

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



# Cortex Acanthopanax\*

**Source** The dried root bark of *Acanthopanax gracilistylus* W. W. Smith in the family Araliaceae

**Property and Flavour** Warm; pungent and bitter

**Meridian Affinity** Liver and kidney meridians

**Actions** To remove wind and eliminate dampness, tonify the liver and kidney, strengthen the sinews and bones, induce urination and resolve oedema

**Production Area** Mainly produced in Hubei, Henan, Anhui, etc.

Note:

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



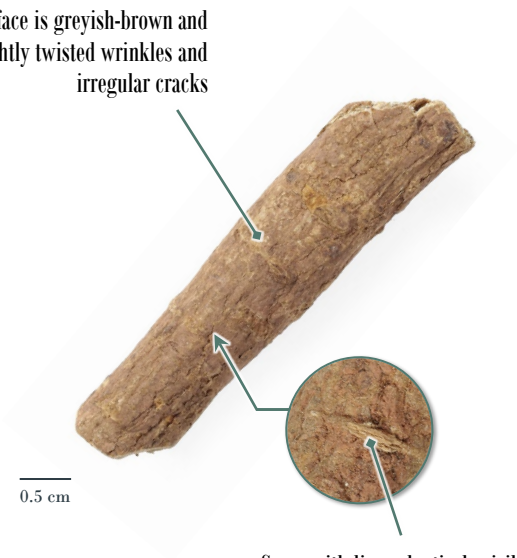
衛生署  
Department of Health



## Macroscopic Identification Features

**Shape** Irregularly-quilled, some in flat slices

Outer surface is greyish-brown and has slightly twisted wrinkles and irregular cracks



Some with linear lenticels visible



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



Cut surface is greyish-white or greyish-yellow, in which some have faintly observable brown dots scattered over



**Texture** Light, fragile, easily broken

**Fracture** Slightly uneven. Brown dots (→) are usually visible and more distinct than on cut surface



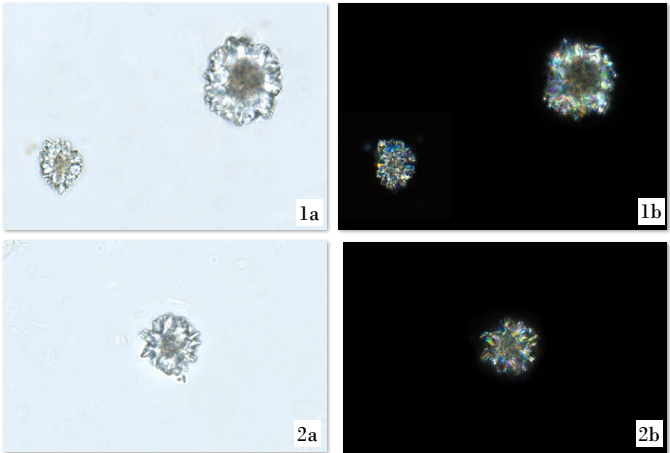
0.2 cm

**Odour** Slight aroma



■ ■ ■ Feature of Easy Powder  
■ Microscopic Identification  
- Crystal -

Cluster of calcium oxalate



50 μm

Scattered or present in parenchymatous cell, varies in size, angle is usually thick and short (1), while sometimes acute (2); polychromatic under polarized light microscope

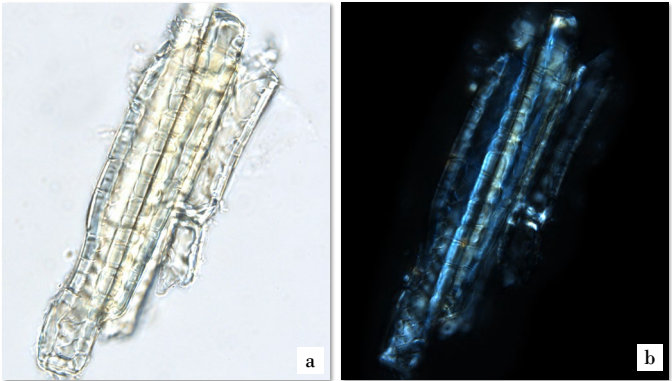
*a. features under bright field; b. features under polarized light*



# Additional Features of Powder Microscopic Identification

## - Sclerenchyma -

### Phloem fibre



50 µm

Singly scattered or several in bundles, with thick or slightly thick wall, pits and pit canals are usually sparse; bright white, orange-yellow or polychromatic under polarized light microscope

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



- Secretory tissue -

Fragment of secretory canal



50  $\mu$ m

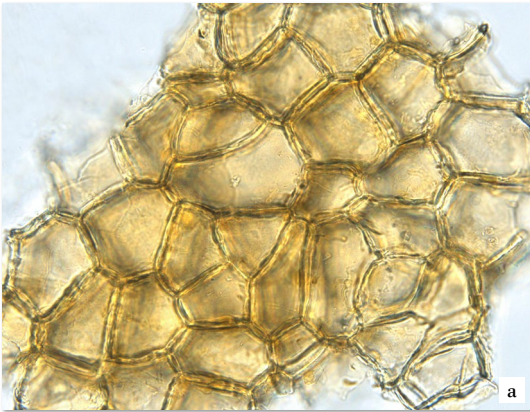
Contains light yellow or yellowish-brown secretions(→)

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



- Protective tissue -

Cork cell



50  $\mu$ m

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

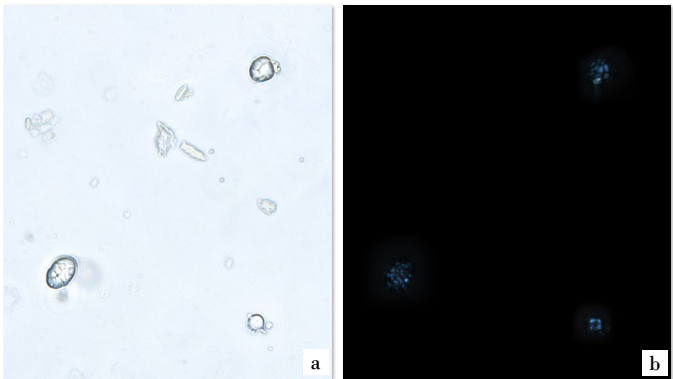
*a. features under bright field; b. features under polarized light*





- Starch -

**Starch granule**



50  $\mu$ m

Small, simple granule is fewer, sub-rounded, compound granule consists of several to tens 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 has slightly twisted wrinkles and irregular cracks, in which some have lenticels visible
- ◇ Fracture is slightly uneven and usually with brown dots visible

### - Powder Microscopic features -

- ◇ Angle of cluster of calcium oxalate is usually thick and short

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

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Government Chinese Medicines Testing Institute

Department of Health

Enquiry hotline: 3188 8079

Website: [www.cmro.gov.hk](http://www.cmro.gov.hk)

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