Medicinal plant raw materials and phytopreparations of haemostatic action

Haemostatic agents (drugs) found in plants,help stop bleeding by increasing the coagulation of the bloodor by constricting blood vessels. The drugs,that stimulate the uterine muscles stop uterine bleedingbecause the contraction of the uterus causes the blood vessels in the uterine wallsblood vessels embedded in the uterine wall.

The green parts of some plants contain vitamin K, whichstimulates the liver to produce prothrombin, which is necessary forthe blood clotting process. Prescribedhaemostatic agents of plant origin in the case of pulmonary, renal, intestinal, etc. Haemorrhage; in uterine bleeding haemorrhage most effective drugs that cause contraction of the uterine musculature.

Medicinal plant raw materials of *Urtica dioica*, *Polygonum (Persicaria) hydropiper*, *Polygonum persicaria*, *Capsella bursa pastoris* is widely used in the medicine as an auxiliary agent in the complex therapydiseases accompanied by bleeding.

The contraindication in the use of medicinal plant materials that have a styptic effect is increased blood clotting, early pregnancy and high blood pressure, because styptic substances, sometimes contribute to the stoppage of bleeding as a result of constriction of blood vessels.blood vessels.

Medicinal plant raw materials and phytopreparations of haemostatic (styptic) action

1. Common nettle – *Urtica dioica* L.
2. Shepherd´s purse - *Capsella bursa-pastoris* (L.)
3. spotted lady's thumb - *Polygonum persicaria* L. (*Persicaria maculosa* Grey)
4. water pepper - *Polygonum hydropiper* L.
5. guelder-rose - *Viburnum opulus* L.

Common nettle – *Urtica dioica* L.
Nettle leaves – Urticae dioicae folia
Family Urticaceae

Urtica dioica is a dioecious, herbaceous, perennial plant, 0.9 to 2 metres tall in the summer and dying down to the ground in winter.

It has widely spreading rhizomes and stolons, which are bright yellow, as are the roots. The soft, green leaves are 30 to 200 mm long and are borne oppositely on an erect, wiry, green stem.

The leaves have a strongly serrated margin, a cordate base, and an acuminate tip with a terminal leaf tooth longer than adjacent laterals. It bears small, greenish or brownish, numerous flowers in dense axillary inflorescences.

The leaves and stems are very hairy with non-stinging hairs, and in most subspecies, also bear many stinging hairs (trichomes or spicules), whose tips come off when touched, transforming the hair into a needle that can inject several chemicals causing a painful sting or paresthesia, giving the species its common names: stinging nettle, burn-nettle, burn-weed, or burn-hazel.

U. dioica is considered to be native to Europe, much of temperate Asia and western North Africa. It is abundant in northern Europe and much of Asia, usually found in the countryside. It is less widespread in southern Europe and north Africa, where it is restricted by its need for moist soil, but is still common. It has been introduced to many other parts of the world.

Chemical composition

Raw material contains vitamin K, ascorbic acid, carotenoids (β - carotene, xanthophylls, violaxanthin, etc.), vitamins B1, B2, B6. In addition there are flavonoids (quercetin), coumarins (scopoletin), tannins, polysaccharides, phytoncides, caffeic acid, ferulic acid, formic acid, oxalic, succinic, fumaric, citric acids, iron salts, sterols.

According to the State Pharmacopoeia of Russia XIV in whole, crushed raw material, powder: the sum ofoxycinnamic acids in terms of chlorogenic acid should be not less than 0.3%.

Collect the raw material in May-July, before the lower leaves begin to fade. The above-ground part is cut with a sickle or a knife, wilted for two to three hours, and then, when the leaves stop burning, they are cut off.

Collection and processing of raw materials is carried out in canvas gloves.

The leaves can be dried in dryers at a temperature of 40 - 50 ° C or in the attics, under sheds, spread a layer of 3 - 5 cm on cloth or paper.

