

Formulation and Evolution of Polyherbal Cough Syrup

Sakshi Anant Kadam, Seema Dharmaraj Gadade, Anjali Laxman Kalunke, Dr. L. D. Hingane
Aditya Pharmacy College, Beed, Maharashtra, India

Abstract: Polyherbal formulation of multi components which produce synergistic effect cough is common respiratory system that can have a significant impact on the quality of life. Cough is chronic and acute disease. Polyherbal formulation have been used for to treat cough and other respiratory infection. In this we study, we prepared a polyherbal cough syrup using a various combination of Medicinal plant. plant which is used as Natural Ingredients, like Ginger: Zingiber and Liquorice: Turmeric: Curcuma longa (Zingiberaceae), Tulsi: Ocimum santum. (Labiatae) and Liquorice: Glycyrrhiza glabra (Leguminosae).

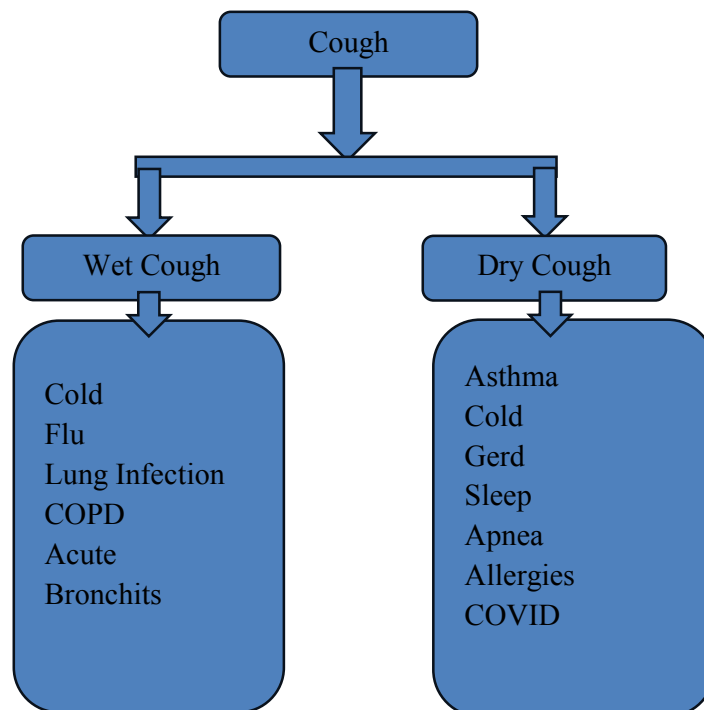
Keywords: Polyherbal formulation

I. INTRODUCTION

1.1 Cough What Is Ment By Cough?

Herbal cough syrup is defined as decoction with Honey or sugar. Herbal cough syrup is formulated using Crude. Drugs Marshmallow, Elderberry Thyme etc. as vasaka. cinnamon & Herbal cough Syrup is used in both dry wet coughs. The cough syrup medication is a liquid dosage form use of oral liquid pharmaceutical has been confirm on basic ease of administration to those People to have the problem in swallowing of solid dosage form of medication.(1)

1.2 Classification of Cough:-



1.3 Types of Coughs:

1. Acute Cough
2. Chronic Cough
3. Dry Cough
4. Wet Cough
5. cough From Chest and Throat

1.4 Invergordon to herbal cough trip:

Herbal cough syrup means a Natural remedy for coughs and other Respiratory Issues and thren's disease symptoms. It is made up of combination of the Honey or Sugar Used in Honey, ginger, this, turmeric liquorice etc used in the preparation of the Herbal Ingredient

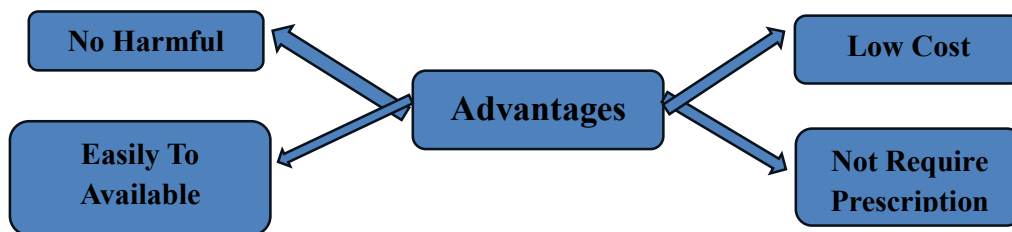
Poly Herbal cough syrup Poly Herbal cough syrup believed to have favourable Properties of the cough syrup
Ingredients -

