

contain 11.4% H<sub>2</sub>O, 2.3% protein, 13.4% starch, 31.5% crude fiber, 14.5% fatty oil, and 0.2 to 0.6% volatile oil. The volatile oil, extracted by steam distillation, is semisolid at ordinary temperatures, with a high percentage of fatty acids, chiefly palmitic and myristic acid and some acetic acids. The characteristic musk-like odor is due mainly to the ketone ambrettolide, a lactone of ambrettolic acid, and ambrettol, Mucilage, gum and resin are also reported. Seeds also contain methionine sulfoxide and several phospholipids (alpha-cephalin, phosphatidylserine, phosphatidylserine plasmalogen, and phosphatidylcholine plasmalogen).<sup>29</sup> Stem bark yields a jute-like fiber with 78% cellulose.

**Toxicity** — Classified by the FDA<sup>62</sup> as a Herb of Undefined Safety: “Seeds were formerly considered stimulant and antispasmodic but are now used only in perfumery.” Classified by the FDA as GRAS (acronym for Generally Recognized As Safe) (§ 182.20).<sup>29</sup> Oil and absolute are used in baked goods, candy, frozen dairy desserts, gelatin, nonalcoholic beverages, and puddings at levels usually less than 10 ppm.<sup>29</sup>