



Anup dated review of phytochemistry and pharmacology of *Cynodon dactylon*(L.)

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Abstract:

Among varied species of plants growing in Asian country, *Durva*, *Cynodon dactylon* has a very important role in eth-nos medicative practices and ancient medical. Bermuda grass or *Cynodon* may be a perennial grass distributed everywhere the planet, and significantly it's native to the nice and cozy temperate and tropical regions. The plant has been made in metabolites notably proteins, carbohydrates, minerals, flavonoids, carotenoids, alkaloids, glycosides and triterpenoids. It's a perennial herb found in varied regions of Asian country. It issued within the treatment of assorted diseases within the variety of powder, paste and juice. It contains several metabolites, like proteins, carbohydrates, minerals, flavonoid, carotenoids, alkaloids and glycosides. Its invades all types of crops and act as weed. It grows altogether system. largely found in road and rail road tracks in several regions. it's originated in continent and happens worldwide in each tropical and subtropical areas.

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Introduction:

CYNADON DACTYLON (Poaceae) may be a perennial herb found in varied regions of Asian country. it's totally different names in several Dhro [Gujarati], Shataparva [Sanskrit] etc. It contains several metabolites proteins, carbohydrates, minerals flavonoids, carotenoids, alkaloids and glycosides. This grass is extravagantly found on road sides and may take possession of any uncultivated space. it's a weed and have several medicative properties. it's pungent, bitter in nature with characteristic fragrance and has cold efficiency, the plant possesses sharp and hot style with sensible odour. Its aerial components and rhizomes have cardioprotective action, medicine, antimicrobial, inhibitor, wound healing, anti-diabetic, anti-diuretic effects. it conjointly possesses cynodin, acid and triticin. Juice of *Cynodon* are often utilized by as health steep the South Asian country.

Taxonomical Classification of *Cynodon dactylon*:

Kingdom — Plantae

Division — Magnoliophyte

Class — Liliopsida

Order — Cyperales

Family — Poaceae

Genus — *Cynodon*

Species - *dactylon*

This plant conjointly remains inexperienced in gentle winters. It conjointly plays a very important role in conservation, prevents eroding. It may be wont to conserve waterways.

Botanical Description

Roots: Roots square measure fibrous, cylindrical that is four metric linear unit thick. From the most roots arise the minute hair like roots. Leaf is a pair of to six cm long and one.25 to three metric linear unit wide slim, linear. plate of the leaf have sq. and oval stratum. The mesophyll isn't differentiated into palisade and spongy parenchyma. the leaves lack the chlorophyl. Bundle sheath is single and accommodates



thin-walled isodiametric parenchyma cells containing plastid.

Stem: It is oval in form and possess some depression on that. Cells on the stem square measure gift in single layer. layer is created from few layers of sclerenchyma cells. Cortex is created from three to 5 layers of oval walled parenchymatous cells. Endodermis is created from continuous ring of two to five layers of sclerenchyma cells. Pericycle is additionally gift.

Inflorescence:

Three to seven spikes square measure gift. it's chromatic in color and gift in one whorl. Spikelets square measure 2 to three metric linear unit long, sessile, with one bloom, alternate, laterally flat, in 2 rows to at least one facet of the rachis.

Foliage:

Leaves square measure gray — inexperienced in color. These square measure 4-5 cm long. plant structure contains a ring of white hairs.

Flowers:

Flowers occur in one — three spikes. They occur in late summer. This grass has scaly rhizomes and flat plant organ that type dense resilient turf.

Habitat:

C. dactylon is distributed throughout the nice and cozy temperature and also the sub-tropical space. Usually, it prefers moderate heat. it's tolerant to extraordinarily heat. It grows as weed in annual and perennial crops, in pastures, fallows and waste areas. It happens in semi-arid and irrigated conditions on varied soil. conjointly need high light-weight intensities. It needs direct daylight. It tolerates a large vary of soil varieties and conditions. It grows quicker on significant clay soils than on light-weight sandy soils in dry regions. It will survive in long periods of flooding. It grows on soils with a large vary of pH, however alkaline soil is additional preferred. N is employed to extend the forage and turf price of star grass.

Medicinal Use:

Cynodon dactylon has necessary medicative price. It are often applied each outwardly

and internally. it's antiviral and antimicrobial properties. Decoctions of root square measure utilized in syph and irritation of urinary organs. it's a folks remedy for snake bites, arthritis and rheumatic affections. It conjointly has opposed —inflammatory activity. The plant is astringent, sweet, equilibrium diuretic drug and tonic and is helpful in impaired conditions of tyrannid and kapha, burning sensation, symptom, wounds, diarrhoea, dysentery, physiological reaction and rubor. The rhizomes used as diuretic drug in humans. Grass juice are often used as astringent. It are often consumed by dogs to induce physiological reaction whereas having canal issues. This result is caused thanks to irritation caused by bristles on the leaf margin.

