



# The Review On Medicinal Uses Of Tulsi (Holy basil)

AVHAD AKASH RADHAKRUSHNA

Swami Vivekananda Sanstha's Institute of Pharmacy, Mungase, Malegaon

Corresponding Author: Assistant Prof. Neha S. Kothawade

Department of Pharmaceutics

## ABSTRACT:

Tulsi (*Ocimum basilicum* L.) And it Family (*Lamiaceae*) is the most Important medicinal plants mentioned in Ayurvedic creative writing for its medicinal and religious properties. It is widely used as medicine to cure various ailments. The objective. of the study was to analyse different phytochemical components of tulsi leaf. The dried powder of Tulsi (50g) was placed in the thimble of Soxhlet apparatus and the experiment was done separately for methanol, ethanol and distilled water. The percentage yield was 8% w/w, 7% w/w, and 5% w/w respectively. The study reveals that various secondary metabolites such as carbohydrate, tannin, flavonoids, saponins, glycoside, terpenoid, fatty acids and phenol are present in tulsi leaf extract. tulsi is mentioned under Helminthiasis because it is an anti-microbial agent. This drug is a famous for house hold medication for many diseases such as injury, hepatic disease, viral infection, earache, back pain, hiccup, inflammation of the conjunctiva in newborns, respiratory disorder, stomach diseases, urinary disorders, seborrhea disease, a variety of toxicity and mental stress. Hence it is more beneficial to use tulsi asan herbal medicine as compare to chemically synthesized drug.

## KEYWORDS:

Pharmacognostical & Pharmacological aspect and traditional uses. *Ocimum sanctum*, phytochemical, medicine, GC-MS, Antiviral activity.

## INTRODUCTION:

Medicinal plants are rich source of different types of medicines and produce various bioactive molecules. Herbal plant extracts are very useful and are the major sources of medicine which play vital role in controlling various types of pathogens (Doss, 2009) and as growth promoters.

Tulsi tells the suggestion of the unparalleled one. Additional name, “Vishnupriya” expresses the one that delight Lord Vishnu. Cultivated in maximum of Indian houses and temples, its marvel has saturated our native society down the ages. Tulsi” tells the suggestion of the unparalleled one. Additional name, “Vishnupriya” expresses the one that delight Lord Vishnu. Cultivated in maximum of Indian houses and temples, its marvel has saturated our native society down the ages. Tulsi classified into two types- forestland and cultivated land. While having selfsame usage, it has dark coloured leafs. Tulsi is widely used in home remedy for for treatment of injury, respiratory disorders, hepatic disorders, viral infection, earache, spinal pain, hiccup, inflammation of the conjunctiva in newborns. Tulsi is maybe one of the most specimens of Ayurveda universal method to live the life come up to health. It’s taste is bitter.

It also having antipyretic properties.

The medicinal plants are rich sources of secondary metabolites which are chemically and taxonomically extremely diverse compounds with obscure function. A large number of phytochemicals are widely uses in human therapy, agriculture, veterinary, various scientific researches and in different areas (Vasu et al., 2009) along with inhibitory effects on all types of microorganisms in vitro (Cowan, 1999).

The medicinal plants extract have now emerged as a good alternative as they are rich in a wide variety of secondary metabolites such as tannins

