

Species (Family)

- (i) *Cola nitida* A. Chev. (Sterculiaceae)
- (ii) *Cola acuminata* Schott & Endl. and related species

Synonym(s)

- Cola Seed, Guru Nut, Kola Nut
- (ii) *Sterculia acuminata* Beauv.

Part(s) Used

Cotyledon

Pharmacopoeial and Other Monographs

BHC 1992^(G6)
BHP 1996^(G9)
BP 2001^(G15)
Complete German Commission E^(G3)
Martindale 32nd edition^(G43)
PDR for Herbal Medicines 2nd edition^(G36)
Ph Eur 2002^(G28)

Legal Category (Licensed Products)

GSL^(G37)

Constituents^(G6,G22,G41,G48,G62,G64)

Alkaloids Xanthine-types. Caffeine (0.6–3.0%), theobromine (up to 0.1%).

Tannins Condensed type, catechins.

Other constituents Betaine, cellulose, enzyme, fats, a glucoside, protein, red pigment and sugars.

Food Use

Cola is listed by the Council of Europe as a natural source of food flavouring (cola and cola nut extract: category 4, with limits on caffeine) (*see* Appendix 23).^(G17) Cola is commonly used in foods. In the USA,

it is listed as GRAS (Generally Recognised As Safe).^(G41)

Herbal Use

Cola is stated to possess CNS stimulant, thymoleptic, antidepressant, diuretic, cardioactive and antidiarrhoeal properties. It has been used for depressive states, melancholy, atony, exhaustion, dysentery, atonic diarrhoea, anorexia, migraine and specifically for depressive states associated with general muscular weakness.^(G6,G7,G8,G64)

Dosage

Powdered cotyledons 1–3 g or by decoction three times daily.^(G6,G7)

Liquid Extract of Kola (BPC 1949) 0.6–1.2 mL (1:1 in 60% alcohol).

Tincture of Kola (BPC 1934) 1–4 mL (1:5 in 60% alcohol).

Pharmacological Actions

The xanthine constituents, caffeine and theobromine, are the active principles in cola. The pharmacological properties of caffeine are well documented and include stimulation of the CNS, respiratory system and skeletal muscle, cardiac stimulation, coronary dilatation, smooth muscle relaxation and diuresis.^(G41) Cola-containing beverages are stated to provide active doses of caffeine.^(G45)

Side-effects, Toxicity

Side-effects commonly associated with xanthine-containing beverages include sleeplessness, anxiety, tremor, palpitations and withdrawal headache.^(G54)

Contra-indications, Warnings

Consumption of cola should be restricted in individuals with hypertension or cardiac disorders, because of the caffeine content.

Pregnancy and lactation It is generally recommended that caffeine consumption should be restricted during pregnancy, although conflicting reports have been documented regarding the association between birth defects and caffeine consumption. In view of this, excessive consumption of cola during pregnancy should be avoided. Caffeine is excreted in breast milk, but at concentrations too low to represent a hazard to breastfed infants.^(G45) As with all xanthine-containing beverages, excessive consumption of cola by lactating mothers should be avoided.

Pharmaceutical Comment

The principal active constituent in cola is caffeine. The reputed herbal uses of cola can be attributed to the actions of caffeine, and precautions associated with other xanthine-containing beverages are applicable to cola.

References

See also General References G3, G6, G9, G11, G16, G22, G31, G36, G37, G41, G43, G48, G62 and G64.