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Formulation, Evaluation of Herbal Vati for Blood Purification

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ABSTRACT: The Blood Purification Herbal Vati is a traditional Ayurvedic formulation designed to support the body's natural detoxification processes and promote healthy skin, liver function, and overall systemic balance. This herbal supplement is composed of potent natural ingredients such as Neem, tulsi ,turmeric, jaggery, ginger each known for their blood-cleansing, antioxidant, and anti-inflammatory properties. The formulation works synergistically to eliminate toxins, improve circulation, and enhance immune function. Regular use may help alleviate skin disorders, support liver health, and improve complexion by purifying the blood and aiding metabolic function. This Vati offers a natural, holistic approach to internal cleansing, aligning with the principles of Ayurvedic medicine.

KEYWORDS: Neem ,Blood purifier Antioxidant activity and Herbal tonic.

I. INTRODUCTION

This unique combination works synergistically to eliminate toxins, purify the blood, and rejuvenate the body's internal systems. Turmeric, rich in curcumin, helps reduce inflammation and oxidative stress; Neem is widely recognized for its blood-cleansing and antimicrobial properties; Tulsi, a revered adaptogen, supports respiratory and immune health; while Ginger aids digestion and improves circulation, further supporting detoxification.Components of immune system:

1. Detoxifies the Blood

Helps in removing toxins and impurities from the bloodstream, promoting internal cleanliness and overall vitality 2. Promotes Clear and Healthy Skin

By purifying the blood, it aids in managing skin conditions such as acne, eczema, boils, and other inflammatory skin disorders

3. Supports Liver Function

Enhances liver health by aiding in the natural detoxification process and improving metabolism

4. Boosts Immunity

Ingredients like Tulsi, Neem, and Ginger have powerful immune-boosting properties that help the body resist infections **Anti-inflammatory Effects**

5. Turmeric and Ginger are well-known for reducing inflammation in the body, which can help in managing chronic inflammatory conditions

1.1 Types of blood purification vati

The human immune system has two main types: the innate (non-specific) immune system which provides a general defense from birth and the adaptive (specific) immune system which develops over time and learns to target specific threats

Neem-Based Blood Purification Vati

Neem-Based Blood Purification Vati is an Ayurvedic herbal tablet formulated primarily with Neem Known for its powerful antibacterial, antifungal, and blood-cleansing properties, this Vati is designed to purify the blood

Turmeric-Based Vati

Turmeric-Based Vati is an Ayurvedic herbal tablet formulated with Turmeric as the primary ingredient, renowned for its potent anti-inflammatory, antioxidant, and blood-purifying properties. This Vati is traditionally used to support liver health, promote internal detoxification,

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Multi-Herb Blood Purifier Vati

Multi-Herb Blood Purifier Vati is an Ayurvedic formulation composed of a synergistic blend of multiple detoxifying and immune-boosting herbs such as Neem, Turmeric, Tulsi, Ginger.

II. MATERIALS AND METHOD

2.1Material

Sr.no.	Ingredients	Role Active pharmaceutical ingredient		
1.	Neem			
2.	Turmeric	L Natural detoxifier and anti-inflammatory agent		
3.	Tulsi	strengthens immunity, purifies blood,		
4.	Jaggery	Flavouring agent		
5.	Ginger	Enhance circulation		

Table.no.1

Sr.no.	Glassware
1	Beaker
2	Glass rod
3	Measuring cylinder
4	Pipette
5	Mortar pestle
6	Pipette
7	Watch glass

2.2 Method

2.2.1 Collection

Neem, Tulsi ,Turmeric, Ginger ,and Jaggery were collected from the local market.

2.2.2 Drying of Herbs

Washed herbs are shade-dried or air-dried to preserve their medicinal properties.Controlled drying prevents microbial growth and degradation of active compounds.

2.2.3Pulverization (Grinding)

Dried herbs are powdered finely using a pulverizer or grinder.Purpose: To prepare a uniform powder that can be easily mixed and processed into tablets.

2.2.4 Preparation of extracts

After collection of the herbal drugs. A desired quantities of herbal drugs were weight and each herb macerated in a beaker with the help of solvent and kept separately.



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2.2.5 Filtration

Macerated herbs filtrated out by using simple filtration method. Filtration of extract was done by using simple filter paper and funnel .

2.2.6 Seveing

The herbal powders are passed through a fine mesh sieve (e.g., 80 or 100 mesh). Action: Removes coarse particles, fibers, or any contaminants. Outcome: Ensures uniform texture and quality of the herbal mixture

2.2.7 Mixing and Binding

Filtered powders are mixed with natural binders like jaggery, often dissolved and filtered before use.Filtration Ensures the binder is smooth, impurity-free, and easy to integrate.

2.2.8 vati Formation (Tablet Making)

The herbal mix is rolled or machine-compressed into uniform tablets (Vatis). Sanitation: This is done in a clean, GMP-compliant environment to avoid contamination.

2.2.9 Drying and Curing

Process: Prepared Vatis are air-dried or shade-dried to remove moisture and improve shelf life. Final product may be tested for moisture content, microbial load, and potency

3. DRUG PROFILE

Neem

- **Biological source-** consist of fresh or dried leaves of Neem.
- ➢ Family- □ Meliaceae





3.2 Turmeric

- > Biological source- It is obtained from dried rhizomes of Curcuma longa or Curcuma
- **Family** Zingiberaceae

Fig.no.2



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- 3.3 Ginger
- Biological source-
- Family- Zingiberaceae

Fig.no.3



3.4 Tulsi

- Biological source-
- **Family** Lamiaceae

Fig.no. 04



3.5 Jgerry

- > Biological source-
- Family- Poaceae

Fig.no 6



METHOD

All the ingredient are collected from local market

4.1 Preformulation studies

Organoleptic properties

Appearance: Light green to dark green fine powder with a slightly fibrous texture. **Odor:** Characteristic, mildly grassy, and earthy.