- Honey
- Ginger
- Liquorice
- Turmeric
- Tulsi

1.5 Benefits:

1. Poly herbal Cough syrup can have a stronger.
 2. Poly herbal syrup it is therapeutic effectiveness.
 3. It is convenience.
 4. Poly herbal syrup immune system boost.
 5. It is cough relief.
- Herbs Ingredients ginger, turmeric, Liquorice, Tulsi, clove They are used mostly Antibacterial, Ant - Inflammatory They properties are help to the Relief the cough.
6. Sooting.
 7. It is an effective in productive and unproductive.
 8. It is used in an anti-allergic and protest allergic cough syrup.

1.6 Advantages of Herbal cough syrup



1.6 Disadvantages

Adverse drug Reaction with prescription drug.

Patients:-

1. Herbal medicine are the natural product The effectiveness of Herbal medicines. is not optimized in Laboratory so if taken time to procedure effect.

Here are the names of 8 scientists who have contributed to the research and development of polyherbal cough syrups, focusing on herbal formulations, pharmacological properties, and therapeutic efficacy:

1. Dr. Mohammad Ali

His work focuses on the pharmacological effects of herbs like liquorice and ginger, both common ingredients in polyherbal cough syrups, for treating cough and related symptoms.

2. Dr. S. J. K. Lee

Dr. Lee has studied traditional East Asian polyherbal formulations, including those used to treat respiratory conditions, with an emphasis on liquorice and peppermint.

3. Dr. R. S. Verma

A prominent researcher in the field of alternative medicine, Dr. Verma has conducted studies evaluating the efficacy of polyherbal cough syrups in managing acute and chronic respiratory issues.

4. Dr. Bharat B. Aggarwal

Known for his research on the anti-inflammatory and antioxidant properties of medicinal herbs, including their use in managing respiratory disorders like cough.

5. Dr. Mohammad Ali

His work focuses on the pharmacological effects of herbs like licorice and ginger, both common ingredients in polyherbal cough syrups, for treating cough and related symptoms.

6. Dr. T. K. S. Reddy

An expert in Ayurvedic medicine, Dr. Reddy has conducted research on polyherbal formulations, particularly those aimed at respiratory health, including cough syrups.

7. Dr. Shilpi Gupta

A researcher in the field of herbal medicine, Dr. Gupta has contributed to studies on the use of polyherbal syrups in treating cough and respiratory issues, focusing on herbs like Tulsi and ginger.

Dr. Iqbal Ahmed

Specializing in phytochemistry, Dr. Ahmed has studied the pharmacological properties of common herbs used in polyherbal cough syrups, like thyme and licorice.

8. Dr. S. J. K. Lee

Dr. Lee has studied traditional East Asian polyherbal formulations, including those used to treat respiratory conditions, with an emphasis on liquorice and peppermint.

9. Dr. R. S. Verma

A prominent researcher in the field of alternative medicine, Dr. Verma has conducted studies evaluating the efficacy of polyherbal cough syrups in managing acute and chronic respiratory issues.

These scientists have contributed significantly to the research, development, and understanding of polyherbal formulations used for treating cough and other respiratory disorders.

III. AIM AND OBJECTIVE

4.1 Aim: formulation and evolution of polyherbal cough syrup

4.2 The Study of Objective:

It is a non-alcoholic formulation.

It is effective in dissolution and removing congealed cough and phlegm.

It is non habit forming.

Expels sputum accumulated in the chest and prevent forming new sputum.

Cures cold, sore throat and bronchitis.

Promotes easy breathing.

Very effective against allergic cough and smoker cough.

