

Radix Cynanchi Paniculati versus Herba Cynanchi Paniculati



Source

***Radix Cynanchi Paniculati**
is the dried root or rhizome of
Cynanchum paniculatum (Bge.) Kitag.
in the family Asclepiadaceae

Herba Cynanchi Paniculati
is the dried whole part of
Cynanchum paniculatum (Bge.) Kitag.
in the family Asclepiadaceae

Overview

Radix Cynanchi Paniculati is listed in Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020) while Herba Cynanchi Paniculati is documented in the *Chinese Materia Medica Standards in Guangdong Province*. According to *Zhong hua ben cao*, *Cynanchum paniculatum* was also known as “Gui du yao”. Subsequently people pronounced the two characters “Du yao” in combination and gave a sound like “Diao” whereas when pronounced them backwards gave the sound “Liao diao”. Moreover, the herb has unbending stems and long internodes resembling bamboo (“Zhu”), thus also known as “Liao diao zhu”. According to the *Chinese Materia Medica Standards in Guangdong Province*, *Cynanchum paniculatum* with roots was customarily used in Guangdong province with “Liao diao zhu” as the name of the Chinese Materia Medica (CMM), resulting in confusion with Radix Cynanchi Paniculati documented in the Chinese Pharmacopoeia. In addition, taking into account the higher content of paeonol in the subterranean part versus the aerial part of *Cynanchum paniculatum*, the two CMM should be used accordingly.

Note:

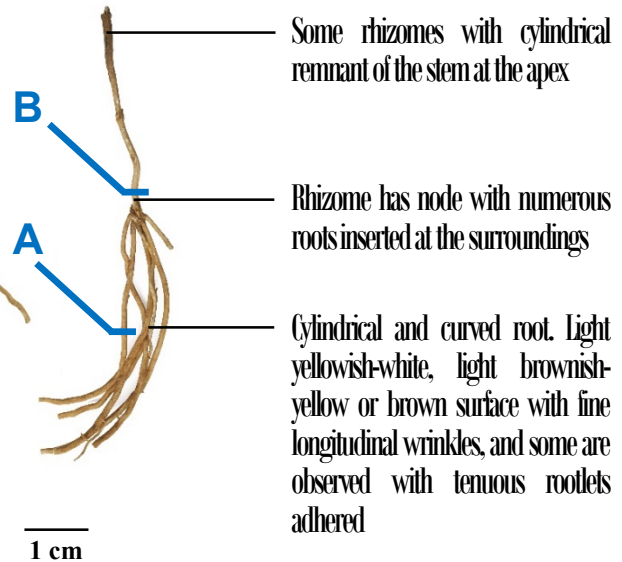
*Its name in Chinese Pharmacopoeia (2020) is “Cynanchi Paniculati Radix et Rhizoma”.

Key identification features

Macroscopic features of Radix Cynanchi Paniculati decoction pieces

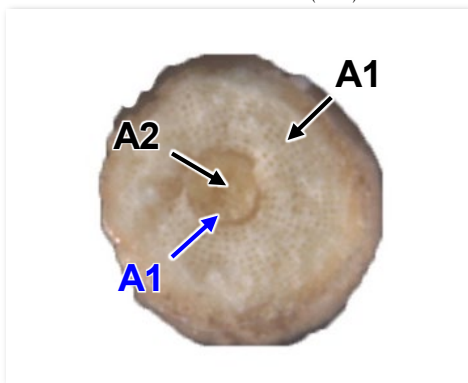


◆ Irregular sections



Micro-morphological features

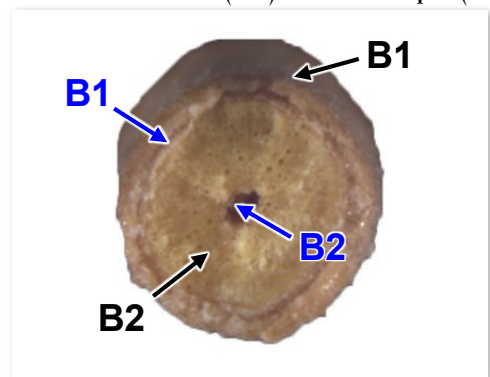
A1: Whitish or yellowish-white bark(→)
with light brown cambium ring(→)
A2: Small wood(→)



(Transverse section of the root)

500 µm

B1: Brown narrow bark(→)
with light brown cambium ring(→)
B2: Broad wood(→) with hollow pith(→)