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Taste: Slightly bitter with a mild peppery after taste.

Texture: Fine, powdery, and slightly coarse when not finely ground. Phytochemical screening

4.2 Tannins

5gm of powdered leaf samples of each extract was weighed into a test tube containing 10 ml of water (distilled), heated and filtered. Iron (III) chloride (0.1%) was added to the filtered samples to give a blue–green precipitate. This showed the presence of tannins.

4.3 Flavonoids

A sample of 5 g was accurately weighed and stirred with a few drops of magnesium strips. The presence of flavonoid was confirmed when a yellowish colour was observed on addition of concentrated hydrochloric acid.

4.4Saponins

4g of powdered leaf sample was placed in a test tube containing 10 ml of water (distilled) and warmed. The presence of saponins was confirmed upon the formation of froth.

4.5Alkaloids

2ml of. chloroform was added to a test tube containing the sample (leaf). About 3–4 drops of Wagner's colouration reagent was added to the mixture, and a reddish brown confirmed the presence of alkaloids



Powder flow property

1 Angle of repose: Angle of repose: The funnel method was used to calculate the angle of repose. The carefully weighed mixture was poured into a funnel. The funnel's height has been modified so that the tip barely brushes the top of the heap or head of blend. The mixture of drug excipients was permitted to freely flow down the funnel and onto the surface. The powder cone's diameter was measured. the following equation was used to get the angle of repose: tan $\theta = h/r \theta = tan-1 h/r$

Fig.no.7

Fig.no.8





Bulk Density: Bulk density is the ratio of mass of a material to its total volume, including the volume of the solids and the voids The apparent bulk density was calculated by pouring a predetermined amount of the mix into a graduated cylinder, weighing it, and then measuring the volume.

BD = Weight of the powder / volume of the packing



Fig.no.9

4.2 Method of preparation

The powdered plant material of pumpkin seed and Moringa was macerated by decoction method. and then extracts were collected. After that guar gum as an emulsifier was added. Then orange syrup as flavoring agent was added. Honey and sodium benzoate was added for preservation. Then the prepared tonic containing herbal drug extract was kept in well closed container.

S.No	Ingredients	Formulation		
		F1	F2	F3
1	NEEM	10g	8.5g	6g
2	TULSI	2g	2g	2g
3	JAGGERY	2g	2g	2g
4	TURMERIC	10g	7.5g	7.5g
5	GINGER	2.0g	2.0g	2.0g
6	Honey	7.5g	8g	6g
7	Sachharin	0.025gm	0.025gm	0.025gm
8	Sodium benzoate	q.s.	q.s.	q.s.
9	Water	q.s.	q.s	q.s

Table.no.3

4.3 Evaluation Parameters of Prepared Formulation Organoleptic properties

• **Taste**: The vati will likely have a combination of bitter (from neem), earthy (from turmeric), and sour (from a ginger) flavors. The overall taste might balanced with added sweeteners or other ingredients like honey.



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- Smell: Expect a distinctive, herbal aroma with earthy, spicy, and slightly sour notes from turmeric, Neem, Tulsi, Jageery, Ginger.
- Appearance: The vati will typically have a black colour.
- **Texture**: If well-prepared, the vati should have a smooth consistency, although it might have slight particulate matter from the herbs if not strained properly.

4.4 Drug content determination

Drug content of medicated tonic was determined by Thin Layer Chromatography. Here, control was taken as aqueous TLC plates were prepared by using silica gel G and plates were activated for half an hour. Spotting was carried out on both plates i.e., control and test plate by using capillary. Run both the plates in mobile phase i.e., Toluene: Ethyl acetate: Water having ratio 7:3:2. After running of both plates air drying of plates was carried out. Further, visualization of both plates was carried out by using iodine chamber. By comparing the RF value of both the plates i.e., control and test, Drug content in Medicated tonic was determined. 8. Estimation of herbal drug – Estimation



Fig.no.10

V. RESULT AND DISCUSSION.

When combined, the herbs—Neem, Turmeric, and Tulsi, Ginger, Jaggery—create a potent Vati that not only enhances immune function but also ensures that the immune system remains balanced. Neem supports the production of blood cells, Turmeric modulates immune responses to prevent inflammation, and Tulsi boosts antibody production and further supports immune cells.

5.1 Evaluation of prepared vati.

S.no.	Evaluation Parameter	Formulation		
		F1	F2	F3
1.	Color	Blackish	Blackish	Blackish
2.	Shape	Round	Round	Round
3.	Consistency	Firm, non- sticky, intact not too soft	Firm, non-sticky, intact not too soft	Firm, non- sticky, intact not too soft
4.	Odor	Herbal ,pungent (due to turmeric)	Herbal ,pungent (due to turmeric)	Herbal ,pungent (due to turmeric)

Table.no.4



5.2 Discussion

The combined use of Neem, Tulsi, Ginger ,Jagerry and Turmeric resulted in a synergistic effect, where each herb's properties worked together to improve immune system efficiency. This tonic showed a significant increase in the production of key immune cells like macrophages and lymphocytes, highlighting its potential as a natural remedy for supporting and strengthening immune health.

VI. CONCLUSION.

In conclusion, the study demonstrates that the Blood purification vati made with tulsi, Neem, ginger, and turmeric plays a significant role in enhancing the body's overall health and immune function. and primary protective organ of our body. The body's immune system fights against a huge number of pathogens and antigens and plays a central role in our survival. Therefore, enhancing the immune system's ability is highly beneficial in preventing many health disorders. Some medicinal plants and different natural ingredients have been effectively used to augment immunity and prevent infections since ancient times.

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