

Pimpinella anisum L.

Standardized Common Name: Anise

Family: Apiaceae (Umbelliferae)

Taxonomy: *Pimpinella* is a genus of about 150 Old World herbs. *Pimpinella anisum* is one of 16 species that grows wild in Europe, and has been widely cultivated for millennia. Synonyms include *Anisum officinale* DC., *Anisum vulgare* Gaertn., *Apium anisum* Crantz and *Pimpinella aromatica* Bieb.

Description: Annual herb. Stem (10–)30–50(–100) cm high, sometimes bearing small bristles. Leaves basal and cauline; basal leaves petiolate, simple, ovate or reniform, 2–5 cm long, the margins dentate to serrate; stem leaves with sheathing petioles, alternate, 1–2(–3)-pinnately or ternately compound, the leaflets ca. 1.5–4 cm long, linear or ovate to rhomboid and toothed to deeply pinnatifid. Inflorescence a compound umbel, long-peduncled, with 7–15 rays, bractless or with 1 linear bract; umbellets 7–12(–15)-flowered, without bracteoles or with few small linear bracteoles; flowers small, white or yellowish, 5-petaled. Fruit a schizocarp of 2 mericarps, (2–)3–5(–7) mm long, ovoid, laterally compressed, constricted at commissure, with short scaly hairs; vallecular vittae usually 3, commissural vittae 2–4(–6); stylopodium conical.

Parts in Commerce: Fruits

Identification: See glossary for explanation of the technical terms pertaining to umbel fruits.

- Schizocarp usually intact, not split into individual mericarps, and often still attached to the slender pedicel
- (2–)3–5(–7) mm long
- Ovoid or pear-shaped; apex narrowed and ending in conical stylopodium
- Broad at commissure, but grooved on both sides between mericarps
- Greenish or yellowish brown; ribs yellowish, paler than valleculae
- Ribs delicate, threadlike, straight, at least as broad as high
- Pubescent with small yellowish scaly hairs; hairs may be worn off, but are easiest to observe in commissural grooves or in valleculae near apex
- Vittae usually at least 3 per vallecule, quite inconspicuous; commissural vittae usually 2–4, observable in cross-section or in separated mericarps as pale ridges on commissural face
- Endosperm in cross-section flat along commissural face

- Odor of crushed fruit strong, aromatic
- Taste characteristic, aromatic, pleasant

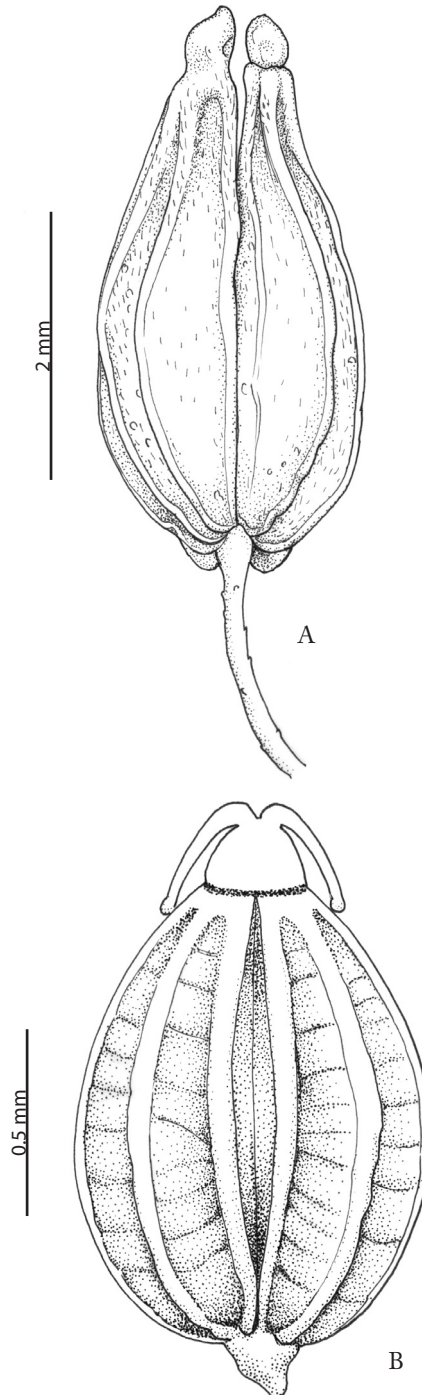


Figure 55: a, *Pimpinella anisum* fruit; b, *Petroselinum crispum* fruit.

Adulterants: Literature reports adulteration by *Petroselinum crispum* (Mill.) A. W. Hill (Parsley), also important in commerce, and *Conium maculatum* L. (poison hemlock), a toxic plant that is no longer sold as medicinal. These share relatively small, ovoid fruits with threadlike ribs (although some material of *C. maculatum* has narrow, elongated fruits), but they may be distinguished easily by several morphological features, as well as great differences in aroma and taste:

| | Pimpinella anisum | Petroselinum crispum | Conium maculatum |
|---|--|---|--|
| Pubescence | Short scaly hairs, often persistent only in grooves near apex and commissure | Hairless | Hairless; minute teeth may be seen in valleculeae of immature fruits |
| Primary ribs (in dried fruits) | Straight; usually at least as broad as high | Straight; usually broader than high | Tend to undulate especially in immature fruits; usually higher than broad; often somewhat notched or toothed |
| Vittae | 2 or more on commissural face, numerous and hard to observe in valleculeae | 2 on commissural face; 1 per valleculea, very broad, giving valleculeae brown color | Absent at fruit maturity |
| Commissure | Fairly broad (but narrower than fruit) | Constricted | Constricted |
| Endosperm at commissural face in cross-section | Flat | Flat | Deeply grooved |

References:

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