

### Chemicals in Food

#### Purpose:

- For their preservation.
- Enhancing their appeal.
- Adding nutritive value.

(a) Artificial Sweetening Agents: Natural sweeteners (sucrose), artificial sweeteners (Aspartame, Saccharin)

(b) Food Preservatives : Prevent spoilage of food due to microbial growth. (Table salt, sugar)

### Chemistry In Everyday Life

### Cleansing Agents → Detergents → Types

#### (i) Soap (Saponification)

Glycerol ester of stearic acid (fat) + Sodium hydroxide → Sodium stearate + Glycerol

#### (ii) Synthetic Detergents :

- Anionic detergents : Sodium salts of sulphonated long chain alcohols or hydrocarbons. (sodium salts of alkyl benzene sulphonates)
- Cationic detergents : Quaternary ammonium salts of amines with acetates, chlorides or bromides as anions. (Cetyltrimethylammonium bromide)
- Non-ionic Detergents : Non-ionic type

### Therapeutic action of Different Classes of Drugs

- Antacids: Substances that neutralize the excess HCl and raise pH in stomach (Ranitidine, Cimetidine)
- Antihistamines : Interfere with natural action of histamine by competing with histamine for binding sites of receptor where histamine exerts its effect.

#### • Neurologically Active Drugs

(a) **Tranquillizers**: Class of chemical compounds used for the treatment of stress and mild or even severe mental diseases. (Iproniazid, Phenelzine)

(b) **Analgesics**: Reduce/abolish pain without causing impairment of consciousness, mental confusion, incoordination or paralysis or other disturbances of nervous system. These are classified as

(i) Non-narcotic (non-addictive) : (Aspirin, Paracetamol)

(ii) Narcotic : (Morphine)

#### • Antimicrobials

(a) **Antibiotics** : Drugs to treat infections because of their low toxicity for humans and animals. (Prontosil)

(b) **Antiseptics and Disinfectants** : Chemicals which either kill or prevent the growth of microorganisms. Antiseptics are applied to living tissues whereas disinfectants are applied to inanimate objects.

• **Antifertility Drugs**: Birth control pills (Norethindrone, ethynyl estradiol)

