

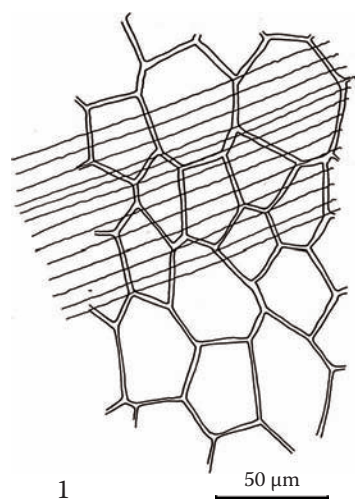
***Lycium chinense* Mill., *L. barbarum* L.****Lycium Fruit*****Lycii Fructus*****Pinyin: Gou ji zi*****Solanaceae***

Lycium fruit, more commonly known as lycii berries and more recently as goji, is predominantly used in traditional Chinese medicine as a blood, liver, and kidney tonic, and to benefit the eyes. In recent years, the use of the juice has increased dramatically in popularity. Two primary species of lycium are used: *L. chinense* and *L. barbarum*. Microscopically, these two species are identical.

**A. Fruit**

**Surface view:** Exocarp of irregular polygonal cells, cuticle very thick with conspicuous parallel striations.

**Transverse section:** Exocarp with thick cuticle; hypodermis of thick-walled cells; mesocarp of thin-walled cells gradually becoming very enlarged toward endocarp, with orange oil droplets throughout; small, helical or scalariform vessels embedded in mesocarp; idioblasts filled with microsphenoidal calcium oxalate tetraeders (crystal sand) found mostly near vascular bundles; endocarp of small cells.

**B. Seed**

**Surface view:** Testa epidermal cells are lignified with wavy anticlinal walls and conspicuous, irregular cell wall thickening showing a striation (typical of Solanaceae family plants).

**Transverse section:** Testa cells have U-shaped wall thickenings; the inner tangential wall is thickest and the radial walls become thinner toward the unthickened outer tangential wall; cells interior to testa are collapsed; endosperm of regularly shaped thin-walled cells, often containing colorless oil droplets; starch is absent.

**Powder:** Sticky and red-orange to deep red in color, with color darkening with age. Fragments of mesocarp parenchyma with orange-colored oil droplets and sandy crystals of calcium oxalate; colorless parenchyma of the endosperm with oil droplets; testa epidermis in surface view with wavy, heavily thickened cell wall thickening; vascular tissue and beaded cells of the endocarp.

