

Tribulus Terrestris

Tribulus terrestris (family Zygophyllaceae), commonly known as Gokshur or Gokharu or puncture vine, has been used for a long time in both the Indian and Chinese systems of medicine for treatment of various kinds of diseases [1].

- Family: Zygophyllaceae
- Genus: Tribulus
- Species: terrestris Linn.



Active constituents:

Protodioscin, terrestrosins A-E, desgalactotigonin, F-gitonin, desglucolanatigonin, gitonin, tigogenin, furostanol glycosides, β -Sitosterol, spirosta-3,5-diene, stigmasterol, diosgenin, hecogenin, ruscogenin, Kaempferol, quercetin, tribulusamides A and B [2].

Pharmacological action:

T. terrestris shows aphrodisiac, diuretic, antiseptic, anti-inflammatory, demulcent, nerve tonic, emenagogue, alterative, astringent analgesic activities.

Plant and spiny fruits are used in the form of decoction or infusions in cases of spermatorrhea [3], phosphaturia, and diseases of the genitourinary system such as dysuria, gonorrhoea, gleet, chronic cystitis, calculus affections, urinary disorders, gout, and impotence; also in urine disorder after parturition, kidney diseases, and gravel. It is used in northern India in cough [4].

Clinical study:

- Study was conducted in 406 patients with coronary heart disease. They were treated with saponins of *T. terrestris*. The results showed that the total efficacious rate of remission angina pectoris was 82.3% it is shown that saponin of *T. terrestris* has the action of dilating coronary artery and improving coronary circulation. No adverse side effects were noted [5].
- Another study was conducted on 30 consecutive male patients complaining of manifestations of partial androgen deficiency in aging males (PADAM). In this study (750 mg/day) of *Tribulus terrestris* in 3 divided doses, each of 250 mg, as an endogenous testosterone enhancer had been tried for a duration of 3 months and the evaluation of its effect had been monitored for each patient concerning its effect on serum testosterone (total and free) and luteinizing hormone (LH), as well as its impact on erectile function, which was evaluated by the International Index of Erectile Function-5 (IIEF-5) questionnaire for those patients. Results showed a statistically significant difference in the level of testosterone (total and free) and IIEF-5 [6].

Available grades: 40% Saponins

Specification:

Botanical/ Scientific name	<i>Tribulus terrestris L.</i>
Common Name	Goksuru
Identification	Gravimetry
Heavy metal	Not more than 20 ppm
Arsenic	Not more than 1 ppm
Lead	Not more than 3 ppm
Microbiological profile	As per JPN Food Regulation

References:

1. Saurabh Chhatre et al., "Phytopharmacological overview of *Tribulus terrestris*" *Pharmacogn Rev.* 2014 Jan-Jun; 8(15): 45–51. doi: 10.4103/0973-7847.125530
2. Wu TS, Shi LS (1999). Alkaloids and other constituents from *Tribulus terrestris*. *Phytochem.*, 50: 1411-1415.
3. Georgiev P, Dimitrov M, Vitanov S (1988). The effect of the preparation Tribestan on the plasma concentration of testosterone and spermatogenesis of lambs and rams. *Vet Sb.*, 3: 20-22.
4. M. Akram et al., "Tribulus terrestris Linn.: A review article" *Journal of Medicinal Plants Research* Vol. 5(16), pp. 3601-3605, 18 August, 2011
5. Wang Y, Ohtani K, Kasai R, Yamasaki K. Steroidal saponins from fruits of *Tribulus terrestris*. *Phytochem.* 1997; 45: 811-817

