

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



Cortex Ulmi Pumilae



Source The dried inner bark of *Ulmus pumila* L. in the family Ulmaceae

**Property
and Flavour** Neutral; sweet

**Meridian
Affinity** Lung, spleen and bladder meridians

Actions To induce urination, resolve oedema, clear heat

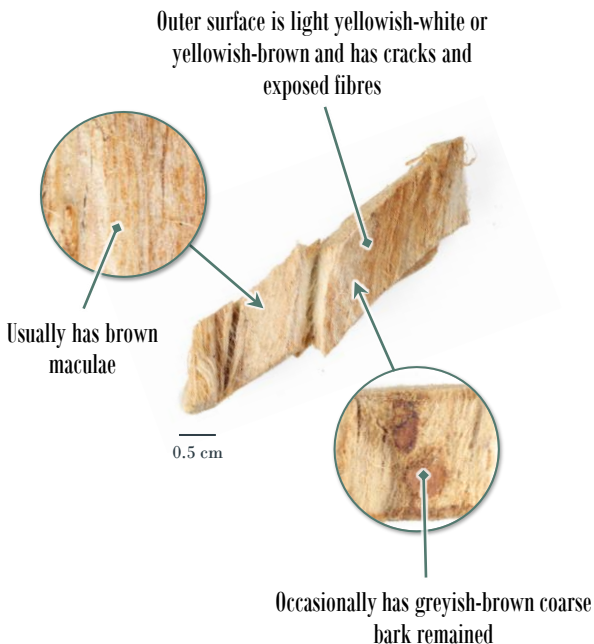
**Production
Area** Mainly produced in Northeast China, North China, Northwest China, etc.





Macroscopic Identification Features

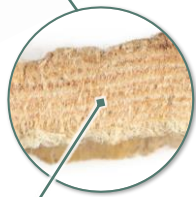
Shape Strip-shaped or irregular slices, varies in size



Inner surface is yellowish-white or yellowish-brown, smooth and usually has dense linear striations observable

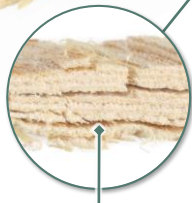


0.5 cm



Cut surface is yellowish-white, light yellowish-brown or light yellow arranged in an alternate pattern

Some cut surface is split in a laminated way



Texture Pliable

Fracture Fibrous, slightly laminated

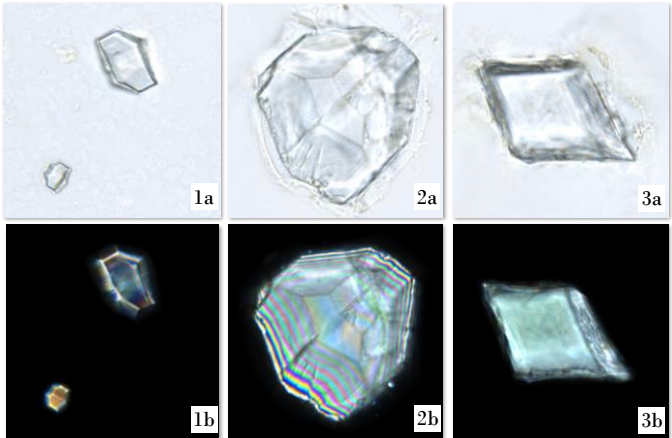


Odour Slight



Feature of Simplified Powder Microscopic Identification - Crystal -

Prism of calcium oxalate

50 μ m

Frequently found, singly scattered or present in parenchymatous cell, appears double-conical (1), polyhedral (2) or rhombic (3); varies in size, some are enormous; bright white or polychromatic under polarized light microscope

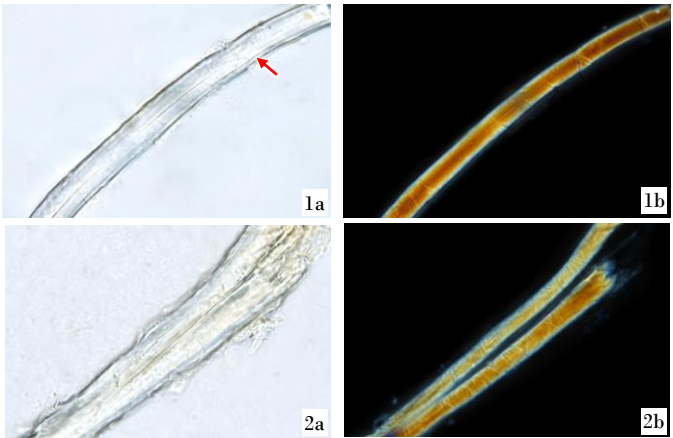
a. features under bright field; b. features under polarized light



Additional Features of Powder Microscopic Identification

- Sclerenchyma -

Fibre

50 μm

Singly scattered (1) or in bundles (2), wall is extremely thick, narrow lumen, some primary walls separated from the secondary walls (\rightarrow); bright white or polychromatic under polarized light microscope

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



- Secretory tissue -

Mucilage cell



50 μm

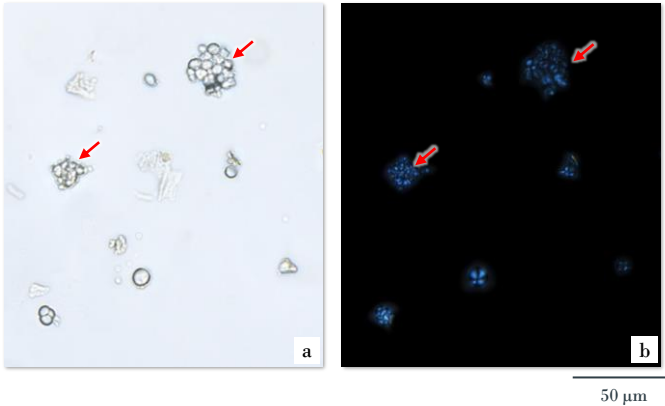
Enormous, usually broken, wall is thin

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



- Starch -

Starch granule

50 μ m

Frequently found, small, usually stick together (\rightarrow), mainly simple granule, appears sub-rounded or sub-elliptical, compound granule is fewer, consists of several units; relatively dim, and 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 light yellowish-white or yellowish-brown and usually has brown maculae
- ◇ Fracture is fibrous and slightly laminated

- Powder microscopic feature -

- ◇ Prism of calcium oxalate appears double-conical, polyhedral or rhombic. It varies in size and some are enormous

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