

gelatins, meat and meat products, puddings, etc., and as a photographic sensitizer. If you grow a good quantity of seed, they are useful for refreshing the breath. Teas and salads are embellished by the addition of small quantities of leaves. Anise odor sometimes used in England and U.S. as an artificial fragrance for "drag hunting" with fox hounds. In the old days, anise seed was valued against the evil eye and the bad breath. The condiment anise seed was taxed by Edward I to help repair London Bridge.⁶ Powdered anise used to flavor horse and cattle feed. Oil of anise regarded as an excellent bait for mouse and rat traps, and as fish lure, said to be poisonous to pigeons. Ground seeds are used in sachets and have been smoked to promote expectoration. Anise oil, mixed with sassafras oil, is used against insects.⁶⁵ Anethole, anisaldehyde, *d*-carvone, and myristicin all have mild insecticidal properties.⁶⁵ The fungicidal oil is used in oil-painting china.⁶¹

Reported to be abortifacient, anodyne, antiseptic, antispasmodic, aperient, aphrodisiac, aromatic, balsamic, carminative, collyrium, diaphoretic, digestive, diuretic, expectorant, fungicidal, lactagogue, pectoral, stimulant, stomachic, sudorific, and tonic, anise is a folk remedy for asthma, bronchitis, cancer, cholera, colic, cough, dropsy, dysmenorrhea, epilepsy, gall bladder, halitosis, indigestion, insomnia, lice, migraine, nausea, nephrosis, neuralgia, purperium, scabies, stomach, and stones. Yucatan natives take a decoction of 3 to 4 g fruit per 160 cc water three to four times a day as a tonic and galactagogue.⁴² Said to promote milk production as well as sleep in nursing mothers. Placed under the pillow, anise is supposed to ward off bad dreams.

Per 100 g, anise seed is reported to contain 337 calories (1412 kJ), 9.5 g H₂O, 17.6 g protein, 15.9 g fat, 50.0 g total carbohydrate, 14.6 g fiber, 7.0 g ash, 646 mg Ca, 440 mg P, 37 mg Fe, 170 mg Mg, 16 mg Na, 1441 mg K, and 5.3 mg Zn.⁸⁹ Fresh leaves, used in garnishes and salads, may contain 8 to 9 mg vitamin C per 100 g. Simple coumarins (6,7-furocoumarins) and acetylinic compounds have been reported.²⁶² Anethol-glycol, creosol, anethol, acetaldehyde, isoamylamine, umbelliferone, bergaptene, isopimpinellin, isobergaptene, and sphondin have been reported from *Pimpinella*. Kunzemann and Hermann²⁶³ report the flavonoids: quercetin-3-glucuronide, rutin, luteolin 7-glucoside, isoorientin, isovitexin, and apigenin 7-glucoside. El-Moghazi et al.²⁶⁴ add luteolin and luteolin 7-*O*-xyloside for the fruits.

Toxicity — Its major component, anethole, can cause dermatitis (erythema, scaling, and vesiculation). Anethole has two isomers, the *cis* isomer 15 to 38 times more toxic than the *trans* isomer.²⁹ Like fennel oil, anise oil contains compounds that can be aminated in vivo resulting in a series of three dangerous hallucinogenic amphetamines.⁵⁴ Anethole used to flavor toothpaste has produced contact sensitivity, according to reports.⁶ Aniseed is reported to have caused cheilitis and stomatitis.⁶ Anethole (1-methoxy-4-propenylbenzene) is a major component of the essential oils of bitter fennel, anise, star anise, et al.¹⁵ Anethole is a moderate acute toxin with an oral LD₅₀ of 2090 mg/kg in rats. Bitter fennel oil, with an oral LD₅₀ of 4.52 ml/kg in rats, is irritant when applied to the skin. Rats fed a diet containing 0.25% anethole for 1 year showed no ill effects, while those receiving 1.0% anethole for 15 weeks had microscopic alterations of the hepatocytes. Anethole and the essential oils of anise and fennel significantly stimulated hepatic regeneration in rats.¹¹⁷