

Cortex Pseudolaricis versus Cleistocalycis Operculati Cortex



Source

*Cortex Pseudolaricis

is the root bark or stem bark near the root of
Pseudolarix kaempferi Gord.
in the family Pinaceae

Cleistocalycis Operculati Cortex

is the dried stem bark of
Cleistocalyx operculatus (Roxb.) Merr. et Perry
in the family Myrtaceae

Overview

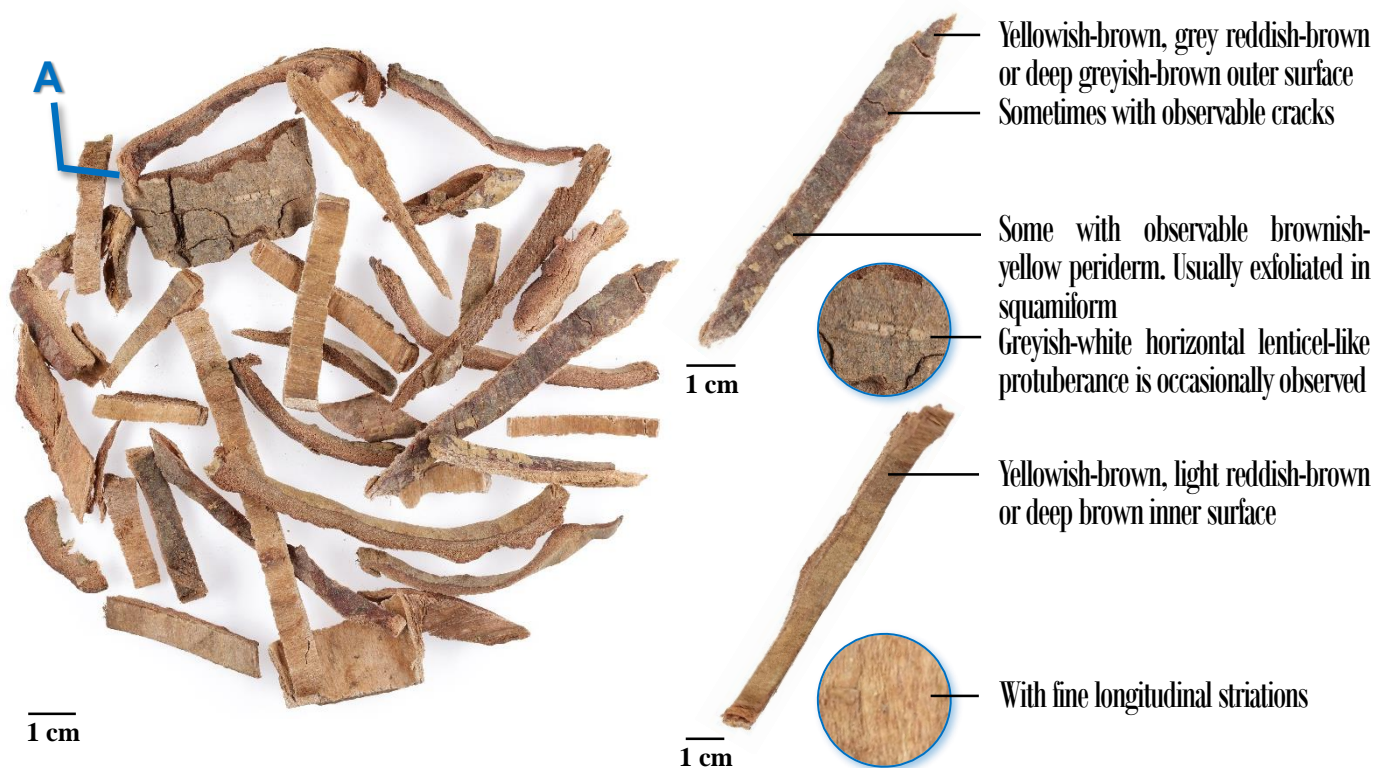
The Chinese Materia Medica (CMM) Cortex Pseudolaricis is listed in both the Schedule 2 of the Chinese Medicine Ordinance and the Chinese Pharmacopoeia (2020), while Cleistocalycis Operculati Cortex has not yet been listed in either references. According to *Zhong yao pin zhong li lun yu ying yong*, different species has been sold as “*Tu jin pi*” on the market, for example, species sold in the Guangdong region is *Cleistocalyx operculatus* in the family Myrtaceae, while the species sold in the region of East China is *Pseudolarix kaempferi* in the family Pinaceae, which is Cortex Pseudolaricis as referenced in the Chinese Pharmacopoeia. According to the Chinese Pharmacopoeia and *Chinese Materia Medica Standards in Guangdong Province*, both can kill worms and relieve itching. Furthermore, Cortex Pseudolaricis can treat tinea, while Cleistocalycis Operculati Cortex can clear heat and detoxify and dry dampness. As the efficacy of these two CMM differs, they should be used accordingly.

