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.

SPECIFICATIONS/ TECHNICAL CHARACTERISTICS

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<th>Raw material</th>
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Composition of Extract Preparation

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

Extract Specifications

- Loss on drying: ≤ 6 % w/w
- Total ash: ≤ 10 % 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 (HPLC): Caftaric acid + Chicoric acid (dry basis) (%) *

* Select Botanical can offer other qualities upon request.

REGISTRY NUMBERS

- CAS: 90028-20-9
- EINECS: 289-808-4
- INCI/ UE: ECHINACEA PURPUREA ROOT EXTRACT

INFORMATION ABOUT PLANT ORIGIN

Botanical Description

It is a perennial herb of South Western and Central parts of United States of America. Its smell is aromatic and its taste is sweet in the beginning followed by bitterish and giving tingling effect to the tongue. It has vivid purple coneflowers and dark green leaves. The rhizome is up to 15 cm long, branched, reddish-brown to dark brown on the surface and carries many stem bases; the inside is fibrous and white. The numerous roots are spirally twisted, light to dark brown and show a fine cross structuring on the surface. (1)

Analytical marker / Active principle

Caftaric acid

Chicoric acid

INFORMATION ABOUT PLANT ORIGIN

(1) Analytical marker / Active principle
**PHARMACOLOGICAL STUDIES**

- **Immunomodulatory activity:** Different in vivo and in vitro experiments showed an influence on immune functions, such as a macrophage activating capacity. Echinacea has been found to be a highly promising immunostimulant from nature. \(^{(4, 5)}\)

- **Antimicrobial activity:** Echinacea purpurea was found to have antiviral activity against herpes virus and influenza virus in a human cell model. In placebo-controlled trials *Echinacea purpurea* root in combination with other herbal drugs was reported to be successful in reducing the severity of symptoms of common cold or flu. \(^{(4, 5)}\)

- **Anti-inflammatory activity:** Different in vivo tests have proved an anti-inflammatory activity. A fraction from Echinacea root consisting of 10 polyunsaturated isobutylamides had an inhibitory effect in a 5-lypo xigenase assay. \(^{(4, 5)}\)

**PHYTOTHERAPY**

**Activities**

- Immunomodulatory \(^{(4, 5)}\)
- Anti-inflammatory \(^{(4, 5)}\)
- Antioxidant \(^{(4, 5)}\)
- Antimicrobial \(^{(4, 5)}\)

**Indications:**

**Oral use:**

In accordance to the EMA Monograph:

- Traditional herbal medicinal product for the supportive treatment for common cold. \(^{(3)}\)

In accordance to the ESCOP Monograph:

- Adjuvant therapy and prophylaxis of recurrent infections of the upper respiratory tract (common cold). \(^{(2)}\)

**Undesirable effects:**

- Hypersensitivity reactions (skin reactions) may occur. The frequency is not known. \(^{(2, 3)}\)

**Contraindications and special warnings:**

- In the absence of sufficient data, the use during pregnancy and lactation is not recommended. \(^{(2, 3)}\)

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**BIBLIOGRAPHY AND OTHER REFERENCES SOURCES**