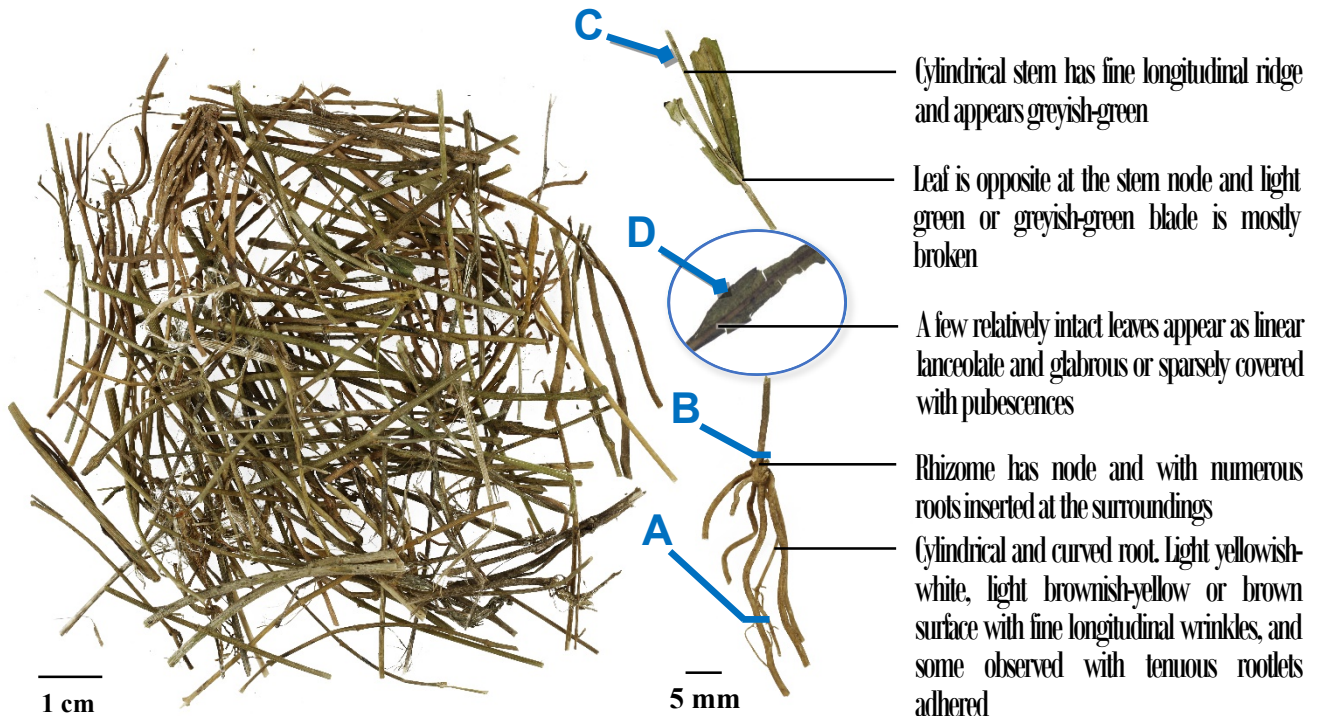
(Transverse section of the rhizome)

500 µm

Macroscopic features of Herba Cynanchi Paniculati decoction pieces

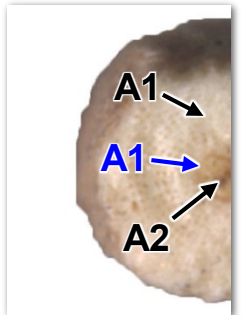


◆ Irregular sections, mainly are aerial parts



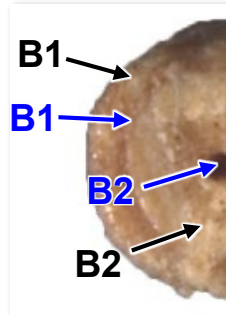
Micro-morphological features

A1: Whitish or yellowish-white bark(→) with light brown cambium ring(→)
A2: Small wood(→)



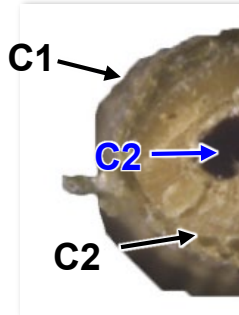
(Transverse section of the root) 250 μm

B1: Brown narrow bark(→) with light brown cambium ring(→)
B2: Broad wood(→) with hollow pith(→)



(Transverse section of the rhizome) 250 μm

C1: Greyish-green narrow bark with rugged margin(→)
C2: Broad wood(→) is relatively large and with hollow pith(→)