Note:

*Its name in the Chinese Pharmacopoeia (2020) is “Pseudolaricis Cortex”.

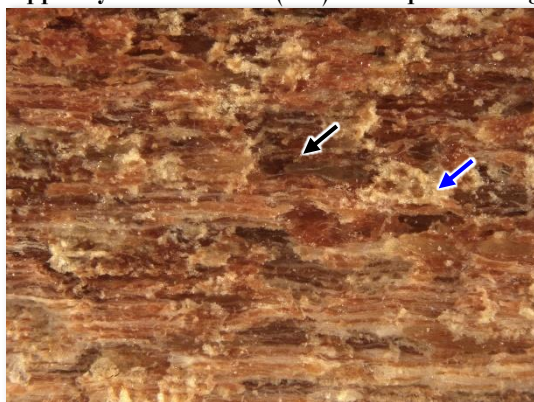
Key identification features

Macroscopic features of Cortex Pseudolaricis decoction pieces



Micro-morphological features

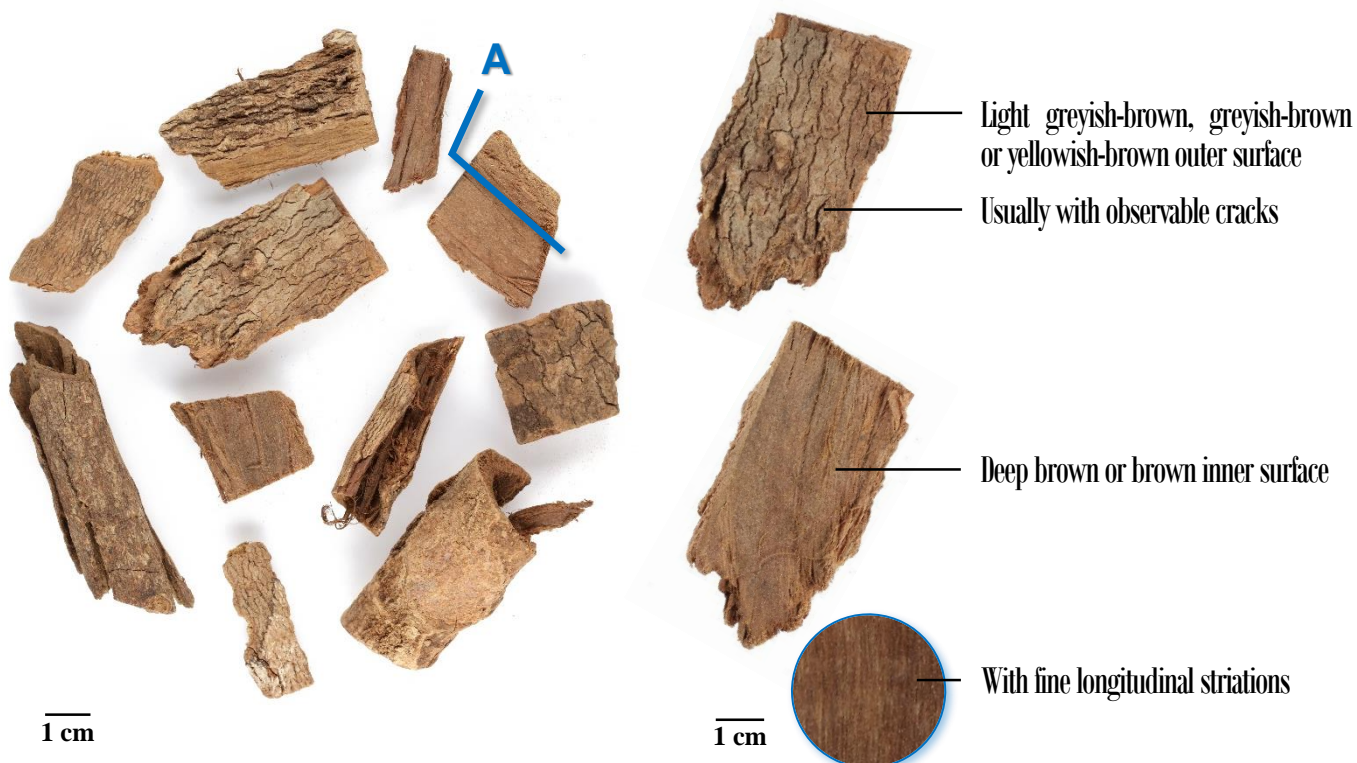
A: Usually observed with brownish-red or yellowish-white striations arranged in alternative pattern. With transparent granular substances(→) which appear yellowish-white(→) when present in groups