Colour dried raw material should be dark green, odour faint, taste bitter.

Stored in a dry, well-ventilated room for two years.

The leaves are used as an infusion or liquid extract, which is used as a styptic for various internal haemorrhages. Nettle preparations increase the contractile activity of the uterus and increase blood clotting, so they are effective in menopausal bleeding.Effective preparations of nettle leaves in C hypo- and avitaminosis.Leaves are included in multivitamin and stomach medicinal tea collections.

In addition, nettle leaves have a positive effect on the metabolism in the body, have a general tonic effect, contribute to the metabolism of the the body, have a general tonic effect, promote increase the content of haemoglobin, increase the tone of smooth musculature.

Contraindications and possible side effects.

Nettle preparations are contraindicated in people with high blood clotting, hypertension and atherosclerosis, as well as should not be used with bleeding caused by cysts, polyps and tumours of the uterus.

Particular caution is needed when prescribing nettle to patients with kidney disease.

Nettles are also used in other areas. The leaves protect against rotting, rapidly spoiling foods. The young shoots and leaves of nettle. The young shoots and leaves of nettle, rich in vitamins, are consumed as food.

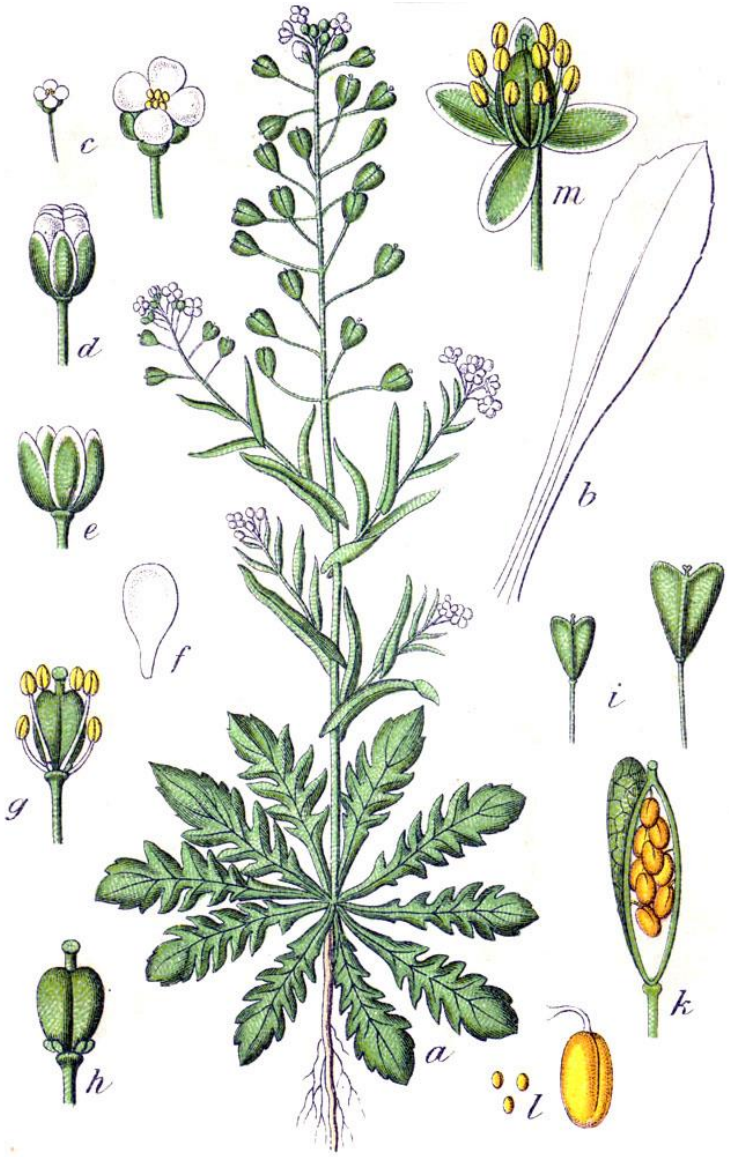
shepherd's purse herb - Capsella bursae pastoris herba
shepherd's purse - *Capsella bursa-pastoris* (L.)
Family *Brassicaceae*

Capsella bursa-pastoris, known as shepherd's purse because of its triangular flat fruits, which are purse-like.

