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 : buchu
German : Bucco
Italian : buchu

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  
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Research & Scientific work: Dr Ernst Baard  
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(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 Blommmerus (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)

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

Dykman EJ (1891) *Kook-, Koek- en Resepte Boek*. Paarlse Drukpers Maatskappy, Paarl


