

Part used: Herb

Traditional Uses: The taste is bitter and sour, and the potency is cool and blunt. It is used for the following: treating fever and cough. It is an ingredient of the following traditional prescriptions: Bongar-12, Bragshun-7, Gogal-18, Dudziseljor, and Jabur-8 [5–9].

Microscopic characteristics: Leaf is isolateral. Inner side of lower and upper epidermis are present 2–3 layers of palisade parenchyma. Centre of the leaf shows 2–4 layers of spongy parenchyma. Upper epidermal cells are relatively large than lower epidermis. Outer epidermal wall very thick, lignified. Anomocytic stomata occur on lower and upper epidermis. Intercellular spaces large. Phloem and xylem well-developed. Collateral vascular bundle is surrounded by parenchyma containing chlorophyll [10].

Chemical constituents: 6.1% flavonoids [5], sugars, 0.096% alkaloids, and tannins [11].

Qualitative and quantitative assays: Flavonoids in the plant are identified by cyanidin reaction. Total flavonoid content is determined by spectrophotometry at 420 nm and calculated based on rutin [10].

Qualitative and quantitative standards: Loss on drying, 8.0–9.0%. Ash, not more than 2.0%. Organic matter, not more than 2.0% and mineral matter, not more than 0.5%. Total flavonoid content, not less than 0.5% [10].

Bioactivities: Bile-expelling, stimulates secretion of gastric acid [11].

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