# SYNONYMS

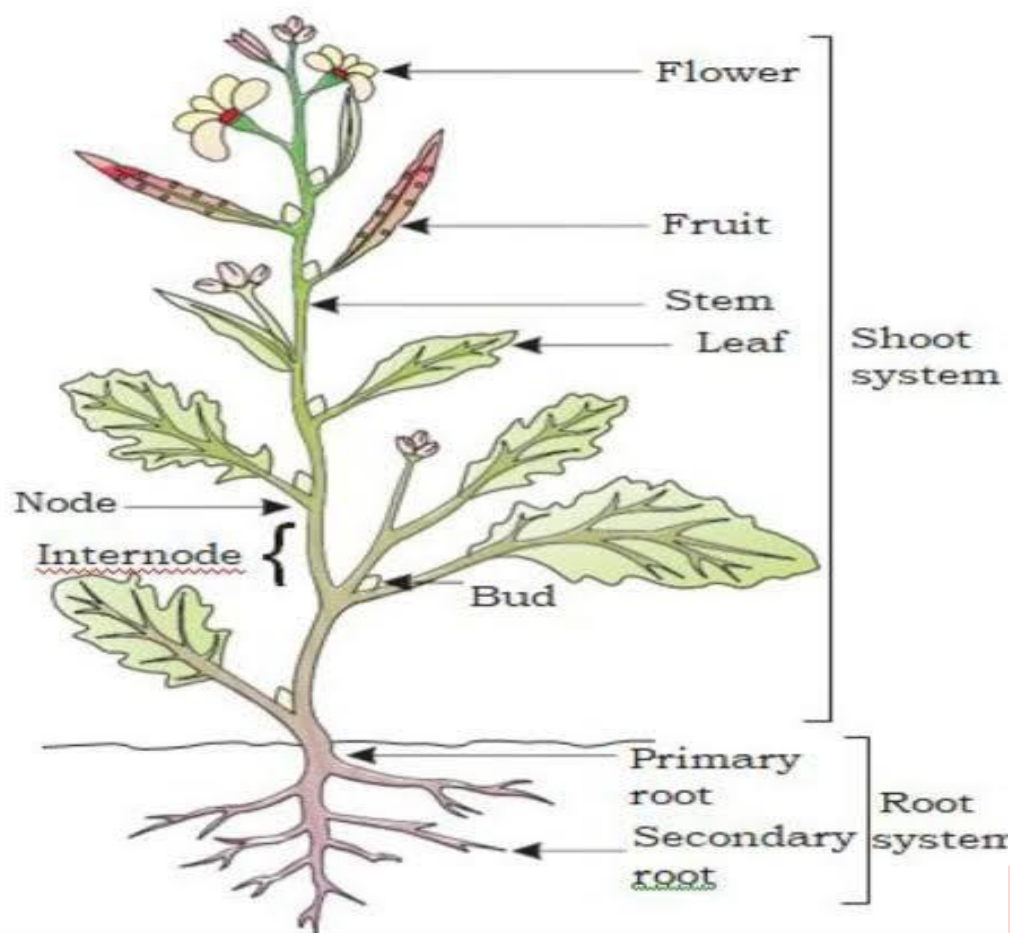
- Hindi : Tulasii
- Sanskrit : Surasa, Krishna tulasi, Bana Tulasi
- English : Holy Basil
- Marathi : Tulase
- Assamese : Tulasii
- Bengali : Tulasai
- Gujrati : Tulasei, Tulsi lip
- Kannada : Tulaseii, Shri Tulsi, Vishanu Tulsi
- Malayalam : Tulsii, Tulasae
- Punjabi : Tulsi
- Tamil : Tulaesi, Thulasii, Theiru Theezaei
- Telugu : Tulasii
- Urdu : Raihana, Tulss
- Armenia: Shahasbram, Rehan
- Bulgaria: Bosilek
- Burma: Laun, Pinzainpinzin
- Denmark, Greenland :Basilikum
- Netherlands, South Africa: Baziell, Koningskruid
- England: Basilie, Sweet Basil
- Finland, Sweden, Norway: Basilika
- France: Basilic sacre, Herbe royale
- Georgia: Rekhani, Rehan
- Germany: Indisches Basilikum

## Botanical Classification of Ocimum Basilicum

Taxonomic Rank	Taxon
Kingdom	Plantae
Division	Magnoliophyta
Class	Magnoliopsida
Order	Lamiales
Family	Lamiaceae
Genus	Ocimum
Species	Ocimum Basilicum

### MORPHOLOGY :

- Distribution : Grow upto 30 - 60 cm height .
- Territory : Found throughout the Indis .
- Habit : Annual herb.
- Tana (Stem): Stiff, greenly, wooded, branches are hairy, external colour pinkish brown black, internal colour dull yellowish, fracture: stringy and slightly order.
- Patra(leaf) : Leafs are 2.5 to 5cm long 1.6 to 3.2 cm wide, elliptically egg shaped, or acute apex, hairy on both sides. Petiole is thin, hairy; odour, aromatic
- Mool(root) : Thiny, wired, branches, hairs, soft, colour black to brown from external or dull and violet internal.
- Pushpa(flower) : Purplish or crimson coloured, calyx elliptical or campanulated 3-4 mm bilipped, odour is aromatic, taste is pungent.
- Phal (fruit): Four nutlets, each contains one seed, membranous, colour is dull brown or reddish with small black patches, odour is aromatic, taste is pungent.
- Beej (seed) : Shape is oval, colour is brown, mucilaginous when soaked in water odourless, taste is bitter



**Fig.1: Plant parts**

## MEDICINAL PROPERTIES :

- It is used in the manufacturing of many skin ointments and cosmetics because it contains anti-bacterial activities
- It is used in cough and cold with Kali mirch, Ginger juice and honey
- It is used as an antiseptic, antiviral and antibiotic.
- It also used to treat gastric disorders, cough, common colds, malaria, and headaches
- It is used in the manufacturing of many skin ointments and cosmetics because it contains anti-bacterial activities.
- It's oil shows stomach poisoning against "malarial larve.
- It has immuno-modulatory properties .
- It acts as repellent for insect. So, it is widely used to store grains.
- A chemical present in tulsi known as beta-Ursolic acid, may used as a anti-fertility agent in future

- External application of juice of Tulsi, lime Juice eradicates pimples with softness of skin.
- It is very useful in chronic fever.
- Keeping a Tulsi plant in the house will prevent all types of insects and mosquitoes, so that Malaria and Dengue etc. can be prevented.
- The holy plant of Tulsi in House gives Riddhi-Siddhi, Prosperous and Healthy Wealthy Life.