(Longitudinal fracture)

500 μm

Macroscopic features of Cleistocalycis Operculati Cortex decoction pieces



Micro-morphological features

A: Usually observed with irregular brownish-red striations. With white granular substances(→) which are sometimes faintly arranged in rows


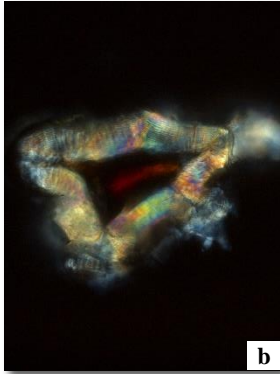



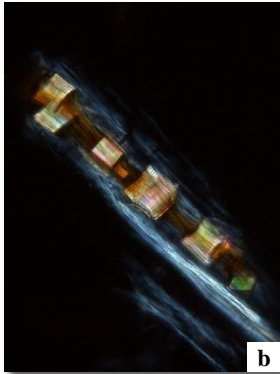



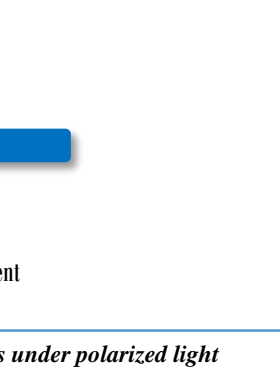
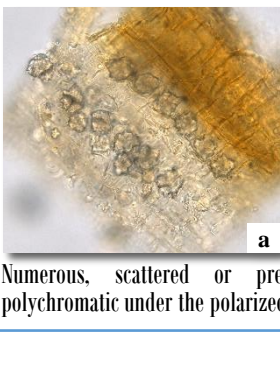
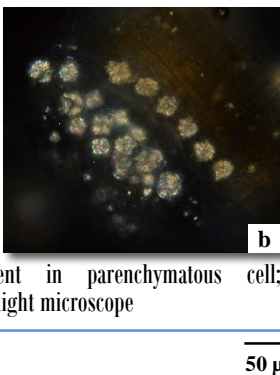


(Longitudinal fracture)

