

Bayberry

Species (Family)

Myrica cerifera L. (Myricaceae)

Synonym(s)

Candleberry Bark, Myrica, Wax Myrtle Bark

Part(s) Used

Root bark

Pharmacopoeial and Other Monographs

BHP 1996^(G9)

PDR for Herbal Medicines 2nd edition^(G36)

Legal Category (Licensed Products)

GSL^(G37)

Constituents^(G22,G41,G48,G64)

Flavonoids Myricitrin.

Tannins 3.9% (bark), 34.82% (total aqueous extract).

Terpenoids Myricadiol, taraxerol and taraxerone.⁽¹⁾

Other constituents Albumen, red dye, gum, resin, starch, wax containing palmitic, myristic and lauric acid esters.

Food Use

Bayberry is not used in foods.

Herbal Use

Bayberry is stated to possess antipyretic, circulatory stimulant, emetic and mild diaphoretic properties. It has been used for diarrhoea, colds and specifically for mucous colitis. An infusion has been used as a gargle for a sore throat, and as a douche for leucorrhoea. Powdered root bark has been applied topically for the management of indolent ulcers.^(G7,G41,G64)

Dosage

Powdered bark 0.6–2.0 g by infusion or decoction three times daily.^(G7)

Liquid extract 0.6–2.0 mL (1:1 in 45% alcohol) three times daily.^(G7)

Pharmacological Actions

In vitro and animal studies

Myricitrin has been reported to exhibit choleric, bactericidal, paramedicinal, and spermatocidal activity; myricadiol has mineralocorticoid activity.^(G41) Tannins are known to possess astringent properties.

Side-effects, Toxicity

A total aqueous extract, tannin fraction, and tannin-free fraction from bayberry were all reported to produce tumours in NIH black rats, following weekly subcutaneous injections for up to 75 weeks.^(2,3) The number of tumours that developed were stated to be statistically significant for the tannin fraction and tannin-free fraction. Analysis of the tannin-free fraction revealed the presence of four phenolic compounds, one of which was identified as myricitrin. No tumours were reported in a later study, in which rats were given subcutaneous injections of total aqueous extract for 78 weeks.

Large doses may cause typical mineralocorticoid side-effects (e.g. sodium and water retention, hypertension).

Contra-indications, Warnings

Large doses may interfere with existing hypertensive, hypotensive or steroid therapy. Excessive use of tannin-containing herbs is not recommended.

Pregnancy and lactation The safety of bayberry has not been established. In view of the possible mineralocorticoid activity and the reported carcinogenic activity, the use of bayberry during pregnancy and lactation should be avoided.

Pharmaceutical Comment

Limited chemical information is available for bayberry. Documented tannin constituents justify

some of the herbal uses. In addition, mineralocorticoid activity has been reported for one of the triterpene constituents. In view of this and the tannin constituents, excessive use of bayberry should be avoided.

References

See also General References G9, G11, G22, G31, G32, G36, G37, G41, G44, G48 and G64.

- 1 Paul BD *et al.* Isolation of myricadiol, myricitrin, taraxerol, and taraxerone from *Myrica cerifera* L. root bark. *J Pharm Sci* 1974; 63: 958–959.
- 2 Kapadia GJ *et al.* Carcinogenicity of *Camellia sinensis* (tea) and some tannin-containing folk medicinal herbs administered subcutaneously in rats. *J Natl Cancer Inst* 1976; 57: 207–209.
- 3 Kapadia GJ *et al.* Carcinogenicity of some folk medicinal herbs in rats. *J Natl Cancer Inst* 1978; 60: 683–686.