

Valeriana officinalis L.

Standardized Common Name: Valerian

Other Common Names: All Heal, Belgian Valerian, Cat's Valerian, Common Valerian, Garden Heliotrope, Garden Valerian, Phu, Wild Valerian

Family: Valerianaceae

Taxonomy: *Valeriana* includes about 200 species of shrubs and herbs, widely distributed in the Northern Hemisphere, of which many have been used medicinally. *Valeriana officinalis* is one of about 20 species native to Europe. There are dozens of marginally different populations that have at some point been described as species. The *Flora Europaea* treatment recognizes three subspecies, all widespread: subsp. *sambucifolia* (J.C. Mikan ex Pohl) Čelak and *V. officinalis* subsp. *collina* (Wallr.) Nyman often possess stolons, whereas subsp. *officinalis* does not.

Description: Perennial herb, rhizomatous and sometimes stoloniferous; rhizome to 5 cm long, thick, vertical, with numerous roots on lower portion. Stem erect, hollow, to 1.5 m high, branching at top, sometimes pubescent at base and below nodes. Leaves basal and opposite, pinnately compound; lower leaves with long clasping petioles, upper leaves sessile; leaflets (3–)7–25, sessile, opposite or alternate on rachis, lanceolate to elliptical or nearly linear, 2–7 cm long; bases often rounded and slightly oblique, apices acuminate, margins irregularly toothed or entire; rachis and underside of blades pubescent on lower leaves. Inflorescence cymose, compound, many-flowered, bracteate; flowers small, borne in groups of 3. Calyx with inrolled lobes that unfold at fruiting to produce bristles; corolla pink, 2.5–5 mm long, narrowly funnelform with 5 spreading lobes; stamens 3, the filaments attached basally to the corolla; stigma 3-lobed; ovary inferior. Fruit an achenelike cypsela, ca. 4 mm long, 1-seeded, compressed; flat side with 1 rib, rounded side with 3 ribs.

Parts in Commerce: Rhizome with roots and with stolons if present

Identification:

Rhizome

- Vertical, small; 2–5 cm long, 1–3 cm thick, cylindrical or tapering in overall shape, not branching
- Outside irregular and rough, yellowish to grayish or dark brown
- Inside brownish or grayish-white
- Apex usually with cup-shaped scar, or with remains of stem
- Numerous roots growing from all sides, sometimes

stolons from the upper part; no tubers present

- In cross-section, consists of narrow bark; starchy cortex containing random vascular bundles to leaves or roots; endodermis; ring of vascular bundles; large starchy pith with clusters of stone cells
- Pith may be hollow; in longitudinal section, multiple hollow spaces may be separated by septa
- Fracture horny
- Odor strong upon drying, characteristic, unpleasant
- Taste camphoraceous, slightly bitter

Roots

- Numerous, slender, to >10 cm long
- Brown to yellowish or grayish brown outside, mostly yellowish brown inside
- Brittle and shrivelled upon drying
- In cross-section, consists of 1–2 layers of cork or epidermis; 2–4 layers of resin-containing cells; cortex of starch-containing parenchyma that occupies most of root volume; small vascular cylinder with vessels in an interrupted circle; small “pith” at center

Stolons

- Absent in ssp. *officinalis*
- Dull yellowish-gray color outside
- Nodes prominent; internodes 2–5 cm long
- Fracture fibrous

Adulterants: *Valeriana dioica* L., *V. edulis* ssp. *procera* (Kunth) F.G. Mey. (Mexican Valerian,) *V. phu* L., and *V. jatamansi* Jones (Indian Valerian, often called *V. wallichii* DC.) are among the species that are used medicinally and may be substituted for *V. officinalis*. *Veratrum* species, *Scabiosus* species, unspecified Ranunculaceae, and *Cypripedium macranthum* Sw. have also been reported as adulterants in older literature, but these are unlikely to be found today. Characteristics that may be found in the rhizomes of substitutes include:

- Longer than expected, or elongated and with roots growing along only one side, indicating that it lay horizontally
- Smaller than expected (although tiny rhizomes may be found in the genuine article, from new plants growing at the nodes of stolons)
- Odor in dried material weak, pleasant, or lacking
- Surface not rough

- Fracture brittle, inside white
- Fractured surface bluish or black
- Many layers of cork present

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