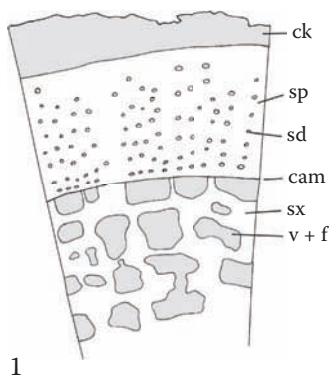


Bupleurum spp.**Bupleurum Root****Radix Bupleuri****Pinyin: Chai hu****Apiaceae**

Bupleurum is one of the primary botanicals used in traditional Chinese medicine for supporting liver health. According to the Chinese pharmacopoeia (2005), *Radix Bupleuri* may consist of the roots of *Bupleurum chinense* DC. (bei chai hu) or *Bupleurum scorzonerifolium* Willd (nan chai hu). Remnants of aerial stem parts may be present in commercial material. There are numerous other species of *Bupleurum* that may also be traded as *Radix Bupleuri*. These are not easily differentiated morphologically. The toxic species of *Bupleurum* (*B. longiradiatum*; da ye chai hu) is not typically found in trade.

A. Root

Transverse section: Cork contains small calcium oxalate prisms; interior to the cork is a narrow zone of collenchyma with thickened tangential walls; secondary phloem cells are compressed; secretory ducts containing reddish brown secretions are scattered throughout the secondary phloem; the ducts are largest (up to 170 μm diameter) near the cork and smaller (up to 50 μm long) toward the cambium; secondary xylem vessels up to 50 μm diameter are arranged in tangentially elongated groups near the cambium and radially arranged groups toward the root



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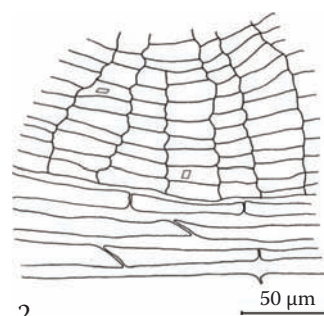
center; xylem parenchyma is abundant, but is replaced by pitted fibers surrounding the vessels.

Longitudinal section: Scalariform vessels.

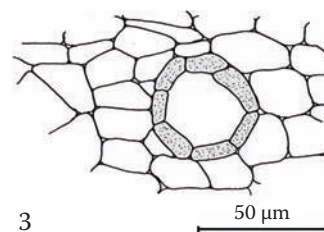
B. Stem

In contrast to the roots, stems have a solid xylem consisting mainly of fibers.

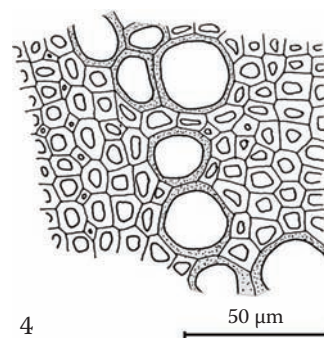
Powder: Fragments of cork with small calcium oxalate prisms; scalariform vessels with attached fibers; parenchyma with reddish brown secretory ducts.



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