

Urticae herba

Nettle herb (BHP 1/1990)

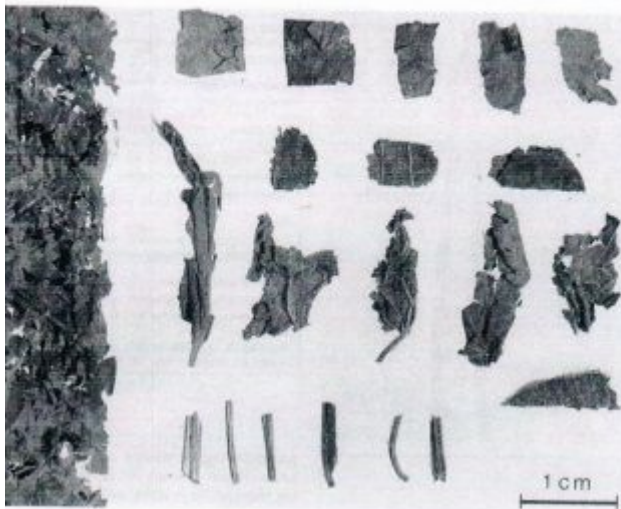


Fig. 1: Nettle herb

Description: The drug consists of the above-ground parts with stems not more than 3 mm thick, collected during the flowering period and dried. In the cut drug, the leaf fragments are shivelled and often crumpled up into a ball. The upper surface is greenish black and the lower surface is pale green; there are large, scattered, erect stinging hairs (Fig. 4) and numerous small bristles; the margin of the leaf fragments is coarsely serrate and the nervature on the lower surface is distinct and prominent. Pieces of the square stem are mostly flattened, green to brown, and deeply grooved. Occasional pieces of the green flowering panicles may be present.

Odour: Not characteristic.

Taste: Not characteristic.

Fig. 2: *Urtica dioica* L., female plant

A 60-120 cm tall herb bearing ovate and acuminate leaves with a coarsely serrate margin; stinging hairs and bristles present. Flowering panicles longer than the leaf petioles (difference from *U. urens* L.).

Fig. 3: *Urtica dioica* L., male plant

Same habit as described for Fig. 2; flowers yellowish (anthers with yellow pollen grains).



Abb. 2



Abb. 3

DAB 10: Brennesselblätter
DAB 1986: Brennesselkraut
St. Zol.: 8500,99,99

Plant sources: Mostly *Urtica dioica* L., common nettle, but occasionally also *U. urens* L., small nettle (Urticaceae).

Synonyms: Urtica, Stinging nettle (Engl.), Brennesselkraut, Haarnesselkraut, Hanfnesselkraut (Ger.), Herbe d'ortie (Fr.).

Origin: Occurrence almost worldwide as a plant of wasteland; the drug is obtained from plants growing in the wild in central and eastern Europe (eastern part of Germany, former USSR, Bulgaria, former Yugoslavia).

Constituents: Apart from flavonoids (glycosides of quercetin, kaempferol, and rhamnetin in the flowers) [1], up till now no constituents have been found which will explain the effects ascribed to the drug. In addition to the chlorophylls a and b that are charac-

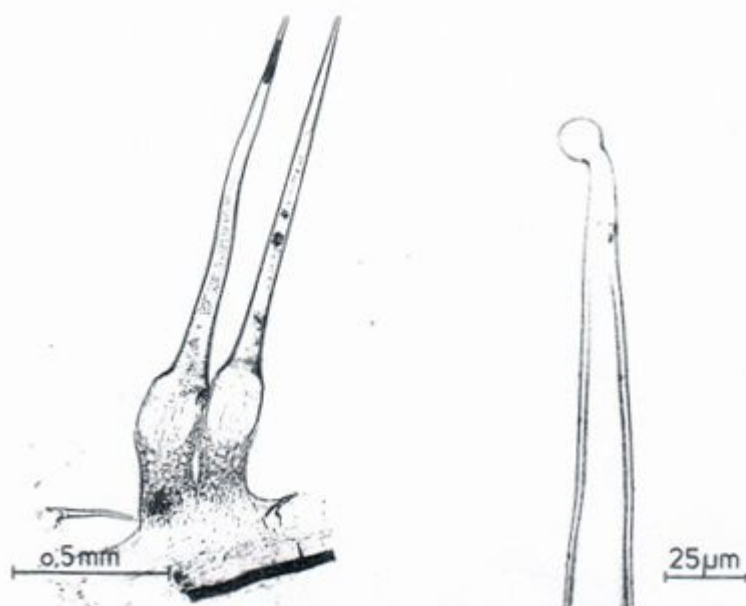


Fig. 4: Typical stinging hairs, from *Urtica dioica*
 Fig. 5: Undamaged, swollen tip of the stinging hair

teristic of all green plants, chlorophyll degradation products and carotenoids (including β -carotene and xanthophylls), vitamins (among them C, B group, K₁), triterpenes and sterols (including β -sitosterol), mineral salts (among them silica, potassium salts, nitrates), other ubiquitous plant substances, e.g. formic, acetic, citric, and other acids) are also present. The detection of the glucokinins, which continue to be made responsible for the "antidiabetic" activity, is still disputed. The stinging trichomes in particular contain amines (including histamine, serotonin, choline, etc.) [2].

