

PHYTOCHEMICAL SCREENING OF TULSI LEAVES

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ABSTRACT: The objective of present study is phytochemical screening of tulsi leaves. Phytocemical analysis done for different constituents present such alkaloids, glycosides, tannins, resins, carbohydrateds present in tulsi leaves. The obtained result from whole study confirm the validity of the use of Ocimum sanctum plant as medicine in ancient medicinal traditions and suggest that some of the plant extracts possess compounds with antimicrobial properties. cirsilineol, circimaritin, isothymusin, apigenin and rosameric acid, are present in isolated aqueous extract of ocium sanctum. Ocium sanctum which may be useful against fever, syphilitic, ulcer, infl ammatory disease wounds, such as antimicrobial infection analgesic, antifungal, arthritis, anticancer, eye disease, antifertility, hepatoprotective, chronic fever, antispasmodic, antiemetic, cardio protective etc. In protective antioxidant supplement ocimum sanctum leaf extract tmay be used after the analysis of certain tests. After this study it is assumed that the extract could be used for the new formulations.

KEYWORDS: Antioxidant, antimicrobial, antifungal, arthritis, Extract.

INTRODUCTION: Tulsi commonly known as Known as tulbi P ocimum ten villorum, also. tulasi and tample, damale or domple in Fiji. Tulsi or Tulasior or holybasil Vaishnavi Cocimuntenuiflorum) is sacred plant of India. Plant has great spiritual, medicinal & therapeutic value in Hindu belief. Tulsi is belongs to Tulsi is The Kingdom have order of Lamiales to the family Lamiaceac Plantac and belongs to family Lamiaceae. Tulsi belongs to Grenco Ocimum Genus essentialoil. It is widely used as for it's a herballea, commonly Used in Ayurveda, and has a place within the vaishnava tradition of Hinduism,in which devotees perform worship involving holy basil plants or leaves. It is native to tropical and Subtropical regions Australia, Malesia, Asia and the western Pacific.

It is widely cultivated throughout the southeast Asian tropics. This plant has escaped from cultivation and has naturalized in many tropical regions of the Americas. It is agricultural and environmental weed. Traditionally, In india, Tulsi is planted in the Center of the central courtyard of Hindus Houses. Tulsi is aromatics hrub in the basil family lamiaceae (tribeocimeae) that is thought to have originated in north

central India now grows native throughout the eastern would tropics. The plant is Cultivated for religious and medicinal purposes, and for its essential oil (EO). Tulsi taste shot & bitter and is said to penetrate The deep tissues, dry tissue Secretions and normalize Kapha & Vata. Tulsi is also credited with giving luster to the complexion, Sweetness to the voice and fastering beauty, intelligence, stamina and a calm emotional disposition. Tulsi is perhaps one of the best examples of ayurved holistic lifestyle approach to health.

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There are mainly four types of tulsi found in india. Rama (Green Leaf) Tulsi, Sri or Lakshmi tulsi, ocimum tenuiflorum, ocimum sanctum. Krishna (Purple Leaf) Tulsi, Shyama tulsi. vana (wild leaf) tulsi. kapoor tulsi (Heavy Glowered). Holy basil is an erect, many - branched Subshrub, 30-60cm (12-24 in) tall with harry Stems. The purplish flowers are placed in close whorls onelongate dracemes. leaves are green or purple; they Are Simple, petroled, with ovate blade up to 5cm (2in) long,which usually has a slightly to the margin; they are strongly scented" and have a decussate phyllotaxy.

The three main Morphotypes Cultivated in India and Nepal ane Ram tulsi (the most common type, with broad bright. green leaves that are slightly sweet), the less common purplish green-leaved. (Krishna or Shyam tulsi) and the common. Wild Vana tulai (eg. Ocimum gratissimum).

Main Varieties of Tulsi in India

There are four varieties of tulsi plants in india

KrishnaTulsi

It is said that Krishna Tulsi got its name because of the purple leaves. Tulsi is hard to find in Comparison to the other types of tulsi. Purple leaf Tulsi is also used to treat throat Infections, etc.



Kapoor Tulsi or Heavy flowered Basil

This type of Tulsi has granished its name due to Sweet fragrance that can keep insects and Mosquitoes at bay. Use of kapoor tulsi can help in the treatment of bronchitis, malaria etc.

RamaTulsi

Rama Tulsi is also known as Sri or lakshmi Tulsi, Ocimum Sanctum, and green Leaf Tulsi (Basil).

VanaTulsi

It is native to India, Java, Srilanka and the eastern and northern pants of africa. The strong antioxidant activity of vana tulsi slows down the ageing process. It can grow up to 2m high with leaves aromatic and slightly hair green leafs.

