

Herbal Medicines Compendium

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Lepidium meyenii Tuber

Proposed For Development Version 0.1

Lepidium meyenii Tuber

DEFINITION

The article consists of the tuberous root of *Lepidium meyenii* Walp. (Family Brassicaceae) collected from May to July. It meets the *Acceptance criteria* under the Assay.

SYNONYMS

Lepidium gelidum Wedd.

Lepidium meyenii var. *affine* (Wedd.) Thell.

Lepidium meyenii subsp. *gelidum* (Wedd.) Thell.

Lepidium meyenii subsp. *marginatum* (Griseb.) Thell.

Lepidium orbignyanum Wedd.

Lepidium peruvianum G. Chacon de Popovici

Lepidium weddellii O.E. Schulz

POTENTIAL CONFOUNDING MATERIALS

Dioscorea alata L.

SELECTED COMMON NAMES

Danish: Perukarse

English: Maca, Peruvian ginseng

Spanish: Maca, mace

Swedish: Maca

CONSTITUENTS OF INTEREST

Polyunsaturated fatty acids, and their amides: macaenes and macamides

Alkaloids, amino acids, and glucosinolates

IDENTIFICATION

• A. BOTANICAL CHARACTERISTICS

Macroscopic: The tubers' size varies from 2–5 cm; color may be white, yellow, reddish and white, white and yellow, white and purple, light-lead gray, purple and lead gray or yellow, red and gray; tuber has a meaty texture and a rounded, globose, or napiform shape.

Microscopic

Transverse section: Epidermal cells are square and slightly larger than the cortical cells; outer cortical cells are elongated and flattened, blemished yellow and purple color; cortical area shows circular with

radially arranged xylem vessels towards the center, the phloem has an opaque color, opposite the xylem a thin meristematic procambium; layers of rectangular cells suberized, of which the outermost layers are flattened and have a disorganized appearance; central vascular cylinder is branched, star-shaped, surrounded by a winding contour vascular cambium, inward xylem vessels, radially arranged in abundant parenchyma phloem area; layers of parenchyma cells, round or ellipsoidal shapes, full of starch granules.

- **B. THIN-LAYER CHROMATOGRAPHY**

CALL FOR SUBMISSION OF VALIDATED INFORMATION

Additional information including validation data will be required to complete the development of the *Identification*. For requirements, please see under "*Identification*" and related sections of the guidelines document "*Monographs in the Herbal Medicines Compendium*" at <http://hmc.usp.org/about/general-noticesguidelines> [1].

Interested parties are encouraged to submit their proposals to complete the monograph.

ASSAY

- **CONTENT OF CONSTITUENTS OF INTEREST**

CALL FOR SUBMISSION OF VALIDATED INFORMATION

Additional information including validation data will be required to complete the development of the *Assay*. For requirements, please see under "*Composition*" and related sections of the guidelines document "*Monographs in the Herbal Medicines Compendium*" at <http://hmc.usp.org/about/general-noticesguidelines> [1].

Interested parties are encouraged to submit their proposals to complete the monograph.

CONTAMINANTS

- **ARTICLES OF BOTANICAL ORIGIN, *General Method for Pesticide Residues Analysis* <561>**: Meets the requirements
- **MICROBIAL ENUMERATION TESTS <61>**: The total aerobic bacterial count does not exceed 10^5 cfu/g, the total combined molds and yeasts count does not exceed 10^3 cfu/g, and the bile-tolerant Gram-negative bacteria does not exceed 10^3 cfu/g.
- **TESTS FOR SPECIFIED MICROORGANISMS <62>**: Meets the requirements of the tests for the absence of *Salmonella* species and *Escherichia coli*
- **ARTICLES OF BOTANICAL ORIGIN, *Test for Aflatoxins* <561>**: Meets the requirements

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE**: Preserve in well-closed containers, protected from light and moisture, and store at room temperature.
- **LABELING**: The label states the Latin binomial and the part of the plant contained in the article.
- **USP REFERENCE STANDARDS <11>**

[USP Aflatoxins RS](#) [2]

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