

Caulis Spatholobi versus Caulis Sargentodoxae



1 cm



1 cm

Source

***Caulis Spatholobi**
is the dried stem of
Spatholobus suberectus Dunn
in the family Leguminosae

Caulis Sargentodoxae[#]
is the dried stem of
Sargentodoxa cuneata (Oliv.) Rehd. Et Wils.
in the family Lardizabalaceae

Overview

Both Caulis Spatholobi and Caulis Sargentodoxae are listed in Chinese Pharmacopoeia (2020) and Schedule 2 of the Chinese Medicine Ordinance. According to the research by *Zhong yao pin zhong li lun yu ying yong*, Caulis Sargentodoxae is one of the Chinese Materia Medica (CMM) which shares the same name as Caulis Spatholobi but of a different species. It has been recorded in the Qing dynasty literature as “*Ji xue teng*”, and the confusion of use has spread throughout Northeast China and Guangdong regions. This issue of confusion of use has been further supported in the *Guang dong zhong yao zhi*, where substitutional use of the above two CMM have been reported in the Guangdong province. According to the Chinese Pharmacopoeia, both CMM can activate blood; Caulis Spatholobi can also tonify blood, regulate menstruation to relieve pain, and relax sinews and activate collaterals, while Caulis Sargentodoxae can clear heat and detoxify, dispel wind to relieve pain. Due to variation in the efficacy of these two CMM, they should be used accordingly.

Note:

*Its name in the Chinese Pharmacopoeia (2020) is “Spatholobi Caulis”.

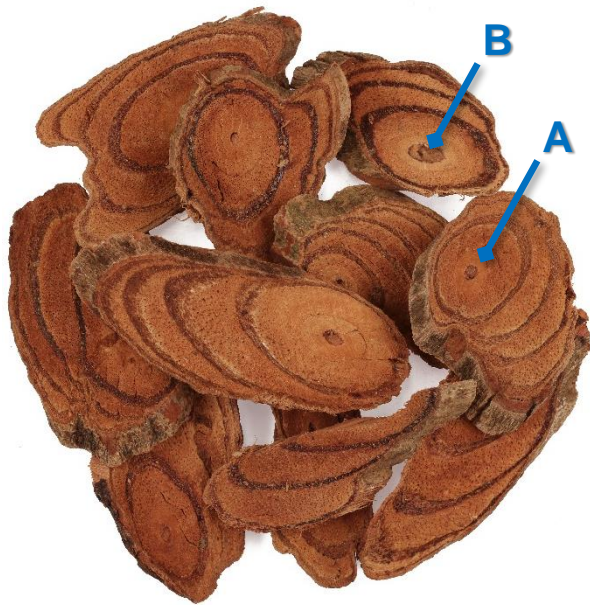
[#]Its name in the Chinese Pharmacopoeia (2020) is “Sargentodoxae Caulis”.

Key identification features

Macroscopic features of Caulis Spatholobi decoction pieces



- ◆ Sub-elliptical or irregular oblique slices, partially broken



1 cm



1 cm

Reddish-brown bark

Phloem has reddish-brown or dark reddish-brown resinous secretion

Reddish-brown or brown wood with numerous duct holes

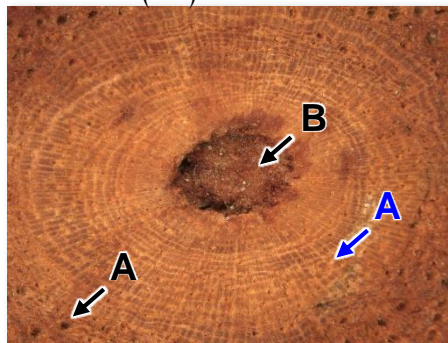
Phloem and wood are arranged in alternative pattern to form 2 or more concentric elliptical rings or eccentric semi-circular rings

Pith located towards one side

Micro-morphological features

A: Wood has duct holes(→) and the area near to the pith has light brown radial and annular striations(→)

