

form short, roundish spike in axils of young branches, with dissected tepals and 4 stamens. Female flowers solitary in axils, gamotepalous, with 2 short lobes. Pistil with style and long stigma, protruding from perianth tube.

**Distribution:** Khang., Mong-Dag., Khovd, Mong. Alt., Gobi-Alt. (Ikh Bogd), Olon n., Ikh n.

**Habitat:** River banks and lake shores, uremas, waterside rocks, forest fringes, canyon slopes [2–5].

**Parts used:** Fruit

**Traditional Uses:** The taste is sweet and sour, and the potency is blunt, oily, and dry. It is used for the following: to expectorate and dilute blood, treating lung and throat phlegm, liver, stomach and spleen disorders. Stops cough, and fortifies the body. An ointment can be used for burn wounds. It is an ingredient of the following traditional prescriptions: Darbu-4, Dejin-7, Jumz-5, Jugan-5, Shimshin-6, Yavuukhai-6, Jonsh-21, Yumedeujin-25, Zobu-25, Rashinamjil, Usu-7, Bayagava-10, Braina-17, Gantig-92, and Adon-8 [5–9].

**Microscopic characteristics: Fruit.** Epicarp thick-walled, quadrangular, covering trichomes, which are thin-walled, multicellular, peltate shaped. Parenchyma containing oil globules yellowish in color. Seed divided into three layers; outer layer narrow, slightly thick-walled, no pores; middle layer: parenchymatous cells thin-walled; inner layer: sclerid relatively thin-walled [10].

**Chemical constituents:** Fruit contains sugars: glucose, fructose, pectin [11,12], galactose, arabinose, rhamnose [13], polysaccharides [14], organic acids: [12], triterpenoids: ursolic acid [15], 2-*O-trans*-coumaroyl maslinic acid, 2-*O*-caffeoyl maslinic acid, oleanolic acid, 3-*O-trans-p*-coumaroyl oleanolic acid, 3-*O*-caffeoyl oleanolic acid [16], carotenoids: phytophluin,  $\beta$ -carotene,  $\gamma$ -carotene, lycopene [12], violoaxanthin, neoxanthin and others [12,17], ascorbic acid [12,18], tocopherols [19], thiamine, riboflavin [12], flavonoids: quercetin, isorhamnetin, and kaempferol [20], myricetin, rutin [12], pentamethylquercetin, syringetin [21] and others, tannins [22], fat with higher fatty acids: oleanolic, linolic, palmitic and others [12]. Seed contains sugars, organic acids [23], ascorbic acid, tocopherols, triterpenoid [15], carotenoids [24,25], steroids [25], higher fatty acids [12,26].

**Qualitative and quantitative assays:** Carotenoids in the fruit are identified by reacton with  $\text{SbCl}_3$ . Total acid and ascorbic acid contents are determined by titration method. Total carotenoid content is deternimed by spectrophotometry at 541 nm and calculated as  $\beta$ -carotene [27].

**Qualitive and quantitative standards:** Loss on drying, not more than 75.0%. Ash, not more than 1.0%. Organic matter, not more than 0.5%. Juice yield, not less than 70%. and total acid content, not more than 3.0%. Carotenoid content calculated as  $\beta$ -carotene, not less than 7.9%. Oil content, not less than 7.0% and vitamin C content, not less than 50 mg [27].

**Bioactivities:** Anti-atherosclerosis, antioxidant [28], antibacterial [12], angioprotective [29]. Healing ulcer [12], leukemia HL-60 cells were inhibited [21].