

**Distribution:** Khovs., Khent., Khang., Khovd, Mong. Alt., Gobi-Alt.

**Habitat:** Between rocks, stony slopes, screes in alpine belt [2–5].

**Part used:** Root

**Traditional Uses:** The taste is bitter and the potency is cool. It is used for the following: treating lung fever, enhancing strength and vigor, and as a mouthwash for bad breath. It is an ingredient of the following traditional prescription: Santal-6 [5–7] .

**Chemical constituents:** organic acids [8], 0.8% tannins,  $\beta$ -sitosterol, 0.49–1.1% salidroside (rodiolside) [8,9], chlorogenic acid, rhodioline, rosiridine, rosavine, rhodiooctanoside, monghroside [9], gallic acid, kaempferol, quercetin, umbelliferone, scopoletin [5]. Cyanoglycosides: rhodiocianoside A and B, octyl  $\alpha$ -L-arabinopyranosyl(1–6)- $\beta$ -D-glucopyranoside, gossypetin 7-O- $\beta$ -D-glucopyranosyl(1–3)- $\alpha$ -L-rhamnopyranoside [10].

**Qualitative and quantitative assay:** The following is a suitable TLC procedure to identify salidroside and rosavin: silica gel, chloroform-methanol-water (26:14:3) solvent system. Violet spot of rosavin ( $R_f=0.4$ ) is observed under UV lamp. Red spot of salidroside ( $R_f=0.42$ ) is observed after spraying detection reagent. Salidroside content is determined by spectrophotometry at 486 nm [11].

**Qualitative and quantitative standards:** Loss on drying, not more than 10%. Ash, not more than 5%. Organic matter, not more than 0.5% and mineral matter, not more than 3.0%. Heavy metals, not more than 3 mg/kg. Water-soluble extractive, not less than 25%. Salidroside content, not less than 0.3% [11].

**Bioactivities:** Antibacterial [9].