500 μm

Microscopic feature comparison of Cortex Pseudolaricis decoction pieces and Cleistocalycis Operculati Cortex decoction pieces powder



	Cortex Pseudolaricis decoction pieces	Cleistocalycis Operculati Cortex decoction pieces
Stone cell	  <p>Appears sub-square, sub-rounded, sub-triangular or irregular-branched, usually contains reddish-brown or yellowish-brown substances, extremely thick wall, striations and pit canals distinct; polychromatic or bright white under the polarized light microscope</p>	  <p>Appears sub-square, sub-rounded, sub-fusiform, a few contain yellowish-brown substances, thin, thick or extremely thick wall, striations indistinct, pit canals distinct; polychromatic or bright white under the polarized light microscope</p>
Resin cell	  <p>Longitudinally connected to become tubular, contains yellowish-brown resinous substances, sometimes with prism of calcium oxalate embedded; prism of calcium oxalate polychromatic under the polarized light microscope</p>	  <p>Absent</p>
Cluster of calcium oxalate	  <p>Absent</p>	  <p>Numerous, scattered or present in parenchymatous cell; 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 Cortex Pseudolaricis decoction pieces and Cleistocalycis Operculati Cortex decoction pieces :

		Cortex Pseudolaricis decoction pieces	Cleistocalycis Operculati Cortex decoction pieces
Macroscopic and micro-morphological features	Outer surface	Some with observable brownish-yellow periderm. Sometimes with observable cracks	Usually with observable cracks
	Longitudinal fracture	With transparent granular substances which appear yellowish-white when present in groups	With white granular substances which are sometimes faintly arranged in rows
Microscopic features	Stone cell	Usually contains reddish-brown or yellowish-brown substance	A few contain yellowish-brown substance
	Resin cell	Present	Absent
	Cluster of calcium oxalate	Absent	Numerous

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



Pseudolaricis Cortex - Hong Kong Chinese Materia Medica Standards (Volume 7)

