

EAR DROP FORMULATION

Principle : Ear drops are categorized under the otic solutions, the primary intended use of these preparations is to remove the wax present in the ear or the treatment of pain, infection, and inflammation in the ear. The preparation including some medication is applied in form of drops. Common classes of drugs used in this preparation are, benzocaine, neomycin, and cortisone for the treatment of pain, infection, and inflammation respectively. These drug molecules can be dissolved in the appropriate solvents/ buffers and dispersants could be used along with them. Moreover, glycerine and propylene glycol can be used for increasing the viscosity of the ear drop. Drug-added viscous solutions allow drugs to remain there for a long time, interestingly, anhydrous glycerine can be useful in reducing the swelling in the ear, due to its hygroscopic nature it removes surrounding moisture, which may result in reduced swelling. These formulations may contain surfactant and viscosity enhancers, which may easily lead to ear wax removal.¹

REQUIREMENTS

Apparatus:

Beaker, Stirrer/glass rod, Measuring cylinder, Spatula, balance, Storage bottle.

Chemicals:

Sodium bicarbonate, Glycerol, Deionized water.

PROCEDURE

For the preparation of ear drops, weigh the required quantity of sodium bicarbonate and add it to the beaker, add some quantity of purified water to the beaker to dissolve the sodium bicarbonate. Add the measured quantity of glycerol to the solution and stir it to mix it

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well, then transfer the solution to the measuring cylinder and make up the volume up to 100 ml with purified water. Store the prepared ear drop in a storage bottle.^{3,4}

Use: this ear drop is used to remove the wax from the ear.

Label: for external use only

CONCLUSION

Sodium bicarbonate ear drop is prepared and submitted.

FORMULA:

OBSERVATION TABLE :-

INGREDIENTS	REQUIRED QTY
Sodium Bicarbonate	5 gm
Glycerol	30 ml
Purified Water	100 ml