Vetiveria zizaniodes

TAXONOMICAL CLASSIFICATION:[1]

- Kingdom - Plantae
- Phylum: Spermatophyta
- Subphylum: Angiospermae
- Class: Monocotyledonae
- Order: Cyperales
- Family: Poaceae
- Genus: Chrysopogon
- Species: Chrysopogon zizanioides

INTRODUCTION:[2,3]

Vetiver (Vetiveria zizanoides (Linn) Nash.) or Khus of family Poaceae, is a perennial grass which can grow up to 1 to 2 metres high and form wide clumps. The plant stems are erect and stiff and the leaves are 120-150 cm long and 0.8 cm wide and rather rigid. The panicles are 15-30 cm long, brownish-purple in colour and have whorled 2.5-5.0 cm long branches. The spikelets are in pairs, and there are three stamens. The root system of vetiver is finely structured and very strong. It has no stolons or rhizomes. Unlike most grasses, which form horizontally spreading mat-like root systems, vetiver's fibrous roots grow downward, 2-4 m in depth, and are strongly scented. Vetiver is mainly cultivated for the fragrant essential oil distilled from its roots. The main chemical components of the oil are benzoic acid, vetiverol, furfurol, vetivone and vetivene. Due to its excellent fixative properties, it is used widely in perfumes. Dry roots are also used for making mats, fans, screens, pillows, baskets, incense sticks and sachet bags. Since plant has extensive fibrous roots, it is useful in both soil and water conservation. It helps in maintaining soil moisture, absorbs toxic substances in chemical fertilizers and pesticides and improves physical characteristics of soil. The plant is one of the best soil binders and is used through tropics to check soil erosion by planting along contour. Grass is also widely grown as a protective partitions in terraced fields and as a border for roads and gardens.

MEDICINAL PROPERTIES: [4]

- Anti Septic
- Aphrodisiac
- Healing
- Calming
- Anti-inflammatory

SIDE EFFECTS OF EXCESS CONSUMPTION:[5,6]

- Side effects Sida cordifolia when used excessively can cause ephedrine related side effects like insomnia, , , and, or even stroke.
- Restlessness
- Irritability
- Anxiety
- Nervousness
- Increase in blood pressure
- Memory loss
- Lack of appetite
- Nausea
- Vomiting.

DOSAGE:[7]

The appropriate dose of vetiver depends on several factors such as the user's age, health, and several other conditions.

RESEARCH:[8,9]

1. Vetiveria zizanioides (vetiver grass) is well known as an eco-friendly plant that prevents soil erosion and rehabilitates metalliferous polluted land. V. zizanioides is also the major source of vetiver oil for medicine and perfumery. Our study identified 25 compounds in V. zizanioides essential oil (VZ-EO). The major components were cedr-8-en-13-ol (12.4%), a-amorphene (7.80%), b-vatirenene (5.94%) and a-gurjunene (5.91%). VZ-EO may suppress the inflammatory responses of LPS-stimulated RAW 264.7 macrophages, including nitric oxide production and cell apoptosis, by regulating the expression of the inflammationrelated enzymes heme oxygenase-1, inducible nitric oxide synthase and cyclooxygenase-2 (inducible cyclooxygenase) and the inflammatory cytokines tumour necrosis factor-a, interleukin-1b and interferon- b. Additionally, the anti-inflammatory activity of VZ-EO correlated with its antioxidant activity of decreasing LPS-induced superoxide anion production and malondialdehyde levels.
2. Antioxidant capacities of vetiver (Vetiveria zizanioides) oil were evaluated by two different in vitro assays: the DPPH• free radical scavenging assay and the Fe2+-metal chelating assay. Results showed that the vetiver oil (VO) possessed a strong free radical scavenging activity when compared to standard antioxidants such as butylated hydroxytoluene (BHT) and α-tocopherol. However, its metal chelating capacity was relatively weak. VO (10 μL/mL) dissolved in methanol exhibited 93% free radical scavenging activity in the DPPH• assay and 34% Fe2+ chelating activity in the metal chelating assay. By contrast, 10 mM BHT and 0.1 mM α-tocopherol exhibited 93 and 89% free radical scavenging activities in the DPPH• assay, respectively, and 1 mM EDTA exhibited 97% activity in the metal chelating assay. Among the complex constituents in the crude VO, β-vetivenene, β-vetivone, and α-vetivone, which had shown strong antioxidant activities, were isolated and identified using various chromatographic techniques including silica gel open column chromatography, silica HPLC, and GC-MS. These results show that VO and some of its inherent components can be potential alternative natural antioxidants.

PRECAUTIONS & WARNINGS-[7]

Pregnancy and breast-feeding: It is **LIKELY UNSAFE** to take vetiver if you are pregnant. It might cause a miscarriage. It's also best to avoid vetiver if you are breast-feeding

References:

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