(Transverse section of the stem) 250 μm


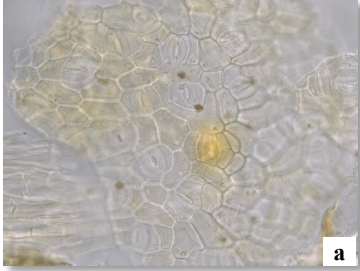
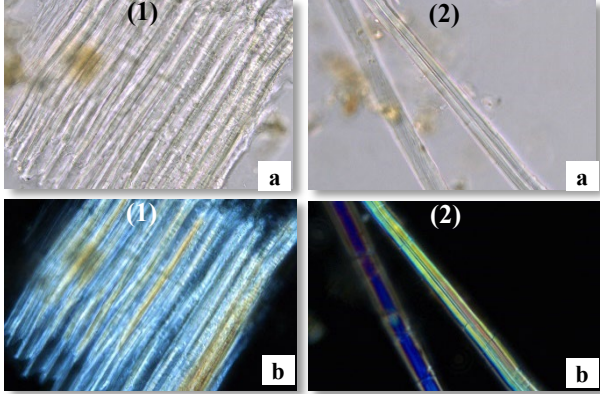
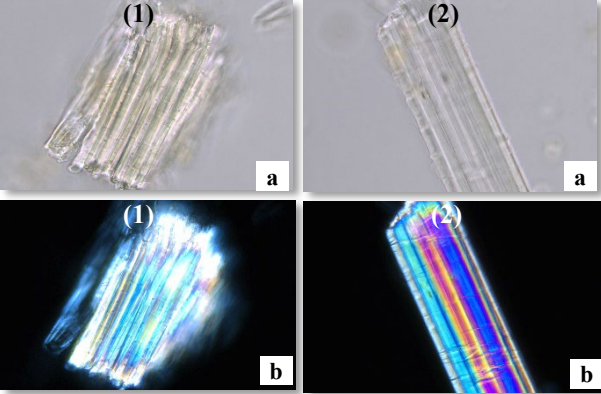


D: Entire and slightly revolute margin with short hairs(→)



(Leaf margin) 2 mm

Microscopic feature comparison of Radix Cynanchi Paniculati decoction pieces and Herba Cynanchi Paniculati decoction pieces powder



	Radix Cynanchi Paniculati decoction pieces	Herba Cynanchi Paniculati decoction pieces
Lower epidermal cell of the leaf	 Absent	 Thin wall, with numerous paracytic stomata
Fibre	 With 2 types. Xylem fibres(1) are frequently found, colourless or light yellow, mostly in bundles, with thick wall, pits, broad and distinct lumen; bright white under the polarized light microscope. Pericyclic fibres(2) are occasionally found, colourless, slender, mostly broken, with narrow lumen; polychromatic under the polarized light microscope	 With 2 types. Xylem fibres(1) are frequently found, colourless or light yellow, mostly in bundles, with thick wall, pits, broad and distinct lumen; bright white under the polarized light microscope. Pericyclic fibres(2) are frequently found, colourless, slender, mostly broken, with narrow lumen; polychromatic under the polarized light microscope
Non-glandular hair	 Absent	 Multicellular, with warty protuberances on the surface

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

50 µm

Summary

Major differences in the features between Radix Cynanchi Paniculati decoction pieces and Herba Cynanchi Paniculati decoction pieces:

		Radix Cynanchi Paniculati decoction pieces	Herba Cynanchi Paniculati decoction pieces
Macroscopic and micro-morphological features	Appearance	Irregular sections	Irregular sections, mainly are aerial parts
	Transverse section	Can be divided into root and rhizome	Can be divided into root, rhizome and aerial stem
	Leaf margin	Absent	Entire and slightly revolute margin with short hairs
Microscopic features	Lower epidermal cell of the leaf	Absent	Present
	Fibre	Mainly xylem fibres	Both xylem fibres and pericyclic fibres are frequently found
	Non-glandular hair	Absent	Present

For more information, please refer to the [Hong Kong Chinese Materia Medica Standards website](#):



Cynanchi Paniculati Radix et Rhizoma - Hong Kong Chinese Materia Medica Standards (Volume 6)

