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Nasal drops

- Nasal drops are aqueous or oily sol. Which are designed to be administered to the nasal passages in drop or spray form. They are commonly used for their antiseptic, local analgesic or vasoconstrictor properties

- Nasal drops must be isotonic with nasal secretion and have the same pH of nasal secretion.

Ephedrine nasal drop

Rx

Ephedrine HCL		500 mg
NaCl		500 mg
Chlorobutol		500 mg
D.W	Q.S	100 ml

Mitt.50 ml

Sig. two drops to be placed into each nostril as directed

Factor = 50/100 = 0.5

Ephedrine HCL = 500mg x 0.5= 250 mg

NaCl = 500 mg x 0.5 = 250 mg

Chlorobutol = 500mg x 0.5= 250 mg

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D.W = 100mg x 0.5 = 50 ml

50 x ¾ = 37.5 ml of D.W used to dissolve solid ingredient

Procedure

1. Dissolve 250 mg of chlorobutol in 37.5 ml of hot water
2. Add 250 mg of ephedrine HCl and 250 mg of NaCl to the solution
3. Complete the volume up to 50 ml by water

Notes:-

- Ephedrine HCl used as vasoconstrictor (decongestant)
- Chlorbutol has low solubility in water but it is more soluble in hot water.
- Chlorbutol used as preservative, antiseptic, mild sedative, local analgesic.
- Sod.chloride used to maintain osmotic pressure.

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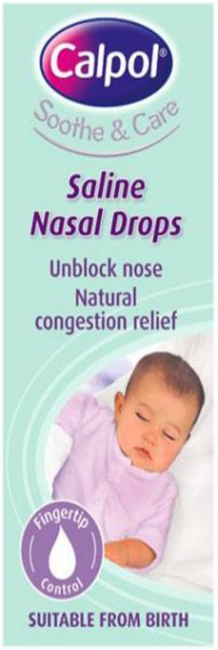

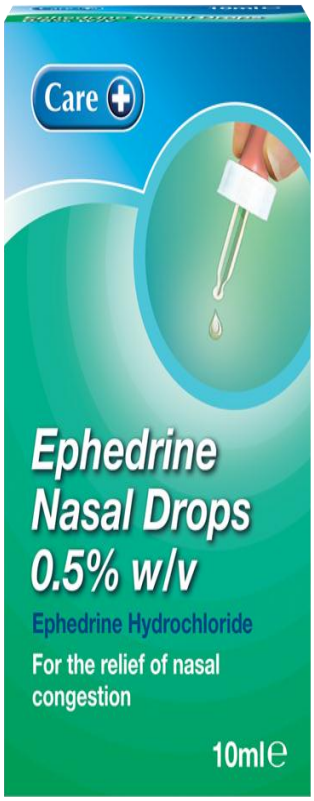

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Ear drops

These are mostly simple solution of drugs dissolved in suitable solvent(s) applied into ear by dropper.

Example on solvent: glycerin, propylene glycol, alcohol, water or alcohol – water mixture)

Ear drops used as antibiotic, wax softener, cleansing solution.

Sodium bicarbonate ear drop

Rx

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Sod.Bicarb. 5g

Glycerin 30 ml

D.W Q.S 100 ml

Ft. mist

Mitt 50 ml

Sig. as directed

Calculation:

Factor = 50/100 = 0.5

Sod. bicarb. = 5 x 0.5= 2.5 g

Glycerin 30 x 0.5 = 15 ml

D.W 100 x 0.5= 50 ml

50 x ¾ = 37.5 ml

37.5 - 15 ml= 22.5 ml of DW used to dissolve sodium .bicarb.

Procedure

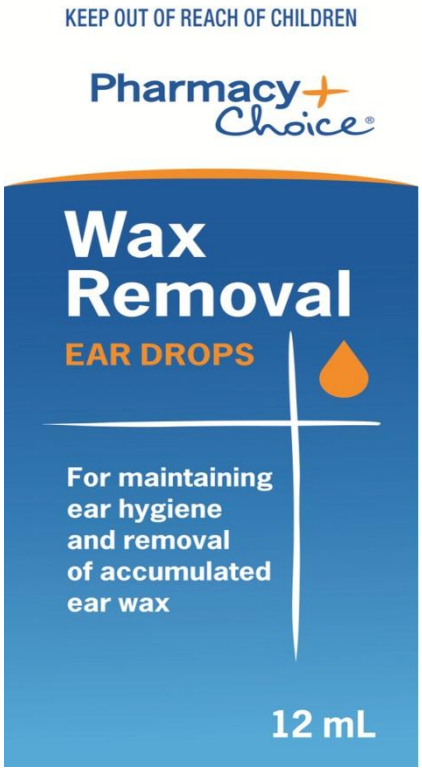
1. Dissolve 2.5 gm of Sod. Bicarb in 22.5 ml of D.W.
2. Add 15 ml of glycerin.
3. Complete the volume up to 50 ml by D.W.

Notes:-

- nasal drops used internally while ear drops used externally because the outer ear is a skin covered structure and

susceptible to the same dermatologic condition as other parts of the body's surface

- Sod. Bicarb. Used for softening the wax
- Glycerin used as preservative and lubricant , it increase the viscosity so it give suitable time for drug to be effective
- Sod.Bicarb.ear drop should be freshly prepared



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