INTERNATIONAL JOURNAL OF PHARMACEUTICAL SCIENCES
[ISSN: 0975-4725; CODEN(USA): IJPS00]
Journal Homepage: https://www.ijpsjournal.com

OPEN ACCESS

Research Paper

To Formulation and Evaluation of Herbal Cough Syrup

Pallavi pandit*, Aditi Pacharane, Kanchan Pandit, NIKUM R. D.

Department of pharmacognosy Dr. Kolpe institute of pharmacy, kolpewadi, Ahilyanagar, Maharashtra-423602

ARTICLE INFO

Published: 08 May 2025
Keywords:
Immune boosting, Evaluation, Wet cough, Dry cough, Gulvel syrup, Asthma
DOI:
10.5281/zenodo.15364981

ABSTRACT

Gulvel syrup Guvel syrup is also known as immunity-boosting syrup. Gulvel syrup is a concoction of sugar, honey, and occasionally alcohol. The syrup was created by combining gulvel powder, tulsi, turmeric powder, and ginger cloves. The parameters used to evaluate cough syrup are density, color, odor, viscosity, stability, and pH. Cough syrups come in two varieties: wet cough and dry cough. Asthma, hypertension, fever, malaria, fungal, bacterial, and cardiac disorders are among the acute and chronic conditions that are treated using various plant components that contain biologically active ingredients, such as the roots, bark, stem, and leaves.

INTRODUCTION

In addition to suppressing the cough, cough drugs can help to ease the discomfort that comes with frequent coughing**.**

Cough Types:

Classifying coughs as either dry or wet is the most straightforward method of understanding them. While a dry cough does not create mucus or mucous, a wet cough does. The ease of administration of liquid medications to patients who have trouble swallowing solid dosage forms has generally been used as justification for their oral administration. Gulvel syrup: Another name for gulvel syrup is immunity booster syrup. Guvel syrup is defined as a mixture of sugar, honey, and sometimes alcohol. A mixture of gulvel powder, tulsi, turmeric powder, ginger, cloves, acacia nilotica, amla, clitoria ternatea flower, and prickly chaff was decocted to create the syrup.Gulvel is an effective immune modulator and aids in building a strong immune system. Giloy makes it easier to get rid of coughs brought on by pollen, smoke, or pollution allergies. It can also be used to treat tonsillitis. The phytochemical composition, antibacterial properties, and hemolytic activity of Achyranthes aspera (Amaranthaceae) leaves were examined. Asthma, fever, hypertension, malaria, fungal infections, bacterial infections, and heart disorders are among the acute and chronic

***Corresponding Author:** Pallavi pandit
Address: *Department of pharmacognosy Dr. Kolpe institute of pharmacy, kolpewadi, Ahilyanagar, Maharashtra-423602*
Email ✉: pallavipandit7373@gmail.com

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

conditions that are treated using various plant components that contain biologically active chemicals, such as the root, bark, stem, and leaf.

Advantages of Gulvel cough syrup:

 No side effects.
 No harmless.
 Easily available.
 Patient can be self administred.
 Easy to adjust the dose for patient's weight.
 It can redused coughing and help you sleep better.
 It can boost immune system and help the body fight infection.
 It is natural and safe medication.
 It is also the most effective herb for cough and cold.
 Strong patient adherence, particularly for younger patients because the syrup testes good during testing
 As osmotic pressure, it acts as a preservative by preventing the growth of bacteria.

Disadventages of gulvel cough syrup:

 Microbial contamination take place if preservatives are not added in accurate proportion.
 Flucution in storage temperature may cause crystallization of sucrose from saturated syrup.
 Another disadvantage is the risk of self dosing ofsyrup which is very rare.

MATERIAL AND METHOD

Following parts are used in the formulation of syrup for treatment of cough.

