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Popular Article

Nutritional Importance of Poi Saag

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Abstract

Poi saag, also known as *Malabar* spinach is a green leafy vegetable consumed in abundance in the eastern states of India. It has 2 varieties. One has green stems and other has reddish green stems. However, leaves of both the plants are green and are heart shaped. Inflammation is the complex biological response of vascular tissue to harmful stimuli such as pathogens, damaged cell, or irritants. *Basella alba* possesses a good anti-inflammatory activity. It has been found that its consumption is comparable with the standard drug. The plant extract was found effective in various inflammations. The different concentrations of extract showed moderate activity against *Pseudomonas aeruginosa*, *Bacillus subtilis* while weak response against *Staphylococcus aureus*, *Micrococcus lutes* and *Escherichia coli*.

Key Words: Poi Saag, Nutrition, Flavonoids, Quinones, Vine spinach

Introduction

Basella alba commonly known as poi, Malabar nightshade, Vine spinach, basella, climbing spinach and Indian spinach is a popular summer leafy vegetable grown in almost all parts of India. The plants have fleshy stem and leaves and is of trailing habit. Besides, India, it is widely cultivated in tropical Asia, Africa and tropical areas of the new world. Indian spinach is commonly grown for its leaves and young shoots.

Poi, also Known as malabar spinach, originates from Eastern India is usually made by mixing it with potatoes and pumpkin *poi* saak or malabar spinach. *Poi* shaak or *malabar* spinach. Poi saag is made from tender, leafy greens that are rich in essential nutrients like vitamin A, C, and iron. This dish is popular for its unique flavor and texture, making it a favourite among many households in Bihar. *Poi* saag is typically cooked with a combination of spices and seasoning to enhance its taste, and it is often served with rice or roti. This nutritious and delicious dish is a must-try for anyone



looking to extreme the diverse cuisine. Rich in vitamin A and fibre, poi saag helps in weight loss and promotes a healthy digestive system. Medicinal plant is defined as any substance as with one or more of its organs containing properties that can be used for therapeutic purposes or which can be used as precursors for the synthesis of various drugs. Medicinal plants contain numerous biologically active compounds such as carbohydrates, proteins,enzymes, fats, and oils, minerals, vitamins,alkaloids ,quinones, terpenoids, flavonoids, carotenoids, sterols,simple phenolic glycosides, tannins, saponins, polyphenols etc. *Basella alba L.*, (*Basellaceae*) commonly has known as ‘ *poi* (Hindi), *Potaki* (Sanskrit) and *poi shak* (Bengali). *Basella* is a widely cultivated, cool season vegetable with climbing growth habit. It is a succulent, branched, smooth, twining herbaceous vine, several meters in length. Stems are purplish or green. Leaves are fleshy, ovate or heart- shaped, 5 to 12 cm long,stalked, tapering to a pointed tip with a cordate base. Spike are axillary, solitary, 5-29 cm long. Fruit is fleshy, stalk less, ovoid or spherical,5-6 mm long and long and purple when mature. Mainly leaves and stems are used for the medicinal purpose.

Taxonomy of the Poi Plant

Kingdom: Plantae
Phylum: Mangnoliophyta
Class: Magnoliopsida
Order: Caryophyllales
Family: Basellaceae
Genus: *Basella*
Species: *Alba*

Composition and Use

It is an excellent source of calcium(109mg), iron (10mg), vitamin A (8,000 IU), vitamin C (102 MG) and Folic acid (140 micro gram) per 100 g of fresh weight . Roots are employed as rubefacient i.e a paste made of herbs and other substances with healing properties .Poultice of leaves used to reduce local swelling. The paste is spread on a warm, moist cloth and applied to the body to relief inflammation and promote healing. The colouring matter present in the red cultivar of poi is reported to have been used as a dye. The juice of leaves is prescribed in cases of constipation, particularly for children and pregnant women. It contains saponin that act as phytochemicals. It fight against cancer and other diseases. Sap can be applied to acne areas to eliminate irritation. The sap has a softening or smoothing effect especially to the skin. Leaf juice with butter has a smoothing effect on burns and scalds. Stems and leaf extract can cure habitual headache Poi is a good source of fibers



It is also a good substitute for spinach.

Traditional uses: -

The plant has been known to be a demulcent, a diuretic and an emollient action. The entire plant is used in Chinese medicine where it is claimed to reduce fever and neutralize poison. The pulped or bruised leaves are used as a poultice for ulcers and to hasten the maturation of abscesses. The decoration of leaves is believed to have laxative properties, and is used to treat constipation in pregnant women and children. The juice of the plant is used as a dye for official seals, as a rouge on the facial skin and food coloring. Especially the ones with red stem shows anti-inflammatory and anti-ulcer effects. *Basella* plant species contain betacyanin, carotenoids, Beta-sitosterol and lupeol which are reported to have anti-oxidant, anti-proliferative, anti-microbial and anti-inflammatory effects etc., and help in curing various diseases, namely anti-cancer, anti-viral, anti-ulcer, anti-cholesterol, hypoglycemic, wound healing and androgenic from the ancient times. Leaf juice is used to treat catarrh. The Ayurveda treatment in India has been used *B. alba* leaves and stem for anti-cancer such as melanoma, leukemia and oral cancer.

Nutritional value

Table below shows the nutritive value of edible portion of shoots per 100 g

| | |
|---|-----------------|
| Water | 91 g |
| Protein | 2.1 g |
| Fat | 0.3 g |
| Carbohydrates | 3.9 g |
| Fiber | 1.3 g |
| Vitamin A | 1686- 6390 IU |
| Vitamin C | 29- 166 mg |
| Calcium | 16- 117mg |
| Iron | 1.2 - 3.1mg |
| Antioxidant of red Basella (by ABTSM) water | 71 µm/g(Medium) |
| Antioxidant of green Basella (by ABTSM) water | 71 µm/g(Medium) |



Table: Characters of *Basella alba* L. and var. *Cordifolia* (lamk.) almeida, 2003)

| S. No. | Character | <i>Basella alba</i> L. | <i>Basella alba</i> L. var. <i>Cordifolia</i> (lamk.) almeida |
|--------|------------|---|--|
| 1. | Stem | Fleshy, stout at the base with slender upper branches. | Very long, slender, succulent, glabrous and much-branched |
| 2. | Leaves | Auxiliary dark green, broadly ovate in shape and acute. | Broadly ovate, acute or acuminate, thick, apiculate with a cordate base. |
| 3. | Flower | White, pink or red in colour and subsessile. | White or red in colour, sessile in few lax pedunculate spikes. |
| 4. | Bracts | Scaly and small. | Small and apiculate |
| 5. | Bracteoles | Acute | Longer |
| 6. | Fruit | Black or dark purple in colour and enclosed within the persistent fleshy calyx. | Small and red or black in colour. |
| 7. | Seed | Black, globose | Black |
| | | | |

Reference

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