

Radix Fici versus Herba Gelsemii Elegantis

Sessions



Thick slices



5 cm



5 cm

Source

Radix Fici
is the dried root of
Ficus hirta Vahl
in the family Moraceae

Herba Gelsemii Elegantis
is the dried whole part of
Gelsemium elegans (Gardn. et Champ.) Benth.
in the family Loganiaceae

Overview

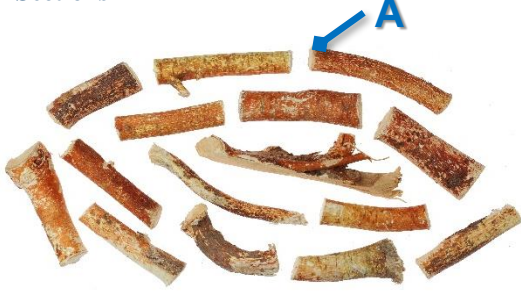
Herba Gelsemii Elegantis but not Radix Fici is listed in Schedule 2 of the Chinese Medicine Ordinance. Both are not recorded in the Chinese Pharmacopoeia (2020). According to the *Chinese Materia Medica Standards in Guangdong Province*, Radix Fici has the functions of fortifying the spleen and replenishing qi, dispelling phlegm and draining dampness, relaxing sinews and activating collaterals. It has become a popular ingredient for making soup in recent years. As Radix Fici usually grows at the same place together with Herba Gelsemii Elegantis and their roots have similar appearance, the toxic Herba Gelsemii Elegantis is easily mixed with Radix Fici upon its digging and collection. There have been poisoning cases in Hong Kong due to adulteration of Radix Fici by Herba Gelsemii Elegantis, therefore attention should be paid to distinguish the two Chinese Materia Medica (CMM). In addition, the public should not dig or collect wild plants for intake to avoid poisoning.

Key identification features

Macroscopic features of Radix Fici decoction pieces



Sections

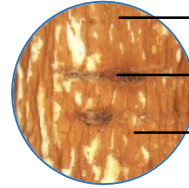


5 cm

Sections



1 cm



2 mm

Cylindrical sections
Reddish-brown or brown surface
With long horizontal lenticels observable
With fine and dense longitudinal wrinkles
Bark is thin and tough, easily peeled and fibrous
Wood in yellow or yellowish-white
Broad wood, some with relatively dense concentric rings observable

Thick slices



5 cm

Thick slices

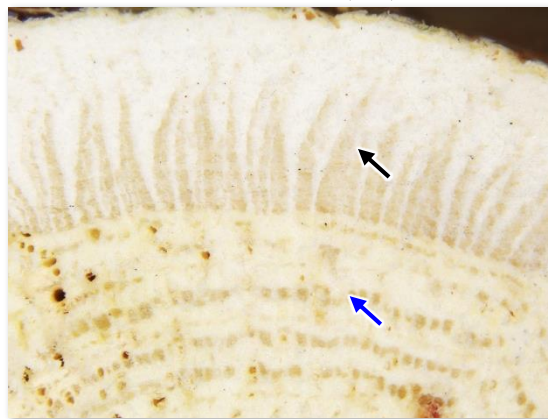


1 cm

Irregular flat slices

Micro-morphological features

A1: Light yellow linear or triangular phloem(→) is observable in some bark
A2: Yellow dots arranged in interrupted rings(→) are observable in some wood



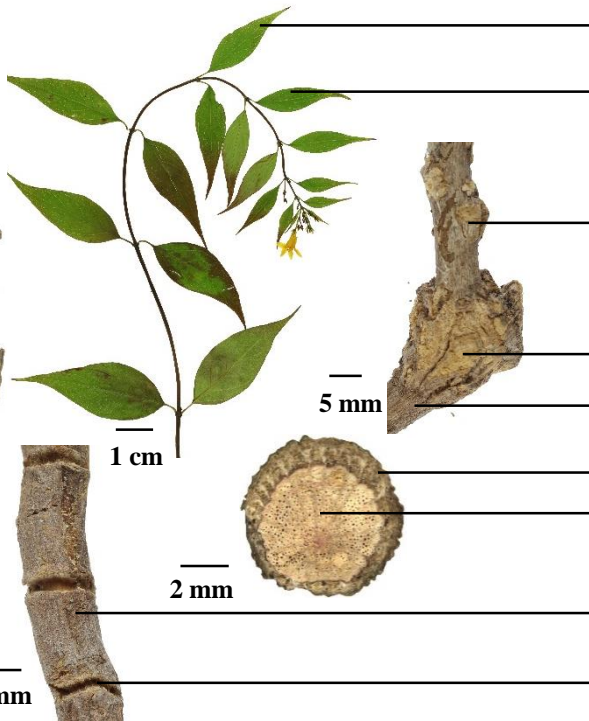
(Transverse section)

1 mm

Macroscopic features of Herba Gelsemii Elegantis*



◆ Irregular sections



Solitary and opposite leaf with short stalk

Leaf shriveled irregularly and mostly fallen off. Intact leaf has acuminate apex, cuneate or sub-rounded base and entire margin when flattened