B: Pith(→) without striations



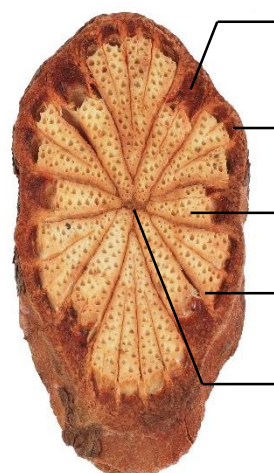
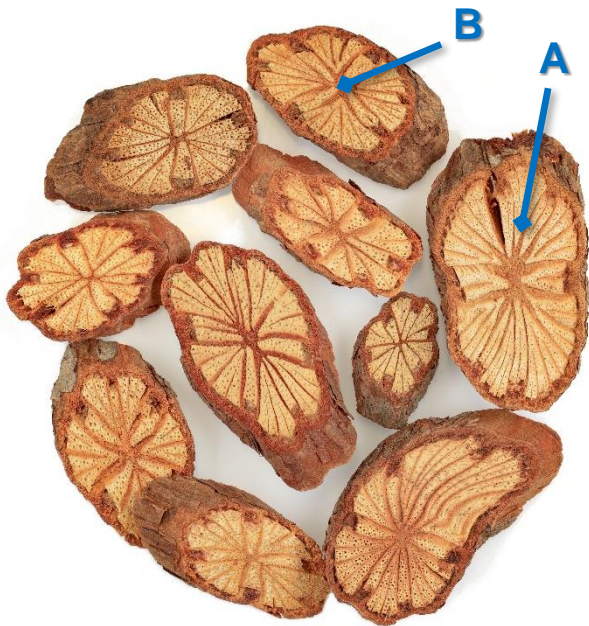
(Cut surface of the wood and pith)

2 mm

Macroscopic features of Caulis Sargentodoxae decoction pieces



◆ Sub-elliptical or sub-rounded oblique slices



- Reddish-brown bark has 6 parts extended towards the inner side and inlaid into the wood
- Phloem has reddish-brown resinous secretion
- Yellowish-white wood with numerous duct holes
- Reddish-brown rays are arranged radially
- Pith located in the centre

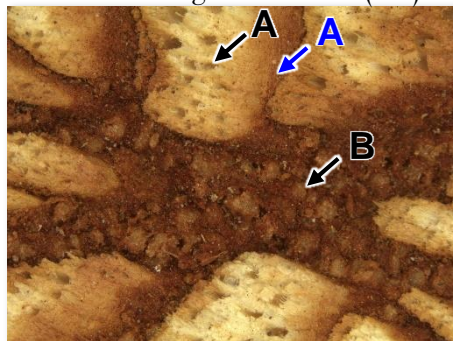
5 mm

1 cm

Micro-morphological features

A: Wood has duct holes(→) and reddish-brown radial striations(→)

B: Pith has light brown dots(→)

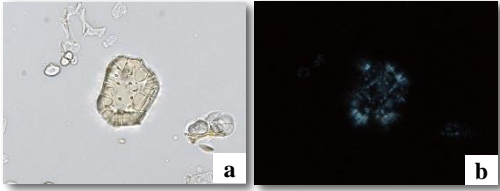
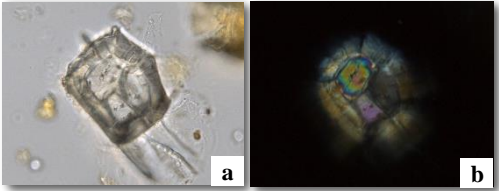
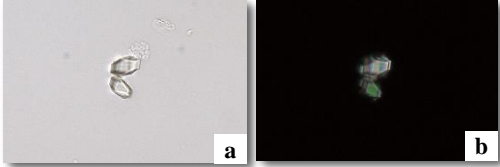
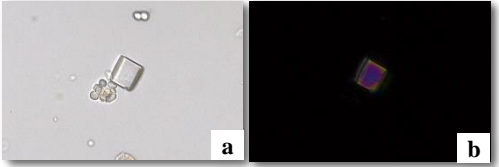
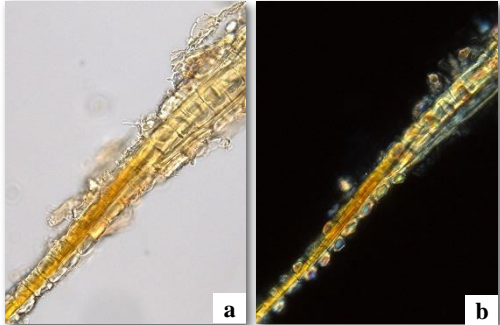
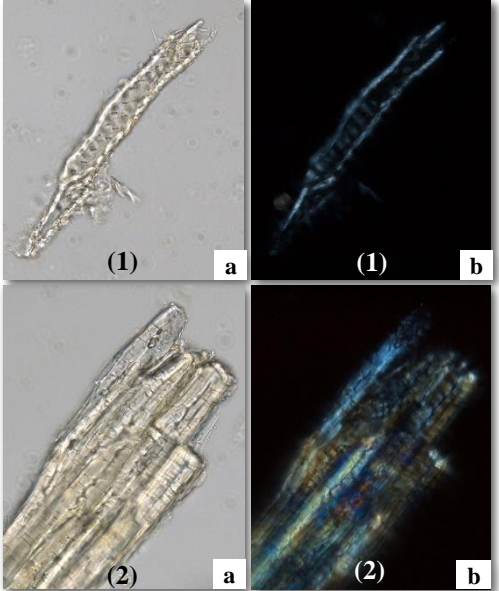


(Cut surface of the wood and pith)

