

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for BETA-BOURBONENE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mentha longifolia	Shoot	1.0	535.0	4.321101307401028	--
Satureja douglasii	Plant		533.0	3.4610603724632867	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Teucrium kotschyianum	Leaf		640.0	3.3887196948397023	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.
Pycnanthemum tenuifolium	Shoot	16.0	400.0	3.120215066226877	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Ocimum gratissimum	Flower	95.0	145.0	1.9537073405462937	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of Ocimum gratissimum L. J. Ess. Oil Res. 4: 231-234.
Pycnanthemum virginianum	Shoot	6.0	232.0	1.6257788549879333	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Perilla frutescens	Shoot Essent. Oil		12000.0	1.262572667633647	Nguyen, X. D., La, D. M., Lu'u, D. C., Leclercq, P. A. 1995. Essential Oil Constituents from the Aerial Parts of Perilla frutescens (L.) Britton. J. Essent. Oil Res., 7(4): 429-432.
Pycnanthemum montanum	Shoot	91.0	104.0	0.4871607892820716	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lycopus virginicus	Plant	53.0	132.0	0.46323688546044917	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Satureja montana	Plant	4.0	85.0	0.11187104035039094	--
Teucrium cyprium	Leaf		105.0	0.08261691770889089	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.
Pycnanthemum albescens	Shoot	16.0	54.0	0.04238810736571947	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Nepeta racemosa	Shoot		50.0	0.006806292812411298	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Nepeta racemosa</i>	Shoot		50.0	0.006806292812411298	Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7.
<i>Monarda didyma</i>	Plant	5.0	70.0	-2.6699532303189845E-4	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda didyma</i>	Leaf	50.0	90.0	-0.010077552677954457	--
<i>Teucrium divaricatum</i>	Leaf		90.0	-0.010077552677954457	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. J. Ethnopharm. 35: 105-113.
<i>Melissa officinalis</i>	Shoot	1.0	48.0	-0.010984614464242788	Deutsche Apot. Ztit. 129(4):155-163. W. Schulze et al. Die Melisse.
<i>Thymus cilicicus</i>	Shoot		47.0	-0.019880068102569832	Tumen, G., Koyuncu, M., Kirimer, N., and Baser, K.H.C. 1994. Composition of the Essential Oil of <i>Thymus cilicicus</i> Boiss. & Bal. J. Ess. Oil Res. 6: 97-8.
<i>Salvia gilliesii</i>	Shoot		44.0	-0.04656642901755096	Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. J. Ess. Oil Res. 5: 319-320.
<i>Monarda fistulosa</i>	Plant	1.0	62.0	-0.06007394768219075	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Origanum vulgare</i>	Shoot Essent. Oil		7500.0	-0.07953213654385216	--
<i>Pycnanthemum pilosum</i>	Flower	10.0	35.0	-0.11296029540349557	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Ocimum gratissimum</i>	Leaf	40.0	70.0	-0.13367017986041468	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of <i>Ocimum gratissimum</i> L. J. Ess. Oil Res. 4: 231-234.
<i>Micromeria congesta</i>	Leaf	45.0	55.0	-0.22636465024725982	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . J. Ess. Oil Res., 3: 387-393.
<i>Mentha spicata</i>	Leaf	2.0	50.0	-0.2572628070428749	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Acinos alpinus	Shoot		20.0	-0.2600573163374	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinos alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Acinos alpinus	Shoot		20.0	-0.2600573163374	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinos alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Mentha pulegium	Plant	15.0	30.0	-0.2993017571188262	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hyptis suaveolens	Shoot		15.0	-0.3045345845290352	Mallvarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of Hyptis suaveolens (L.) Poit. J. Ess. Oil Res. 5: 321.
Hyptis suaveolens	Shoot		15.0	-0.3045345845290352	Mallvarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of Hyptis suaveolens (L.) Poit. J. Ess. Oil Res. 5: 321.
Micromeria fruticosa	Shoot		10.0	-0.3490118527206704	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of Micromeria fruticosa (L.) Druce subsp. barbata (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
Micromeria fruticosa	Shoot		10.0	-0.3490118527206704	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of Micromeria fruticosa (L.) Druce subsp. barbata (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
Sideritis pauli	Shoot		10.0	-0.3490118527206704	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
Pycnanthemum pilosum	Leaf	10.0	35.0	-0.34995727742972005	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Thymus longicaulis	Shoot		9.0	-0.3579073063589975	Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of Thymus longicaulis C. Presl subsp. longicaulis in the same Population. J. Ess. Oil Res. 5: 291-5.
Thymus longicaulis	Shoot		9.0	-0.3579073063589975	Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of Thymus longicaulis C. Presl subsp. longicaulis in the same Population. J. Ess. Oil Res. 5: 291-5.
Thymus funkii	Shoot		8.0	-0.36680275999732453	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. Flav. & Fragr. J. 10(6): 379-383.
Thymus funkii	Shoot		8.0	-0.36680275999732453	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. Flav. & Fragr. J. 10(6): 379-383.
Thymus x citriodorus	Plant		20.0	-0.37406044756777473	Stahl-Biskup, E. and Holthuijzen, J. 1995. Essential oil and glycosidally bound volatiles of lemon-scented thyme, Thymus x citriodorus (Pers.) Schreb. Flav. & Fragr. J. 10: 225-229.
