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# FORMULATION AND EVALUATION OF ANTIULCER SYRUP

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## ABSTRACT

Nearly most of the herbal syrups made up from a plants extract by their contents present in it. Likeother dosage form herbal syrup also made up in various treatments. In today's life syrups mostly used for a various treatments to overcome a diseases. We can add some flavoring agent like raspberry and for a adding a flavor. And antibacterial agent likes extraction of a neem to inhabit the growth of bacteria and sucrose, sodium benzoate used as preservative. All formulation was prepared by parameters like density, specific gravity, pH, organoleptic characteristics. The resultsshown that herbal syrup formulation is more stable and elegant as compared to other formulations.

**KEYWORDS:** Herbal syrups, flavoring agents (Raspberry), preservatives (Sodium benzoate) and Evaluation,Decoction.

## INTRODUCTION

### Ulcer

An ulcer is a discontinuity or break in a bodily membrane that impedes normal physiological structure or function. Ulcers can occur in various parts of the body, but they are commonly associated with the gastrointestinal tract. The two main types of ulcers are peptic ulcers and oral ulcers. Usually found in the stomach (Gastric ulcers) or the upper part of the small intestine (Duodenal ulcers). The most common causes are infection with the bacterium Helicobacter pylori (H. pylori) or extended use of nonsteroidal anti-inflammatory drugs (NSAIDs). Include Symptoms Burning stomach pain, bloating, nausea, and in severe cases, bleeding or perforation of the ulcer. Found in the mouth, including on the inner cheeks, lips, tongue, and gums. Multiple factors can contribute, such as minor injury, stress, certain

medical conditions, or autoimmune disorders. Symptoms like Pain or discomfort, especially while eating or drinking, and sometimes accompanied by redness and inflammation. Ulcers can vary in severity, and complications may arise if left untreated. Diagnosis often involves endoscopy, imaging studies, or other laboratory tests. Treatment depends on the underlying cause and may include medications to reduce stomach acid production, antibiotics to treat bacterial infections, and lifestyle modifications.

It is important to see a doctor if you suspect you have an ulcer. Diagnosis and appropriate treatment can help reduce symptoms and prevent complications.

**Herbal syrup**

A syrup is a pharmaceutical product consisting of a concentrated, viscous aqueous solution of sugar (Usually sucrose), often containing medicinal agents, flavorings, and preservatives. Herbal formulation means a dosage from herbs to consisting of provide specific one nutritional cosmetic benefits and meant for Used to diagnose beat of human brings or animals. Tinctures central oils, expressed juice are the different herbal formulation is Herbal Syrup solution of syrup is a concentrated. Sucrose content in water is approximately (85%).

**Classification of syrup**

1. **Simple syrups**

Syrups are saturated or concentrated viscous aqueous solutions of sucrose/sugar substitutes with or without flavorings/agents in purified water. Simple syrup contains 85% w/v (65% w/w). Specific gravity is 1.313 (USP) or 66.7% w/w according to Indian Pharmacy/BP.

2. **Medicated syrup**

Medicinal or therapeutic syrup containing active ingredients. Example – cough syrup.

3. **Flavored syrups**

Syrup flavored with flavorings, but not medicinal substances. Flavored syrups usually consist of a simple sugar syrup (Mixed thoroughly with water and heated) in which natural or artificial (Synthetic) flavors are also dissolved. Herbal syrup is prepared by adding concentrated decoction of herbs with either sucrose, (Substitution of sugars). For the thickening of Syrup we added g. It also responsible for a shelf life of a formulation by making a solution more concentrated. And final product was consumable. It is defined as a viscous liquid consisting of a concentrated solution of sugar and water with no added or added

flavorings or pharmaceuticals.

**Ingredients used in formulation**

**1. Punica granatum**

Botanical name: P. granatumFamily: pomegranate

Use: antiulcer activity as well as Flavoring agent.

**2. Sugar**

It consist stem of plant Saccharum officinarum Botanical name: Saccharum officinarum Family: Poaceae.

Use: It act as preservative and uses to increases shelf life of product.

**4. Sodium benzoate**

It used as a preservative.

**5. Glycerine**

As thickening agent.

**Table 1: Role of ingredients in herbal syrup.**

| Sr. No. | Ingredient | Role |
|---|---|---|
| 1. | Punica granatum | Antiulcer activity |
| 2. | Raspberry | Flavoring agent |
| 3. | Sucrose | Act as natural Preservative. |
| 4. | Sodium benzoate. | Preservative. |
| 5. | Glycerine. | Thickener. |

**MATERIALS AND METHODS**

**Preparation of herbal syrup**

**Procedure**

First we need to perform water decoction of Punica granatum leaves which are previouslypowdered.

Now for decoction we had taken 20gm of powdered drug and 180ml of water. And placed in waterbath until the one fourth of the water remain in the beaker.

