

A Review: Poly Herbal Lozenges For Cold And Flu

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ABSTRACT :Lozenges are solid dosage form which are intended to slowly dissolve in the mouth for therapeutic effect. A small usually sweetened and flavored medicated material that is designed to be held in the mouth. Common cold and flu are common disease which usually infect the respiratory system include symptoms like headache, fever, runny nose and cough. It is a small, typically medicated tablet intended to dissolved slowly in the mouth temporarily stop cold and coughs. Both cold and cough respiratory illnesses, but they are caused by different viruses only, including rhinoviruses, seasonal corona viruses.

Key words: polyherbal lozenges, common col, flu polyherbal, lozenges, formulations, cold, flu, standardization.

I. INTRODUCTION:

The lozenges are intended to be dissolved or disintegrated slowly in the mouth. They contain one or more active ingredients and are flavored and sweetened so as to be pleasant tasting. Lozenges is a solid preparation consisting of sugar and gum the later giving strength and cohesiveness to the lozenges facilitating slow release of the medicaments.

HISTORY OF LOZENGES

Lozenges originated ancient , specifically 1000BC. Then , they were often made of honey with flavors ranging from citrus to spice .

In the 19th century, however, lozenges took on a far less simple formula when doctors began adding morphine and heroine to tablets in an effort to stop

the cough or cold before it happens. Cough drops was first advertised in the year 1850 and ludens created in 1880.

About the disease

A common viral infection of the nose and throat.

IN contrast to the flu , a common cold can be caused by many different types of viruses. The condition is generally harmless and symptoms usually resolves within two weeks. Flu symptoms are similar ,but include fever ,headache and muscles soreness. Cold symptoms are runny nose ,congestion ,and cough.

Cold : the common cold is one of most frequent human illnesses and is responsible for substantial morbidity and economic loss. No consistently effective therapy for the common cold has been well documented, but evidence suggests that several possible mechanisms may make polyherbal an effective treatment.

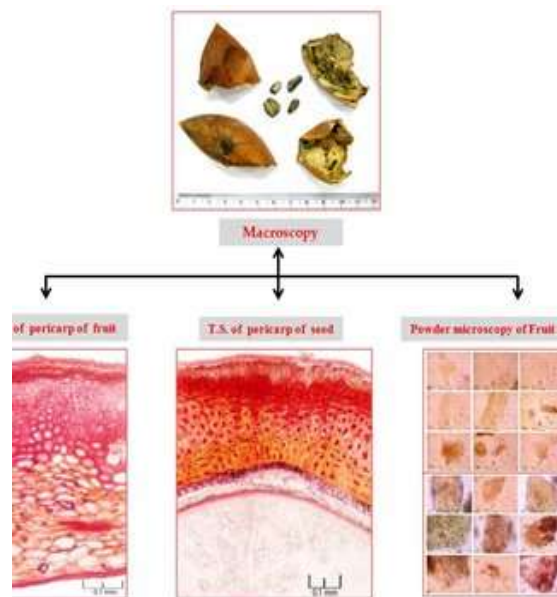
Flu: a common viral infection that can be deadly, especially in high-risk groups

The flu attacks the lungs, nose and throat. Young children, older adults, pregnant women and people with chronic disease or weak immune systems are at high risk. And spreads easily.

About herbal drugs

An herb is a plant or plant part used for its scent, flavor , or therapeutic properties. Herbal medicines are one type of dietary supplement.

They are solid as tablets, capsules, powders ,teas, extracts, and fresh or dried plants. And it will improve health.



About the ingredients

Liquorice : it is the root of glycyrrhiza glabra (family : leguminosae) from which a flavor can be extracted. The liquorice plant is a herbaceous perennial legume native to southern.

Clove: cloves are aromatic flower buds of a tree in the family myrtaceae, syzygium aromaticum. They are native to Maluku islands in Indonesia.

zingiberaceae, the rhizomes of which are used in cooking. It is also protective to skin, it possesses anti septic property hence used for respiratory problems.

Long pepper: it is a flowering vine the family piperaceae, cultivated for its fruit, which is usually dried and used as a spice and seasoning.