With fine longitudinal striations and longitudinal, elliptical, protruded and dotted lenticels on the surface of the stem

Slightly swollen node

Yellowish-green or brown surface

Root with yellowish-brown bark
Wood in light yellowish-brown or reddish-brown. Some with radial striations observable

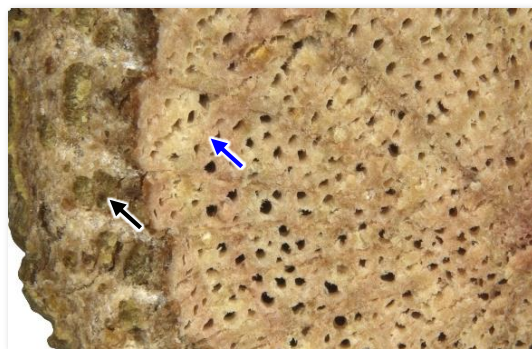
Greyish-brown or brown on the surface of the root

Semi-annular fractures are observable sometimes

Micro-morphological features

A1: Yellow sub-rectangular phloem(→) is observable in some bark

A2: Wood has radial striations and numerous duct holes, and pink concentric rings(→) are observable in some wood



(Transverse section of the root)

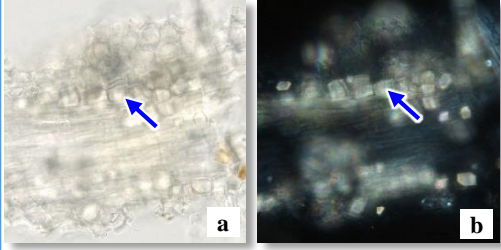
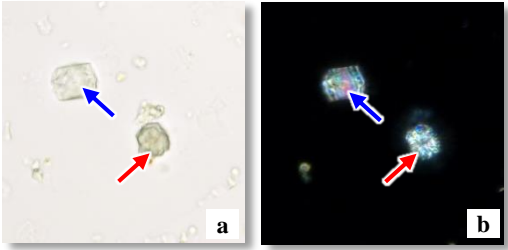
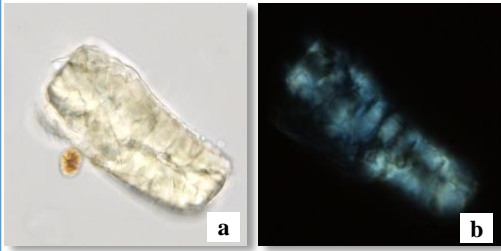
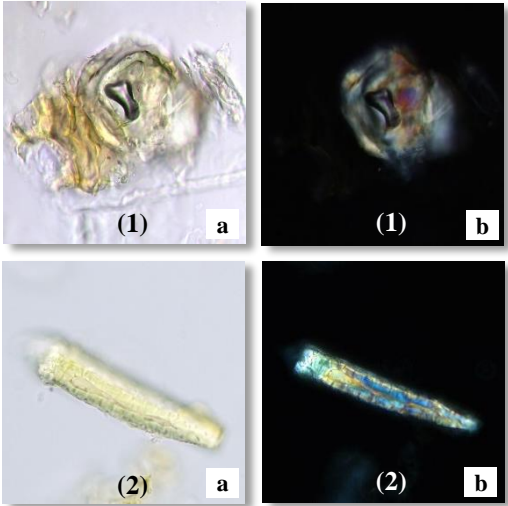
1 mm

Note:

*Herba Gelsemii Elegantis is a toxic CMM. Handle it with care and avoid tasting during identification.

Microscopic feature comparison of Radix Fici decoction pieces and Herba Gelsemii Elegantis powder



	Radix Fici decoction pieces	Herba Gelsemii Elegantis
Crystal of calcium oxalate	 <p>Only with prism of calcium oxalate (→); polychromatic under the polarized light microscope</p>	 <p>With prism of calcium oxalate (→) and cluster of calcium oxalate (→); polychromatic under the polarized light microscope</p>
Stone cell	 <p>Only 1 form. Sub-rounded or sub-square; yellowish-white under the polarized light microscope</p>	 <p>With 2 forms. The first form is irregular or sub-rounded(1); the other form is fusiform and obtuse or short forked on one or two ends(2); polychromatic under the polarized light microscope</p>

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

50 μm

Summary

Major differences in the features between Radix Fici decoction pieces and Herba Gelsemii Elegantis:

		Radix Fici decoction pieces	Herba Gelsemii Elegantis
Macroscopic and micro-morphological features	Surface of root	Reddish-brown or brown	Greyish-brown or brown
	Bark of root	Some with light yellow linear or triangular phloem observable	Some with yellow sub-rectangular phloem observable
	Wood of root	Some with relatively dense concentric rings observable	Some with radial striations observable
Microscopic features	Crystal of calcium oxalate	Prism of calcium oxalate	Prism of calcium oxalate and cluster of calcium oxalate
	Stone cell	With 1 form only	With 2 forms

Additional information

Photo of crude Radix Fici



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