

Habitat: Steppe debris and stony slopes, bottom of dry riverbeds, sandy places [2–5].

Parts used: Herb and fruit

Traditional Uses: The taste is bitter and the potency is cool and blunt. It is used for the following: bile diseases, dysentery, pneumonia, detoxification, hemostatic, and wound healing. It is an ingredient of the following traditional prescriptions: Agar-13, 11, Bavo-6, 15, Bilva-11, Bongar-5, 13, Bragshun-7, Givan-11, 15, 18, Gurgum-7, 9, Khach gurgum-25, Dashil-36, Dontal-24, Doshin-7, Doshun-23, and Dudzitigva [5–8].

Microscopic characteristics: Leaf is dorsoventral. Palisade single-layered; spongy parenchyma 5–8 layered. Anomocytic stomata occur on the lower and upper surface; covering multicellular trichomes on both epidermis; vascular bundle is collateral [9].

Chemical constituents: Herb contains phenol carboxylic acids, their derivatives: ferulic, isoferulic, sinapic, 3-ferulyolquinic, 3-O-sinapyol-B-quinic acids, 1-ferulyolglucose, flavonoid: quercetin glucoside [10].

Bioactivities: Anti-inflammatory and hypotensive [11].

References:

1. Olziikhutag, N. (Ed). (1983). Latin-Mongolian-Russian Dictionary of Vascular Plants of Mongolia (p. 216). Ulaanbaatar: Press of Mongolian Academy of Sciences.
2. Gubanov, I.A. (1996). Conspectus on Mongolian Flora (vascular plants) (p. 85). Moscow: Valang Press.
3. Malishev, L.I., and Peshkova, G.A. (1979). Flora of Central Siberia (Vol. 2, p. 719). Novosibirsk: Science Printing.
4. Sanchir, Ch., Batkhuu, J., Boldsaikhan, B., and Komatsu, K. (2005). Illustrated Guide of Mongolian Useful Plants. (Vol. 2, p. 38). Ulaanbaatar: Admon Printing.
5. Ligaa, U., Davaasuren, B., and Ninjil, N. (2005). Medicinal Plants of Mongolia Used in Western and Eastern Medicine. (p. 170). Ulaanbaatar: JCK Printing.
6. Yuthok Yonten Gonpo., Four Medical Tantras, VIII-IXth century.
7. Danzanpuntsag., Crystal rosary. XVIIIth century.
8. Boldsaikhan, B. (2004). Encyclopedia of Mongolian Medicinal Plants (p. 56). Ulaanbaatar: Mongolian University of Science and Technology.
9. Tserenkhand, G. (1999). Microscopic characteristics of leaves of some plants of Mongolia. (p. 166). A thesis submitted for the degree of Doctor of Philosophy in Biology. Ulaanbaatar: Mongolian Academy of Sciences, Institute of Biology.
10. Shatokhina, R.K., Dranik, L.I., and Blinova, K.F. (1974). Phenolic compounds from *Antitoxicum sibiricum*. *Khim. Prirod. Soedin.* 518.
11. Sokolov, P.D. *et al.* (1990). Plants Review of USSR: Family Caprifoliaceae-Plantaginaceae. (p. 46). Leningrad: Science Printing.