



Wormwood

Product Images

Short Description

Wormwood. Wormwood herb and leaves

Description

Specification & Spread

Wormwood herb — herba artemisiae absinthii

Wormwood leaves — folia artemisiae absinthii

Wormwood — artemisia absinthium L.

Composite family — asteraceae (compositae)

Other names: vermouth, bitterness.

It is a perennial herbaceous plant with a many-headed short rhizome and taproot.

The stems are numerous, slightly ribbed, branching at the top, 50-100 (120) cm tall. The rosette and lower stem leaves are long-petiolate, twice or thrice pinnate, the stem leaves are alternate, petiolate, apical - sessile, whole or tripartite. The whole plant is silvery grey due to the dense pubescence, with a strong peculiar «wormwood» smell.

The flowers are all tubular, yellow, in spherical drooping baskets with a diameter of 2.5-4 mm. The calathidium is gathered on short branches in one-sided brushes, forming paniculate common inflorescence. The fruit is an achene.

It blooms in June - August, the fruits ripen in September - October.

Spreading. It grows throughout the European part of the country, in the south of Western Siberia and the Krasnoyarsk Territory, in the steppe, forest-steppe regions and the southern part of the forest zone, where it forms in places significant thickets.

Habitat. It grows as a weed on disturbed habitats - young fallow lands, grazing with loose soils, in populated areas, near roads, in vegetable gardens, field fields, gardens.

Composition

The chemical composition of wormwood

The herb and leaves of wormwood contain 0.5-2% essential oil, which consists of:

- bicyclic monoterpenoids - tuyol (10-25%), thujone (about 10%),
- pinen and others;
- and also azulene sesquiterpene lactones, which give the herb of wormwood a peculiar bitter taste - artabsin, absintine (dimer of artabsin).

The green-blue colour of wormwood oil is due to azulene.

It also contained:

- flavonoids,
- organic acids,
- tannins,
- carotenoids and
- other compounds.

Harvesting and storage of raw materials

Harvesting. Only two types of raw materials are harvested: herb and leaves. The leaves are harvested fully developed, before flowering or at the very beginning of flowering, in May - June, with shortened shoots, as well as rosettes and the lower stem. The leaves are torn by hands. The herb is harvested at the beginning of flowering in June - August; it is cut the tops of shoots 20-25 cm long without coarse stem bases with sickles or knives. Harvesting lasts 10-15 days. Harvested at a later date, the raw material during drying becomes dark grey, and the baskets turn brown and crumble. Then, the other plants and coarse stems with a diameter of more than 3 mm are removed from the freshly harvested herb. Both types of the raw materials are separately harvested.

Security measures. It is forbidden to pull out plants with roots.

Drying. The herb and leaves are dried in attics, under sheds or in the open air in the shade, spreading the raw material in a thin layer (up to 3-5 cm) on paper or on fabric and stirring occasionally. Heat drying with heating up to 40 °C is allowed. It is dried in good weather, the herb dries in 5-7 days, the leaves - in 3-5 days. The end of the drying is determined by the fragility of the stems and leaf stalks.

Storage. According to the rules of storage of essential oil raw materials, it is packed in bales or bags.

External signs of raw materials

Whole raw materials

Herb. There are solid or partially crushed leafy tops of flowering shoots not more than 25 cm long, not containing coarse lower parts of the stem. The stems are slightly ribbed, ending with a leafy spreading whisk, the twigs of which carry small spherical calathidium with a diameter of 2.5-4 mm. Calathidium is drooping, come out in one or two of the sinuses of lanceolate covering leaves. Outside, the calathidium is covered with a wrap of tiled, linearly arranged, outside woolly leaves, the inner leaves are elliptical, dull, and membranous. The common receptacle of the calathidium is convex, covered with white ribbon-like, scaly glume. The flowers are small, all tubular, external - pistillate, the internal - bisexual. Upper bracts are sessile, oblong, entire, the lower ones on the peduncle - trifoliate, less often twice, three-pinch. Non-flowering leafy shoots may occur. The colour of the stems is greenish grey, the leaves are greyish-green on top, silver-grey below, the flowers are yellow. The smell is fragrant, peculiar and strong. The taste is bitter.