Capsella bursa-pastoris is a small annual and ruderal flowering plant.

Capsella bursa-pastoris plants grow from a rosette of lobed leaves at the base. From the base emerges a stem about 0.2–0.5 m tall, which bears a few pointed leaves which partly grasp the stem.

The flowers are white and small, 2.5 mm in diameter, with four petals and six stamens. They are borne in loose racemes, and produce flattened, two-chambered seed pods known as silicles, which are triangular to heart-shaped, each containing several seeds.



It is native to eastern Europe and Asia minor, but is naturalized and considered a common weed in many parts of the world, especially in colder climates, including British Isles, North America and China, but also in the Mediterranean and North Africa. *C. bursa-pastoris* is the second-most prolific wild plant in the world, and is common on cultivated ground and waysides and meadows.

Shepherd's purse is often accompanied by a slightly resembling plant from the family *Brassicaceae*, Thlaspi arvense, which should not be harvested. Unlike shepherd's purse, the leaves of the root rosette are elongate-obovate, fruits are round-elliptic with a narrow notch at the apex.

The herb is harvested during flowering and the beginning of fructification shepherd's purse, in June-July, in dry weather, after the dew has dried, cutting the herb with a knife or secateurs. grass with a knife or secateurs. It is inadmissible to collect plants with mature (opened) fruits, as well as plants affected by fungus (with a whiteplaque on the leaves).

Collected raw materials are put loosely in baskets and sent to the drying.

The shepherd's purse is dried under awnings or in attics with good ventilation by spreading it loosely in a thin layer up to 5-7 cm thick on paper or cloth. In good weather, the herb dries in 5-7 days. It can be dried in dryers at a temperature not exceeding 45 °C.

Chemical composition

The raw material contains significant amounts of vitamin K, ascorbic acid and carotenoids.In addition, there are amines, tannins, flavonoids, malic, citric, fumaric and tartaric acids, as well as a high content of potassium up to 40%.

The seeds have a fatty oil and a small amount of allyl mustard oil.

According to the State Pharmacopoeia of Russia XIV in whole, ground raw material, in powder of the amount of flavonoids in terms of rutin, should not be less than 0.5%.

Herbaceous stems, simple or branched with a ribbed surface, glabrous or weakly pubescent in the lower part, with flowers and immature fruits on elongated cystoid inflorescences, often with rosettes of root leaves. Flowers and immature fruits on elongated clusters, often with rosettes of root leaves. Root leaves are oblong-lanceolate, petiolate, pinnately divided with acute triangularwhole-edged or toothed lobes; stem leaves are ordinary, sessile,oblong-lanceolate, entire-edged or notched-toothed; the upper ones -almost linear with arrow-shaped base. Flowers are small, regular, separately lobed. Calyx of oblong-ovate, green sepals. The corolla consists of 4 obovate petals. Fruits are pods, inversely triangular-heart-shaped, slightly emarginate at the apex, flattened, with twoopening flaps. The colour of the stems, leaves and fruits is green, while the flowers are whitish. Odour faint. The flavour is bitter.

The herb shepherd's purse in the form of infusion and liquid extract is used in gynaecological practice as a styptic after childbirth, as well as to strengthen the contraction of the musculature of the uterus during childbirth. In this regardshepherd's purse is contraindicated in pregnancy.Preparations of the herb have the ability not only to strengthen the contraction of the uterus, but also to constrict peripheral vessels. Aqueous and alcoholic extracts of the plant have hypotensive properties.