleansing agents than soap. These are of three types:

- (a) **Anionic detergents** are those detergent which contain large part of anion.
- (b) **Cationic detergents** are mostly acetates or chlorides of quaternary amines.
- (c) **Non-ionic detergents** are esters of high molecular mass.