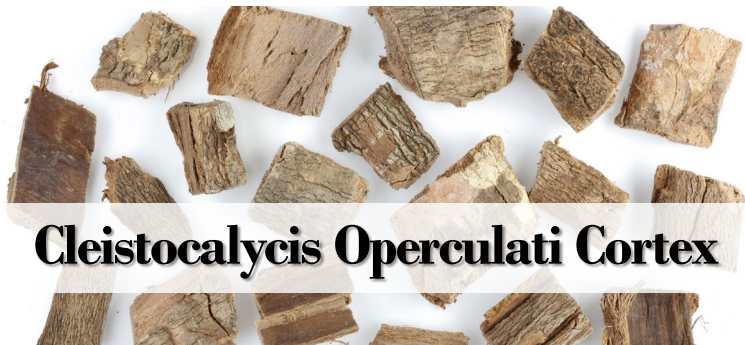


Macroscopic and Microscopic Identification of Cortex type of  
Decoction Pieces Commonly Found in Hong Kong



# Cleistocalycis Operculati Cortex

**Source** The dried bark of *Cleistocalyx operculatus* (Roxb.) Merr. et Perry in the family Myrtaceae

**Property and Flavour** Cool; bitter and pungent

**Meridian Affinity** Spleen and stomach meridians

**Actions** To clear heat and remove toxins, dry dampness and kill parasitic worms, relieve itch

**Production Area** No information

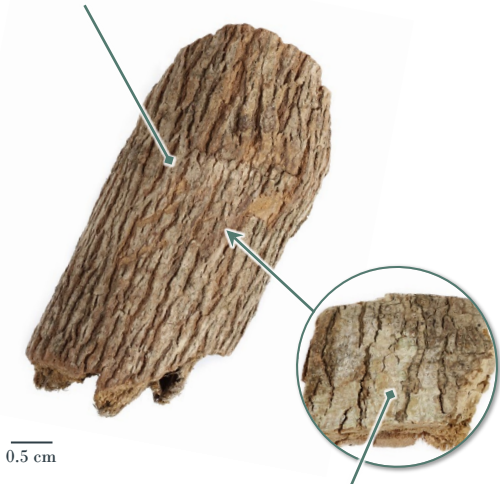




## Macroscopic Identification Features

**Shape** Flat slices, some are quilled

Outer surface is greyish-brown or light brown, rough and usually has cracks. No lenticels



Occasionally covered with patches of lichen



Inner surface is brown or deep brown  
and has fine and straight striations

Inner layer is easily exfoliated. The surface  
appears greyish-white or yellowish-brown and  
usually fibrous after the inner layer is exfoliated

Cut surface is reddish-  
brown, yellowish-brown  
or light yellowish-brown

0.5 cm

Some are split in a laminated way



**Texture** Tough, large amount of dust wafts when broken

**Fracture** Outer layer is granular, inner layer is fibrous



0.5 cm

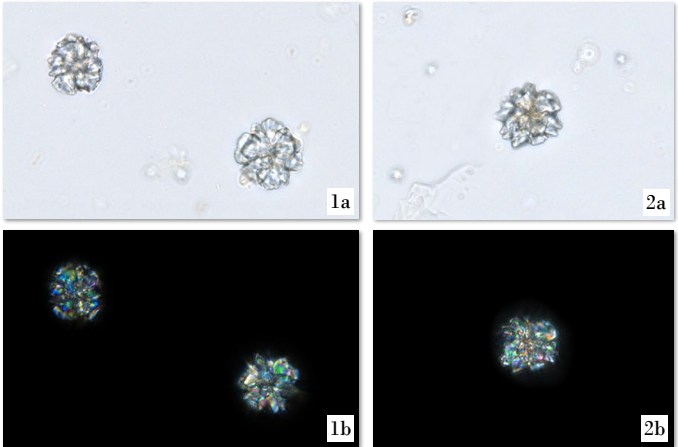
**Odour** Slight



# Features of Easy Powder Microscopic Identification

## - Crystal -

### Cluster of calcium oxalate



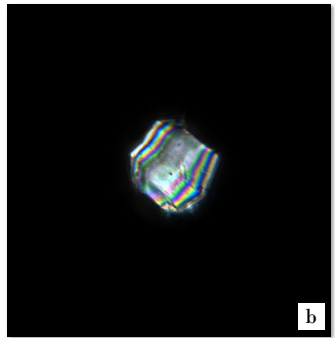
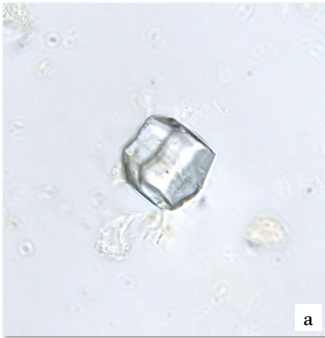
50 µm

