

# C BETA-CUBEBENE

## Chemid

BETACUBEBENE

\*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Leaf	1	15	-0.27140166674948796	--
Acinos alpinus	Shoot	0.5	0.5	-0.2604456884937858	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Acinos alpinus	Shoot	--	0.5	-0.2604456884937858	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Ageratum conyzoides	Plant	4	32	1.7781592386140743	--
Ageratum conyzoides	Shoot	--	2460	4.864903734217578	R. Vera, (1993); Chemical composition of the essential oil Ageratum conyzoides L. (Asteraceae) from Reunion, Flavour Fragr. J., Vol.8, 257-260.
Artemisia annua	Leaf	55	1775	4.912450928332629	--
Artemisia pallens	Plant	3	12	0.06289309204101236	--
Chamaemelum nobile	Plant	--	--		--
Citrus paradisi	Pericarp	--	17		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Citrus sinensis	Fruit	10	10	-0.7068656261481132	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Copaifera spp	Gum	2100	8100		--
Eucalyptus angulosa	Leaf	--	1.5	-0.31116417245040195	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1994. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part I. Subgenus Symphyomyrtus, Section Dumaria, Series Incrassatae. Flavour and Fragrance J. 9(3):113-7
Eucalyptus behriana	Leaf	2.7	2.7	-0.30762972749920964	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus ceratocorys	Leaf	--	6	-0.29791000388343064	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1994. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part I. Subgenus Symphyomyrtus, Section Dumaria, Series Incrassatae. Flavour and Fragrance J. 9(3):113-7
Eucalyptus citriodora	Leaf Essent. Oil	--	5000	-0.27151722480926643	--
Eucalyptus cuprea	Leaf	6.4	6.4	-0.29673185556636655	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus desquamata	Leaf	0	15	-0.27140166674948796	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus dolichorhyncha	Leaf	--	6	-0.29791000388343064	Bignell,C.M.,Dunlop,P.J.,Brophy,J.J.,and Jackson, J.F.1994.Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus.Part I.Subgenus Symphyomyrtus,Section Dumaria,Series Incrassatae.Flavour and Fragrance J.9(3):113-7
Eucalyptus erythrandra	Leaf	--	7	-0.2949646330907703	Bignell,C.M.,Dunlop,P.J.,Brophy,J.J.,and Jackson, J.F.1994.Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus.Part I.Subgenus Symphyomyrtus,Section Dumaria,Series Incrassatae.Flavour and Fragrance J.9(3):113-7
Eucalyptus fasciculosa	Leaf	0	1.3	-0.31175324660893394	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus forrestiana	Leaf	--	80	-0.07995256522656888	Bignell,C.M.,Dunlop,P.J.,Brophy,J.J.,and Jackson, J.F.1994.Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus.Part I.Subgenus Symphyomyrtus,Section Dumaria,Series Incrassatae.Flavour and Fragrance J.9(3):113-7
Eucalyptus globulus	Leaf Essent. Oil	--	1000	-1.066201785226631	--
Eucalyptus incrassata	Leaf	--	14	-0.2743470375421483	Bignell,C.M.,Dunlop,P.J.,Brophy,J.J.,and Jackson, J.F.1994.Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus.Part I.Subgenus Symphyomyrtus,Section Dumaria,Series Incrassatae.Flavour and Fragrance J.9(3):113-7
Eucalyptus intertexta	Leaf	5.5	5.5	-0.29938268927976075	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus lansdowneana	Leaf	2.4	2.4	-0.30851333873700776	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus largisparsa	Leaf	50	50	-0.1683136890063777	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus leucoxyloides	Leaf	0	5.5	-0.29938268927976075	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus melanophloia	Leaf	2	2	-0.3096914870540718	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus ochrophloia	Leaf	1.5	1.5	-0.31116417245040195	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus odorata	Leaf	4.4	4.4	-0.30262259715168716	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus populnea	Leaf	1.8	1.8	-0.31028056121260383	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus porosa	Leaf	10	10	-0.28612852071278944	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus sparsa	Leaf	25	25	-0.24194795882288503	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus stoatei	Leaf	--	13	-0.27729240833480856	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1994. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part I. Subgenus Symphyomyrtus, Section Dumaria, Series Incrassatae. Flavour and Fragrance J. 9(3):113-7
Eucalyptus tetraptera	Leaf	--	10	-0.28612852071278944	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1994. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part I. Subgenus Symphyomyrtus, Section Dumaria, Series Incrassatae. Flavour and Fragrance J. 9(3):113-7
Eucalyptus viridis	Leaf	0	0.5	-0.31410954324306223	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Humulus lupulus	Fruit	5	5	-0.7073479088132132	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Laurus nobilis	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Leonotis leonurus	Se	6	6		Pedro, L.G., Barroso, J.G., Marques, N.T., Ascensao, L., Pais, M.S.S. and Scheffer, J.J.C. 1991. Composition of the Essential Oil from Sepals of Leonotis leonurus R. Br. J. Ess. Oil Res. 3: 451-3
