

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 (2025 Edition) is “Lycii Cortex”.

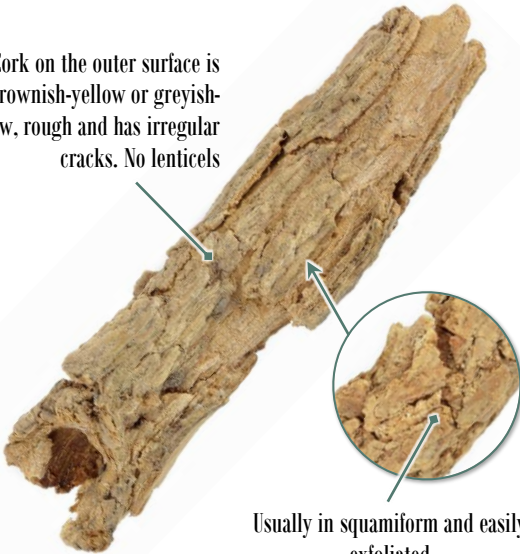




Macroscopic Identification Features

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

Cork on the outer surface is brownish-yellow or greyish-yellow, rough and has irregular cracks. No lenticels

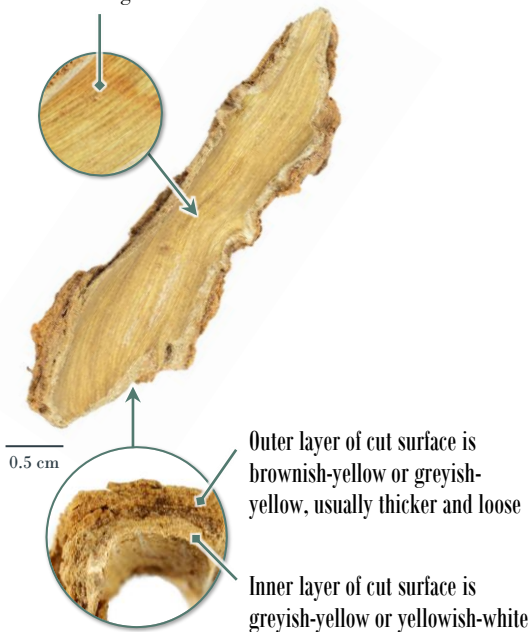


0.5 cm

Usually in squamiform and easily exfoliated



Inner surface is greyish-yellow or yellowish-white and relatively even, with fine and straight striations



Texture Light, fragile and easily broken

Fracture Uneven, small amount of dust wafts when broken



0.2 cm

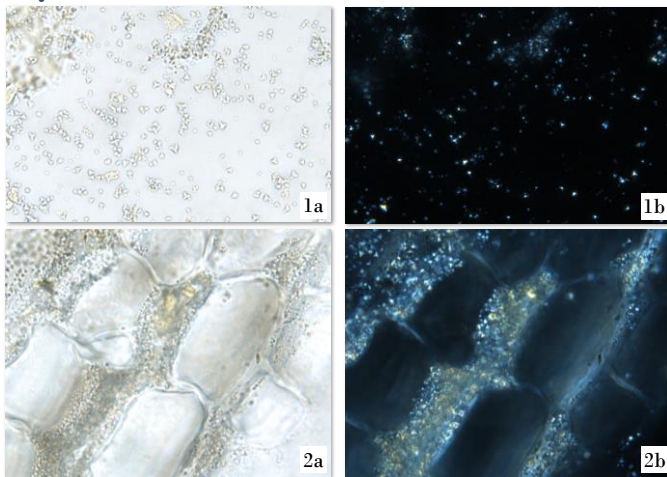
Odour Slight



Features of Simplified Powder Microscopic Identification

- Crystal -

Crystal sand of calcium oxalate



50 μm

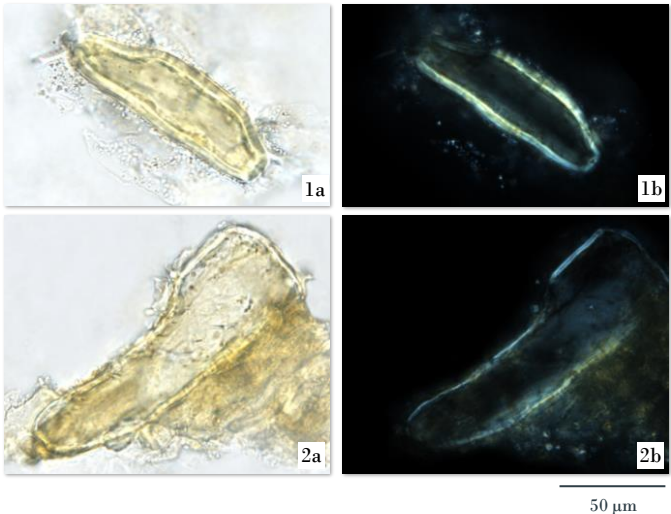
Small, numerous, slightly appears arrowhead-shaped, scattered (1) or present in parenchymatous cell (2); bright white or orange-yellow under polarized light microscope

