

anemia, chest pains, dysentery, fever, but is correctly deemed hypnotic, narcotic, and, perhaps, harmful to the brain.³⁸ The plant provides a narcotic that induces sleep, a sleep so heavy that the person becomes insensible. When the Roman soldiers at Golgotha took pity on their prisoner on the cross, they added this poppy juice to the potion of sour wine. Its compounds are used in medicine as analgesic, anodyne, antispasmodic, hypnotic, narcotic, sedative, as respiratory depressants, and to relieve severe pain. Jewish authorities maintain that the plant and its stupefacience were well known among the Hebrews more than 2000 years ago. The Jerushalmi warns against opium eating. Although the seeds contain no narcotic alkaloids, urinalysis following their ingestion may suggest the morphine of a heroin addict's urinalysis.³⁸

Seed is reported to contain 4.3 to 5.2% moisture, 22.3 to 24.4% protein, 46.5 to 49.1% ether extract, 11.7 to 14.3% N-free extract, 4.8 to 5.8% crude fiber, 5.6 to 6.0% ash, 1.03 to 1.45% calcium, 0.79 to 0.89% phosphorous, 8.5 to 11.1 mg/100 g iron, 740 to 1181 µg/100 g thiamine, 765 to 1203 µg/100 g riboflavin, 800 to 1280 µg/100 g nicotinic acid; carotene is absent. Minor minerals in the seeds include 6 µg/kg iodine, 29 mg/kg manganese, 22.9 mg/kg copper, 15.6 g/kg magnesium, 0.3 g/kg sodium, 5.25 g/kg potassium, and 130 mg/kg zinc; the seeds also contain 2.80% lecithin, 1.62% oxalic acid, 3.0 to 3.6% pentosans, traces of narcotine, and an amorphous alkaloid; and the enzymes diastase, emulsin, lipase, and nuclease. Poppyseed oil cakes were estimated to have 88 feed units per 100 kg, 27.5% digestible crude protein, and 25.6% digestible true protein. Another analysis showed 54% organic matter, 87% crude protein, 100% crude fat, 0% crude fiber, and 48% N-free extract. The opium alkaloids are rather numerous, Duke⁹⁷ having listed allocryptopine, apomorphine, berberine, codeine, codeinone, corytuberine, cryptopine, desmethylepiporphyroxine, glaudine, gnoscopine, hydroxycodine, isoboldine, isocorypalmine, lanthopine, laudanidine, laudanine, laudanidine, 6-methylcodeine, morphine, narcotine, narcotoline, nornarceine, oxycryptopine, oxymorphine, oxynarcotine, palaudine, papaveraldine, papaveramone, papaverine, papaverubines B, C, D, and E, protopine, pseudomorphine, reticuline, roemerine, salutaridine, salutaridinol-1, sanguinarine, and thebaine.

Toxicity — Opium and its derivatives are responsible for many deaths each year in the U.S., especially when a high potency heroin gets through to a street user, accustomed to low potency adulterated dosages. Duke²⁴³ discusses the toxicities of some of these alkaloids. Morton¹⁷ adds that as little as 300 mg opium can be fatal to a human, though addicts can tolerate 2000 mg morphine over 4 hr. Death from circulatory and respiratory failure follows cold and clammy skin, weak and rapid pulse, pulmonary edema, and cyanosis. Pupil dilation may occur just before death.¹⁷