Additional information

Photo of crude Cortex Pseudolaricis

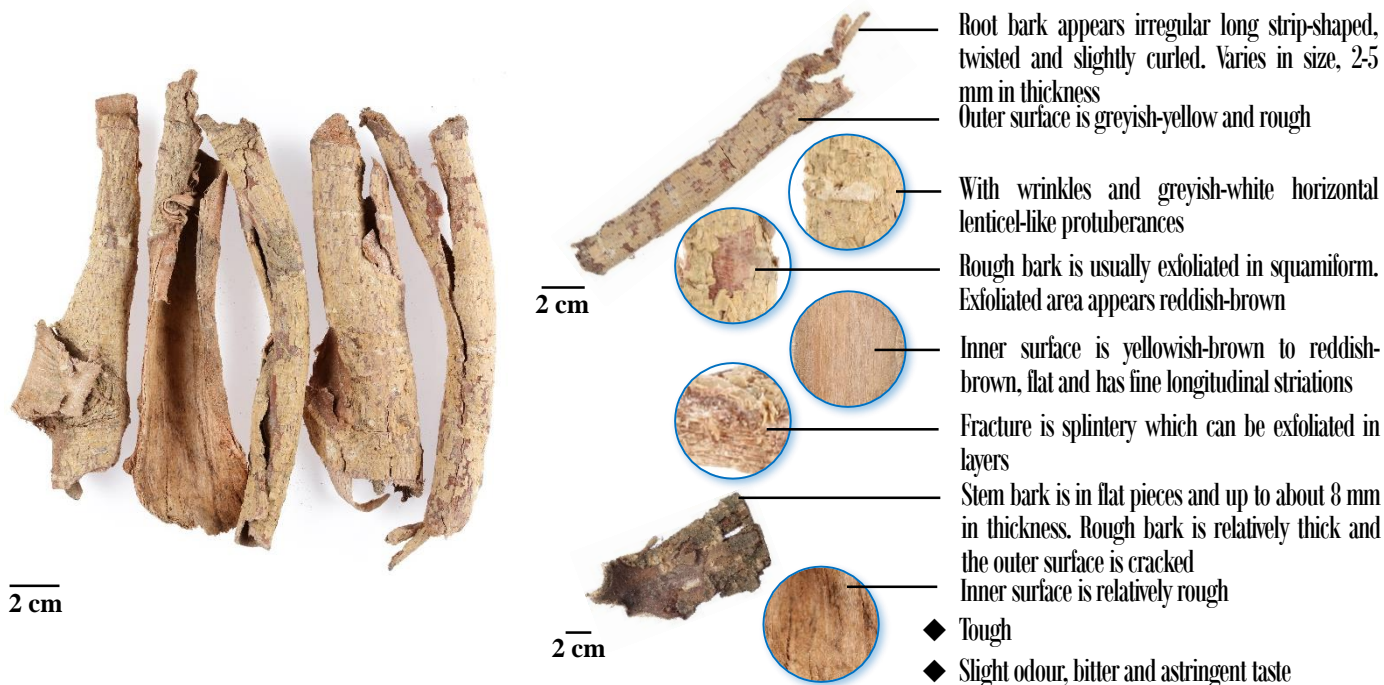
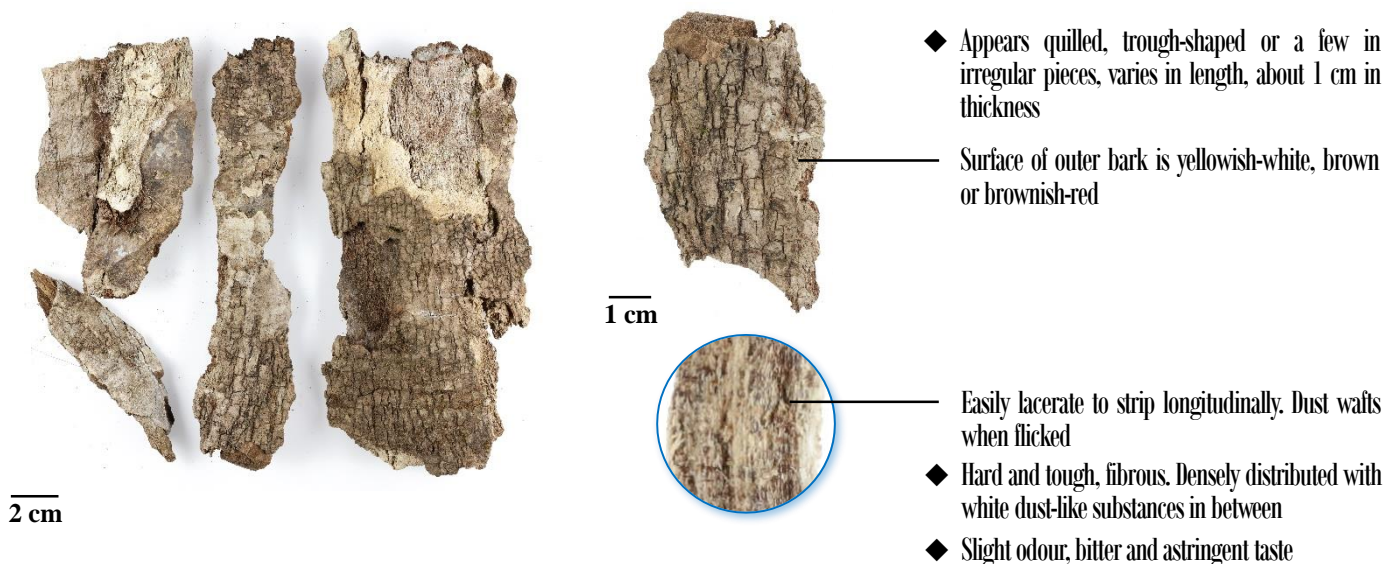


Photo of crude Cleistocalycis Operculati Cortex



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