Identification of Easily Confused Species of Chinese Materia Medica in Hong Kong by Macroscopic and Microscopic Characteristics Project

Rhizoma Curcumae Longae versus Rhizoma Wenyujin Concisa





1 cm

Source

*Rhizoma Curcumae Longae

is the dried rhizome of *Curcuma longa* L. in the family Zingiberaceae

Rhizoma Wenyujin Concisa#

is the dried rhizome of Curcuma wenyujin Y. H. Chen et C. Ling in the family Zingiberaceae

Overview

The Chinese Pharmacopoeia (2020) and Schedule 2 of the Chinese Medicine Ordinance have both listed Rhizoma Curcumae Longae and Rhizoma Wenyujin Concisa. According to the Species Systematization and Quality Evaluation of Commonly Used Chinese Traditional Drugs, before the end of Ming Dynasty, the rhizome of Curcuma wenyujin was one of the documented sources of "Jiang huang", then it was named as Rhizoma Wenyujin Concisa in literatures of Qing Dynasty. The rhizome of Curcuma longa in the family Zingiberaceae was used as Rhizoma Curcumae Longae only after Qing Dynasty and became the major species. Although the two Chinese Materia Medica (CMM) only differ in their Chinese names by one character, both are cut into slices for clinical use and according to the Chinese Pharmacopoeia, have the same functions of breaking blood and moving qi, unblocking meridians and relieving pain, their contents of curcuminoid are significantly different according to the Species Systematization and Quality Evaluation of Commonly Used Chinese Traditional Drugs, thus the two CMM should be used distinctly.

Note:

1 cm

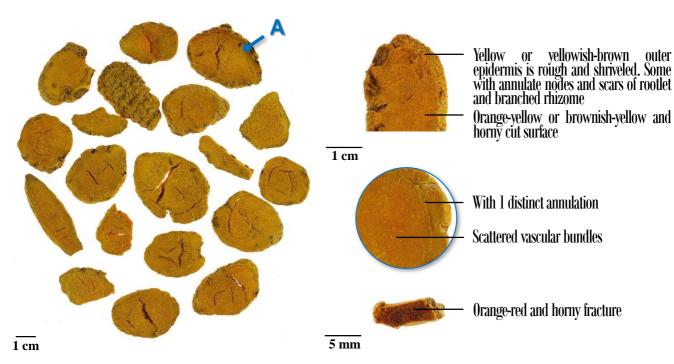
^{*}Its name in the Chinese Pharmacopoeia (2020) is "Curcumae Longae Rhizoma".

^{*}Its name in the Chinese Pharmacopoeia (2020) is "Wenyujin Rhizoma Concisum".

Key identification features

Macroscopic features of Rhizoma Curcumae Longae decoction pieces







A: Non-glandular hairs are frequently observable in fissure

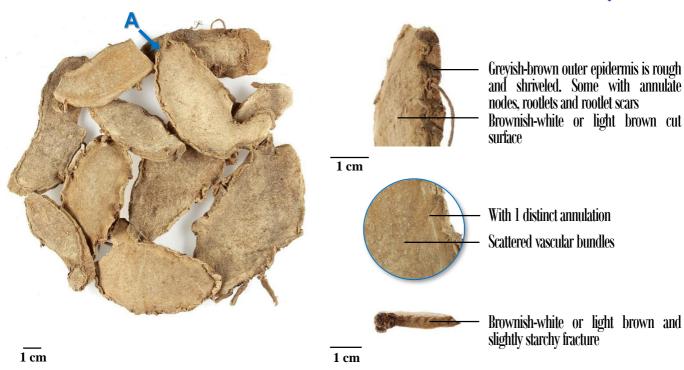


(Outer epidermis)

500 μm

Macroscopic features of Rhizoma Wenyujin Concisa (





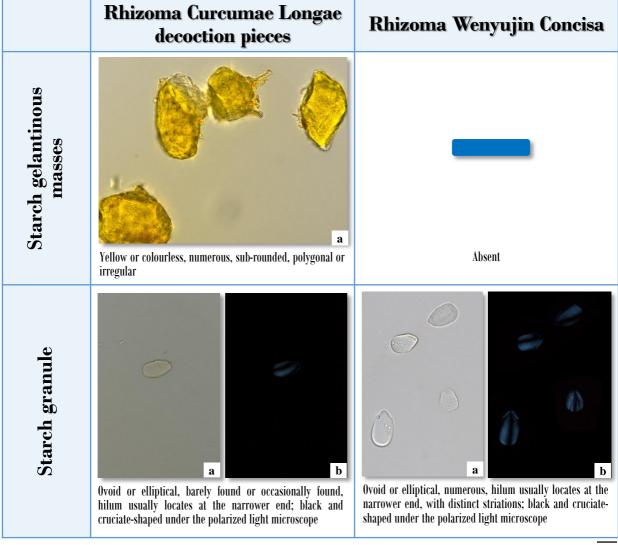
Micro-morphological feature

A: Non-glandular hairs are frequently observable on whole surface



Microscopic feature comparison of Rhizoma Curcumae Longae decoction pieces and Rhizoma Wenyujin Concisa powder





a. features under bright field; b. features under polarized light

50 μm

Summary

Major differences in the features between Rhizoma Curcumae Longae decoction pieces and Rhizoma Wenyujin Concisa:

		Rhizoma Curcumae Longae decoction pieces	Rhizoma Wenyujin Concisa
Macroscopic and micro-morphological features	Cut surface	Orange-yellow or brownish-yellow	Brownish-white or light brown
	Outer epidermis	Non-glandular hairs are frequently observable in fissure	Non-glandular hairs are frequently observable on whole surface
Microscopic features	Starch gelantinous masses	Present	Absent
	Starch granule	Barely found or occasionally found	Numerous

For more information, please refer to the <u>Hong Kong Chinese Materia Medica</u> Standards website:



Curcumae Longae Rhizoma - Hong Kong Chinese Materia Medica Standards (Volume 4) Wenyujin Rhizoma Concisum - Hong Kong Chinese Materia Medica Standards (Volume 9)

Additional information

Photo of crude Rhizoma Curcumae Longae



Irregular ovoid, cylindrical or fusiform, usually curved, some with short forked-branching, 2-5 cm long, 1-3 cm in diameter

Deep yellow surface is rough, with shriveled striations and distinct annulate nodes, and rounded scars of branched rhizome and rootlet

Brownish-yellow to golden yellow and horny fracture has wax-like luster, distinct endodermis ring and dottedly scattered vascular bundles

- Hard, not easily broken
- ◆ Aromatic and characteristic odour. Bitter and pungent taste

1 cm

Government Chinese Medicines Testing Institute Department of Health

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