



Identification of Tiny Seed and Fruit Types of Chinese Materia Medica

General notices

This study aims to establish the micro-morphology and powder microscopy for the seed and fruit types of Chinese Materia Medica (CMM) with 5 mm or less in diameter, that are hindered from effective observation by traditional macroscopic identification method. The monograph of each CMM is outlined below:

Photo of CMM

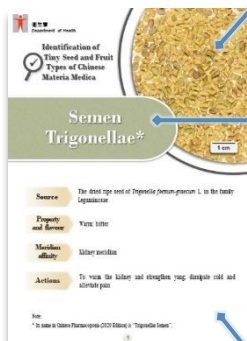
This section displays the appearance of CMM.

Name of CMM

Reference is made to Schedules 1 and 2 of the Chinese Medicine Ordinance (Cap. 549) and the Pharmacopoeia of the People's Republic of China (2020 Edition) [abbreviated as the Chinese Pharmacopoeia (2020 Edition)]. For CMM not included in the above two, other statutory standards or reference materials are used.

Basic information of CMM

This section includes source, property and flavour, meridian affinity and actions.





Micro-morphological features

Shape Rhomboid, rectangular, trapeziform or oblong

1. *Long*

Surface view

With 1 deep groove observable on both sides in surface view, slowly dividing the seed into 2 asymmetrical parts.

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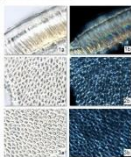
This section lists the shape and surface features of CMM with photos and texts. All described features can be observed under magnification of 20 times or less. The cut sections, other internal features and odour are omitted unless they are significant to identification.



Powder microscopic features

Tests

Palisade cell of testis



Columnar or light yellowish-brown, cells occur in 1 column in lateral view (2), covered with thick cuticle, outer wall is relatively thick, with scars open and 1 indurum band; sub-polygonal in top view (3), lumen is relatively small, with distinct pit canals; lumen is relatively large in bottom view (3); bright white or pale cream under polarized light microscope.

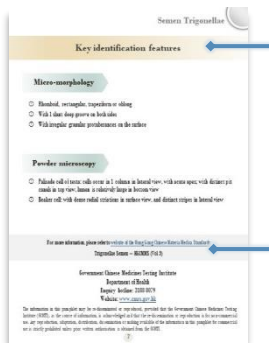
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Powder microscopic features

This section lists the microscopic features of powdered CMM, including trichome, crystal, secretory tissue, pericarp, testa, etc. Common features found in fruits and seeds, including endosperm cell, cotyledon cell, oil droplet, aleurone granule, starch granule, small vessel and parenchymatous cell, are omitted unless they are significant to identification.

For specific operation of microscopic identification, please refer to Appendix III Microscopic Identification of the Hong Kong Chinese Materia Medica Standards (HKCMMS):

https://www.cmro.gov.hk/html/eng/useful_information/hkc_mms/volumes.html



Key identification features

This section concisely describes the most critical micro-morphological and powder microscopic features of the CMM, with one to three selected points each.

If the CMM has been included in the HKCMMS, the number of issue will be listed for reference.

Government Chinese Medicines Testing Institute

Department of Health

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