

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

Cortex Fraxini*

Source The dried branch bark or stem bark of *Fraxinus rhynchophylla* Hance, *F. chinensis* Roxb., *F. chinensis* Roxb. Var. *acuminata* Lingelsh[@] or *F. stylosa* Lingelsh[#] in the family Oleaceae

Property and Flavour Cold; bitter, astringent

Meridian Affinity Liver, gallbladder and large intestine meridians

Actions To clear heat and dry dampness, astringe and stop dysentery, stop leucorrhoea, brighten the eyes

Production Area Mainly produced in Shaanxi, Sichuan, Liaoning, Jilin, Heilongjiang, Henan, Hubei, Gansu, Yunnan, etc.

Note:

* Its name in Chinese Pharmacopoeia (2025 Edition) is “Fraxini Cortex”.

@ The scientific name of the plant source in Chinese Pharmacopoeia (2025 Edition) is “*Fraxinus szaboana* Lingelsh.”.

The scientific name of the plant source in Chinese Pharmacopoeia (2025 Edition) is “*Fraxinus stylosa* Lingelsh.”.

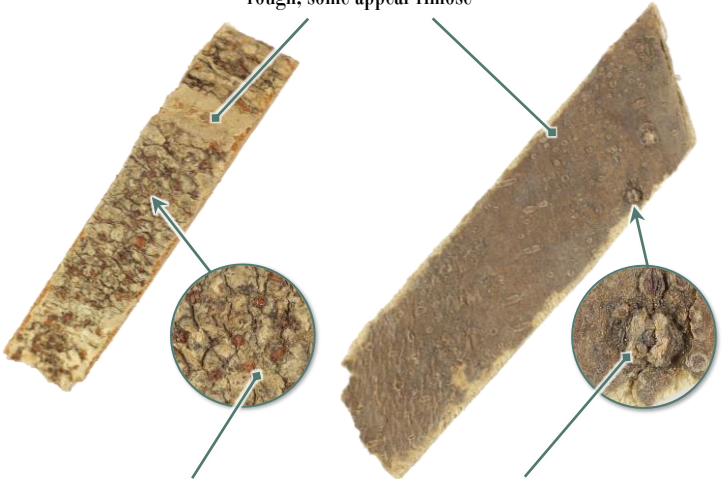




Macroscopic Identification Features

Shape Appears strip-shaped, varies in length, straight or curled

Cork on the outer surface is greyish-white or greyish-brown, some of which having the two colours arranged alternatively to appear mottle-like. Even or rough, some appear rimose



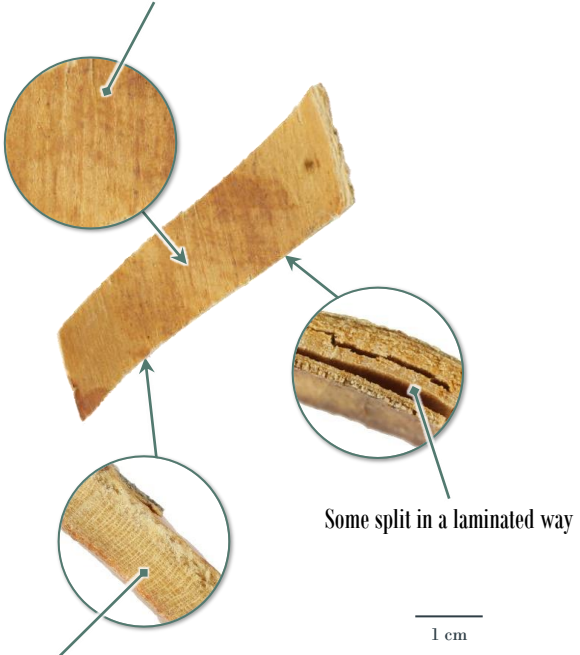
With dot-like or linear lenticel.
Some with fine wrinkles visible

Some with scars of branch visible

1 cm



Inner surface is light brown, greyish-brown or brown, smooth, and has fine, dense and straight striations



Some split in a laminated way

1 cm

Cut surface is yellowish-white, light brown or brown. Some with grid-like striations



