

PHARMACEUTICS -1 (BP 103)**UNIT:3 LIQUIDS TO BE USED IN MOUTH**

CLASS:2

TOPIC: LIQUIDS TO BE USED IN MOUTH**LIQUIDS TO BE USED IN MOUTH****GARGLES**

Gargles are aqueous solution used to prevent or treat infection. They are usually available in concentrated form with direction for dilution with warm water for use. They are used to relieve soreness in mild throat infection. Phenol or thymol is used as antibacterial agent in gargles. Phenol or thymol may be present in low concentrations which exert mild anaesthetic effect; KCl is included in gargle preparation for its weak astringent effect.

Gargle differs from mouth washes in that they are light medicated oral mixture be diluted with water before use.

For example: Phenol gargle, KClO₃ gargles

Formula: Phenol gargle

Rx

Phenol glycerin - 5 ml

Amaranth solution 1 ml

Purified water-q.s. to 100 ml

PREPARATION

Mixing amaranth solution (1% w/v in chloroform water) with a small quantity of water

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Adding Phenol glycerin (16% w/w phenol and 84% w/w glycerin) to it. The solution is stirred

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Made up to volume with water



The gargle is meant to be diluted with equal quantity of warm water before use

Uses: Antibacterial effect astringent affect mild anaesthetic effect

MOUTH WASH

These are aqueous solutions with a pleasant taste to clean, deodorize the buccal cavity Mouthwashes have refreshing, antiseptic and antibacterial activity and prevent Halitosis.

They may also contain alcohol, glycerin, synthetic sweeteners, surfactants, flavouring and colouring agents.

For example: Compound sodium chloride mouth wash, Zinc chloride mouth wash, Fluoride mouth wash.

Formula:

Rx

Zinc sulphate and zinc chloride mouth wash B.P.C.

Zinc sulphate - 20 g

Zinc chloride - 10 g

Dilute hydrochloric acid - 10 ml

Compound tartarazine solution - 10 ml

Chloroform water to produce - 1000 ml

PREPARATION

made by dissolving Zinc sulphate and Zinc chloride in small quantity of Chloroform solution



To this is added dilute hydrochloric acid and compound tartrazine solution



The final volume is made up with water

THROAT PAINTS

Solution or dispersion of one or more active agents. Throat paints are viscous liquid preparations used for mouth and throat infections.

Glycerin is commonly used as a base because being viscous it adheres to mucous membrane for a long period. Glycerin prolongs the action of medicaments.

Glycerin also provides sweet taste to preparation.

For example: Boroglycerin, Phenol glycerin throat paint, Compound iodine paint (Mandl's paint)

Formula:

RX

Potassium iodide - 2.5 gm

Iodine 1.25 gm Alcohol - 4 ml

Water 2.5 ml

Peppermint oil - 0.4 ml

Glycerin - 100 ml

PREPARATION

Dissolve the potassium iodide in water.



Add the iodine and stir until completely dissolved.



Dissolve peppermint oil in alcohol 90% in a small container and transfer it into iodine solution.



Transfer paint into a measuring cylinder



Make up the volume to q.s.



Paint are applied with soft brush

LIQUIDS TO BE INSTILLED INTO BODY CAVITIES

DOUCHES

A douche is a medicated solution meant for rinsing a body cavity

The word douche is often used for vaginal solutions

Solutions are generally called irrigations

Douches are also used to irrigate the other body cavities, such as eyes, ear or nasal cavities for cleaning or removing the foreign particles or discharges from them.

Douches are generally dispensed in the form of a powder or tablet with a specific directions for dissolving it in a specific quantity of warm water

They are also dispensed as concentrated solutions with direction to dilute it in a specific quantity of warm water before use.

Vaginal douches must be sterile

EAR DROPS

Ear drops are liquid preparations meant for instillation into the ear

In these preparations, the drug is usually dissolved or suspended in a suitable solvent such as propylene glycol, polyethylene glycol, glycerol alcohol and water or a mixture of these.

Aqueous vehicle is generally not preferred because the secretions in the ear are fatty in nature and as such these do not easily mix with water

Used for their cleansing, pain relieving and antiseptic actions.

The main classes of drugs include analgesics like benzocaine, antibiotics like neomycin and chloramphenicol and anti-inflammatory agents such as cortisone and dexamethasone.

Wax softening agents include hydrogen peroxide and sodium bicarbonate.

Ear drops are usually supplied in amber coloured, glass bottles with and dropper closure or plastic squeeze bottles .

Example: Chloramphenicol Ear Drops

Chloramphenicol - 5g

Propylene glycol q.s to 100 ml

PREPARATION

Chloramphenicol ear drops may be prepared by dissolving Chloramphenicol in sufficient quantity of Propylene glycol and finally making up the final volume with it

NASAL DROPS

These are aqueous solutions of drugs that are instilled into the nose with a dropper

The oily vehicle is not used nowadays because oily drops inhibit the movement of cilia in the nasal mucosa and if used for long periods, may reach the lungs and cause lipoid pneumonia

Nasal drops should be isotonic with 0.9% sodium chloride having neutral pH and viscosity similar to nasal secretions by using 0.5% methyl cellulose.

The buffering capacity of nasal mucosa is quite low and strong alkali solutions can cause considerable damage to cilia. To prevent this, it is advisable to use a phosphate buffer of pH 6.5 as a vehicle.

EXAMPLE- Prepare and dispense 100 ml of ephedrine nasal drops

Ephedrine Hydrochloride - 0.05 g

Chlorobutol -0.05 g

Sodium Chloride - 0.05g

Purified water q.s to 100 ml

METHOD OF PREPARATION

Dissolve the ephedrine hydrochloride, chlorobutol, and sodium chloride in warm water



Cool, filter if necessary and make to volume through the filter.



Transfer the nasal drops to the container, label and dispense.

NASAL SPRAYS

Nasal sprays are used to reduce nasal congestion and to treat infections

The main aim of nasal spray is to retain the nasal solution in the droplet form in the nasal tract

For this purpose, the nasal solution is sprayed in the form of coarse droplets by using scent spray type of atomizer or a plastic squeeze bottle.

The nasal spray should be isotonic and buffered at pH 6.2.

They may contain antibiotics and antihistamines

INHALATIONS

These are liquid preparations containing volatile substances and are used to relieve congestion and inflammation of the respiratory tract.

Substances that are volatile at room temperature may be placed on an absorbent pad or handkerchief to inhale there from.

In other cases inhalations are added to hot, but not boiling water (about 65°C) and vapours are inhaled for about 10 minutes

Aerosol inhalations are solutions, suspensions or emulsions of drugs in a mixture of inert propellants held under pressure in an aerosol dispenser

The dose of the medicament in the form of droplets of 50 µm diameter or less is released from the container by using the metering valve.