

# Chemistry in Action

## Drugs:

| Drugs                                   | Description  | Examples  |
|---|--|---|
| <b>Analgesics</b>                       | Relieve or decreases the pain without causing unconsciousness. These are also known as "Pain Killers".   | Asprin, Analgin, seridon etc.   |
| <b>Tranquizers/<br/>Antidepressants</b> | These are used for treatment of mental diseases.   | Equanil, Calmpose, Tofranil, Barbituric Acid, Cocaine and Iproniazids etc..   |
| <b>Antiseptics</b>                      | They are applied on living tissues to kill or prevent the growth of micro-organisms.   | Dettol, Savlon and Acriflavin etc.  |
| <b>Disinfectants</b>                    | These are applied on floor, instruments or wall etc. to kill microorganisms but are not safe for application on living tissues.  | Phenol  |
| <b>Antimicrobial</b>                    | These are use to either kill (bactericidal) or stop the growth of diseases causing microorganisms. (bacteriostatic).   | Salvarsan, Prontosil, Sulphanilamide, Bacteriostatic Drugs: Erythromycin, Tetracycline, Chloramphenicol Bactericidal Drugs: Ofloxacin, Aminoglycosides. |
| <b>Antipyretics</b>                     | These drugs bring down the body temperature during fever.  | Paracetamol, Analgin and Novalgin.  |
| <b>Antifertility Drugs</b>              | Prevent pregnancy in women by controlling menstrual cycle and ovulation.   | Norethindrone & Mestranol   |
| <b>Antacids</b>                         | Used for the treatment of acidity. Metal hydroxides are generally used as antacids.  | Eno, & Milk of magnesia $[Mg(OH)_2]$  |
| <b>Antibiotics</b>                      | These are the chemical substances which are produced by micro –organisms like bacteria and fungi and are able to kill or stop the growth of pathogenic microorganisms. | Penicillin, Amoxicillin and Ampicillin.   |
| <b>Antihistamins</b>                    | These drugs compete with histamine for finding sites of receptors and thus interfere with the natural action of histamine.   | Brompheniramine & Terfenadine   |

## Artificial Sweetening Agents

| Artificial sweetener | Structural formula | Sweetness value in comparison to cane sugar |
|----------------------|--------------------|---|
| Aspartame            |                    | 100   |
| Saccharin            |                    | 550   |
| Sucralose            |                    | 600   |
| Alitame              |                    | 2000  |

### Food preservatives:

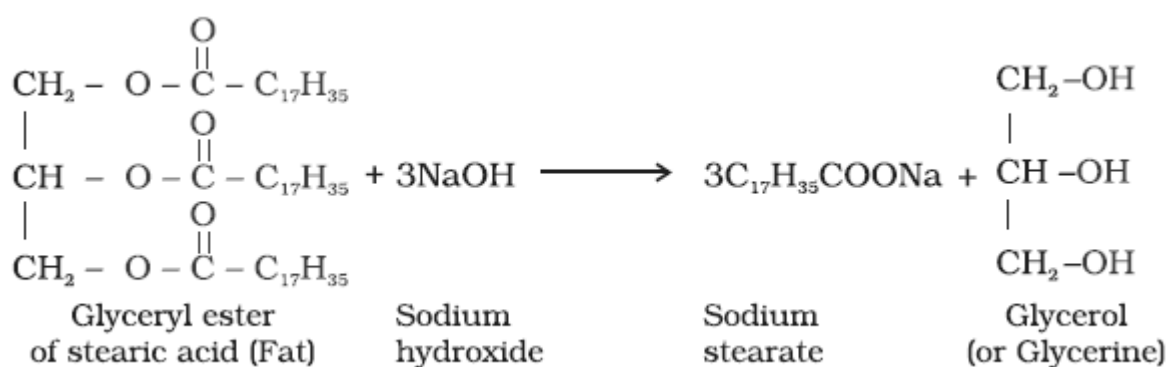
These are the chemical substances which prevent undesirable changes in flavor, colour, texture of the food during processing and storage of food.

Examples, Table salt, sugar, vegetable oils, sodium benzoate ( $\text{C}_6\text{H}_5\text{COONa}$ ) etc

### Cleansing Agents

#### Soaps:

Sodium or potassium salts of fatty acids.

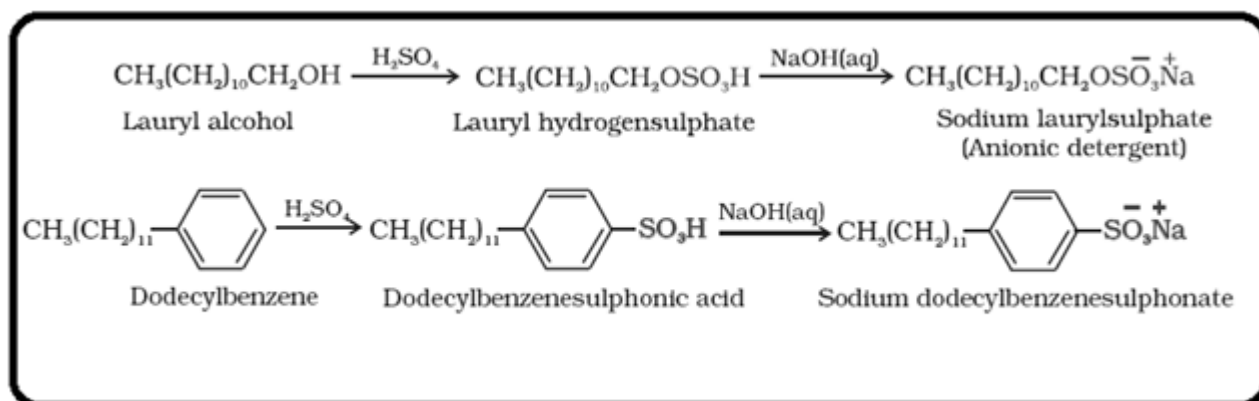


Soaps do not work with hard water as it forms insoluble salts with calcium and magnesium ions present in hard water.

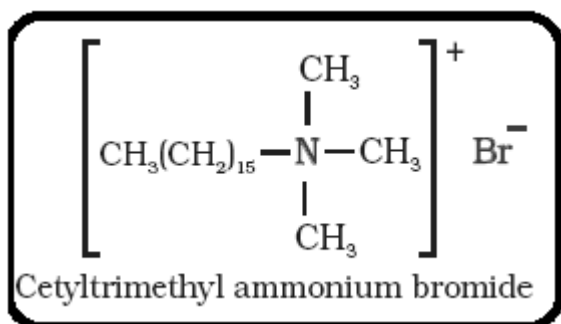
### Detergents:

Sodium or potassium salts of sulphonic acids. These can work with hard water also.

Anionic Detergents: Sodium Salts of sulphonated long chain alcohols or hydrocarbons



**Cationic Detergents:** Quaternary ammonium salts of amines with acetates, chlorates or bromates.



**Non-Ionic Detergents:** Do not contain any ion.

