

P **Agathosma betulina**

Common Name(s)

Buchu, Honey Buchu, Mountain Buchu

How Used

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Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(+)-4-HYDROXYMENTHONE	Leaf Essent. Oil	--	--		
0	(+)-8-HYDROXYMENTHONE	Leaf Essent. Oil	--	--		
0	(+)-ISOPULEGONE	Leaf Essent. Oil	--	--		
0	(+)-LIMONENE	Leaf Essent. Oil	--	--		
0	(+)-LIMONENE	Leaf	1500	2500	0.707106781186547	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(+)-LINALOOL	Leaf Essent. Oil	--	--		
0	(+)-MENTHONE	Leaf Essent. Oil	--	--		
0	(+)-MENTHONE	Leaf	1350	2250		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	(+)-PULEGONE	Leaf	1500	3000	-0.15169172521226934	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	(-)-ISOMENTHONE	Leaf	5250	8750		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	(-)-ISOMENTHONE	Leaf Essent. Oil	--	--		
0	(-)-ISOPULEGONE	Leaf	450	900		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	(-)-ISOPULEGONE	Leaf Essent. Oil	--	--		
0	(-)-PULEGONE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	(-)-PULEGONE	Leaf	1650	2750	-0.7071067811865475	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	1,8-CINEOL	Leaf Essent. Oil	--	--		
0	1-4-CINEOL	Leaf Essent. Oil	--	--		
0	2-EPI-P-MENTHANE-8-THIOL-1-ONE	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	3-METHYL-CYCLOHEXANONE	Leaf Essent. Oil	--	--		
0	4-ACETOXY-ISOMENTHONE	Leaf Essent. Oil	--	--		
0	4-ACETOXY-ISOPULEGONE	Leaf Essent. Oil	--	--		
0	4-HYDROXY-DIOSPHENOL	Leaf Essent. Oil	--	--		
0	4-HYDROXY-ISOPULEGONE	Leaf Essent. Oil	--	--		
8	4-TERPINEOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	5-METHYL-FURFURAL	Leaf Essent. Oil	--	--		
0	8-ACETOXYMENTHONE	Leaf Essent. Oil	--	--		
0	8-ACETYL-THIOPIPERITONE	Leaf Essent. Oil	--	--		
0	8-ACETYLTHIO-P-MENTHAN-3-ONE	Essential Oil	--	--	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses	
0	8-MERCAPTO-P-MENTHA-3-ONE	Leaf	--	--	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.	
0	ALPHA-MUROLENE	Leaf Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil	--	--		
0	ALPHA-PHELLANDROL	Leaf Essent. Oil	--	--		
28	ALPHA-PINENE	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
28	ALPHA-PINENE	Leaf Essent. Oil	--	--		
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	--		
13	ALPHA-TERPINENE	Leaf	--	--		
23	ALPHA-TERPINEOL	Leaf Essent. Oil	--	--		
5	ALUMINUM	Leaf	1360	1360	0.6789856525717123	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	AROMADENDRENE	Leaf Essent. Oil	--	--		
112	ASCORBIC-ACID	Leaf	4900	4900	0.010737464231764774	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ASH	Leaf	81000	81000	-0.666900349430093	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	BAROSMA-CAMPHOR	Leaf	1800	3000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	BETA-DAMASCENONE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
5	BETA-ELEMENE	Leaf Essent. Oil	--	--		
13	BETA-IONONE	Leaf Essent. Oil	--	--		
3	BETA-PHELLANDRENE	Leaf Essent. Oil	--	--		
0	BETA-PHELLANDROL	Leaf Essent. Oil	--	--		
13	BETA-PINENE	Leaf Essent. Oil	--	--		
3	BETA-TERPINEOL	Leaf Essent. Oil	--	--		
35	BORNEOL	Leaf Essent. Oil	--	--		
0	BUCHU-CAMPHOR	Leaf Essent. Oil	--	--		
0	CALAMENENE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
28	CALCIUM	Leaf	38800	38800	1.391343499963003	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
9	CAMPHENENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	CAMPHENENE	Leaf Essent. Oil	--	--		
19	CARVONE	Leaf Essent. Oil	--	--		
24	CHROMIUM	Leaf	29	29	1.832564064465539	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CIS-2-ACETOXY-PULENONE	Leaf Essent. Oil	--	--		
0	CIS-BETA-OCIMENE	Leaf Essent. Oil	--	--		
0	CIS-CARVEOL	Leaf Essent. Oil	--	--		
0	CIS-CARVEYL-ACETATE	Leaf Essent. Oil	--	--		
0	CIS-LINALOOL-OXIDE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
15	CITRONELLOL	Leaf Essent. Oil	--	--		
2	CITRONELLYL-ACETATE	Leaf Essent. Oil	--	--		
2	COBALT	Leaf	--	87	0.21821961505531773	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CYMOPYROCATECHOL	Leaf Essent. Oil	--	--		
19	D-LIMONENE	Leaf	--	--		Jim Duke's personal files.
0	DEC-CIS-4-ENOL	Leaf Essent. Oil	--	--		
0	DEC-TRANS-4-ENOL	Leaf Essent. Oil	--	--		
0	DELTA-TERPINEOL	Leaf Essent. Oil	--	--		
0	DIHYDROCARVONE	Leaf Essent. Oil	--	--		
13	DIOSMETIN	Leaf	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