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

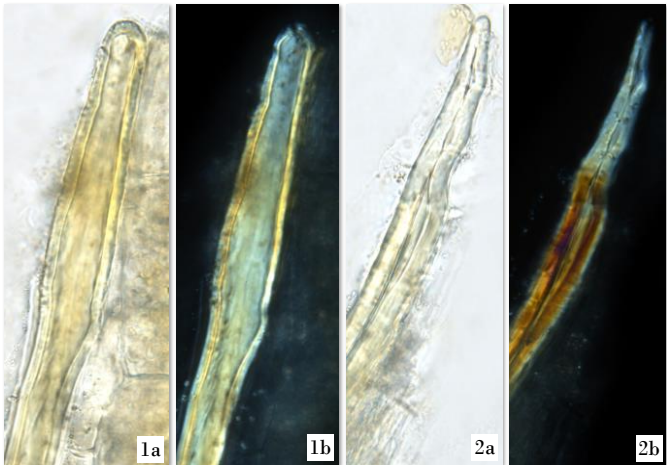
a. features under bright field; b. features under polarized light



Additional Features of Powder Microscopic Identification

- Sclerenchyma -

Fibre



50 μm

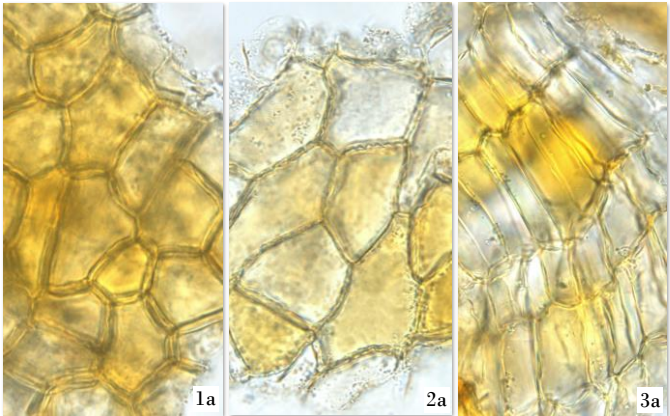
Barely found, light yellow, usually singly scattered, wall is slight thick (1) or thick (2), some with sparse pits and pit canals; bright white, orange-yellow or polychromatic under polarized light microscope

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



- Protective tissue -

Cork cell



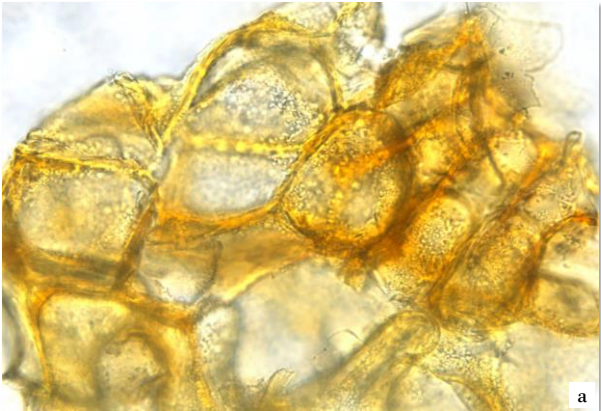
50 μm

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

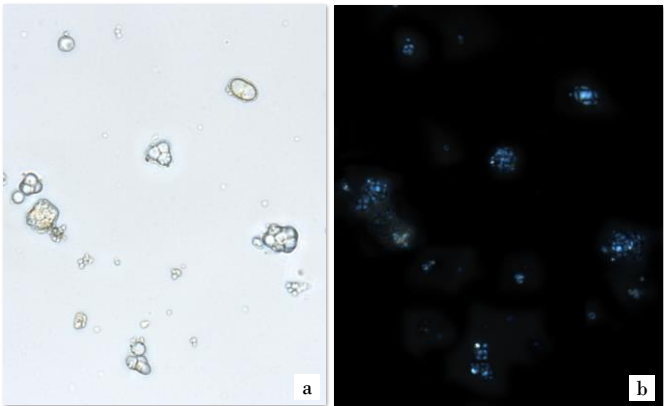
Usually broken, brownish-yellow or brown, wall is slightly thick, intact ones appear sub-square, sub-polygonal or polygonal, usually contains crystal sand of calcium oxalate

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



- Starch -

Starch granule



50 μm

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 -

- ◇ Cork on the outer surface is rough and has irregular cracks. No lenticels. It 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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