

Macroscopic and Microscopic Identification of Cortex type of Decoction Pieces Commonly Found in Hong Kong



Cortex Lycii*

Source The dried root bark of *Lycium chinense* Mill. or *L. barbarum* L. in the family Solanaceae

Property and Flavour Cold; sweet

Meridian Affinity Lung, liver and kidney meridians

Actions To cool blood and relieve bone-steaming sensation, clear lung heat and reduce fire

Production Area Mainly produced in Gansu, Ningxia, Hebei, Hubei, Shanxi, Henan, etc.

Notes:

* Its name in Chinese Pharmacopoeia (2020 Edition) is “Lycii Cortex”.

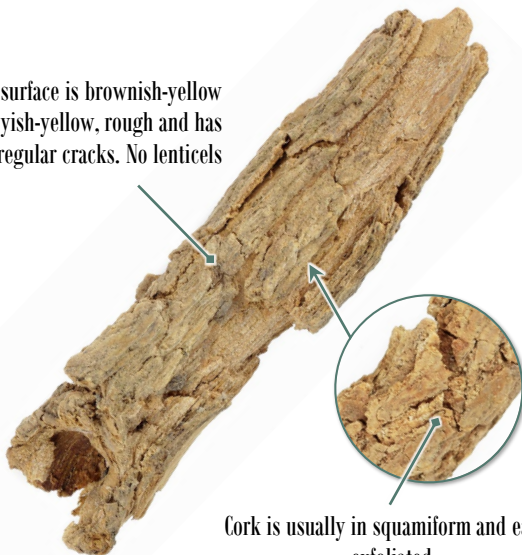




Macroscopic Identification Features

Shape Irregularly-quilled or trough-shaped, some in flat slices

Outer surface is brownish-yellow or greyish-yellow, rough and has irregular cracks. No lenticels

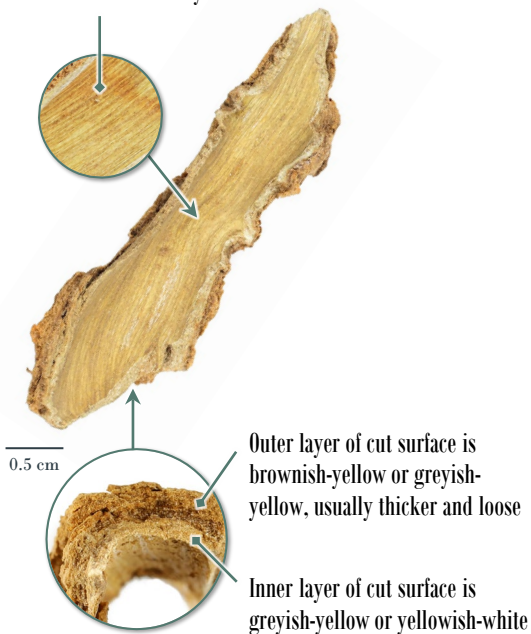


Cork is usually in squamiform and easily exfoliated

0.5 cm



Inner surface is greyish-yellow or yellowish-white and relatively flat



Texture Light, fragile and easily broken

Fracture Uneven, small amount of dust wafts when broken



0.2 cm

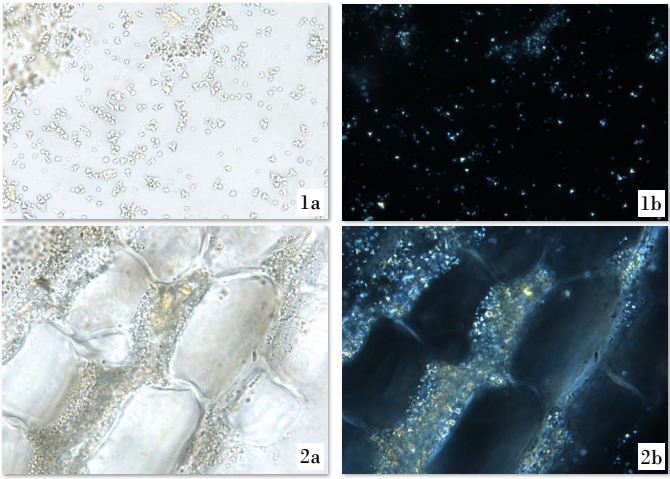
Odour Slight



Features of Easy Powder Microscopic Identification

- Crystal -

Crystal sand of calcium oxalate

50 μm

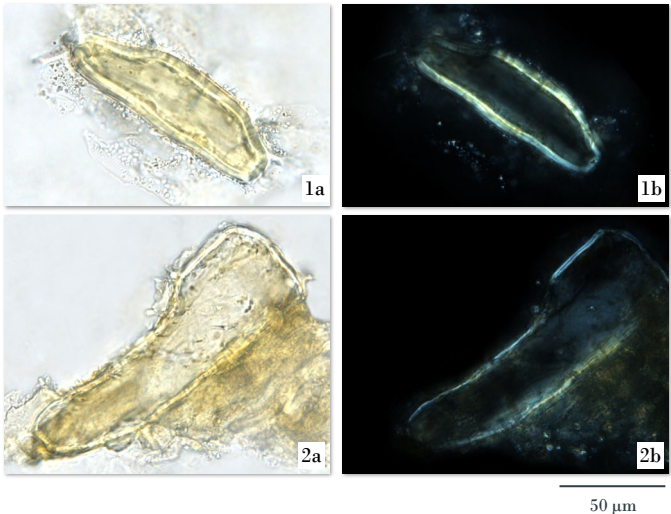
Small, numerous, slightly appears arrowhead-shaped, scattered (1) or present in parenchymatous cell (2); bright white or orange-yellow under polarized light microscope