	Chemical Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
34	DIOSMIN	Leaf	200	500		
4	DIOSPHENOL	Leaf	1800	3600	0.7071067811865478	
4	DIOSPHENOL	Leaf Essent. Oil	--	--		
0	DIOSPHENOL-METHYL-ETHER	Leaf Essent. Oil	--	--		
0	DIOSPHENOLENE	Leaf Essent. Oil	--	--		
7	DIPENTENE	Essential Oil	--	--	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses	
0	DL-PIPERITONE-EPOXIDE	Leaf	1425	2375	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	
0	DL-PIPERITONEPOXIDE	Leaf	1425	2375		
0	DODECA-CIS-CIS-3,6-DIENOL	Leaf Essent. Oil	--	--		
0	DODECA-CIS-CIS-3,6-DIENYL-ACETATE	Leaf Essent. Oil	--	--		
0	EO	Leaf	10000	35000	2.0639741997608496	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
12	ESTRAGOLE	Leaf Essent. Oil	--	--		
76	EUGENOL	Leaf Essent. Oil	--	--		
6	FURFURAL	Leaf Essent. Oil	--	--		
0	GAMMA-MUROLENE	Leaf Essent. Oil	--	--		
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	--		
11	GAMMA-TERPINENE	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	
18	GUAIACOL	Leaf Essent. Oil	--	--		
31	HESPERIDIN	Leaf	10000 34000 0.7071067811865476		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.	
6	IRON	Leaf	867 867 1.2770392926238854		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
3	ISOMENTHONE	Leaf Essent. Oil	--	--		
3	ISOMENTHONE	Leaf	5250	8750	2.193021261596281	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISONEOMENTHOL	Leaf Essent. Oil	--	--		
0	ISONEOMENTHOL-ACETATE	Leaf Essent. Oil	--	--		
0	ISOPULEGOLE	Leaf Essent. Oil	--	--		
0	ISOPULEGOLE-ACETATE	Leaf Essent. Oil	--	--		
4	ISOPULEGONE	Leaf	450	900	0.7071067811865482	Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
4	ISOPULEGONE	Leaf Essent. Oil	--	--		
0	L-MENTHONE	Essential Oil	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
60	LIMONENE	Leaf Essent. Oil	--	--		
65	MAGNESIUM	Leaf	2210	2210	-0.7397339063106452	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	MANGANESE	Leaf	675	675	0.6622735776500002	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	MENTHOFURAN	Leaf Essent. Oil	--	--		
63	MENTHOL	Leaf Essent. Oil	--	--		
0	MENTHOL-ACETATE	Leaf Essent. Oil	--	--		
30	MENTHONE	Leaf Essent. Oil	--	--		
3	MUCILAGE	Leaf	--	--	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses	
22	MYRCENE	Leaf	--	--		
22	MYRCENE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	MYRTANOL	Leaf Essent. Oil	--	--		
0	MYRTANOL-ACETATE	Leaf Essent. Oil	--	--		
2	MYRTENOL	Leaf Essent. Oil	--	--		
1	MYRTENYL-ACETATE	Leaf Essent. Oil	--	--		
0	NEOISOPULEGOLE	Leaf Essent. Oil	--	--		
2	NEOMENTHOL	Leaf Essent. Oil	--	--		
10	NEROL	Leaf Essent. Oil	--	--		
0	NEROL-ACETATE	Leaf Essent. Oil	--	--		
0	NEROL-ACETONE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
39	NIACIN	Leaf	--	42	-0.6750885614025129	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	P-CYMEN-8-OL	Leaf Essent. Oil	--	--		
16	P-CYMENE	Leaf Essent. Oil	--	--		
0	P-CYMOL	Essential Oil	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	P-MENTH-1-EN-9-AL	Leaf Essent. Oil	--	--		