2 mm



Microscopic feature comparison of Caulis Spatholobi decoction pieces and Caulis Sargentodoxae decoction pieces powder

	Caulis Spatholobi decoction pieces	Caulis Sargentodoxae decoction pieces
Stone cell	 <p>Singly scattered or in groups, light yellow, sub-rectangular, sub-rounded, sub-polygonal, sub-square or irregular, distinct striations; bright yellowish-white under the polarized light microscope</p>	 <p>Singly scattered or in groups, light yellow or colourless, sub-rectangular, sub-square, fusiform or irregular, distinct striations, some lumen contain prism of calcium oxalate; bright yellowish-white or polychromatic under the polarized light microscope</p>
Prism of calcium oxalate	 <p>Scattered or present in sclerenchymatous cell, mainly appears double-conical, others are square or rectangular; polychromatic under the polarized light microscope</p>	 <p>Scattered or present in cell, mainly appears square, others are double-conical or rectangular; polychromatic under the polarized light microscope</p>
Fibre	 <p>Only exists in 1 form, mostly in bundles, crystal fibre is formed as a result of fibre bundle surrounded by cells which contain prisms of calcium oxalate; single fibre without pits and pit canals, slightly thick wall; yellowish-white, bright white or polychromatic under the polarized light microscope</p>	 <p>Exists in 2 forms. The first form with oblique pits, slightly thick wall, mostly broken; bright white or bright yellowish-white under the polarized light microscope(1); another form with dotted pits, distinct pit canals, thick wall; bright yellowish-white or polychromatic under the polarized light microscope(2)</p>

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

50 μm

Summary

Major differences in the features between Caulis Spatholobi decoction pieces and Caulis Sargentodoxae decoction pieces:

		Caulis Spatholobi decoction pieces	Caulis Sargentodoxae decoction pieces
Macroscopic and micro-morphological features	Appearance	Sub-elliptical or irregular	Sub-elliptical or sub-rounded
	Cut surface of wood	With 2 or more elliptical or semi-circular rings	With radial rays
	Cut surface of pith	Without striations	With light brown dots
Microscopic features	Stone cell	Without prisms of calcium oxalate in lumina	With prism of calcium oxalate in some lumen
	Prism of calcium oxalate	Mainly appears double-conical	Mainly appears square
	Fibre	With 1 form only	With 2 forms

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



Spatholobi Caulis - Hong Kong Chinese Materia Medica Standards (Volume 6)

Sargentodoxae Caulis - Hong Kong Chinese Materia Medica Standards (Volume 10)

Additional information

Photo of crude Caulis Spatholobi



1 cm

- ◆ Lianoid stem appears flattened cylindrical and slightly curved, 30-90 mm in diameter
- ◆ Greyish-white to greyish-brown surface appears reddish-brown at the exfoliated area of the periderm
- ◆ Phloem has reddish-brown to blackish-brown resinous secretion and arranged alternately with wood to form 2 to 10 eccentric semi-circular rings or circular rings
- ◆ Brownish-yellow to reddish-brown wood with numerous holes observable at the transverse section
- ◆ Pith located towards one side
- ◆ Hard
- ◆ Slight odour and astringent taste

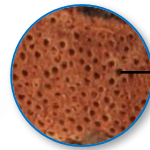
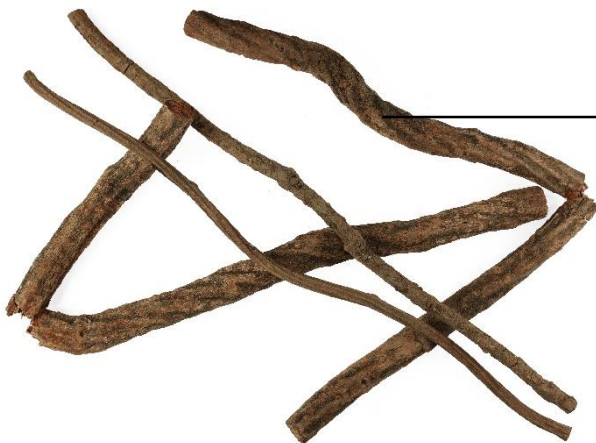
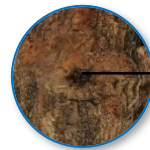


Photo of crude Caulis Sargentodoxae



2 cm

- ◆ Cylindrical and slightly curved, 30-60 cm long, 1-3 cm in diameter
- ◆ Surface is greyish-brown and rough. Outer bark usually exfoliates in squamiform and appears dark reddish-brown at the exfoliated area
- ◆ Some with swollen nodes and slightly dented scars of branch or leaf observable
- ◆ Reddish-brown bark with a few parts extend towards the inner side and inlay into the wood in fracture
- ◆ Yellowish-white wood with numerous fine pore-like vessels and radially arranged rays
- ◆ Hard
- ◆ Slight odour and slightly astringent taste



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