

HORSETAIL (EQUISETUM MARVENSE L.) – BIOLOGICAL SIGNIFICANCE, MEDICINAL PROPERTIES AND USE IN FOLK MEDICINE

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Abstract: In this article, the author provides information on the available scientific literature on the horsetail plant (*Equisetum marvense* L.), including the benefits and medicinal properties of plant products for the body, laboratory studies, medicinal properties, use in folk medicine, and biological significance.

Keywords: Horsetail (*Equisetum marvense* L.), silicon compounds, saponins, alkaloids, flavonoids (apigenin, luteolin, quercetin, kaempferol and their glycosides, equisetin, naringenin), up to 190 mg% vitamin C carotene, oxalate, up to 25% silicate (in water-soluble form) and other acids, astringents, bitter substances.

Аннотация: В данной статье автором представлены сведения о растении Хвощ полевой (*Equisetum marvense* L.) на основе имеющейся научной литературы, в том числе о пользе продуктов из этого растения для здоровья и его целебных свойствах, результатах лабораторных исследований, лекарственных особенностях, применении в народной медицине, а также о его биологическом значении.

Ключевые слова: Хвощ полевой (*Equisetum marvense* L.) содержит кремниевые соединения, сапонины, алкалоиды, флавоноиды (апигенин, лутеолин, кверцетин, кемпферол и их гликозиды, эквизетин, нарингенин), до 190 мг% витамина С, каротин, оксалат, до 25% силиката (в водорастворимой форме), другие кислоты, вяжущие и горькие вещества.

Horsetail (*Equisetum marvense* L.) is a genus of perennial plants belonging to the family of Equisetaceae. In Uzbekistan, the species of horsetail and horsetail are found. The stem is hard, erect, jointed, ribbed, and branched. It is 40-60 cm tall. Strong branches emerge from the joints. In spring, brown spore-bearing stems grow, and in summer, green, jointed vegetative stems grow. At the ends of the reddish-brown branches, spore-bearing spikes form. The rhizomes and spores multiply. The centipede grows in moist soil, along ditches, in betel, cotton fields, rice fields, as well as along irrigation channels, in swamps and marshy lands. Part used.

Above-ground part. In the middle of the summer months, the summer, non-spore-forming stems of the centipede are harvested and dried in the shade.

Biological significance

Strengthens the soil. Reduces soil erosion through rhizome-like stems. Is an indicator plant of wet areas. Its growth can be a sign of moisture and silicate richness in the soil. Contributes to the turnover of organic matter. Dry stems decompose, increasing soil fertility. Evolutionary significance. Centipedes are one of the oldest plant groups on Earth. They were very widespread in the Carboniferous period and are a rare relict group that has survived to this day. Reproduction by spores has been considered an important model in studying the evolution of ancient plants. Biochemical and physiological significance. The abundance of silicon compounds in the stem gives the plant strength. The role of silicon in plant physiology is used in scientific research on stem hardness and mechanical strength.

Medicinal value

The above-ground part contains up to 5% saponins, alkaloids, flavonoids (apigenin, luteolin, quercetin, kaempferol and their glycosides, equisetin, naringenin), up to 190 mg% of vitamin C carotene, oxalate, up to 25% silicate (in water-soluble form) and other acids, astringents, bitter substances. Due to substances such as flavonoids, saponins, silicic acid, organic acids, it has diuretic, anti-inflammatory, and regeneration-accelerating properties. This is important for the production of medicines and pharmacological research.

Use in folk medicine

The tincture or decoction and liquid extract are used for circulatory failure, dysentery, inflammation of the bladder, and other diseases of the urinary tract, as a diuretic, as a stop-bleeding agent for stomach, intestinal, uterine, and hemorrhoidal diseases, and for the treatment of some types of pulmonary tuberculosis. The above-ground part is included in the composition of the Zdrenko collection and diuretic collection teas.

The plant has been used by the people for centuries as a remedy for various ailments. Abu Ali ibn Sina used the juice extracted from its undried aboveground part to treat wounds. He used a tincture made by adding wine to the dried and crushed aboveground part to treat liver swelling, bloody diarrhea, and dysentery.

A decoction made from the above-ground part is used in folk medicine to treat pulmonary tuberculosis, kidney and urinary tract stones, to induce urination, and to treat various bleeding disorders (hemorrhagic dysentery, bloody diarrhea, bleeding from the nose, gums, and wounds). The decoction is also used to treat wounds, boils, and some skin diseases.

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