After that we need to make a simple syrup of 100ml water by gentle heating and adding

66.67gmof sucrose.

For the formulation of 30ml of antiulcer syrup we need following quantity of ingredints.

| Sr. no. | Ingridients | Quantity. |
|---|---|---|
| 1. | Punica granatum extract. | 4.16ml. |
| 2 | Sodium benzoate. | 0.2%. |
| 3 | Simple syrup. | 20.83ml. |
| 4. | Raspberry. | Qs. |
| 5. | Glycerin. | 5ml. |

Add drug extract and syrup in the 1:5 ratio (As tacking quantity mentioned above table.)

Add sodium benzoate 0.2% and raspberry for flavor then add glycerin for the thickening offormulation.

Make up the final volume by adding distilled water (if necessary).

**Decocation of punica grantum**

**Punica granatum leaves.** **Punica granatum powder.** **Punica granatum extration.**

**Simple syrup**

**Sucrose.** **Water.** **Simple syrup.**

**Final syrup.**

**Evaluation parameter**

**1. Procedure to determine density**

1) Clean thoroughly the specific gravity bottle with chromic acid or nitric acid.
2) Rinse the bottle at least two to three times with distilled water.
3) If required, rinse the bottle with an organic solvent like acetone and dry.
4) Take the weight of empty dry bottle with capillary tube stopper (w1).
5) Fill the bottle with unknown liquid and place the stopper, wipe out excess liquid from outsidethe tube using tissue paper
6) Weight bottle with unknown liquid on analytical balance (w2).
7) Calculate weight in grams of unknown liquid (w3).

**Formula for density**

$$\text{Density of liquid under test (syrup).} = \frac{\text{Weight of liquid under test (W3).}}{\text{Volume of liquid under test (V).}}$$

**2. Procedure to determine specific gravity**

1) Clean thoroughly the specific gravity bottle with chromic or nitric acid.
2) Rinse the bottle at least two to three times with purified water.
3) If required, rinse the bottle with an organic solvent like acetone and dry
4) Take weight of empty dry bottle with capillary tube stopper.
5) Fill the bottle with distilled water and place stopper; wipe out excess liquid from side tube usingtissue paper (w2).
6) Weight bottle with stopper and water on analytical balance (w2).
7) Repeat the procedure for liquid under test by replacing the water after emptying and drying asmentioned in step 4 to 6.

8) Weight bottle with stopper and liquid under test on analytical balance (w3).

**Formula for specific gravity**

$$\text{Specific gravity of liquid under test (syrup)} = \frac{\text{Weight of liquid under test (W5).}}{\text{Weight of water (W4).}}$$

**3. Procedure to determine viscosity**

1) Thoroughly clean the Ostwald viscometer with warm chromic acid and if necessary used anorganic solvent such as acetone.
2) Mount viscometer in vertical position on a suitable stand.
3) Fill water in dry viscometer up to mark G.
4) Count time required, in second for water to flow from mark A to mark B.
5) Repeat step 3 at least 3 times to obtained accurate reading.
6) Rinse viscometer with test liquid and then fill it up to mark A, find out the time required forliquid to flow to mark B.
7) Determination of densities of liquid as mentioned in density determination experiment.

**Formula for viscosity**

$$\text{Viscosity} = \frac{\text{Density of test liquid} \times \text{Time required to flow test liquid}}{\text{Density of water} \times \text{Time required to flow water}} \times \text{Viscosity of water}$$

**4. PH determination**

The PH determination of syrup by using two techniques.

a) Glass electrode.
b) PH paper.

**Procedure for glass electrode**

1) Prepare 30ml buffer of each PH. The volume of the stock solution to be taken. Prepare the bufferby mixing appropriate volume.
2) Allow the solution for 15 minutes to establish equilibrium.
3) Measure the PH of solution using a PH meter.

**DISCUSSION**

In today's life herbal products are safe and synthetic drugs which are regarded as unsafe to human being and environment. And herbal ingredient's plays their roles in the diseases

treatments in ancients of times which is medicinal flavoring and others. It's important to promote. The herbal product which can we make have anti-oxidant activity One kiwi fruit contains about 100 mg vitamin C. it can plays important role in a e platelet aggregation and plasma triglyceride level were reduced after 28 days of fruit consumption. The daily consumption of kiwi fruits is reduced the harm of cancer, especially colon cancer. It also used in treatment of insomnia, to treat sleep disorder. It helps to promote natural sleep.

## CONCLUSION

The final conclusion was obtained from this formulation is it will help to treat ulcers. The medicinal herbal product have a medicinal property such as a: Antioxidant, Antibacterial, and the antiulcer activity of the different extracts may be due to the presence of the various compound as flavonoids which are well known antioxidants that help to treat diseased condition, hence it will be very helpful for researchers as well as industries to make the similar formulations on large scale.

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