Religious:

In Asian country it's used for the worship of Lord Ganesh. A clump of twenty one shoots of grass is for pooja ceremony and celebration of the eighth day of Shukla Paksha of Bhadra month of lunisolar calendar. It is called Karuka in Malayalam and used as Dashapushpam. It is a quick growing and hard, it's utilized in sports fields. When it broken it recover quickly. Bermuda grass is additionally cultivated in saline soils in Calif. central vale, as these too salt - broken to support agricultural crops. it's with success irrigated with saline water and wont to graze kine.

Phytochemistry:

C. dactylon contains twenty eight.17% enzymes, 11.79% ash, 10.47% Proteins. Ash contains zero.77% Ca, 0.58% phosphorus, 0.34% metallic element, 0.23% sodium, 2.08% metallic element. Dry grass contains per four hundred grams thirty six.16% sugar, 6.04 nothing proteins. It contains synthetic resin phytotoxins viz. ferulic, syringic, para coumaric, vanillic, para chemical group carboxylic acid and ortho group phenyl carboxylic acid. Flavonoids and glycosides were found to be gift within the liquid extract of *C. dactylon* whereas alkaloids, glycosides and flavonoids were reported to be gift in plant product extract of the plant.



Chemical structures of few necessary constituents square measure shown in

Figure one.

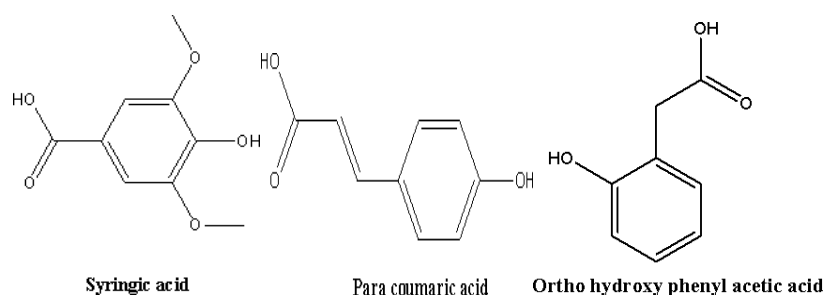


Fig.1:Fewchemicalconstituentsfrom*Cynodon dactylon*

Phyto constituents present in *Cynodon dactylon*:

Quantity per 100 gm of Components sample Alkaloids 0.1%, Resins 1.05, Tannin 6.3 %, Free reducing sugar 10%, Total reducing sugar 12%, Glycosides 12.2%, Saponins 1.04%.

Nutritional components: Components Quantity per 100 gm of sample-Fat 2.1gm, Carbohydrate 75.9 gm, Fiber 25.9 gm, Ash 10.4 gm, Calcium 530 gm, Phosphorous 220 gm, Protein15 gm.

Antioxidant activity:

Antioxidants square measure the chemical compounds that scavenge or suppress the formation of reactive O species (ROS) that may delay the beginning or slow the speed of lipid chemical reaction reaction in food systems (Sies, 1997). radical damages the cells and plays a significant role within the aging method and in illness progression. Antioxidants square measure defence against free-radical harm and square measure essential for maintaining optimum health (Sies, 1997). Ethanolic extracts of aerial a part of *C. dactylon* were found to possess potent DPPH radical scavenging activity and gas scavenging activity (Bhalerao et al., 2011). ester extract of over ground a part of the plant has shown larger in vitro inhibitor ability supported estimating non accelerator haemoprotein glycosylation by colorimetrically (Paul et al., 2008).

Conclusion:

Cynodon dactylon occupies a key position in ethno medicative practices and ancient medicative systems. it's very helpful in big variety of diseases and disorder. Aqueous extract of whole plant, aerial elements, leaves and rhizomes of *C. dactylon* has medicative and clinical applications which may be created solely once large-scale analysis on its medicine activity, mechanism, bioactivity and intensive safety studies. even so, the determined analysis studies square measure occurring, and it'd be comfy to develop new medication once wider studies on medicine and biological activities. In recent years, treating varied diseases with natural seasoning product inflated. many studies showed clear proof that *C. dactylon* could be a natural crude drug having a widespread of biological and medicine functions. Therefore, it's anticipated that it should be used as a completely unique drug within the close to future to manage several diseases like as antitumor, antiulcer, antidiabetics, bactericide, antimicrobial, antiviral and wound healing.

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