



## A review article on Bengal Kino or Kamarkas

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**Abstract:-** Bengal kino which is also called as Kamarkas is mostly found in Bangladesh Nepal, and different parts of India . It is a tree which has a height of about 12-15 metre and has botanical name *Buteamonosperma* which belongs to family fabiaceae. Kamarkas has many medicinal activity due to its chemical constituents such as Buteamonospermin A, buteaspermin B, Cajanin, cladrin etc. It can be used to treat different ailments. It has a good anti-inflammatory activity and hence can be used to treat backpain by using its gum resin which is called as “kamarkas”. It also has a diuretic effect and also can be used in menstruation to promote flow. Traditionally it is considered as sacred tree and hence it is called as **Treasure of God**. Its different parts can be used in medicine such as palash flower, bark, powder, leaves etc. It is also reported to have antidiabetic activity and hepatoprotective efficacy as well.

**Key words:-** Anti-inflammatory activity, *Buteamonosperma*, Kamarkas, Palash.

*Butea monosperma* is a species of *Butea* native which belongs to tropical and sub-tropical parts of India. It ranges across the different parts of Indian subcontinents such as Bangladesh, Nepal, Sri Lanka,, Pakistan, Myanmar, Thailand, Laos, Cambodia, Malaysia, Vietnam, Western Indonesia etc

**Some Common names of Kamarkas-**

1.Flame-of-the-forest, bastard teak and palash, Parrot tree (Eng.),

2.Chichra tesu, desuka jhad, dhaak, palash, chalcha, kankrei, chheula (छेउला)

(Hindi),

3.Palās (पळस)(Marathi),

4.Kesudo (કેસુડો) (Gujarati),

5. Palashpapra (Urdu),

6. **Muthuga** (ಮುತ್ತುಗ)(Kannada),
7. **Kinshuk, polash** (କିନିಷ) Bengali,
8. **Pauk** (Burmese),
9. **Polāx** (পলাশ) in Assamese,
10. **Porasum, Parasu** (Tamil ),
11. **Muriku, Shamata** (Mal.),
12. **Moduga** (మోదుగ) (Telugu),
- 13 **Khakda** (Guj.),
14. **Ploso** (Javanese),
15. **Palash** ପଲଶ (Odia),
16. **Semarkat api** (Malay),
17. **Palay** (Pushto).



### Botanical Classification of Butea Monosperma

**Kingdom:** Plantae

**Division:** Magnoliophyta

**Class:** Magnoliopsida

**Order:** Fabales

**Family:** Fabaceae

**Genus:** Butea

**Species:** Monosperma

### Morphology

The Plant of Butea monosperma is an erect tree which has a height of 12-15 m and it has irregular branches with the rough bark, having ash colour, and its young parts are downy.



**Fig 1:- Tree of Palash**

## USES OF VARIOUS PARTS OF KAMARKAS:

### Flower-

*Butea monosperma* Lam *Butea frondosa* Roxb. and Koen. syn. . (Leguminosae or *Fabaceae*) It is a tree which grows up to the height of 8 m at the age 50 years. The flowers of the tree are being used traditionally in medicine for treating ulcers, types of inflammation, hepatic disorders, and eye disorders.

Flower extraction is used for the different biological activities. Its chemical constituent, butein have been reported to show anti-cancer activity. It exhibit prophylactic activity against cancer and also in inflammation. Other constituent of flower like butrin, iso butrin, Butein and isocoreopsin are used for the inhibition of the inflammatory gene expression. It also consist rutin constituent which show antioxidant activity. And other constituent like isobutrin and butrin exhibit shows antidiabetic, anticonvulsant , anti-inflammatory activities along with hepatoprotective efficacy.

### Leaves-

The leaves have astringent, cleansing, diuretic and also shows aphrodisiac properties. It helps in stimulation of diuresis and in promoting the menstrual flow.

### Seed-

The seed is good in anthelmintic property. The seeds shows rubefacient activity when mixed with lemon juice and applied to the skin.