Sr. no	Ingredients
1	Gulvel powder
2	Amla
3	Prickly chaff
4	Acacia nilotica
5	Clitoria ternatea flower
6	Honey
7	Turmeric powder
8	Tulsi
9	Ginger
10	Clove

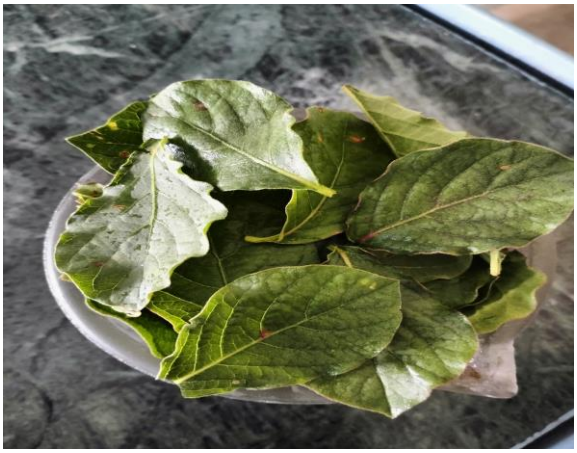
FOLLOWING ARE THE INGREDIENTS USED IN FORMULATION:-

1.GULVEL PLANT

Scientific name: Tinospora cordifolia.

Family: Menispermaceae.

Biological source:It is a pretty widespread shrub that grows over small trees and hedges in dry and deciduous woodlands. From Kumaon to Assam, the plant can be found in the tropical region of India up to 1,200 meters above sea level. In the north, it can be found extending across West Bengal, Bihar, Deccan,Konkan, Karnataka & Kerala.



Benefits Of Gulvel Syrup:

- It has antioxidant properties.
- It also promotes joint health.
- Treat allergic reactions.
- It reduces stress.
- It supports the immune system

2.Emblica officinalis gaertn(Amla):

Biological name: phyllanthus emblica L., Amla/gooseberry

Family: Euphorbiaceous

Biological source:The pericarp of the plant Emmica officinalis Gaerth Phyllanthus emblica Linn. is always full of both fresh and dried fruits.

3.Prickly chaff :

Scientific name : Achyranthes aspera L.

Family: Amaranthaceae

Biological source :

4.Acacia nilotica :

Scientific name : Acacia auriculiformis A.cunn.ex Benth

Family : Leguminosae

Biological source : The dried, gooey substance known as acacia is extracted from the stems and branches of the acacia senegal plant.

Benefits :

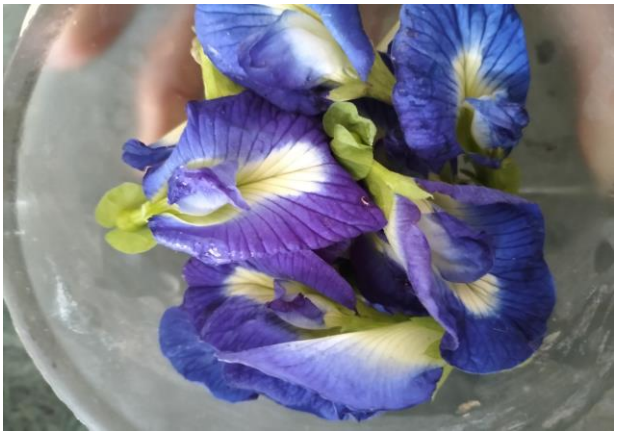
1. Ulcer
2. Tuberculosis
3. Commen cold and coughing
4. Asthama
5. Skin disorder

5.clitoria Ternatea flower:

Biological name : butterfly

Family : Fabaceae

Biological source : sources of natural foods,colours and antioxidants



Uses : ntipyretic anti-microbial, anti-pyretic, antiinflammatory, analgesic

6.Honey :

Scientific name : apis(genus)

Family : Apidae

Biological source : The honeybee Apis mellifera produces honey naturally from the nectar of flowers.

Chemical constituents : Traces of the B vitamins folic acid, niacin, and riboflavin can be found in honey.

Uses : Turmeric (Curcuma longa) has many pharmacological and therapeutic uses in addition to being used as a spice, preservative, and coloring agent.

8.Tulsi

Scientific name:Ocimum tenuiflorum

Family: Lamiaceae

Biological source:Tulsi is a natural plant that is thought to have originated in north central India.

Uses: respiratory disorders, asthma, cough, and colds.

9. Ginger :

Scientific name : Zingiber officinale (Ginger).

Family : Zingiberaceae

Biological source: The rhizome, or underground stems, of the zingiber officinale plant are the source of ginger.

Uses : used to treat cardiac conditions, diarrhea, and colds.