Honey: it is sweet, viscous food substance made by honey bees and some other bees. Bees produce honey from sugary secretions of plants or from other insects, by regurgitation.

Ginger: it is a flowering whose rhizome, ginger root , it is widely used as a spice and a folk medicine. It is a herbaceous perennial which grows annual pseudostems about one meter tall bearing leaf blades.



Method of preparations of lozenges:

Jaggery and sugar were dissolved in little water till a sufficient consistency was obtained. In another container little water was added and all the herbs were added and mixed thoroughly and finally filtered. sugar and jiggery syrup was poured in the beaker containing the herbal juice. Honey was added . The mixture was heated with constant stirring until it reached a temperature of 150degree Celsius. The preparation was then removed from heat and was poured on a lozenge mold to get lozenges of ideal size .the mold was allowed to cool and harden at room temperature. After cooling the hard lozenges were tossed over powdered sugar to avoid getting sticky in humidity . The sugar powdertossed lozengesare stored in a wide mouthed air tight container in a cool place . Herbs used for formulation -1 are Liquorice , clove includes Liquorice,Clove,Ginger,long pepper,Guduchi and vasaka. Honey was used for both the formulation to produce soothing effect on throat.

Physico-chemical parameters

Its like hardness, content uniformity, friability, weight variation etc. the prepared formulation have a hardness of 9-10 kg/cm², not gritty, mouth feel freshness taste. Stability studies of selected. Parameters like colour, odour, taste, and touch, hardness, weight uniformity etc.... taken. Wight uniformity was determined by weighting 5 lozenges individually, the average weigh was calculate and the percent variation the percent variation of each tablet was determined.

Types of lozenges :

Lozenges are various shaped, solid dosage forms usually containing a medicinal agent and flavoring substance, in oral cavity for localized or systemic effect. They are also called troches or pastilles. Pastilles have a softer texture a high percentage of sugar. The soft lozenges generally have a polyethylene glycol base and the chewable lozenges have a gelatin base. These usually are chewed and are a means of delivering the product to the gastrointestinal tract for systemic absorption. the lozenges are aimed to formulation into a stable dosage form and to provide a more promising means of administration of variety of drugs.

Criteria for the formulation of lozenges includes

- 1.selection of suitable of drug candidate
- 2.selection of appropriate drug carries excipients

3.selection of appropriate type of lozenges formulation.

Hard candy lozenges:

Hard candy lozenges are mixture of sugar and other carbohydrates in an amorphous or glassy condition. Usually they have a moisture content of 0.5 to 1.5% hard lozenges should provide a slow, uniform dissolution or erosion over 5 to 10 minutes, not disintegrate, have a smooth surface texture and pleasant flavor masking the drug taste.

Hard candy lozenges generally weigh between 1.5 to 4.5 gm. The incorporation of corn syrup solids at a greater than 50% concentration decreases the graining tendencies which increase product stickiness and interactions of medicaments. Using greater than 70% sucrose solids tends to increase graining tendencies and the rapidity of crystallization. Regular hard candy has a pH of about 5.0 to 6.0 but with the addition of acidulents, it may be as low as 2.5 to 3.0. Calcium carbonate, sodium bicarbonate and magnesium trisilicate can we added to increase the lozenge pH to as high as 7.5 to 8.5.

Soft Lozenges :

Soft lozenges have become popular because of the ease of extemporaneous preparation and application to a wide variety of drugs. The bases usually consist of a mixture of various polyethylene glycols, acacia materials. They are similar to a historical from of medicaments that is making a comeback: the confection are defined as heavily saccharinated, soft masses containing medical agents. Polyethylene glycol-based lozenges may soften if exposed to high temperature. Storage in a cool, dry place should be recommended.

Chewable lozenges :

Soft, chewablecandies have been on the market for a number of years. They are very highly flavored and many often contain a slightly acidic taste. The most difficult part involves the preparation of the gelatin base which is described below. These are especially used for pediatric patients and are a very effective means of administering medicaments for gastrointestinal absorption and systemic use.

Some of the earlier pastilles consisted of a gelatin-based pastilles were prepared by pouring the melt into molds or out onto a sheet of uniform thickness.

