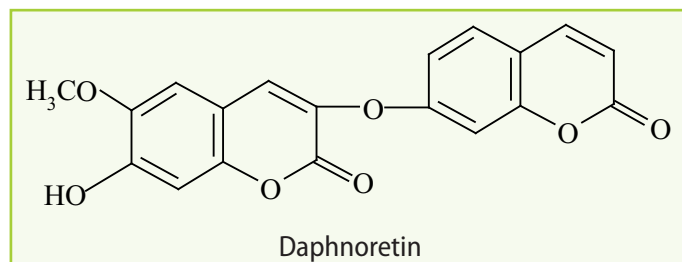


Habitat: Stony and rocky slopes, forest meadows and fringes in mountain forest-steppe and steppe zone [2–5]. **Part used:** Root, herb

Traditional Uses: The taste is bitter and the potency is light. It is used for the following: treating poisoning, inflammation and as an antibacterial. It is an ingredient of the following traditional prescriptions: Bashaga-7, Bemon-9, Dagvo-13, Dotal-18, and Jilz-27 [5–9].

Chemical constituents: Root contains sugars, organic acids, saponins, 1.2% tannins, 0.35% flavonoids [10]: 5,7-dihydroxy-4',11-dimethoxy-3',14-dimethylbenzoflavanone [11], ruixianglangdusu A and B, 4',4'',5,5'',7,7''-hexahydroxy-3,3''-biflavone [12], 7-methoxyneochamaejasmin A [13], 0.31%



coumarins: sfondine, isobergapten, pimpinellin, isopimpinellin [10], umbelliferone, daphnoretin, bicoumastechamin [14], daphnetin [11], diterpenes [15], lignans: (+)-kusunokinin, liriorelinol-B, magnolenin C, (-)-pinoresinol monomethyl ether, (-)-pinoresinol, (+)-matairesinol, isohinokinin, and (-)-eudesmin [14], steroids: daucosterol, β -sitosterol [11]. Herba contains coumarins: daphnorin, daphnetin, daphnoretin, daphnetin 8-*O*- β -D-glycopyranoside, chamaejasmoside [16].

Qualitative and quantitative assays: The following is a suitable TLC procedure to identify coumarins: silica gel, chloroform-methanol (4:1) solvent system. Not less than two blue spots are observed under UV lamp. Total coumarin content is determined by gravimetric analysis [17].

Qualitative and quantitative standards: Loss on drying, 10.0%. Ash, not more than 8.0%. Organic matter, not more than 1.0% and mineral matter, not more than 0.5%. Total coumarin content, not less than 0.3%. Water-soluble extractive, 23–25% [17].

Bioactivities: Antifungal [18], anti-ulcerative, and laxative [10].