



CODEN [USA]: IAJPBB

ISSN : 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**

SJIF Impact Factor: 7.187

Available online at: <http://www.iajps.com>

Research Article

**FORMULATION AND EVALUATION OF HONEY BASE
COUGH SYRUP**Miss. Monali Adhe¹, Mr. Pramod Bhosle², Vaibhav Kute³ & Dr. Vitthal Kuchake⁴¹ Student, Ojas College of Pharmacy, Jalna -431203, Maharashtra, Jalna.² Guide & Assistant Professor, Department of Pharmaceutics, Ojas College of Pharmacy, Jalna – 431203. Maharashtra, India.³ Assistant Professor, Department of Pharmaceutics, Ojas College of Pharmacy, Jalna – 431203. Maharashtra, India.⁴ Principal, Ojas College of Pharmacy, Jalna – 431203, Maharashtra, India.

Article Received: April 2024

Accepted: April 2024

Published: May 2024

Abstract:

Overall, the current scope of herbal syrup is quite broad. And there is a growing demand for natural and herbal remedies. Day by day increasing the astmatic patients cause by increased pollution, smoking. As well as enhance the respiratory disorders where as, increased acute and chronic cough patients in india. That's why essential need of developments in the herbal cough syrup seeing by the current condition. The study aim to formulate and evaluate the natural cough syrup. The purpose of this research is to discuss the current state of the plants that utilised as source of food, and their role in herbal medicine such as respiratory stimulant, antimicrobial, cough suppressant, antibacterial and anti-inflammation. That's herbal ingredients such as Ashwagandha, Tulsi, Turmeric, Honey and Orange oil etc. Which have various action and effect on reducing acute and chronic cough and acts as a cough suppressants. These syrup is used treatment to overcome symptoms of disease formulation of at laboratory scale was done and evaluate for number of parameter such as organoleptic properties, appearance, pH, specific gravity, density and viscosity. The main objective of this study, developing in the herbal cough syrup for the reducing the acute and chronic cough and to prevents the respiratory infection as well as respiratory disorders, to relief the astmatic condition and it also beneficial for people suffering from chest congestion.

Key word :- Cough, herbal syrup, ashwagandha, tulsi, turmeric, orange oil, honey.

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Please cite this article in press Monali Adhe et al, *Formulation And Evaluation Of Honey Base Cough Syrup., Indo Am. J. P. Sci, 2024; 11 (5).*

INTRODUCTION:

Herbal syrup is defined as the prepared and combination and concentration decoction with Honey sugar. Nature has been a source of medicinal agent for thousands of year, and an impressive number of modern drugs have been isolated from natural resources, particularly plants and with many based on their use in traditional medicine.

Now a days , herbal remedies are commonly used for treatment of cough . also the herbal drug as well as herbal formulation are playing important role in various type of cough .

In present days, therapies like cough suppressant are used for cough . The antitussive agent gives only symptomatic relief. There agent are contraindicated in asthma.

- 1) Herbal plant and formulation are used for many types of disease like cough syrup many type and other disease treatment. In these herbal cough syrup include many types of herbal plant is used as like Ashwagandha , turmeric, tulsi, that all herbal plant are use for making herbal cough syrup.
- 2) These harbal cough syrup is a liquid dosage form of medication and oral route of administration.
- 3) The herbal syrup is very prominent delivery vehicle use for the anti tissue medication because they give more soothing to swallow than the tablet and capsule. This syrup is quickly absorbed as well as not having any type of side effect.
- 4) This study goal is to present , analysis and research , the role of herbal ingredient such as

