Mahonia nervosa (Pursh.) Nutt.

Oregon Grape Root

Radix Berberis

Berberidaceae

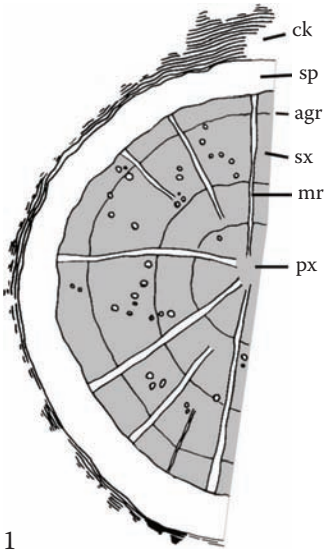
Various species of *Mahonia* are widely used worldwide, predominantly as a digestive bitter in the treatment of gastrointestinal complaints and as an antimicrobial, partially due to the presence of the alkaloid berberine. In North America, Oregon grape root has been widely employed in the treatment of eczematous skin conditions. *Mahonia* species have been known to adulterate the goldenseal (*Hydrastis canadensis*) market. *Mahonia* species can be easily distinguished from goldenseal microscopically (see *Hydrastis canadensis*).

Transverse section: Multilayered cork with cell walls that may be yellow; parenchymatous secondary phloem, with roundish cells and numerous intercellular spaces; rhombohedral calcium oxalate crystals up to ~25 µm long may occur in the secondary phloem and medullary ray cells; secondary xylem dominates older roots; the tissue is compact, consisting of vessels 20–50 µm in diameter and fibers; medullary rays are short and one to several cells broad, becoming very broad in older roots; medullary ray parenchyma cells are square or rectangular, thickened, and conspicuously pitted; annual rings are often apparent.

Longitudinal section: Vessels with bordered pits; numerous fibers, with oblique slit-shaped pits.

Starch: Occurs primarily in medullary ray cells; simple or compound granules are subspherical or elliptical, ~2–16 µm diameter.

Powder: Fragments of cork; bordered-pitted vessels; thickened rectangular cells of the medullary rays; numerous pitted fibers of the xylem, solitary or in bundles; starch.



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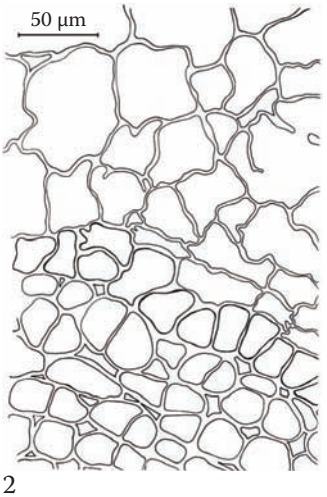

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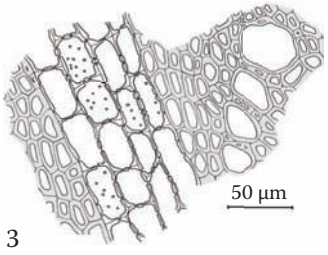

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