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.

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

ASSAY
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]

TO COME

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