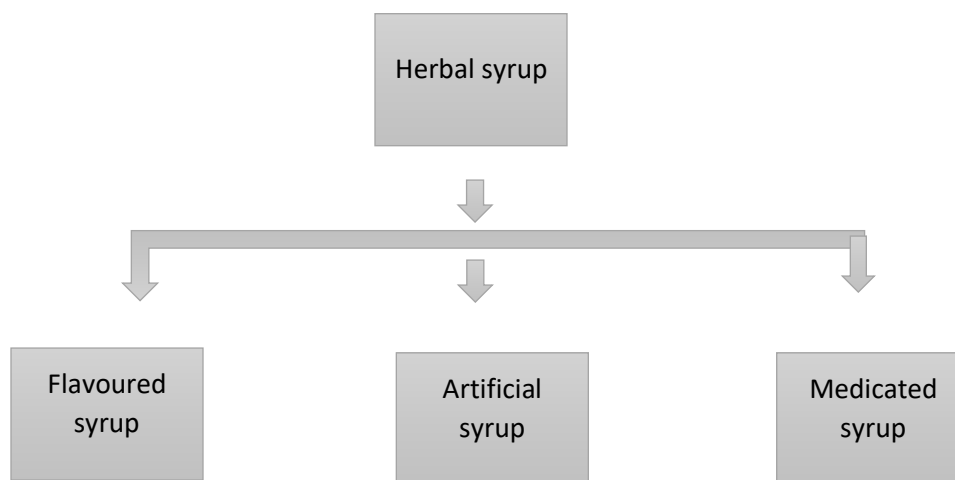
Types of herbal syrup :-

Fig no.01:- Types of herbal syrup

,Ashwagandha , Tulsi, Turmeric, and Honey play role in managing cough version.

COUGH: - Coughing is the most common health problem, coughing can be due to a respiratory tract infection such as common cold , acute bronchitis , flu and smoking or health problem.

Types of cough:-

Mainly there are two types of coughs, which are classifies as follows

1. **Dry cough** – It is an efficient and productive cough . these dry coughs are bought on by dust, smoke, or dry irritation.
2. **Wet cough** – These types of coughs are contagious and ineffective. it is most helpful for clearing mucus and other objects out of the respiratory tract, which is where is the infection originates.

Classification of cough :-

- 1) **Acute cough.** – Not more than 3 week duration
- 2) **Chronic cough-** More than 3 weeks.
- 3) **Dry cough** – No mucus or secretion.
- 4) **Wet cough** – With mucus or secretion.
- 5) **Coughs from chest and throat** – Productive and non- productive.
- 6) **Paroxysmal cough** –Spasodic and recurrent.
- 7) **Bovine cough** –Soundless cough.
- 8) **Psychogenic cough** – Self conscious activity of the patient to draw attention .

HERBAL SYRUP:-Herbal is definid as the prepared and combination and concentration decoction with honey sugar is called as herbal syrup.

1. **Flavored Syrup** :- when the syrup without a medication but flavoring agent present are known as Flavored or non- medicated syrup.
(Flavored syrup such as raspberry syrup, cherry syrup, orange syrup..etc)
2. **Artificial Syrup** :- When the syrup is formulated with artificial sweetening agents and viscosity builder.
(sweetening agent such as sucrose, dextrose, etc)
3. **Medicated Syrup** :-When the syrup formulate with the medicinal substance are called medicated syrup.

ADVANTAGES: -

- 1) No side effect.
- 2) Low cost .
- 3) Easily available.
- 4) harmless.

DISADVANTAGES: -

- 1) Not suitable in emergency for unconscious patient.

- 2) Some microbial contamination take place if preservation not added in accurate proportion.
- 3) Suspension must be packaged in unit dosage form in order to achieve dose precision.

IDEAL PROPERTIES: -

- 1) It can relieve symptoms of cold and cough, such as congestion, coughing, and sore throat.
- 2) It can help soothe and improve the respiratory system.
- 3) It can boost the immune system and help the body fight infection.
- 4) It can reduce inflammation in the respiratory system.

