

***Agathosma betulina* (P.J. Bergius) Pillans**

(Family: Rutaceae)

{Synonyms: *Barosma betulina* (P.J. Bergius) Bartl. & H.L. Wendl.}**Plant part used:** Leaves**Morphology**

Agathosma betulina (round leaf buchu) is a multi-stemmed, resprouting, gland-dotted shrub of up to 2 m in height, with small, characteristically rounded leaves (less than twice as long as broad) that have tips which curve backwards. The solitary flowers are small, star-shaped and white to purplish pink. *Agathosma betulina* (oval leaf buchu) is a single-stemmed shrub of up to 2,5 m in height, with oval leaves (more than twice as long as broad). The flowers are solitary or up to three per leaf axil and are white to purplish in colour. (Pillans 1950, Spreeth 1976, Van Wyk *et al.* 1997).

Ethno-botanical information

Buchu was an important part of the Khoi culture in the Cape (Laidler 1928, Forbes 1986) and still enjoys a great reputation as a general health tonic and medicine throughout South Africa. Buchu has a long history of use against inflammation and infection of the kidneys and urinary tract (as diuretic, diaphoretic and as urinary tract disinfectant). The product is indeed a diuretic and a mild urinary antiseptic. It is taken to stimulate kidney function and to treat mild cystitis and also prostatitis. In small doses it is an appetite stimulant and is used as digestive, carminative and antispasmodic. It is stimulant, useful for hangover, and is also used to treat colds and influenza, cough, rheumatism and gout (Van Wyk & Gericke 2000). Numerous other uses have been recorded, including the use (in bath water) for rheumatism and topically (often as buchu vinegar) for wounds and bruises (Neuwinger 2000, Van Wyk *et al.* 1997, Van Wyk & Gericke 2000, Watt & Breyer-Brandwijk 1962). In modern times, it is still commonly used as an ingredient of over-the-counter medicines to treat cystitis.

HS code (Harmonized Commodity Description and Coding System)

Not available

Common names in trade

English	:	buchu, round leaf buchu
French	:	<i>buchu</i>
German	:	<i>Bucco</i>
Italian	:	<i>buchu</i>

Source of plant material

Buchu is mainly wild-harvested, but the proportion that is grown in fields is increasing (now perhaps reaching 40%). Crop development is ongoing (contact 4 in trade points).

Areas of production in the country

Western Cape Province mainly in the dry region between Citrusdal, Paarl and Piquetberg. 15 hectares of buchu have been planted near Perth in Western Australia.

Volume of production in the country

300 tons/year

Volume of domestic consumption

50 tons/year

Volume of export

250 tons/year

Average price

Producer (R56 per kg fresh leaf) (R8.00 = 1 €)

(Value of industry – ca. R 120 million per year)

Type of plant products

Buchu is sold as fresh leaf, dry leaf, tincture and as so-called buchu water (the water fraction remaining after the oil is hydro-distilled).

Special regulations pertaining to trade

Normal agricultural requirements apply

Details from:

Department of Agriculture
 Directorate Plant Health
 Sub-directorate Plant Health Private Bag X258
 Pretoria 0001, Gauteng Province, South Africa
 Tel: +27 12 319 6100
 Fax: +27 12 319 6350
 E-mail: Mikeh@nda.agric.za

Registration status

An approved foodstuff (FDA, EU). Listed as GSL in the UK (“General Sales List”). The German Commission E listed buchu leaf (*Barosmae folium*) as an unapproved herb because of the lack of published information on efficacy.

Trade points and contact addresses in the country

- | | |
|----------------------|---|
| (1) Juliette Godfrey | Waterfall Health Farm
Dal Josafat
Paarl, Western Cape Province |
| (2) Elmarie Hardie | Afriplex (Pty) Ltd
P O Box 3186, Paarl 7620
Tel: +27 21 872 49 76/872 26 64
E-mail: info@afriplex.co.za
elmarieh@envig.co.za |

- (3) Lance Graven Grassroots Natural Products CC
Gouda, Western Cape Province
Tel: +27 232-320-506
- (4) Louisa Blomerus Agricultural Research Council
Buchu Research
Elsenburg, Western Cape Province
Tel: +27 21-808-5174
- (5) Louisa Blomerus Organic Agricultural Association of South Africa
Box 98347
Sloane Park 2156
Tel: +27 795 2468/706 2672
Fax: +27 794 2169/706 2672
- (6) Betucare International
E-mail: information@betucare.com
(Manufacturers and distributors of buchu water)
- (7) Western Cape Nature Conservation Board
Private Bag X100, Cape Town, 8000
General enquiries: Tel: +27 21 483-4615
E-mail: nrockman@pawc.wcape.gov.za
Fauna & Flora permit section: Deon Hignett
Tel: +27 21 483-3539
E-mail: dhignett@pawc.wcape.gov.za
Research & Scientific work: Dr Ernst Baard
Tel: + 27 21 866-8000
E-mail: baarde@cncjnk.wcape.gov.za
- (8) Ulrich Feiter Parceval (Pty) Ltd
Wellington, Western Cape Province
Tel: +27 21 8733 573
E-mail: parceval@adept.co.za
(Growers and producers of medicinal products)

Available sources of technologies in the country

Cultivation including organic farming: Louisa Blomerus (contact 5 above)

Pre- and post-harvest treatment: Contacts 1-3 above

Conservation: Contact 7 above

Production of phyto-pharmaceuticals: Contact 8 above

Production of herbal drugs: Contact 8 above

People and projects

Louisa Blommerus (contact 4-5 above) – agronomy, crop development

Grassroots Natural Products (contact 3 above)

Monographs

Blumenthal M *et al.* (1998); Newall *et al.* (1996); Van Wyk *et al.* (1997, 2004); Van Wyk & Wink 2004; Wichtl & Bisset (2000); Wichtl (2002)

Pharmacopoeial monographs include BHP 1990, BPC 1963, Martindale 30th edition, Egypt National Pharmacopoeia, French National Pharmacopoeia.

Patents

None

Chemical information including known chemo-types

Agathosma betulina contains flavonoids (mainly diosmin), mucilage and resins. The main compounds of interest, however, are the essential oil components. These include limonene, isomenthone, diosphenol (=buchu camphor) and terpinen-4-ol. Sulphur-containing compounds, including 8-mercapto-p-methan-3-one, are responsible for the characteristic blackcurrent flavour. The oil of *A. crenulata* is less desirable because of the virtual absence of diosphenol and high levels of pulegone (a potentially toxic substance). A comparison of the essential oils of *A. betulina*, *A. crenulata* and a hybrid between the two has been published (Kaiser *et al.* 1975, Blommaert & Bartel 1976, Posthumus *et al.* 1996)

Clinical studies

None

Uses

Medicinal (diuretic, diaphoretic, stimulant tonic); food and beverage flavour

Dosages

Raw herb (teas, infusions), tablets, tinctures

DNA finger-printing

No reports

References

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