Relieves dry and wet cough.(2)

PLAN OF WORK :-

Following steps are involved in present study:

Copyright to IJAR
SCT

DOI: 10.48175/IJAR
SCT-22267

www.ijarsct.co.in

Extensive literature survey.
Selection of plant material and method.
Collection of herb.
Organoleptic identification of herb.
Drying and Processing of herbs.
Extraction of crude herbal drugs.
Preparation of polyherbal cough Syrup.
Evaluation of poly herbal cough syrup.
Colour
Odour
Taste
Ph
Viscosity
Result & discussion.
Summary & conclusion.(2)

Drug and excipient profile

Turmeric :-

Family – zingiberaceae.
Synonym - Curcuma, Haldi, Rhizome, curcuma
Biological Name - Curcuma longa
Common name – turmeric, haldi
Biological source – it is dried rhizomes of curcuma longa linn
Uses :-
cosmetic
As Antifungal
An Anti-Inflammatory
protect Lungs
antiviral



Tulsi :-

Family: - Lamiaceae.
Synonym – holy basil, sacred basil
Biological name – ocimum sactum, ocimum tenuiflorum
Common name – tulsi
Biological source – it consist of fresh and leaves of ocimum sactum

Uses –
anti-bacterial

as antisepticidal
as antiseptic
antiviral
antibiotic
as anti-tussive



Ginger :-

Family - zingiberaceae.

Synonym – zingiber, rhizome, zingiberis

Biological name - zingiber officinale

Common Name - ginger , african ginger

Biological source - It consist of dried rhizomes of zingiber Officinale
Chemical constituents – ginger contains about 0.25-3% of volatile oil, 5-8% resinous matter 56% starch and protein. Volatile mixture contains a mixture of more than 25 constituents containing monoterpenes and sesquiterpenes.

Uses-

An anti-tussive

An anti-emetic

Used as carminative

Used to improve digestion



Honey

Family - Apidae.

Synonym – Madh

Copyright to IJAR

www.ijarsct.co.in

DOI: 10.48175/IJAR

Common name – madh

Biological source - it is a substance which is deposited by the honey camb by the species of app miliferea and other species of apps

Chemical constituent - It is consist glucose 30to 40%samll quality of sucrose dextrin of formic acidIt is also contain protein, enzymes, vitamins.

Uses –

It is used as sweetening agent

It is used as medicine



Clove

Family - myrtaceae.

Biological source - dried flower buds of *Eugenia caryophyllus*

Chemical constituents - volatile oil 15_ 20%, eugenol _70_90%, vaniline,,resine ,tannin cyrophyllene

Uses _

skin issue,

Nausea,

Toothache,

cold and Cough

Synonym_ *caryophyllus aromaticus* L.,*Eugenia aromatica* L. (Baill), *Eugenia caryophyllus* (Spreng)



Peppermint

Family - lamiaceae.

Synonym -mint ,mentha, pudina

Biological name - mentha piperita , pudina

Common name - pudina ,mentha

Biological source - Extracted from stem leaves and flowers of mentha piperita

Chemical constituent - it consist methyl acetate 3-10% menthofuran 1-17% 1,8-cineol 3-6% menthol 7-48% menthone 20-46%

Uses -

it is used to reduce mucosa

Used as aromatic

Used to treat dry cough

Used in common cold and other conditions



Liquorice

Family- Leguminoceae.

Synonym-Liquorice root

Biological Name -glycyrrhiza glabra

Common Name- Mulethi

Biological source- It consist of dried peeled and unpeeled roots and stolon of the plant glycyrrhiza glabra

Chemical constituent- It consist glycyrrhizin, glycyrrhetic acid , flavone glycoside , glucose (upto 4%) sucrose 2.5-6.5% resins asparagine and fat

Uses –

Used as demulcent

Used as expectorant



3)

IV. EXPERIMENT WORK

1.1. Material / Instruments Used

The material or Instruments used this work bottom flask, funnel, spatula ,beaker, reflux condenser, Mortar pestle

Copyright to IJARSCT

DOI: 10.48175/IJARSCT-22267

www.ijarsct.co.in



1.2. Sample /herbal Drug collection

All the herbal drug was collected from the labs and local Market.

1.3. Processing of herbal drug

All the herbal crude ware dried and powdered by using electric grinder

V. EXTRACTION OF HERBAL DRUGS

5-7gm of each herbal ingredients



Herbs was mixed using 100ml of water



Attach reflux condenser and material was boil under carefully by using water bath for 3hours



Boil until total volume becomes one forth part of previous



Then liquid was cooled and filtered



Fig 1.2. Extraction of herbal drugs



Fig.1.3 Extraction of herbal drugs

VI. FORMULATION TABLE

Table list of herbal Ingredients with quantity and use

Sr.No	Ingredient	Quantity F1	Quantity F2	Quantity F3	Use
1	Turmeric	2gm	2gm	2gm	Prevent ,imblomation
2	Tulsi	4gm	4gm	4gm	Cytotoxic, Mucolytic
3	Ginger	3gm	4gm	4gm	Cytotoxic, Mucolytic
4	Honey	30%	35%	40%	Sweetener, viscosity, Skin care.
5	Clove	2gm	2gm	2gm	Mucolytic
6	Pepper mint	2gm	2gm	2gm	Cytotoxic, Mucolytic
7	Liquorice	3gm	3gm	3gm	Expectorant.