10. Clove :

Biological name : Syzygium aromaticum

Family : myrtaceae

Biological source : The dried flower buds of the Syzyjium aromaticum tree are used to make cloves.

Uses : allergy, asthma, and inflammatory disease.

Excipients Profile :

Sr.no	Excipients	Uses
1	Propylene glycol	Drugs stabilizers,food additive
2	Methyl paraben	Preservative
3	Papermint oil	Flavouring agents
4	Amaranth solution	Colouring agent
5	Honey	Sweating agent , thickening agent
6	Purified water	Vehicle

Preparation of extraction:

1) To make extract, mix 200ml of water with 20g of gulvel stem powder on average, and then heat the mixture gradually. After filtering, the extract was allowed to cool.

2) To prepare the extract, combine 5 grams of powdered turmeric with 100 milliliters of water and heat it gradually. After filtering, the extract was allowed to cool.

3) Combine 100ml of water and 10g of tulsi leaves, then gradually heat to create the extract. After filtering, the extract was allowed to cool.

4) Combine 100ml of water and 10g of ginger, then gradually heat to create the extract. After filtering, the extract was allowed to cool.

5) Combine 100ml of water and 10g of cloves, then gradually heat to create the extract. After filtering, the extract was allowed to cool.

6) The filtrate was used to make the finished syrup.

Harvesting of Clitoria Ternatea fresh flowers
↓
Washing of fresh flowers
↓
Shade drying at home
↓
Grinding the dried flowers
↓
Collect the powder
↓
Powder add in 94% methanol
↓
Allow to 5 days
↓
Filter and collect the extraction
↓
Collection of fresh Alma
↓
Washing and drying
↓
Grinding
↓
Collect the powder
↓
During five days, the powder dissolves in 94% methanol.
↓
Collection and filtering of extraction

Process :

1) To make the final syrup, add 20 milliliters of gulvel, 25 milliliters of honey, 4 milliliters of amla, 4 milliliters of prinkly chaff, 4 milliliters of acacia nilotica, 4 milliliters of clitoria ternatea flower, 4 milliliters of turmeric extract, 5 milliliters of tulsi, 4 milliliters of ginger, and 4 milliliters of clove. Slowly, while continuously staring, add the preservative.

2) After combining all of the extracts, 100 milliliters of syrup were produced.

3) After the finished syrup was made, it was evaluated.

4) After making the syrup, the solubility was assessed by visually analyzing the solution's clarity.

5) Once the syrup is ready, pour it into an amber bottle, label it neatly, and store it somewhere cool.

Evaluation Parameters:

Evaluation of cough syrup :

Colour:

The syrup has a yellowish brown color.

Odour:

The scent of syrup is aromatic.

PH:

Determination pH: used a pH paper to measure the final syrup's pH range and put a precisely measured amount in a beaker.

Viscosity:

The Ostaward viscometer was used to measure the viscosity.

Density:

The particular The density of distilled water at room temperature is o.997gm/ml, while the syrup's gravity is 1.0334. Syrup density = specific 1.0334×0.997 = 1.0302998 is the ratio of the density of distilled water to the gravity of syrup.

Specific Gravity :

The specific gravity bottle is weighed when it is empty, then it is weighed again after water and syrup are added. W1gm is the weight of an empty specific gravity bottle. Weight of a bottle with specific gravity and water (w2gm) Weight of a bottle with specific gravity and syrup W3gm W2=84.04, W3=85.7, and W1=35.30 w3-w1÷w2-w1 = 50.41÷48.78 = 1.0334 is the specific gravity.

Sr no.	Evaluation Parameters	Interface
1	Colour	Reddish Brown
2	Odour	Aromatic
3	Specific Gravity	1.0334
4	Density	1.0302998
5	Viscosity	120 Sec
6	pH	5.6

RESULT AND DISCUSSION:

The herbal cough syrup's overall formulation is used to treat colds, coughs, respiratory disorders, asthma, and as an anti-inflammatory and anti-tussive. The current study aids in the development of cough syrup that uses honey as a foundation and is both safe and effective.