Calamintha nepeta	Shoot		5.0	-0.39348912091230565	Kirimer, N., Baser, K.H.C., Ozek, T. and Kurkcuoglu, M. 1992. Composition of the Essential Oil of Calamintha nepeta subsp. glandulosa. J. Ess. Oil Res. 4:189-190
Teucrium scorodonia	Shoot		4.88	-0.3945565753489049	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Sideritis athoa	Shoot		4.0	-0.4023845745506327	Ozek, T., Baser, K.H.C. and Tumen, G. 1993. The Essential Oil of Sideritis athoa Papanikolaou Et Kokkini. J. Ess. Oil Res. 5: 669-670.
Sideritis mugronensis	Leaf	15.0	25.0	-0.41175359102095016	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium oxylepis	Shoot		2.92	-0.4119916644800259	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium pseudoscorodonia	Shoot		2.45	-0.4161725276900396	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Satureja cilicica	Shoot		2.0	-0.42017548182728676	Tumen, G. Baser, K.H.C. and Kirimer, N. 1993. The Essential Oil of Satureja cilicica P.H. Davis. J. Ess. Oil Res. 5: 547-548.
Teucrium salviastrum	Shoot		1.56	-0.42408948142815067	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Pelargonium citrosum	Shoot		1.0	-0.4290709354656138	Matsuda, B. M., et al. 1996. Essential Oil Analysis and Field Evaluation of the Citrosa Plant 'Pelargonium citrosum' as a Repellent Against Populations of Aedes Mosquitoes. J. Am. Mosq. Contr. Assoc. 12(1):69-74.
Teucrium asiaticum	Shoot		0.87	-0.4302273444385963	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium oxylepis	Shoot		0.34	-0.43494193486690963	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Micromeria myrtifolia	Shoot		0.1	-0.4370768437401082	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.
Thymus riatarum	Shoot		0.1	-0.4370768437401082	Iglesias, J., Vila, R., Canigual, S., Bellakdhar, and Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. J. Ess. Oil Res. 3: 43-4.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Micromeria varia	Shoot		0.0	-0.43796638910394087	Pedro, L.G., et al. 1995. Composition of the Essential oil of <i>Micromeria varia</i> Benth. ssp. <i>thymoides</i> (Sol. ex Lowe) Perez var. <i>thymoides</i> , and endemic species of the Madeira Archipelago. <i>flav. & Fragr. J.</i> 10(3): 199-202.
Thymus longicaulis	Shoot		0.0	-0.43796638910394087	Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5.
Teucrium micropodioides	Leaf		20.0	-0.44265174781656524	Arnold, N., Bellomaria, B., Velentini G. and Razaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
Thymus mastichina	Plant		10.0	-0.4488191380167233	Lawrence, B.M., <i>Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.</i>
Sideritis germanicolpitana	Plant	6.0	9.0	-0.45629500706161813	<i>J. Essential Oil</i> , 4: 533.
Origanum vulgare	Plant		9.0	-0.45629500706161813	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431.
Origanum vulgare	Plant		8.0	-0.46377087610651296	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431.
Glechoma hederacea	Plant	1.0	6.0	-0.4787226141963027	Lawrence, B.M., <i>Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.</i>
Sideritis mugronensis	Flower	10.0	15.0	-0.48871804739436636	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. <i>J. Ess. Oil Res.</i> , 3: 395-397.
Hypericum perforatum	Plant	0.25	4.5	-0.489936417763645	--
Origanum vulgare	Plant		2.0	-0.5086260903758821	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Calamintha nepeta	Leaf		8.0	-0.5168073241260414	Akgul, A., De Pooter, H.L., and De Buyck, L.F. 1991. The Essential Oils of Calamintha nepeta subsp. glandulosa and Ziziphora clinopodioides from Turkey. J. Ess. Oil Res., 3: 7-10.
Callicarpa americana	Leaf		3.0	-0.5477054809216564	--
Vitex agnus-castus	Leaf		0.2	-0.5650084487272009	Ekundayo, O., Laakso, I., Holopainen, M., Hiltunen, R., Oguntimein, B., and Kauppinen, V. 1990. The Chemical Composition and Antimicrobial Activity of the Leaf Oil of Vitex agnus-castus L. J. Essential Oil Research, 2: 115-119.
Monarda didyma	Flower		10.0	-0.5826574853920841	Flavour and Fragrance Journal, 6: 80.
Lonicera japonica	Flower	0.001	0.062	-0.7693715123563478	Schlotzhauer, W.S., S.D. Pair, and R.J. Horvat. 1996. Volatile constituents from the flowers of Japanese Honeysuckle. J. Agric. Food Chem. 44:206-209.
Ocimum basilicum	Shoot Essent. Oil		3800.0	-1.183040531089796	--
Boswellia sacra	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Leonotis leonurus	Se		4.0		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
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.
Pelargonium graveolens	Essential Oil				--
Myroxylon balsamum	Plant				--
Salvia officinalis	Leaf Essent. Oil				--
Ocimum basilicum	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Agastache rugosa	Shoot				Jim Duke's personal files.
Micromeria varia	Shoot	0.0			--
Boswellia sacra	Resin, Exudate, Sap		10000.0		Chiavari, G., Gtalletti, G. C., Piccaglia, R., Mohamud, M. A. 1991. Differentiation Between Resins Boswellia carterii and Boswellia frereana (Frankincense) of Somali Origin. J. Essent. Oil Res. 3 (3):185-186.
Chamaemelum nobile	Plant				--
Mentha spicata	Essential Oil				--
Syzygium aromaticum	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Panax ginseng	Flower Essent. Oil				--
Panax ginseng	Shoot				--
Magnolia denudata	Bark				--
Magnolia denudata	Bulb				--
Magnolia denudata	Flower				--
Magnolia denudata	Twig				--