(6)

Formulation Procedure

- 1.To prepare the final cough macerated ginger, honey mixed with medicated solution of tulsi extract
- 2.Add solution (Liquorice , Pepper mint, Clove) slowly and continuslysterred
- 3.Add turmeric and clove oil flavouring agent and methyl paraben as preservatives.
4. Herbal cough syrup was prepared.

Evaluation of formulated poly herbal herbal cough syrup :-

The evaluation test performed for the polyherbal cough syrup are following -

Sr No	Physiochemical parameters	Observed values
1	Colour	Reddish
2	odour	Pleasant odour
3	Taste	Sweet
4	Ph	4.25
5	Wt/ml at 25°C	1.18995 g
6	Specific gravitiy	1.2054 g/ml

VII. RESULT AND DISCUSSION

Pre Formulation studied :

Parameter were identification those organoleptic properties shown in table

Table Pre-formulation Studies

Sr No	Herbal Drug	Colour	Odour	Morphology Size	Shape
1	Turmeric	Yellow	Mustard	1-3 inch	Cylindrical
2	Tulsi	Green	Musky	1.5-6 cm	Elliptical
3	Ginger	Light Brown	Aromatic	2-10cm	Thick, Branched
4	Honey	BrownishYellow	Sweet aromatic	-	-
5	Clove	Dark brown	Spicy sweet	13-19mm	Nail like
6	Peppermint	Light Green	Aromatic	4-10mm	Lance Shaped
7	Liquorice	Brown	Aromatic	2-6cm	Long Cylindrical

: organoleptic characterization

Appreance of all formulation ware observed visually which was found to be brownish

The observation is shown in table

Table Organoleptic charterization

S.r No	Formulation	Colour	Odour	Taste
1	F1	Brownish	Sweet aromatic	sweet
2	F2	Brownish	Sweet aromatic	Sweet
3	F3	Brownish	Sweet aromatic	sweet

Ph DETERMINATION

The ph of all prepared batches of herbal cough syrup were determined by using digital ph meter and observed ph is given in table.

Table ph determination of polyherbal cough syrup

Sr.No	Formulation code	Ph
1	F1	5.89
2	F2	5.68
3	F3	5.76

Viscosity Determination

The pH of all prepared batches of herbal cough syrup were determined by ostwald's viscometer.

Sr no	parameter	Formulation
1	Colour	Dark brown
2	Odour	Pleasant
3	Taste	Sweet
4	Ph	6.8
5	Viscosity	1.01 +/- 0.03

V. SUMMARY AND CONCLUSIONS

The aim of this project was to formulate and evaluate herbal cough syrup the present study helped us to understand what actually cough means study the different types of cough factor responsible for causing cough. herbal treatment for cough studied briefly. Herbal treatment is more benifithuman. herbal drugs have less side effects. Herbal drugs are easily available than that the prscribeddrugs. herbal syrup take cough is avoid three formulation were prepared and evaluation test such as colour, odour, taste,pH ,and viscosity were performed. the present study will help us to understand effectiveness of herbal cough syrup compared to chemical_based syrup

REFERENCES

- [1]. Swain Pramod Kumar,Nayak Durga Prasan , "Design Development and Evaluation of a poly herbal syrup from some herbs used as energy
- [2]. The information has been collected from final rule published in Ninth triennial section 1201 proceedings
- [3]. booster , "International journal of Ayurvedic medicine,2013,4(4),374-378
- [4]. MotumaAdinassAbeshu and Bekesho Geleta "A review Medicinal uses of honey "Biology and medicine (Aligarh)2016 8.2
- [5]. Gule Samreen kazi*, Dimple S.sahare,BhairaviV.Gawande,Dr.suhasp.pamane,Dr.Sheelpriyawalde department of Quality assurance, Gurunanak college of pharmacy, Nagpur, India
- [6]. The information is collected from article Zeeshan Ahmed' Aqib Zahoor'SalehaKhan'KhanUsmanghani