Texture Light, hard and fragile, easily broken

Fracture Strongly fibrous, and yellowish-white or light brown



0.2 cm

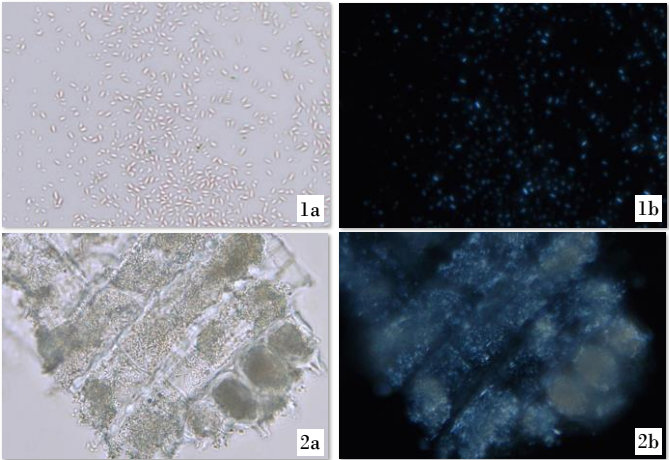
Odour Slight



Features of Simplified Powder Microscopic Identification

- Crystal -

Crystal sand of calcium oxalate



50 μm

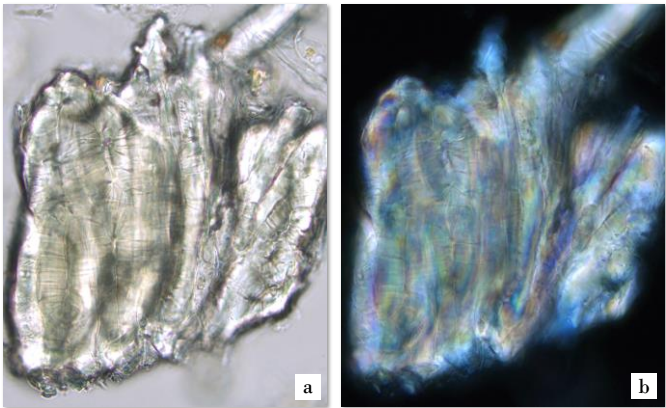
Scattered (1) or present in parenchymatous cell (2), small, appears granular or fusiform; bright white under polarized light microscope

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



- Sclerenchyma -

Stone cell



50 μ m

Frequently found, singly scattered or present in groups, appears sub-rounded, sub-square, sub-rectangular, elliptical or irregular and short-branched, wall is extremely thick, with distinct pit canals; bright white or polychromatic under polarized light microscope

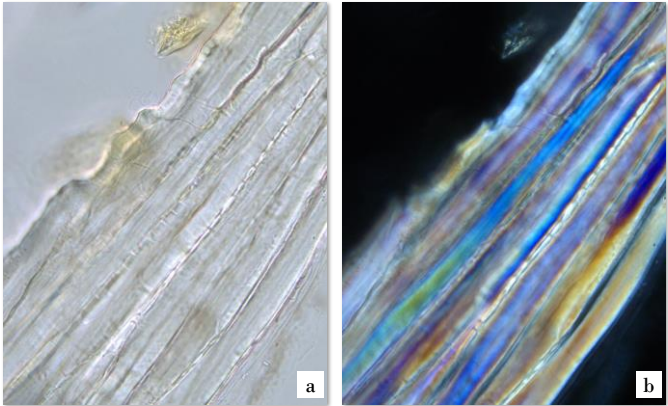
a. features under bright field; b. features under polarized light



Additional Features of Powder Microscopic Identification

- Sclerenchyma -

Fibre



50 μm

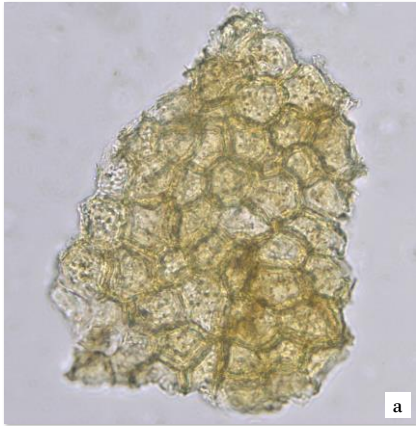
Frequently found, usually several in bundles, sometimes singly scattered, usually broken, straight or slightly curved, margin usually uneven, wall is extremely thick, with indistinct pits, lumen is narrow; bright white or polychromatic under polarized light microscope

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



- Protective tissue -

Cork cell



50 μ m

Light yellow or light yellowish-brown, appears sub-polygonal or sub-rectangular in surface view

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





Key Identification Features

- Macroscopic features -

- ◇ Cork on the outer surface is greyish-white or greyish-brown, some of which having the two colours arranged alternatively to appear mottled-like. With dot-like or linear lenticel. Some with fine wrinkles, scars of branch visible, or appear rimose
- ◇ Fracture is strongly fibrous, and yellowish-white or light brown

- Powder microscopic features -

- ◇ Crystal sand of calcium oxalate is small and appears granular or fusiform
- ◇ Stone cell appears sub-rounded, sub-square, sub-rectangular, elliptical or irregular and short-branched, wall is extremely thick, with distinct pit canals

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

Fraxini Cortex – HKCMMS (Vol 6)

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