

## EXPERIMENT NO: 11

### AIM OF THE EXPERIMENT:

To study antiseptic and marketed products.

### THEORY:

An antiseptic is a chemical agent that slows or stops the growth of microorganisms on external surface of the body and help to prevent infections.

Antiseptics should be distinguished from antibiotic that destroy microorganisms inside the body and from disinfectants which destroy microorganisms found on in inanimate (non-living) objects.

Antiseptic & disinfectants are non-selective anti-infective agents that are applied topically.

Their activity ranges from simply reducing the number of microorganism to within safe limits of public health interpretations (sanitization), to destroy all microorganisms (sterilization), on the applied surface. However antiseptics are often refer to as skin disinfectants.

Most Chemical agents can be used as both an antiseptic & a disinfectant. The purpose for which it is used as both an antiseptic & a disinfectant. The purpose for which it is used is determined by its concentration. For example, Hydrogen peroxide 6% solution is used for cleansing wounds, while stronger solution (>30%) are used in industry as bleach & oxidizing agents.

### Classification of Antiseptics:

Antiseptics can be classified according to their chemical structure. Commonly used antiseptic groups include Alcohols, Quaternary Ammonium Compounds, Chlorhexidine & other Diguanydes, Antibacterial dyes, chlorine & hypochlorite, Inorganic Iodine compounds, Metals, peroxides & permanganates, halogenated phenol derivatives & Quinolone derivatives. The following table lists some of the agents within these groups.

### Uses of Antiseptics:

Antiseptic is mainly used to reduce levels of microorganisms on the skin & mucous membranes, The skin & mucous membranes of the mouth, nose & vagina are home to a large number of microorganism (which are normally harmless).

When the skin or mucous membranes are damaged or breached in surgery, antiseptic is used to disinfect the area & reduce the chances of infection. People who are treating patients with wounds or burns should wash their hands with an antiseptic solution to minimize the risk of cross infection.

### **Antiseptics are used for:**

- **Handwashing:** chlorhexidine gluconate & povidone iodine solutions are often used in hand scrubs & hand rubs in hospitals settings. Alcohol in concentration >60% will destroy pathogens such as the SARS-CoV-19 VIRUS.
- **Pre -operative Skin disinfection:** Antiseptics applied to the operation site to reduce the resident skin flora. Caution should be used in facial use of solutions containing chlorhexidine, as these can injure the eye causing keratitis.
- **Mucous Membrane disinfection:** Antiseptic irrigation may be instilled into the bladder, urethra or Vagina to treat infections or cleanse the cavity prior to catheterization.
- **Preventing & Treating infected Wounds & burns:** Antiseptic preparations are available over the counter from your Pharmacist to treat minor cuts, abrasions & burns.
- **Treating Mouth & Throat Infections:** Dequalinium chloride has both antibacterial & antifungal properties & is the active ingredient in Antiseptic throat Lozenges.

**RESULT:** Understood the study about antiseptic & their marked products.