Additional information

Photo of crude Radix Cynanchi Paniculati

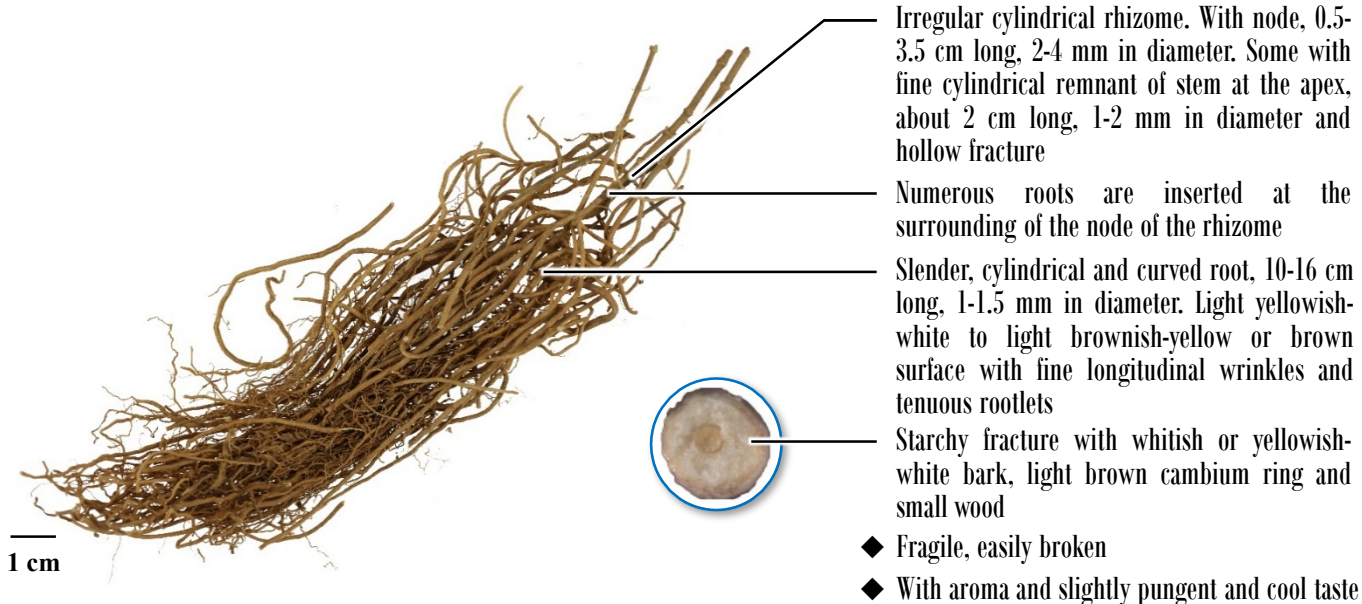
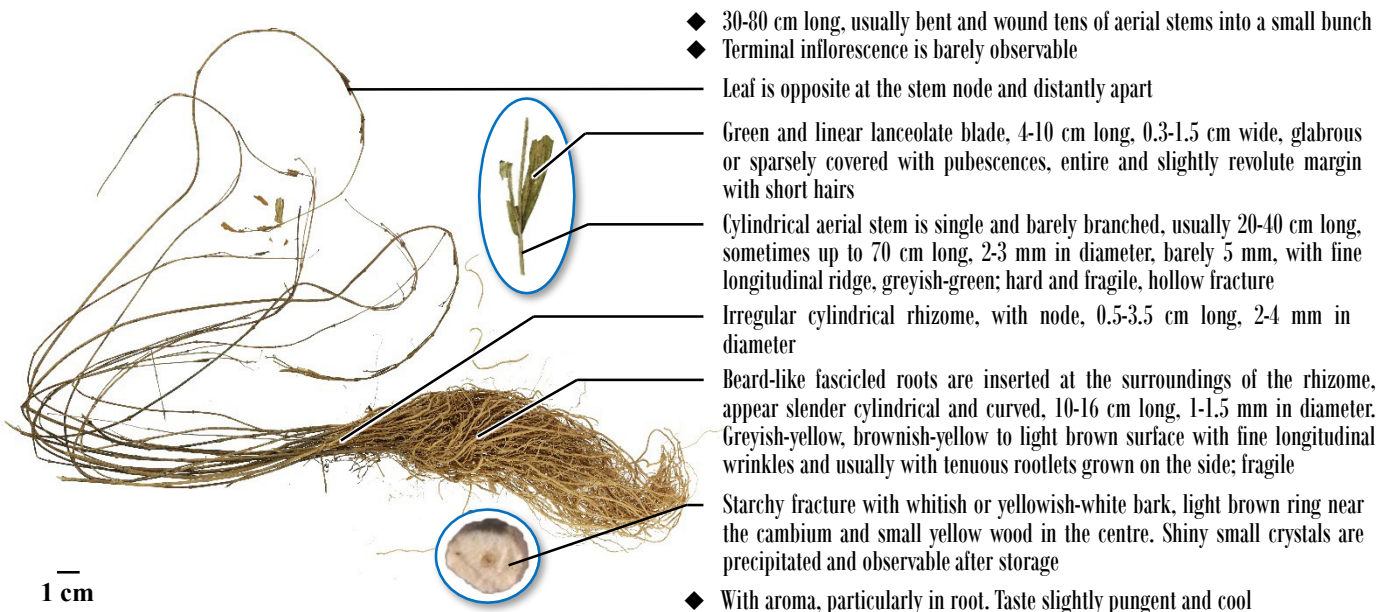


Photo of crude Herba Cynanchi Paniculati



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