### Traditional Use-

*Butea monosperma* is considered as a sacred tree, which is called as a treasurer of the gods. The wood of tree is used to made Sacred utensils . The flowers of the plant are used as in place of blood in sacrifice rituals to goddess kali. The dried pieces of the stem are used to make sacred fire. *Butea monosperma* is a tree which is anthropogenic for several castes. The use of its gum as external astringent application is mentioned by 'Chakradatta'



**Fig:2 - Flower of Palash**



**Fig 3:- leaves of Palash**

The various parts of Palash have numbers of uses. It has many uses like in resin, medicine fodder, and dye. It is very rich in nutrients, its young leaves are considered as a good fodder, and eaten mainly by buffaloes. The fibre procured from the tree is used to make ropes & cordage. The gum acquired from the tree, called as *Kamarkas* in Hindi, is used in certain food dishes. The gum has astringent activity that is why it is considered as a precious by druggists and by leather workers because of its tannin.

#### **Ayurvedic Properties Of Palash:**

It consists anti-diarrheal, anthelmintic, anti-diabetic, anti-stress, hepatoprotective, antifungal, astringent, aphrodisiac, laxative, anti-inflammatory and antioxidant qualities. The flowers and leaves of palash are used as diuretic, aphrodisiac, astringent and also able to increase the bloodflow in the pelvic region. The seeds of the tree are used as purgative, diuretic to increase the urine excretion and anthelmintic i.e. anti-parasitic activity. The powder of the is employed in the case of intestinal parasites. The gum obtained from bark of Palash tree, is called as kino, that undergoes astringent properties to treat haemorrhoids.

#### **Palash Dosage:**

There is a prescribed dosage of the Palash formulations for its safest ingestion in the body on the daily basis for adults are:

- 1 – 2 tsp of Churna of palash taken with lukewarm water and honey can be taken after meals
- 10 – 20 ml juice of leaf
- 50 – 100 ml of decoction of a bark.
- 3 – 6 grams powder of flowers.
- 3 – 6 grams seeds extracts
- 1 – 3 grams of gum resin

The concentrations of Palash infusions is generally safe to use and effective when it is taken with the well ordered diet. Although, it is advised to consult with a certified Ayurvedic practitioner prior to ingesting Palash preparation, must be taken only in required dose to avert any side effects from excess consumption.

In case of children, it is recommended to serve very small portions of Palash extracts along with warm milk and jaggery or honey, to facilitate smooth digestion.

Typically Palash pastes can be applied on the skin which can be done in moderate amounts after making sure that no allergic reactions occur.

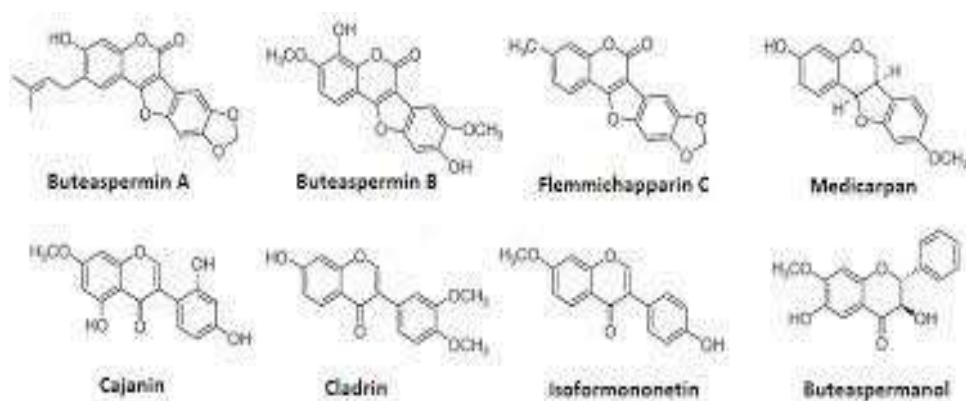


### Palash/Butea Monosperma Health Benefits :

- Alleviates the Symptoms of Diabetes.
- Also treats Hypertension.
- Detoxification of the Kidneys.
- Improves the functioning of Digestive System.
- It strengthens to Respiratory Processes.
- Natural Moisturizer for Skin.
- It Combats the Skin Infections.
- Good Promotor for Hair Growth.