CONCLUSION:

A mix of substances intended to relieve cough symptoms is probably used in the creation of Gulvel cough syrup. Herbal extracts, expectorants, cough suppressants, and sometimes some flavorings or sweeteners for palatability are some examples of these substances. Additionally, the manufactured syrup's physichemical characteristics—such as color, taste, odor, pH, and viscosity—were satisfactory; yet, the formulation met all requirements, including having the right amount of honey according to IP and being a good preservative. The current study aids in the development of a cough base made of honey that is both safe and effective.

REFERENCES

1. Shweta Parihar Department of Pharmacognosy, Maharshi Dayanand University, Near Delhi Bypass, Rohtak, Haryana-124001, India.
2. Gaurav. D. Mahamulkar1, Gayatri. D. Kshirsagar2, Aditi. A. Ghadge3, Dhanashri. T. Jawal4, Z. K. Khan5* Dept. of Pharmacy, Late Narayandas Chhabada Institute Of Pharmacy, Raigaon, Satara, Maharashtra, India. (IJCRT.ORG).
3. https://in.docworkspace.com/d/sIMbP3M-CApjas7gG?sa=601.1123
4. https://www.wilsondrugs.com/Guduchi-Syrup
5. https://images.app.goo.gl/s5QJTYFae5hX9HRF6
6. https://www.slideshare.net/slideshow/amla-118466793/118466793
7. https://en.m.wikipedia.org/wiki/Achyranthes_aspera#:~:text=Achyranthes%20aspera%20(common%20names%3A%20chaff,species%20and%20a%20common%20wee
8. https://www.efloraofgandhinagar.in/plant-details.php?cateUrl=tree&plantUrl=acacia-nilotica
9. Georgia na K. Oguis, Edward K. Gilding, A.Jackson and David J. Craik ,PMCID : PMC6546959(pubmed Central).
10. Mr. Tanvir S. Rohokale1, Miss. Kalyanee V. Gavande2, Dr. Amol N. Khedkar3, Mr. Mr. Harshwardhan D. Ghadge4
11. International Journal for Multidisciplinary Research (IJFMR)E-ISSN: 2582-2160 Website: www.ijfmr.com Email: editor@ijfmr.comIJFMR23068736Volume 5, Issue 6, November-December 2023
12. https://www.ncbi.nlm.nlh.gov pmc
13. https://en.m.wikipedia.org/wiki/Turmeric#:~:text=Turmeric%20(%2F%CB%88t%C9%9C%CB%90rm,in%20the%20ginger%20family%20Zingiberaceae
14. Https.//WWW.mountsinai.org herb
15. Krishna Suresh Gupta1, Yatin Nitin Gorhekar2, Pratiksha Subhash Gharat3 Formulation and Evaluation of Herbal Syrup Krishna Suresh Gupta1, Yatin Nitin Gorhekar2, Pratiksha Subhash Gharat3, Maheshwari Ashok G International Journal of Research Publication and Reviews
16. Ankush Ganpat Patil*, Kaivalya Gajanan Mirajakar*, Pranav Laxman Savekar,Formulation and Evaluation of Ginger Macerated Honey Base Herbal Cough Syrup"International Journal of Innovative Science and Research Technology
17. Shraddha Vinod Jadhav1, Abhishek Prakash Jaiswal2, Lovekesh Jitendra Jaiswal*REVIEW ON HERBAL COUGH SYRUP World Journal of Pharmaceutical Research
18. Miss.Priya D.Khode, Rupali R. Singanjude, Urwashi D. Lanjewar FORMULATION AND EVALUATION OF HERBAL COUGH JOURNAL OF CRITICAL REVIEWS
19. A.A.Alkhamali1, Z.Alshammari2, A.F.Alafnan3 Cough Syrup Misuse in Children International Journal of Scientific Research and Reviews
20. https://en.m.wikipedia.org/wiki/Tinospora_cordifolia
21. https://en.m.wikipedia.org/wiki/Phyllanthus_emblica
22. https://www.wikidoc.org/index.php/Acacia_nilotica
23. Vikas sharma formulation and evaluation of herbal cough syrup international journal of research and pharmacy and chemistry ISSN: 2231-2781.

HOW TO CITE: Pallavi pandit*, Aditi Pacharane, Kanchan Pandit, NIKUM R. D., To Formulation and Evaluation of Herbal Cough Syrup, Int. J. of Pharm. Sci., 2025, Vol 3, Issue 5, 1234-1241. https://doi.org/10.5281/zenodo.15364981