Melaleuca alternifolia	Root Essent. Oil	--	900	-1	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Melissa officinalis	Shoot	3	24	-0.21147406359697055	Deutsche Apot. Ztit. 129(4):155-163. W. Schulze et al. Die Melisse.
Mentha aquatica	Shoot	4	4	-0.253152042232558	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogekagaku Kaishi 67(10): 1417-1419.
Mentha aquatica	Shoot	--	9	-0.2427325475736611	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogekagaku Kaishi 67(10): 1417-1419.
Mentha aquatica	Shoot	--	8	-0.2448164465054405	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogekagaku Kaishi 67(10): 1417-1419.
Mentha aquatica	Shoot	--	2	-0.2573198400961167	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogekagaku Kaishi 67(10): 1417-1419.
Mentha aquatica	Shoot	--	4	-0.253152042232558	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogekagaku Kaishi 67(10): 1417-1419.
Mentha longifolia	Shoot	19	200	0.15529214839619873	Planta Medica, 57: A83, 1991.
Micromeria myrtifolia	Shoot	3	3	-0.25523594116433734	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of Micromeria myrtifolia Boiss. et Hohen. J. Ess. Oil Res., 4: 79-80.
Montanoa tomentosa	Plant	--	--	--	--
Nepeta racemosa	Shoot	2	2	-0.2573198400961167	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of Nepeta racemosa Lam. J. Ess. Oil Res. 5: 215-7.
Nepeta racemosa	Shoot	--	2	-0.2573198400961167	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of Nepeta racemosa Lam. J. Ess. Oil Res. 5: 215-7.
Ocimum basilicum	Plant	--	--	--	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum basilicum	Shoot Essent. Oil	--	3700		--
Ocimum gratissimum	Flower	0	0		Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of Ocimum gratissimum L. J. Ess. Oil Res. 4: 231-234.
Ocimum gratissimum	Leaf	0	0	-0.3155822286393924	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of Ocimum gratissimum L. J. Ess. Oil Res. 4: 231-234.
Ocimum suave	Shoot	205	205	0.1657116430550956	J. Nat. Prod. 44: 308.
Origanum onites	Shoot	120	120	-0.011419766146150994	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. Flav. & Frag. J. 8: 331-7.
Origanum sipyleum	Shoot	30	30	-0.19897067000629431	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum sipyleum	Shoot	--	2	-0.2573198400961167	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum sipyleum	Shoot	--	10	-0.24064864864188173	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum sipyleum	Shoot	--	13	-0.23439695184654363	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum vulgare	Plant	0	0	-0.9662665959028248	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four Origanum vulgare Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.
Origanum vulgare	Plant	0.6	0.6	-0.914808611505633	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four Origanum vulgare Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Panax ginseng	Flower Essent. Oil	--	--		--
Panax ginseng	Shoot	--	--		--
Panax quinquefolius	Root Essent. Oil	997	13216	1	--
Piper cubeba	Fruit	11000	22000	1.4142135349613263	--
Piper cubeba	Fruit Essent. Oil	2000	2000		--
Piper nigrum	Fruit Essent. Oil	--	--		--
Plectranthus incanus	Shoot	20	20	-0.21980965932408802	Shah, G.C., Bhandari, R. & Mathela, C.S. 1992. 1,2-Epoxy-p-Menthane Derivatives from some Labiatae Species. J. Ess. Oil Res. 4: 57-59.
Scutellaria galericulata	Plant	20	20	0.7489995506702372	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Sideritis germanicolpitana	Plant	1	3	-0.7089766739168656	J. Essential Oil, 4: 533.
Stevia rebaudiana	Flower	--	--		Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
Stevia rebaudiana	Leaf	--	--		Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
Teucrium arduini	Shoot	8	8	-0.2448164465054405	Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of Teucrium arduini L. J. Ess. Oil Res. 4: 223-225.



Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium arduini	Shoot	--	8	-0.2448164465054405	Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of Teucrium arduini L. J. Ess. Oil Res. 4: 223-225.
Teucrium cyprium	Leaf	0	0	-0.3155822286393924	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium divaricatum	Leaf	800	800	2.0407144054888424	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium gnaphalodes	Shoot	0	0	-0.26148763795967545	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian Teucrium Species. J. Ess. Oil Res. 5: 397-402.
Teucrium kotschyianum	Leaf	125	125	0.05258912044314433	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium micropodioides	Leaf	0	0	-0.3155822286393924	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium polium	Shoot	2	2	-0.2573198400961167	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian Teucrium Species. J. Ess. Oil Res. 5: 397-402.
Thymus capitatus	Shoot	0	0	-0.26148763795967545	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. Flav. & Frag. J. 8: 331-7.
Valeriana officinalis	Leaf Essent. Oil	6500	13100	1.3377190100358967	--
Valeriana officinalis	Leaf	15	335	0.671116986901806	Father Nature's Farmacy: The aggregate of all these three-letter citations.