### Chemical constituents of Butea monosperma:

Seed contains palasonin, d- mecantharidin proteolytic and lipolytic enymes,  $\alpha$ -amyrin,  $\beta$ -sitosterol and alkaloid monospermine glycerides of stearic, palmitic, linoceric, oleic and linoleic Acids.



Leaves of the butea monosperma contains alkaloids (Euphane trieterpenoid and pterocrpan), Flowers do contains (butrin, butein, butin, isobutin, coreoopsin, monospermoside and their isoderivatives and sulphurein, palastrin). Seed do have palasonin, d- mecantharidin proteolytic and lipolytic enymes,  $\alpha$ -amyrin,  $\beta$ -sitosterol and alkaloid monospermine glycerides of stearic, palmitic, linoceric, oleic and linoleic Acids. The Bark contains tannins and gum (Butea gum), leucocyanidin, it tetramer, procyanidin, allic acid and mucilaginous material<sup>13</sup>.

### Side Effects Of Palash:

- Impaired Kidney function when taken in large amount.
- Impaired reproductive and lactating hormones, if ingested by pregnant and breastfeeding women.

## References

1. "*Butea monosperma*". *Germplasm Resources Information Network (GRIN). Agricultural Research Service (ARS), United States Department of Agriculture (USDA)*. Retrieved 2009-10-24.
2. ^ "*Butea monosperma (Lam.) Taub*". *theplantlist.org. ThePlantList*. Retrieved 28 June 2020.
3. Mehta B, Bokadia M: Monospermin: a new alkaloid of *Butea monosperma* seeds. *Chem. Ind. (London)*, 3: 98, 1981.
4. Chandra S, Lal J, Sabir M: Phytochemical investigation of *Butea frondosa* seeds. *Indian J. Pharm.* 39: 79-80, 1977.
5. Mishra M, Shukla Y, Kumar S: Euphane triterpenoid and lipid constituents from *Butea monosperma*. *Phytochemistry*, 54: 835-838, 2000.
6. Divya BT., Mini S. In vitro radical scavenging activity of different extracts of *Butea monosperma* *International Journal of Current Pharmaceutical Research* 2011; 3(3):114-116.
7. Akhtar MS., Naeem F., Muhammad F., Bhatti N. Effect of *Butea monosperma* (Lam.) Taub. (Palas papra) fruit on blood glucose and lipid profiles of normal and diabetic human volunteers. *African Journal of Pharmacy and Pharmacology* 2010; 4: 539–544.
8. Ahmed F., Siddaraju NS., Harish M., Urooj A. Effect of *Butea monosperma* leaves and bark extracts on blood glucose in streptozotocin-induced severely diabetic rats. *Pharmacognosy Research* 2012; 4: 33–36.
9. Muralidhar A., Sudhakar Babu K., Ravi Shankar T., Reddanna P., Reddy GV., Latha J. In vitro and In vivo Anti Inflammatory Activity of *Butea monosperma* Stem Bark Extract. *International Journal of Pharmacy and Therapeutics* 2010; 1(2):44-51.
10. Muralidhar A., Sudhakar Babu K., Ravi Sankar T., Reddanna P., Reddy GV., Latha J. Anti Inflammatory Activity of Flavonoid fraction isolated from the stem bark of *Butea monosperma* (Lam): A mechanism based study. *International Journal of Phytopharmacology* 2010; 1(2):124-132.
11. Lau GTY., Huang H., Leung LK. Butein down regulates phorbol 12-myristate 13-acetate-induced COX-2 transcriptional activity cancerous and non-cancerous breast cells. *European Journal of Pharmacology* 2010; 648(1-3): 24-30.
12. Rasheed Z., Akhtar N., Khan A., Khan KA., Haqqi TM. Butrin, Isobutrin, and Butein from Medicinal Plant *Butea monosperma* Selectively Inhibit Nuclear Factor-B in Activated Human Mast Cells: Suppression of Tumor Necrosis Factor- $\alpha$ , Interleukin (IL) -6, and IL-8. *Journal of Pharmacology and Experimental Therapeutics* 2010; 333(2): 354.