EXPERIMENTAL WORK:**MATERIAL AND METHODOLOGY: -**

All the natural materials used in the present study i.e; Ashwagandha, Tulsi Turmeric, Orange oil , and Honey were purchased from local market, Whereas some are in college laboratory The details of the plant material used for the formulation of Herbal cough syrup are mentioned below:



Figure 01 :- Ingredients used in formulation

FORMULATION TABLE :-

Table 01:- Formulation Table

Sr. No.	Name of Ingredients	Role of Ingredient	Batches (For 100ml)		
			F1	F2	F3 (Confirmetry)
1	Ashwagandha	Respiratory stimulant	6gm	12gm	12gm
2	Tulsi	Antimicrobial agent	2gm	4gm	4gm
3	Turmeric	Colouring agent	2gm	4gm	4gm
4	Orange oil	Flavouring agent	0.4ml	0.8ml	0.8ml
5	Propyl paraben	Preservative	0.02gm	0.04gm	0.04gm
6	Honey	Sweetner	q.s	q.s	q.s
7	Water	Vehicle	q.s	q.s	q.s

PROCEDURE:

- 1) All the required ingredients such as Ashwagandha powder, Tulsi powder, Turmeric, orange oil and honey accurately weighed individually by using digital balance to make 100 ml herbal cough syrup.
- 2) After weighed then crush all ingredients in the mortar pestle.
- 3) Then ashwagandha, Tulsi, turmeric are ingredients dissolved in water in the separately beaker and heated normally by heating mantle .
- 4) Then the cool and filtered by filter paper.
- 5) And then all filtered ingredients are mix in conical flask and add the propyl paraben and orange oil and honey.
- 6) Then formulation were prepared.
- 7) The prepared herbal cough syrup was packed into a container/self sealable plastic bottle, labeled and used for further studies.