0	P-MENTH-1-EN-9-OL	Leaf Essent. Oil	--	--		
0	P-MENTH-1-EN-9-YL-ACETATE	Leaf Essent. Oil	--	--		
0	P-MENTH-4(8)-EN-7-OL	Leaf Essent. Oil	--	--		
0	P-MENTH-8-EN-7-OL	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	P-MENTHA-1,3,6-TRIENE	Leaf Essent. Oil	--	--		
0	P-MENTHA-1,8-DIEN-10-AL	Leaf Essent. Oil	--	--		
0	P-MENTHA-1,8-DIEN-10-OL	Leaf Essent. Oil	--	--		
0	P-MENTHAN-3-ON-8-THIOL	Leaf	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL.	566 pp.
0	P-MENTHANE-8-THIOL-1-ONE	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite.	1991.
0	P-MENTHANE-8-THIOL-3-ONE	Leaf Essent. Oil	--	--		
6	PHENETHYL-ALCOHOL	Leaf Essent. Oil	--	--		
4	PHOSPHORUS	Leaf	6780	6780	0.33274881093925496	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PINOL	Leaf Essent. Oil	--	--		
3	PIPERITENONE	Leaf Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
7	PIPERITONE	Leaf Essent. Oil	--	--		
14	POTASSIUM	Leaf	11700	11700	-0.8232807551707827	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROTEIN	Leaf	92000	92000	-1.1955701649552826	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PSEUDODIOSPHENOL	Leaf Essent. Oil	--	--		
28	PULEGONE	Leaf	1650	2750	-0.32792065886702804	
0	PULEGONE-EPOXIDE-A	Leaf Essent. Oil	--	--		
176	QUERCETIN	Plant	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	QUERCETIN-3,7-DI-O-BETA-D-GLUGOSIDE	Leaf	--	--		
0	QUERCETIN-3,7-DIGLUCOSIDE	Leaf	--	--		
0	QUERCETRIN-3,7-DIGLUCOSIDE	Essential Oil	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	QUERCETRIN-3,7-GLUCOSIDE	Essential Oil	--	--		
0	RESIN	Leaf	50000	50000	-0.27511406022450346	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
15	RIBOFLAVIN	Leaf	1.1	1.1	-0.172705289047245	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
87	RUTIN	Essential Oil	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
87	RUTIN	Leaf	--	--		
5	SABINENE	Leaf Essent. Oil	--	--		
60	SELENIUM	Leaf	--	70	4.995871526729794	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	SILICON	Leaf	43	43	-0.28529562369022266	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SODIUM	Leaf	2760	2760	-0.15708991303999795	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	SPATHULENOL	Leaf Essent. Oil	--	--		
23	TERPINEN-4-OL	Leaf	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
9	TERPINOLENE	Leaf Essent. Oil	--	--		
31	THIAMIN	Leaf	7	19	2.2289490986880964	
4	TIN	Leaf	11	11	-0.5530067419183887	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	TRANS-2-ACETOXY-PULEGONE	Leaf Essent. Oil	--	--		
0	TRANS-2-HYDROXYMENTHONE	Leaf Essent. Oil	--	--		
0	TRANS-BETA-OCIMENE	Leaf Essent. Oil	--	--		
1	TRANS-CARVEOL	Leaf Essent. Oil	--	--		
0	TRANS-CARVEYL-ACETATE	Leaf Essent. Oil	--	--		
0	TRANS-LINALOOL-OXIDE	Leaf Essent. Oil	--	--		
0	VINYL-GUAIACOL	Leaf Essent. Oil	--	--		
77	ZINC	Leaf	84	84	-0.01125863721237699	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.