Numerous, mostly scattered, angle is usually short and obtuse (1), while sometimes acute (2); polychromatic under polarized light microscope

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



## Prism of calcium oxalate



50  $\mu$ m

Mostly scattered, appears sub-rectangular, sub-double conical or polygonal; polychromatic under polarized light microscope

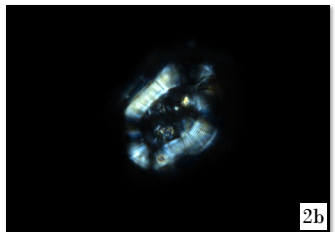
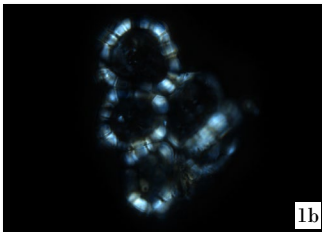
*a. features under bright field; b. features under polarized light*



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## - Sclerenchyma -

### Stone cell



50  $\mu$ m

In groups or singly scattered, appears sub-rounded, sub-rectangular, sub-polygonal or irregular, wall is slightly thick (1) or thick (2), with pit canals and pits; polychromatic or bright white under polarized light microscope

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

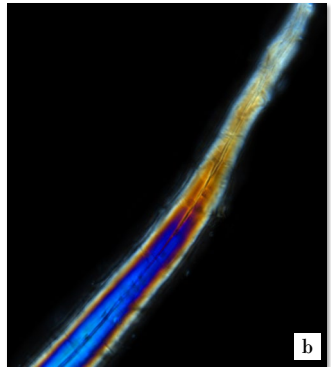




# Additional Features of Powder Microscopic Identification

## - Sclerenchyma -

### Fibre



50  $\mu$ m

In bundles or singly scattered, wall is thick or extremely thick, narrow lumen; bright white or polychromatic under polarized light microscope

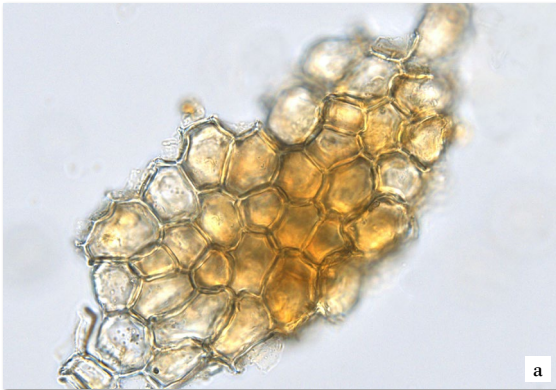
*a. features under bright field; b. features under polarized light*





- Protective tissue -

Cork cell



50  $\mu$ m

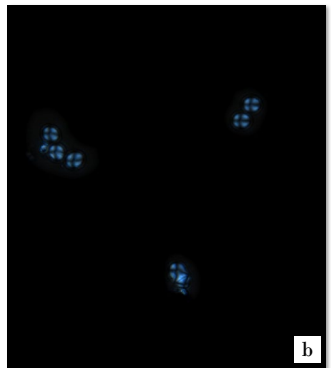
Yellowish-brown or brown, appears polygonal and sub-polygonal in surface view

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



## - Starch -

### Starch granule



50  $\mu$ m

Mainly is simple granule, appears sub-rounded, compound granule is barely found, consists of 2-3 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 usually has cracks. No lenticels
- ◇ Outer layer of fracture is granular, while inner layer is fibrous
- ◇ Inner layer of the inner surface is easily exfoliated

### - Powder Microscopic features -

- ◇ Cluster of calcium oxalate is numerous and usually has short and obtuse angles
- ◇ Prism of calcium oxalate appears sub-rectangular, sub-double conical or polygonal
- ◇ Stone cell appears sub-rounded, sub-rectangular, sub-polygonal or irregular and has slightly thick or thick wall

Government Chinese Medicines Testing Institute

Department of Health

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