

INDUSTRIAL PHARMACY-I

UNIT IV-PARENTERALS

CLASS:34

TOPIC Eye ointments and eye lotions;

EYE OINTMENTS

- Eye ointments are sterile preparation meant for application to the eye.
- These are prepared under aseptic conditions and packed in sterile collapsible tubes which keep the preparation sterile until whole of it is consumed.
- Nowadays eye applicaps are available which contain only one application of the eye-ointment preparation.

Formulation of Eye Ointments

- The ointment based for an eye-ointment must be no-irritating to the eye.
- The eye ointment base should **melt near to the body temperature, so as to permit the diffusion of the drug through the lachrymal** secretions of the eye.
- For the preparation of eye-ointment the following base is used:-
 - **Yellow soft paraffin 80g**
 - **Liquid paraffin 10g**
 - **Wool fat 10g**

Methods of preparation of Eye Ointments

- Melt wool fat, soft paraffin on a water bath.
- Add liquid paraffin.
- Filter through coarse filter placed in heated funnel. It is sterilized by dry heat method (1600C for 2 hours). Incorporate the medicament with the eye ointment base. Pack in sterile containers.

Preparation of eye ointments

- Prepared using aseptic techniques to incorporate the finely powdered active ingredient or a sterilized concentrated solution of the medicament into the sterile eye ointment basis.
- Immediately after preparation, the eye ointment is filled into the sterile container which is then sealed.
- The screw cap should be covered with a readily breakable seal.
- Certain eye oint can be sterilized in their final container using ionizing radiation.

Eye lotion

INTRODUCTION

- Eye lotion are the sterile aqueous solutions used for washing of the eyes.
- The eye lotions are supplied in concentrated form and are required to be diluted with warm water immediately before use.
- They are usually applied with a clean eye-bath or sterilized fabric dressing and a large volume of solutions is allowed to flow quickly over the eye.
- Eye lotions should be **isotonic** and **free from foreign particles** to avoid irritation to the eye.
- They are required to be prepared fresh and should not be stored for **more than two days** as the lotion may get contaminated include sodium chloride, sodium bicarbonate, boric acid, borax or zinc sulphate

FORMULATION OF EYE LOTION

- Eye lotions are simple solution. They are iso-osmotic with tears because they cause much greater dilution of the lachrymal fluid and hence are more likely to cause discomfort if not adjusted.
- The eye lotion should be sterile because the large volume is used to irritation from the eye.
- While removing the irritation from the eye, it become more susceptible to infection.
- The eye lotions are sterilized by **autoclaving** or by passing through bacteria proof filters.
- Sodium chloride eye lotion and sodium bicarbonate eye lotion are commonly used to remove foreign substance from the eye.

PREPARATION OF EYE LOTION

EXAMPLE:-

- To prepare and submit ml of sodium chloride eye lotion B.P.C
- Rx
- Sodium chloride 9gm
- Purified water to produce 1000ml

Method:-

- Dissolve sodium chloride in purified water and made the final volume by adding more of purified water. Filter through sintered glass filter grade

The eye lotion is transfer to the bottle. Close and sealed the bottle sterilize it by autoclaving



Requirements of eye lotions

- Sterile
- Preservative-free
- Isotonic to the lacrimal fluid
- Neutral pH
- Large vol. not exceeding more than 200ml
- Non-irritant to ocular tissue