## PROPERTIES OR ACTION :

- Gunna : Laghau, Ruksh, Tikshn
- Virya : Ushna
- Vipak : Kattu
- Rassa : Kattu, Tikta, Kashya
- Karma: Depana, Hridya, Kaphahara, Rucya, Vatahara, Pittavardhini, Durgandhihara

## THERAPUTIC USES OF OCIMUM SANCTUM :

There are several reports on the use of natural materials sources like plants, bacteria, fungi, yeast and honey. Therapeutic Uses of Ocimum sanctum There are several reports on the use of natural materials sources like plants, bacteria, fungi, yeast and honey

- **Anti-oxidant:** The experimental study on streptozocin-induced diabetic rats showed the antioxidant activity of *O. sanctum*. It was reported that the leaves of this plant contain hydroalcoholic extract which is responsible for the antioxidant property. When the leaves of *O. sanctum* were provided with streptozocin-induced diabetic rats for 30 days, it was found to improve the activity of antioxidant enzyme catalase and reduce the plasma level of thiobarbituric acid in the vital organs like kidneys and liver
- **Anti-ulcer:** It was reported that the *O. sanctum* plant possesses to have antiulcer activity against histamine, aspirin, reserpine, serotonin aspirin indomethacin in rats [55]. The experiment was performed in Wistar rats where it was found that the aqueous extract of *O. sanctum* protects against ethanol-induced gastric ulceration
- **Anti-pyretic activity:** The fixed oil of OS was tested against typhoid-paratyphoid A/B vaccine-induced pyrexia in rats and it was found that the oil extracted from the plant exhibit antipyretic activity
- **Hepatoprotective:** It was reported that the leaf extract of the *O. sanctum* plant possesses significant hepatoprotective activity when studied against paracetamol-induced liver damage against albino rats
- **Anti-stress:** It was reported that the leaves of *O. sanctum* possess anti-stress activity when studied in rabbits



- **Antidepressant and Antianxiety:** The ethanolic extract of *O. sanctum* were tested in swiss mice. It was found that the plant extract possesses antidepressant and antianxiety properties and can act as a therapeutic drug against these disorders
- **Anti-inflammatory:** The presence of fatty acids in the tulsi plant possesses anti-inflammatory activity. The main fatty acid responsible for the antiinflammatory activity is linoleic acid which is capable of blocking the cyclooxygenase and lipoxygenase pathways

## PHYTOCHEMISTRY :

- Extract of fresh leaves and stem contains some antioxidants compounds like “cirsilineol”, “circimaritin”, “isothymusin”, “apigenin”, “rosameric acid”, and considerable properties of “eugeno”.
- The leaf has 0.7% “volatile oil” muster regarding 71% “eugenol” & 20% “methyl eugenol”.
- It’s oil have “carvacrol” & “sesquiterpine hydrocarbon caryophyllene.

## QUALETATIVE PHYTOCHEMICAL ANALYSIS

The extract was tested following standard biochemical methods as described below.

- **Test for proteins:**

- 1)Biuret’s test: 2ml of Biuret reagent was added to 2ml of extract. The mixture was shaken well and warm for 5 min. Appearance of red or violet colour indicated presence of proteins.
- 2)Millon’s test: Crude extract was mixed with 2ml of Millon’s reagent, if precipitate appeared which turned red on gentle heating confirmed the presence of protein.
- 3)Ninhydrin test:Crude extract was mixed with 2 ml of 0.2% solution of Ninhydrin and boiled for some time, if violet colour appeared indicating the presence of amino acids and proteins.

- **Test for carbohydrates:**

- 1)Fehling’s test: Equal amount of Fehling A and Fehling B reagents were mixed and 2ml of it was added to the plant extract and then gently heated the sample. Appearance of brick red precipitate indicated the presence of reducing sugars.
- 2)Benedict’s test: Crude extract when mixed with 2ml of Benedict’s reagents and boiled, a reddish brown precipitate formed which indicated the presence of the carbohydrates.
- 3)Molisch’s test: 2ml of Molisch’s reagent was added to 0.5 ml of crude extract and the mixture was shaken properly. After that, 2ml of concentrated H<sub>2</sub>SO<sub>4</sub> was poured carefully along the side of the test tube. Appearance of a violet ring at the interface indicated the presence of carbohydrate.
- 4)Iodine test: 2ml of iodine solution was mixed with 0.5 to 1 ml of crude extract. A dark blue or purple coloration indicated the presence of the carbohydrate.

- Test for phenol: 2 ml of alcohol and 2-3 drops of ferric chloride solution was added to 1 ml of crude extract, blue green or black coloration indicated the presence of phenols.

## CONCLUSION :

All these medicinal ingredients make Tulsi very important holy basil for longer and peaceful life. It has high traditional value in Hindu as well as other societies. This small plant is certainly a very good source of medicinal properties. Tulsi is appraised as the “Queen of Herbs” on account of its diverse curative abilities & mythological values. Tulsi has indeed an ample range of benefits which is traditionally believed and scientifically proven. These studies demonstrated that the habitual insertion of *Ocimum sanctum* i.e., Tulsi to the menu, also in medications can certainly aid in safeguard or demotion of various health settings and warrants additional medical.

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