Leaves. The leaves are petiolate, triangularly rounded in outline, twice and thrice pinnate; without petioles are

trifoliate and pinion-split. The leaf segments are linear, oblong, obtuse, whole-edged. The leaves are pubescent on both sides. The length of the plate is up to 10 cm. The colour of the leaves is greyish-green from above, silver-grey from below. The smell is fragrant, peculiar and strong. The taste is bitter.

Milled raw materials

Herb. The flower calathidium, pieces of stems and leaves of various shapes are passing through a sieve with holes of 7 mm diameter. The colour is greyish green. The smell is fragrant, peculiar and strong. The taste is bitter.

Leaves. The pieces of leaves of various shapes are passing through a sieve with holes with a diameter of 7 mm. The colour is greyish green or silver grey. The smell is fragrant, peculiar and strong. The taste is bitter.

Prerequisites
While harvesting the raw materials instead of wormwood, harvesters sometimes mistakenly harvest the herb of other types of wormwood. Most often it is the herb of Sagebrush, wormwood, and Austrian wormwood.

Austrian wormwood (Artemisia austriaca Jacq.) – the plant is 20-60 cm tall, with almost white, small (up to 3 cm in length), twice and three times separated or dissected leaves, the segments of which are not wider than 1 mm. The flower calathidium is not drooping, with a diameter of about 3 mm, with yellow or reddish-yellow flowers. It is spread in the steppe and forest-steppe regions of the European part of the country, the Caucasus, Siberia, and also Kazakhstan. It grows on steppe pastures, roadsides.

Common wormwood (Artemisia vulgaris L.), or sage-brush – the plant is 100-150 cm tall. The stems are ribbed, usually reddish. The lower and middle stem leaves are pinhole, with broadly lanceolate or linear-lanceolate large-toothed segments, with edges slightly wrapped on the lower side; the leaves in inflorescence - three- or five-dissected, rarely whole. The main diagnostic sign that distinguishes wormwood from wormwood, is the character of the pubescence of the leaves. The upper side of the leaf is dark green, bare, the bottom is whitish-felt (not silver!). The flowers are reddish, gathered in obovate, oblong or elliptical baskets with a diameter of 2-3 mm. It grows everywhere as a weed and ruderal plant.

Sagebrush (Artemisia sieversiana Willd.) – the plant is 30-120 cm tall. The stems are heavily ribbed. The leaves are broad-triangular in outline, silver-grey, fossa-ferruginous, the lower and middle stems - long-petiolate, up to 12 cm long, twice and triplely divided into oblong or linearly oblong segments, with 1-2 pairs of segments in the base of the petiole (the so-called «ears»). Hemispherical calathidium is drooping, with a diameter of 6 mm. An Asian species are found in the same habitats as wormwood.

Properties and application

Pharmacotherapeutic group. Means for stimulating appetite (appetite stimulant).

The pharmacological properties of wormwood

Irritating the end of the gustatory nerves in the mouth, bitter substances of wormwood reflexively enhance the secretory function of the gastrointestinal tract. The main value belongs to the absintin, which enhances the secretion

- bile
- pancreatic and
- gastric juices.

Essential oil of wormwood

- stimulates the central nervous system,
- has a cardiotoxic effect, similar to camphor. The large doses of wormwood preparations cause cramps in animals.

Azulene, isolated from the herb, has:

- antiallergic,
- antispasmodic,
- anti-inflammatory and
- analgesic properties.

The amount of lactones and polysaccharides isolated from wormwood have:

- anti-inflammatory effect
- activate proliferative phenomena in the area of mucous membrane damage,
- stimulate factors of nonspecific immunity.

There is an evidence of the bactericidal and fungicidal properties of unsaturated hydrocarbons isolated from plants.

Application of wormwood

Wormwood preparations are used for diseases involving secretory insufficiency of the gastrointestinal tract without acute inflammation.

Under the influence of bitterness, along with a general tonic effect on the nervous system,

- digestion improves,
- salivation increases,
- digestive enzymes release is activated,
- increased secretion of bile into the intestines.

Wormwood preparations are taken before meals. Prolonged use of wormwood can cause mild poisoning, in severe cases it can be accompanied by general toxic effects with hallucinations and seizures («wormwood» epilepsy).

Contraindications

The preparations of wormwood are contraindicated in case of increased secretion, gastric ulcer and during pregnancy.

