made by placing the calyx in water, is said to be a folk remedy for cancer. Medicinally, leaves are emollient, and are much used in Guinea as a diuretic, refrigerant, and sedative; fruits are antiscorbutic; leaves, seeds, and ripe calyces are diuretic and antiscorbutic; and the succulent calyx, boiled in water, is used as a drink in bilious attacks; flowers contain gossypetin, anthocyanin, and the glucoside hibiscin, which may have diuretic and choleretic effects, decreasing the viscosity of the blood, reducing blood pressure, and stimulating intestinal peristalsis. In Burma, the seed are used for debility, the leaves as emollient. Taiwanese regard the seed as diuretic, laxative, and tonic. Philippines use the bitter root as an aperitive and tonic.[16] Angolans use the mucilaginous leaves as an emollient and as a soothing cough remedy. Central Africans poultice the leaves on abscesses. Alcoholics might consider one item recounted by Watt and Breyer-Brandwijk: simulated ingestion of the plant extract decreased the rate of absorption of alcohol, lessening the intensity of alcohol effects in chickens.[3]

Per 100 g, the fruit contains 49 calories, 84.5% H_2O, 1.9 g protein, 0.1 g fat, 12.3 g total carbohydrate, 2.3 g fiber, 1.2 g ash, 172 mg Ca, 57 mg P, 2.9 mg Fe, 300 μg β-carotene equivalent, and 14 mg ascorbic acid. Per 100 g, the leaf is reported to contain 43 calories, 85.6% H_2O, 3.3 g protein, 0.3 g fat, 9.2 g total carbohydrate, 1.6 g fiber, 1.6 g ash, 213 mg Ca, 93 mg P, 4.8 mg Fe, 4135 μg β-carotene equivalent, 0.17 mg thiamine, 0.45 mg riboflavin, 1.2 mg niacin, and 54 mg ascorbic acid. The inflorescence, per 100 g, is reported to contain 44 calories, 86.2% H_2O, 1.6 g protein, 0.1 g fat, 11.1 g total carbohydrate, 2.5 g fiber, 1.0 g ash, 160 mg Ca, 60 mg P, 3.8 mg Fe, 285 μg β-carotene equivalent, 0.04 mg thiamine, 0.06 mg riboflavin, 0.5 mg niacin, and 14 mg ascorbic acid.[21] Seeds contain 7.6% moisture, 24.0% crude protein, 22.3% fat, 15.3% fiber, 23.8% N-free extract, 7.0% ash, 0.3% Ca, 0.6% P, and 0.4% S. Seed extracted with ether contained 0.7% fat, 29.0% protein, and 32.9% N-free extract.[170] Component acids of the seed lipids were 2.1% myristic-, 35.2% palmitic-, 2.0% palmitoleic-, 3.4% stearic-, 34.0% oleic-, 14.4% linoleic-, and three unusual HBr-reacting fatty acids (*cis*-12,13-epoxy-*cis*-9-octadecenoic [12,13-epoxoleic] 4.5%; sterculic, 2.9%, and malvalic, 1.3%).[171] Salama and Ibrahim[172] report on the sterols in the seed oil, 61.3% beta-sitosterol, 16.5% campesterol, 5.1% cholesterol, and 3.2% ergosterol (said to be rare in vegetable oil but the most common mycosterol in most fungi, including yeast). Seed has properties similar to those of cotton seed oil, and is used as a substitute for crude castor oil. Karkade (dried-flowers minus-ovary) contains 13% of a mixture of citric and malic acid, two anthocyanins gossipetin (hydroxyflavone), and hibiscin, and 0.004 to 0.005% ascorbic acid. Petals yield the flavonal glucoside hibiscritin, which yields a crystalline aglycone — hibiscetin ($C_{15}H_{10}O_9$). Flowers contain phytosterols. The dried flower contains *circa* 15.3% hibiscic acid ($C_6H_6O_7$). Root contains saponins and tartaric acid. Calyces contain 6.7% proteins by fresh weight and 7.9% by dry weight. Aspartic acid is the most common amino acid. Dried fruits also contain vitamin C and Ca oxalate.[3,33]