Rhubarb

Species (Family)

Rheum officinale Baill. and *R. palmatum* L. (Poly-

Synonym(s)

Chinese Rhubarb, other *Rheum* species, e.g. *Rheum tanguticum* Maxim. & Reg., *Rheum emodi* Wall. (Indian Rhubarb) and *Rheum rhaponticum* L. (Garden Rhubarb)

Part(s) Used

Rhizome, root

Pharmacopoeial and Other Monographs

BHC 1992[G6]
BHP 1996[G9]
BP 2001[G15]
Complete German Commission E[G3]
ESCOP 1999[G52]
Martindale 32nd edition[G43]
PDR for Herbal Medicines 2nd edition[G36]
Ph Eur 2002[G28]
WHO volume 1 1999[G63]

Legal Category (Licensed Products)

GSL[G37]

Constituents[G2,G6,G22,G41,G48,G59,G64]

Hydroxyanthracenes Primarily anthraquinone O-glycosides (anthraglycosides) of aloe-emodin, emodin, chrysophanol and physcion; dianthrone glycosides of rhein (sennosides A and B) and their oxalates; heterodianthrones including palmidin A (aloe-emodin, emodin), palmidin B (aloe-emodin, chrysophanol), palmidin C (chrysophanol, emodin), sennidin C (rhein, aloe-emodin), rheidin B (rhein, chrysophanol), and reidin C (rhein, physcion); free anthraquinones mainly aloe-emodin, chrysophanol, emodin, physcion and rhein.

Tannins Hydrolysable and condensed including glucogallin, free gallic acid, (−)-epicatechin gallate and catechin.

Other constituents Calcium oxalate, fatty acids, rutin, resins, starch (about 16%), stilbene glycosides, carbohydrates, volatile oil (trace) with more than 100 components.

Food Use

Rhubarb is listed by the Council of Europe as a natural source of food flavouring (category N2). This category indicates that it can be added to foodstuffs in small quantities, with a possible limitation of an active principle (as yet unspecified) in the final product.[G16] Rhubarb stems are commonly eaten as a food. In the USA, rhubarb is permitted for food use.[G65]

Herbal Use

Rhubarb has been used traditionally both as a laxative and an antidiarrhoeal agent.[G2,G6,G8,G64]

Dosage

Rhizome/root 0.2–1.0 g.

Pharmacological Actions

The laxative action of anthraquinone derivatives is well recognised (*see* Senna). Rhubarb also contains tannins, which exert an astringent action. At low doses, rhubarb is stated to act as an antidiarrhoeal because of the tannin components, whereas at higher doses it exerts a cathartic action.[G42]

Side-effects, Toxicity

See Senna for side-effects and toxicity associated with anthraquinone-containing drugs. Rhubarb leaves are toxic because of the oxalic acid content and should not be ingested. A case of anaphylaxis following rhubarb ingestion has been documented.[G51]

Contra-indications, Warnings[G20]

See Senna for contra-indications and warnings associated with anthraquinone-containing drugs. The astringent effect of rhubarb may exacerbate, rather than relieve, symptoms of constipation.[1] It has been stated that rhubarb should be avoided by individuals suffering from arthritis, kidney disease or urinary problems.[G42]

Pregnancy and lactation It is stated that rhubarb should be avoided during pregnancy.[G42] *See* Senna for contra-indications and warnings regarding the use of stimulant laxatives during pregnancy and lactation.

Pharmaceutical Comment

The chemistry of rhubarb is characterised by the anthraquinone derivatives. The laxative action of these compounds is well recognised and justifies the use of rhubarb as a laxative. As with all anthraquinone-containing preparations, the use of non-standardised products should be avoided because their pharmacological effect will be variable and unpredictable.

References

See also General References G2, G3, G6, G9, G12, G15, G16, G20, G22, G25, G29, G31, G36, G37, G41, G42, G43, G48, G51, G52, G56, G63 and G64.

1 Rohrback JA. Some uses of rhubarb in veterinary medicine. *Herbalist* 1983; 1: 239–241.