

SELECT BOTANICAL

NETTLE ROOT

Technical-Scientific report

GENERAL INFORMATION

Select Botanical manufactures highest quality extracts following strictest Quality Management System in compliance with the "Good Manufacturing Practices" requirements, carrying on the last manufacturing steps in classified areas (Clean Rooms).

Select Botanical assures the traceability with rigorous analysis from raw material to finished product.

REGISTRY NUMBERS

CAS: 84012-40-8
EINECS: 281-685-5
INCI/ UE: URTICA DIOICA ROOT EXTRACT

INFORMATION ABOUT PLANT ORIGIN

SPECIFICATIONS/ TECHNICAL CHARACTERISTICS

Raw material

Definition: Root of *Urtica dioica* L.
Description:
- Macroscopic: Complies Ph. Eur. current Ed.
- Microscopic: Complies Ph. Eur. current Ed.
Loss on drying: $\leq 12\%$ w/w
Pesticides: According to Ph. Eur. current ed.
Assay (GC): β -sitosterol (%)

Composition of Extract Preparation

Native dry extract
Maltodextrin (if it is necessary)
Colloidal silicon dioxide

Extract Specifications

Loss on drying: $\leq 6\%$ w/w
Total ash: $\leq 20\%$ w/w
Heavy metals: Analysis of Pb, Hg, Cd and As
Microbiological assay: According to Ph. Eur. current Ed "5.1.8. Point B"
Residual solvents: According to guidelines CPMP/ICH/283/95
Assay (GC): β -sitosterol (%)

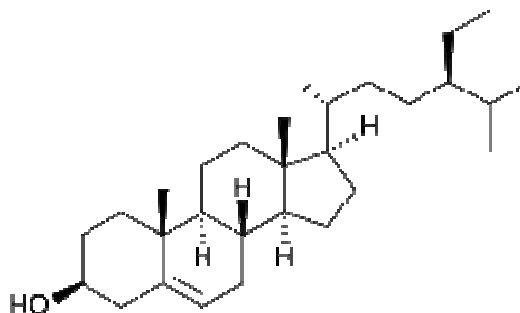
Botanical Description

Nettle is a perennial plant up to 1,5 m. It has square, erect stems and fleshy, drooping, serrated, roughly heart-shaped leaves. The leaves and stems are covered by stinging hairs.

Its rhizome is irregular, cylindrical, greyish-brown, sporadically purple or greenish, 3-10 mm in diameter, the internodes are up to 2-3 cm long, with deep longitudinal furrows, alternating with short, slightly swollen nodes; the nodes bear numerous roots that are externally greyish-brown, 0.5-2 mm in diameter and up to about 10 cm long. The transverse section shows a thin, dark bark, the inner part is creamish-white with a hollow centre. The fracture of the rhizome is fibrous and uneven, especially in the inner part. ⁽¹⁾

Analytical marker / Active principle

β -sitosterol



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PHARMACOLOGICAL STUDIES

sb *Diuretic and anti-inflammatory effects:* The reputed beneficial effect of nettle root on benign prostatic hyperplasia seems to be supported by *in vitro* and *in vivo* pharmacological studies. Phytosterols, lignans, polysaccharides and the lectin UDA (0.2-0.6%) are considered to be among the active principles. It seems likely that sex hormone binding globulin (SHBG), aromatase, epidermal growth factor and prostate steroid membrane receptors are involved in the anti-prostatic effect. The oral nettle root extract and its polysaccharide fraction were shown to exert anti-inflammatory activity in a rat paw oedema. ^(3, 5)

PHYTOTHERAPY

Activities

- sb** Diuretic ⁽⁵⁾
- sb** Anti-inflammatory ⁽⁵⁾
- sb** Antioxidant ⁽⁶⁾

Indications:

Oral use:

In accordance to the EMA Monograph, for traditional use:

sb Traditional herbal medicinal product for the relief of lower urinary tract symptoms related to benign prostatic hyperplasia after serious conditions have been excluded by a medical doctor. ⁽⁴⁾

In accordance to the ESCOP Monograph:

sb Symptomatic treatment of micturition disorders (dysuria, pollakisuria, nocturia, urine retention) in benign prostatic hyperplasia (BPH) at stages I and II as defined by Alken or stages II and III as defined by Vahlensieck. ⁽³⁾

Undesirable effects:

- sb** Gastrointestinal complaints such as nausea, heartburn, feeling of fullness, flatulence, diarrhoea may occur. ^(2, 3, 4)
- sb** Rare cases of allergic skin reactions. ^(3, 4)

Contraindications and special warnings:

sb If complaints worsen or if symptoms such as fever, spasms or blood in the urine, painful urination, or urinary retention occur, a doctor should be consulted. ^(3, 4)

sb There is no relevant use in children and adolescents under 18 years of age. ⁽⁴⁾

Dosage and administration:

Oral use

Herbal preparations may be found in solid or liquid dosage forms or as herbal tea for oral use.

Posology is indicated in the **EMA/HMPC/461160/2008 (traditional use)** and **ESCOP** monographs. ^(3, 4)

BIBLIOGRAPHY AND OTHER REFERENCES SOURCES

- Current monograph "2538: Nettle root" of European Pharmacopoeia edition.
- Blumenthal. The Complete German Commission E Monographs. Therapeutic Guide to Herbal Medicines. American Botanical Council. Austin, Texas 1998.
- ESCOP Monographs. Second edition. 2003
- Community Herbal Monograph on *Urtica dioica* L., *Urtica urens* L., their hybrids or their mixtures, radix. EMA/HMPC/461160/2008. September 2012.
- Assessment report on *Urtica dioica* L., *Urtica urens* L., their hybrids or their mixtures, radix. EMA/HMPC/461156/2008. September 2012.
- Gülçin I., Küfrevio I., Münir Oktay M., Büyükokuro M. Antioxidant, antimicrobial, antiulcer and analgesic activities of nettle (*Urtica dioica* L.). Journal of Ethnopharmacology, 90 (2004) 205–215.



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