Indications: There are few clinically and pharmacologically assured results concerning the action and activity, and such as there are relate to the diuretic effect. Thus, nettle herb is supposed to have a favourable diuretic action, which is accompanied by considerable excretion of chlorides and urea [according to 2]. More recent studies [3]

have confirmed the mild diuretic effect of the fresh sap from the herb. Treatment over a 14-day period brought about an increase in urine volume and a reduction in body weight, as well as an insignificant diminution in systolic blood pressure.

In *folk medicine*, nettle herb as a tea or as juice pressed from the fresh plant is used in many different ways [2]: internally as a "blood-forming" agent, as a diuretic in arthritis and rheumatism of the joints and muscles, "to raise enzyme production" of the glands secreting gastric juice, as a component of "anti-diabetic" teas (against the use of which there have been warnings from the medical profession [4]), to promote wound healing, in biliary complaints, externally for treating seborrhoea of the scalp and hair and against over-greasy hair. (For other folk-medicinal uses, particularly in eastern European countries, see [2]). The numerous and, in part very imprecise and wide-ranging indications for nettle herb [2] and the few

Extract from the German Commission E monograph (BANz no. 76, dated 23. 04. 1987)

Uses

When taken internally and used externally: supportive treatment for rheumatic complaints
 When taken internally: for irrigation in infection of the urinary tract and in the preventive treatment of kidney gravel.

Contraindications

None known.

Side effects

None known.

Interactions with other remedies

None known.

Dosage

Unless otherwise prescribed: average daily 8-12 g drug; preparations correspondingly.

Mode of administration

Crushed drug for infusions and other gaseous preparations for internal use; as spirit of nettle for external use.

Warning: In irrigation therapy, care must be taken to ensure an abundant fluid intake.

pharmacological studies carried out are sufficient reasons for critically appraising therapeutic practice with this drug. *mild diuretic*, the drug can certainly be recommended [4].

Side effects: Occasionally (rare), after nettle tea, allergies (cutaneous affect oedema, oliguria, gastric irritation) have been observed.

Making the tea: 1.5 g of the finely cut drug put into cold water and boiled for a short time, or boiling water is poured directly to it, and after 10 mins. strained. As a diuretic, a cupful is drunk several times a day; 1 Teaspoon = ca. 0.8 g, 1 tablespoon = 2.2 g.

Herbal preparations: The drug is also available in tea bags (1.0-1.8 g).

Phytomedicines: As a component of "urinary eliminating" herbal mixtures (diuretics); so-called "blood-purifying" teas, and fresh plant sap as a "spring cure".

Regulatory status (UK): General Sales List, Schedule 1, Table A.

Authentication: Macro- and microscopic, following the DAC 1986. See also BHP 1/1990. The stinging hairs (Figs.

Wording of the package insert, from the German Standard Licence:

6.1 Uses

For increasing the amount of urine; for supportive treatment of complaints associated with urination.

5.2 Contraindications

Water retention (oedema) as a result of impaired cardiac and renal function.

6.3 Dosage and Mode of administration

Hot water (ca. 150 ml) is poured over 3-4 teaspoonfuls (ca. 4 g) of **Nettle herb** and after about 10 mins. passed through a tea strainer.

Unless otherwise prescribed, a cup of the freshly prepared infusion is drunk three or four times a day.

6.4 Note

Store away from light and moisture.

and 5) are characteristic, as well as the epidermal cystoliths which are up to 70 µm in length.

Quantitative standards: DAC 1986; *Foreign matter*, not more than 10% stem fragments and not more than 2% other foreign matter.

Loss on drying, not more than 12%. *Ash*, not more than 20%. *Acid-insoluble ash*, not more than 4.0%.

BHP 1/1990: *Water-soluble extractive*, not less than 18%. *Stems above 3 mm in diameter*, not more than 2%. *Foreign matter*, not more than 2%. *Total ash*, not more than 20%. *HCl-insoluble ash*, not more than 4%.

Adulteration: The leaves of *Lamium album* L., white deadnettle, have been noted as an adulterant. These have an irregularly serrate

leaf margin, and the stinging hairs and cystoliths are absent. Instead, bicellular uniseriate trichomes and short trichomes with a unicellular head are present (see: *Lamii albi herba*).

Literature:

- [1] N. Chaurasia and M. Wicher, *Planta Med.* 53, 432 (1987).
- [2] J. Lutowski and H. Speichert, *Pharmazie in unserer Zeit* 12, 181 (1983).
- [3] H.W. Kirchhoff, *Z. Phytotherap.* 4, 621 (1983).
- [4] R.F. Weil, *Herbal Medicine*, Arcanum, Gothenburg, and Beaconsfield Publishers, Beaconsfield, 1988.