Distribution: Khent., Khang., Mong-Dag. (west), Mong. Alt. (Khar azarga edge), Khyang., Dor. Mong., Dund. Khalkh, Dor. Gobi, Gobi-Alt.

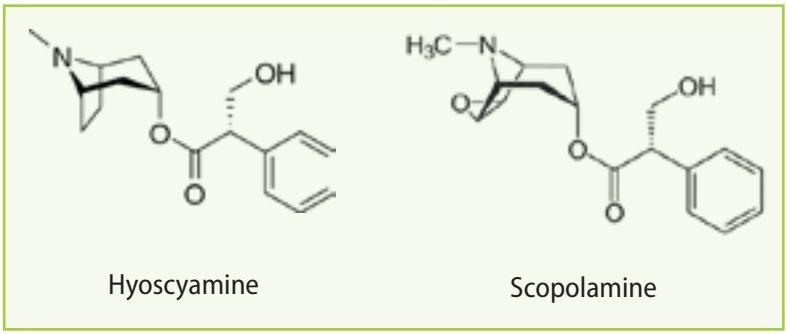
Habitat: Abandoned fields, wastelands in inhabited areas, banks of irrigation ditches, along roads, river banks, agricultural lands, dry rocky areas [1–5].

Parts used: Herb, fruit, and seed

Traditional Uses: The taste is bitter and the potency is oily. It is used for the following: treating diseases of the womb, alleviating pain, and neutralizing poisoning. It is an ingredient of the following traditional prescriptions: Agar-8, Jidanga-10, Zellon-17, Crinman-17, Chugtuv-18, Lantanza-8, and Garid-5 [5–9].

Microscopic characteristics: The leaf is dorsoventral. Epidermis is covered with smooth cuticle and numerous glandular trichomes. In epidermal layer are present anisocytic stomata and prismatic or cluster crystals of calcium oxalate. Near the veins are visible idioblasts. Vascular bundle bicollateral [10].

Chemical constituents: 0.06–0.13% alkaloids: hyoscyamine, apohyoscine, apohyoscine, scopolamine, skimmianine, apoatropine, α-belladonnine, β-belladonnine, tropine [11], coumarinolignans: hyosgerin, venkatasin, cleomiscosin A and cleomiscosin B [12], and other compounds: hyoscyamide, 1,24-tetracosanediol diferulate, 1-*O*-(9*Z*,12*Z*-octadecadienoyl)-3-*O*-nonadecanoyl glycerol, grossamide, cannabisin D, cannabisin G, *N*-*trans*-feruloyl tyramine, 1-*O*-octadecanoyl glycerol, 1-*O*-(9*Z*,12*Z*-octadecadienoyl) glycerol, 1-*O*-(9*Z*,12*Z*-octadecadienoyl)-2-*O*-(9*Z*,12*Z*-octadecadienoyl) glycerol, 1-*O*-(9*Z*,12*Z*-octadecadienoyl)-3-*O*-(9*Z*-octadecenoyl) glycerol, rutin, vanillic acid, β-sitosterol, and daucosterol [13].



Hyoscyamine Scopolamine

Qualitative and quantitative assays: Alkaloids in the plant are identified by the Bitali-Moren reaction, and total alkaloid content is determined gravimetrically [14].

Qualitative and quantitative standards: Loss on drying, not more than 14.0%. Ash, not more than 15.0%. Organic matter, not more than 0.5% and mineral matter. Total alkaloid content, not less than 0.045% [14].

Bioactivities: Sedative, spasmolytic, anticonvulsant, cytostatic, antibacterial, analgesic, anaesthetic [15].