

ine, isobutylamine, isoamylamine, ethanolamine, beta-phenylethylamine, choline, and acetylcholine; also the purine derivatives adenosine, adenine, guanine, resinic-acid, chlorogenic acid, and caffeic acid and the flavone quercetin-3-galactoside and 0.51 to 0.62% beta-sitosterol (0.65 to 0.78% in the flower), sorbitol, 0.14 to 0.25% vitamin C, 0.15% amygdalin, catechin, tannins, pectin, chlorogenic and caffeic acid, etc.³³ Fruit contains fatty acids with oleic-, linoleic-, stearic-, palmitic-, myristic-, and arachidic acids and the universal phytosterols, as well as wax, tannin, mucilage, essential oil, nonacosanol-10-ol, paraffin sorbitol, nicotinic acid. Fruits share with the flowers the triterpene acids, ursolic-, oleanolic-, and crataegolic acid, as well as "remarkable" quantities of Al, Na, K, Ca, and P salt, tartaric, and citric acid.³³

Toxicity — Roots, leaves, and flowers all contain cardioactive compounds. One paper cited in Mitchell and Rook⁶ notes that corneal scratches with the thorns led to blindness in 88 of 132 Irish accidents. With cyanogenic and cardioactive compounds, not to mention tannin, scattered throughout the plant, it should not be taken lightly.