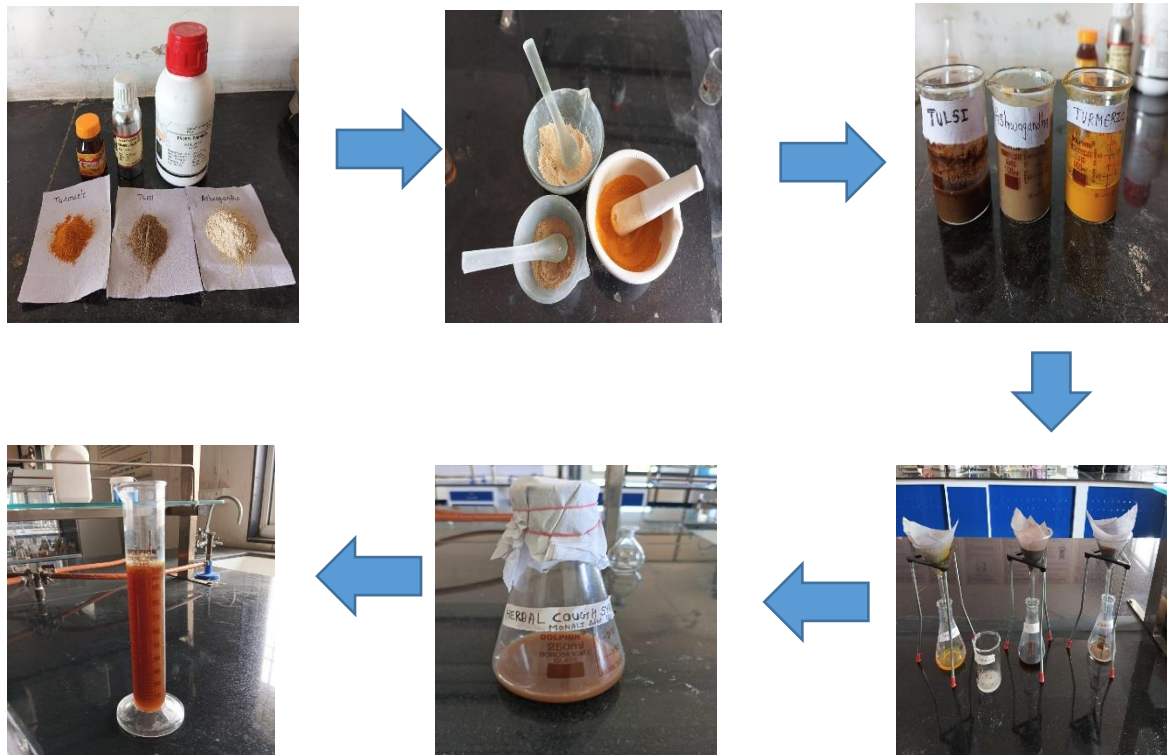


Figure 02 :- Procedure of formulation



Figure 03:-Final cough syrup formulation

EVALUATION PARAMETER**1. Organoleptic Properties :-****a) Colour :-**

- 1) Colour observed by thr naked eyes.
- 2) Colour of F1,F2 &F3 observed is yellowish brown.

b) Odour :-

- 1) Odour is observed by the smell by nose.
- 2) Odour of F1, F2 &F3 observed is sweet aromatic.

c) Taste :-

- 1) Taste is observed examine by taste buds.
- 2) Then the taste of F1,F2 &F3 are observed is sweet.

2. Appearance :-

- 1) Appearance can observe of syrup solution by the naked eyes.
- 2) Then the appearce observed of F1, F2, &F3 batches is Turbid.

3. PH determination :-

- 1) The 5 ml ml of herbal cough syrup took from 100ml of prepared cough syrup.
- 2) The glass electrode of ph meter is dipped in the solution.

- 3) Finally ph determined of F1, F2 &F3 by digital ph meter.

4. Specific gravity

- 1) First one, the empty specific gravity bottle weigh by digital weigh machine.
- 2) Then water filled specific gravity bottle weigh measure.
- 3) And then syrup filled specific gravity bottle was measured.
- 4) And then the calculate the specific gravity of F1, F2,& F3 batches the cough syrup.

5. Density :-

- 1) The density is measured by density bottle.
- 2) The empty density bottle weigh by digital weigh machine.
- 3) Then water filled density bottle weight measure .
- 4) And then syrup filled density bottle weight measure .
- 5) And the calculate the density baches F1, F2 &F3 .

6. Viscosity

- 1) The viscosity of the Batches F1, F2&F3 are calculate by the ostwald viscometer.

RESULT:**Table 02:- Result of formulation**

Sr. No.	Ingredients	Batches		
		F1	F2	F3 (Confirmatory)
1)	Colour	Yellowish brown	Yellowish brown	Yellowish brown
2)	Odour	Sweet aromatic	Sweet aromatic	Sweet aromatic
3)	Taste	Sweet	Sweet	Sweet
4)	Appearance	Turbid	Turbid	Turbid
5)	Ph value	3.98	4	4
6)	Specific Gravity	1.13kg/m ³	1.17kg/m ³	1.17kg/m ³
7)	Density	1.10kg/m ³	1.16kg/m ³	1.16kg/m ³
8)	Viscosity	1.48cp	2.03cp	2.03cp

CONCLUSION:

Nature remedies are more acceptable to the people than synthetic, in the belief that they are safer and fewer side effects that they compare with synthetic. Thus in present work we found good properties of herbal cough syrup by the two formulation batches (F1 & F2) & F3 batch taken as Confirmatory batch and further optimization studies are required on this study to find useful benefit of of herbal cough syrup on human. Herbal formulation have growing demand in the world market. Herbal cough syrup is cough suppressant, reducing cough and respiratory disorders as well as to prevent the respiratory bacterial infection. It is our good attempt to formulate the herbal cough syrup containing natural herbal ingredients such as Ashwagandha, Tulsi, Turmeric, Orange oil and Honey. Quality of the herbal cough syrup was checked by the evaluation parameter such as the pH, Specific gravity, Density, Viscosity, Organoleptic properties and appearance. After evaluation observed that in present syrup have no any side effect. It has been revealed that herbal cough syrup having enough potential to give efficient better effect on cough. The overall study is useful to substantiate product claims due to its useful benefits on the human being.

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