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



- Sclerenchyma -

Stone cell



Absent or occasionally found, light yellow, wall is slightly thick (1) or thin (2), intact ones appear sub-elliptical, sub-rectangular, sub-rounded or irregular, some with sparse pits and pit canals; light yellow or bright white under polarized light microscope

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

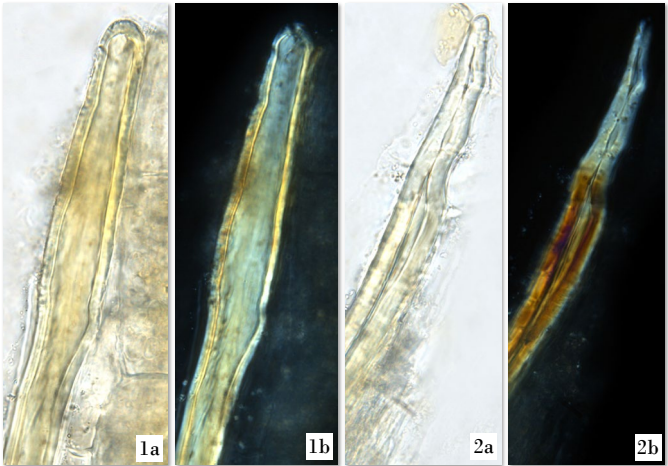




Additional Features of Powder Microscopic Identification

- Sclerenchyma -

Fibre



50 μ m

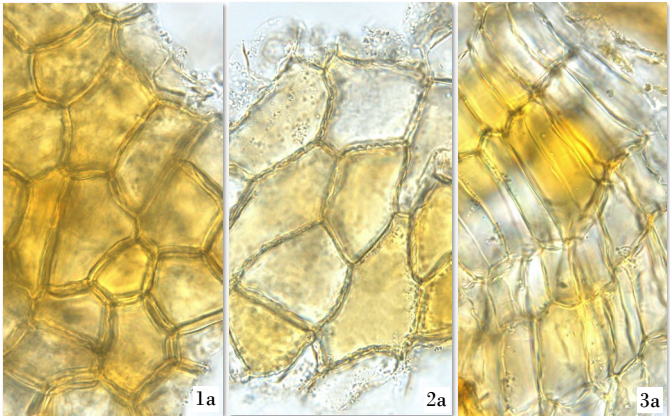
Barely found, light yellow, usually singly scattered, wall is slight thick (1) or thick (2), some with sparse pits and pit canals; bright white, orange-yellow or polychromatic under polarized light microscope

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



- Protective tissue -

Cork cell



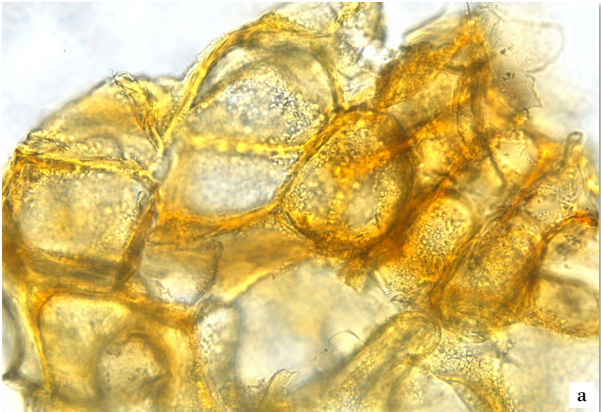
50 μm

Light yellow or light brownish-yellow, appears sub-polygonal or sub-square in surface view, wall is slightly thick (1) or thin (2), straight or slightly wavy; appears sub-rectangular in lateral view

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



Parenchymatous cell of rhytidome



50 μm

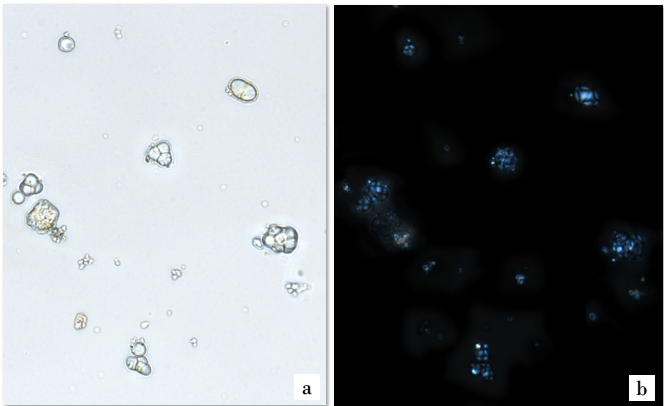
Usually broken, brownish-yellow or brown, wall is slightly thick, intact ones appear sub-square, sub-polygonal or polygonal, usually contains crystal sand of calcium oxalate

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



- Starch -

Starch granule

50 μ m

Mainly is compound granule. Simple granule is sub-rounded or sub-elliptical, compound granule consists of 2-9 units; black and cruciate-shaped under polarized light microscope

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





Key Identification Features

- Macroscopic features -

- ◇ Outer surface is rough and has irregular cracks. No lenticels; cork is usually in squamiform and easily exfoliated
- ◇ Fracture is uneven, small amount of dust wafts when broken

- Powder Microscopic features -

- ◇ Crystal sand of calcium oxalate is small, numerous and slightly appears arrowhead-shaped
- ◇ Stone cell is absent or occasionally found and has slightly thick or thin wall

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

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