Measurement of pH:

The acidity or alkalinity of a lozenges was indicated by using lab pH meter, a scale from 1.0 to 14.0. 1% w/v solution of a candy was prepared by dissolving 1 g candy in 100 ml distilled water and its pH was recorded.

Advantages:

It is easy to administer to both pediatric and geriatric patients.

It has a pleasant taste and will extend the time a quality of drug remains in oral cavity to elicit local activity.

Systemic absorption of drugs can be possible through buccal cavity.

It can be prepared with minimal equipment.

Taste of the drugs can be masked by sweetners and flavours.

Disadvantages :

It could be mistakenly used as candy by children.

Parents should be cautioned not to associate medications with candy and to keep the product out

of reach of children. Some drugs may not be suitable with aldehyde candy bases eg; benzocaine.

Heat stable drugs are suitable.

Children having above 6 years of age can use lozenges safely.

Drugs having minimum bitter taste are suitable.

Tablet lozenges:

Commercially, the preparation of lozenges by tablet compression is less important than hard – candy manufacturing techniques. Essentially, lozenges tablets differ from conventional tablets only in their organoleptic and non-disintegrating properties and slower dissolution rate.

The associated attributes of pleasant taste with or without matching color, smoothness, and mouth and feel during prolonged dissolution on the tongue and the physical consideration of

Unusual formulation requirements are to be met by lozenges compared to those of tablets intended for swallowing or chewing. The commonly used drugs mentioned previously tend to be better, unpleasant tasting compounds. The desire to release these agents slowly in mouth, in constant contact with the tongue, demands a formulation approach unlike that found in any other dosage form.



Processing and Excipients

Any of the common tablet-processing methods, such as wet granulation, dry granulation, or direct compaction, may be utilized in production of lozenge tablet.

as always when the process involves wet granulation, the extent of wetting and rate and of drying must be defined.

The formulation factors primarily responsible for controlling dissolution, hardness, and mouth feel are the presence of a high strength, dissolution retarding binder and the absence of a disintegrate.

Quality control

Candy base – for candy base it essential to check for corn syrup and sugar delivery gears;

Temperature steam pressure, cooking speed, and vacuum of candy based cooker.

Microbiological test for lozenges

The presence of bacteria, mold or spore in formulated lozenges is checked on a raw materials, finished products, machinery used, cooling tunnels, environment conditions and storage drums etc,

Laboratory microbial tests include the counts on total plate, total coliform, yeast and mould, E. coli, staphylococcus species and salmonella.

Stability test for lozenges

Lozenges soon after prepared is subjected to stability testing as per the prescribed conditions either 1-2 months at 60 c RH for 6-12 months for its stability study as per ICH guidelines.

Packaging of lozenges

Lozenges are usually hygroscopic in nature hence an involute and multiple packing system should be used in order to maintain its stability during marketing. The single unit of lozenges it to be wrapped in a moisture impervious liner. These wrapped lozenges are then placed in a tamper proof or water resistant glass, finally, these are over-wrapped using aluminum foil or by a cellophane sheet.

Storage

Lozenges should be stored from extremes of temperature or humidity condition. Refrigerator or room temperature is generally specified on label of the product depending on the storage requirements of both the drug and the base used in the lozenges formulation. Lozenges should be kept out of reach by the children as per the label instruction.

Economic survey :

Average price for one poly herbal lozenges, volunteers (100) willing to pay :RS 3.

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II. CONCLUSION

Lozenges are organoleptically accepted formulation by the pediatric patients and having dysphagia. Poly herbal lozenges have developed with 6 different herbs. The various measure taken for qualitative analysis and physical parameters of finished product are in compliance with the standard mentioned in GMP guidelines and requirements simultaneously supporting the impression of poly herbal lozenges which can compete with standard lozenges available in market.

The study reveals that the lozenges are suitable dosage form for cold and flu for the symptomatic relief of cold and flu. The lozenges for cold and flu all the parameters and was found to be more effective in the treatment of cold and flu.

The standardization which provides a specific and rapid tool for setting the quality Standard identity and reproducibility in herbal lozenges for cold and flu.

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