Medicinal uses of Tulsi leaves:

The tulsi has broad scope in the health benefits. They have different types medicinal uses. Tulsi, commonly known as holy basil has been used for the treatment of a wide range of ailments in many parts of the world. Tulsi leaves leaf extracts is effective to treat Skin disorders. Dried leaf powder isused for to heat brushing teeth. In the preparation of tooth paste for dental health. Tulsi tea or Kara is highly effective to treat the respiratory ailments like Chronic bronchitis, and asthma. It is commonly used for relieving from Fever, headache, sare throat, cold, cough. chest congestion and flu. It helps in regulating uric acid levels in body,there by elimination risks of developing Kidney Stones. Tulsi leaves is used for relief from Cough and cold. In respiratory disorders like Influenza are treated with leaf extract.

Pharmaceutical Activity of Tulsi

Tulsi are Contains various category of phytochemicals which show divers biological and activities of pharmacological Important pharmaceutical activities of tulsi are as follows.

AnticancerActivity

Tulsi leaves, which have high concentrations of Eugenol, have been shown to have anticancer properties. Tulsi or holy basil has eugenol that helps fight cancer. The phytonutrients in Tulsi directly kill the cancer Cells limiting the growth and spread of conces individual.

Antimicrobial Activity:

Tulsi is showing the antimicrobral activity. against the different bacteria the most common being condida albicans staphylococcus aureus, Escherichia coli by its phyto constituent isolate fromVarious parts.

Antioxidant Activity

Tulsi leaves contains variable yield of and types of chemical constituents. Holy basil is also high in antioxidants and helps your body detox. It may also prevent cancer by reducing the growth of Cancerous cells.



Anti-inflammatory

Tulsi haveing anti-inflammatory response. of 500 Mg/kg of the Tulsi paste was found to be 88.15% as that of the response observed with 100 Mg 1kg of indomethacin.

Immunomodulatory

The tulsi leaves consumption on empty stomach enhance the immunity.

AnalgesicActivity

The holy basil oil was found to devoid of analgesic activity in experimental pain model. The analgesic action of tulsi chemical [osciumTuniflura] is extred both & peripheral and involved interplay between Various neurotransmitter systems.

MATERIALS AND METHODS

Soxhlet Extraction

The dried fine powder of holybasil (50gm) was placed in the soxhlet 500 ml of distilled water was used as a Solvent. The extraction process was Continued till the clear solvent was seen in the thimble. The extract was concentrated by using rotavapor. Then the obtained extract was dry in a digital, water bath till the dark green Colour residue was obtained. The percentage yield of the extract was calculated using the formula. The percentage yield was 10% w/w the extract were kept in there till further use.





Fig. 1 Soxhlet apparatus.

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RESULT AND DISCUSSION

Qualitative phytochemicals analysis: various tests are performed for the analysis of alkaloids, flavonoids, tannins, saponins, steroids, glycosides. Phytochemical studies of Tulsi and its Qualitative phytochemical investigation finds presence of alkaloids compounds which show the appearance of red colour, flavonoids and tannins show the pink colour which indicates the presence of flavonoids. Tannins indicates the presence of blackish precipitate and absence of flavonoids Not observed pink coloration in all mentioned extracts of plant. Plants and their products have been used extensively and safely for the treatment of medical problems. Traditionally, medicinal plants play a viral role in developing countries for basic health needs. However, herbal remedies have been used in developed countries since ancient times. Because of their medicinal importance, plants and their products continue to be a rich source of therapeutic agents. For most of the drugs that are available in the world, the active ingredients are found in plant sources. Those active ingredients play a vital role in the treatment of diseases. The drug industry has used medicinal plants for manufacturing new drugs for the treatment of different diseases and illness. phyto-chemical and biological studies have already been performed on a large number of plants by scientists all over the world. Therefore our interest is in carrying out a screening of undetermined plants that are available and are used for ayurvedic system of medicine.

SUMMARY AND CONCLUSION

The obtained result from whole study confirm the validity of the use of ocimum sanctum plant as medicine in ancient medicinal traditions and suggest that some of the plant extracts possess compounds with antimicrobial properties. cirsilineol, circimaritin, isothymusin, apigenin and rosameric acid, are present in isolated aqueous extract of ocium sanctum. Ocium sanctum which may be useful against fever, syphilitic, ulcer, infl ammatory disease wounds, such as antimicrobial infection analgesic, antifungal, arthritis, anticancer, eye disease, antifertility, hepatoprotective, chronic fever, antispasmodic, antiemetic, cardio protective etc. In protective antioxidant supplement ocimum sanctum leaf extrac tmay be used after the analysis of certain tests. After this study it is assumed that the extract could be used for the new formulations.

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