

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for BETA-CARYOPHYLLENE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Leaf	1.0	65.0	-0.303004238741691	--
Aesculus hippocastanum	Flower Essent. Oil		13000.0		Jim Duke's personal files.
Agastache rugosa	Shoot				Jim Duke's personal files.
Ageratum conyzoides	Plant	34.0	270.0	-0.48278584579429146	--
Aloysia citrodora	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
Alpinia galanga	Leaf Essent. Oil		1100.0	-0.3994527618742238	--
Alpinia galanga	Rhizome		50.0	1.0	--
Alpinia galanga	Rhizome Essent. Oil		1100.0	1.0	--
Alpinia galanga	Leaf		350.0	-0.1634629715862706	--
Anethum graveolens	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
Anethum graveolens	Essential Oil				--
Angelica archangelica	Root Essent. Oil		110000.0	1.0368391024927353	--
Angelica archangelica	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Annona squamosa	Leaf				--
Apium graveolens	Fruit Essent. Oil	5000.0	43000.0	-0.3340654939269333	--
Apium graveolens	Seed Essent. Oil	5000.0	43000.0	-1.0	--
Apium graveolens	Seed	55.0	1290.0	0.859268747623255	--
Apium graveolens	Leaf Essent. Oil		5000.0	-0.3762214301968018	--
Aralia cordata	Root		6.0		--
Artemisia capillaris	Essential Oil				--
Artemisia salsoloides	Shoot		500.0	0.6037001779326777	V. Kaul, P. Weyerstahl, H. Wahlberg, H. Marschall, (1992); Volatile constituents of the essential oil and the absolute of Artemisia salsoloides Willd. from Ladakh, Flavour and Fragrance journal, Vol.7, 299-305.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Artemisia annua	Plant	15.0	2240.0	2.028337893386577	--
Artemisia absinthium	Plant				--
Bidens pilosa	Leaf Essent. Oil		730000.0	3.9424235611188183	Jim Duke's personal files.
Boswellia sacra	Resin, Exudate, Sap		49100.0		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.
Boswellia sacra	Essential Oil				--
Calamintha nepeta	Plant		135.0	-0.654867929443742	J. Ethnopharmacology, 39: 167.
Camellia sinensis	Leaf				--
Carum carvi	Seed	20.0	1320.0	0.9233136232225039	--
Centella asiatica	Shoot				Jim Duke's personal files.
Centella asiatica	Essential Oil		125000.0	0.1933351753509813	Jim Duke's personal files.
Centella asiatica	Plant				--
Chamaemelum nobile	Plant				--
Chrysanthemum x morifolium	Plant	3.0	12.0	-0.8116538278799078	Wealth of India.
Chrysanthemum parthenium	Shoot		8.0	-0.39375252938120847	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
Cinnamomum aromaticum	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Cinnamomum camphora	Leaf		5.0	-0.3323813476165163	--
Cinnamomum verum	Stem Bark				--
Cinnamomum verum	Bark Essent. Oil		13500.0		--
Cinnamomum verum	Leaf	30.0	60.0	-0.30545233114792647	--
Cinnamomum aromaticum	Stem Bark				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cinnamomum verum	Leaf Essent. Oil		18500.0	-0.2958052820826489	--
Citrus limon	Leaf Essent. Oil	100.0	3500.0	-0.38515655776504104	Jim Duke's personal files.
Citrus sinensis	Fruit	1.0	2.0	-0.5058677869700708	--
Citrus limon	Petiole		13.0		--
Citrus reticulata	Fruit	1.0	2.0	-0.5058677869700708	--
Citrus paradisi	Pericarp		130.0		--
Cleonia lusitanica	Leaf	2.0	5.0	-0.3323813476165163	Perez-Alonso, M., Velasco-Negueruela, A., and Lopez-Saez, A. 1991. The Essential Oil of Cleonia lusitanica. J. Ess. Oil Res., 3: 441-442.
Coleus barbatus	Leaf Essent. Oil		107100.0	0.23196291961468088	Jim Duke's personal files.
Coleus barbatus	Stem Essent. Oil		107100.0		Jim Duke's personal files.
Coriandrum sativum	Seed Essent. Oil	1600.0	55470.0	1.0	--
Coridothymus capitatus	Shoot		200.0	-0.004502692380667468	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Croton lechleri	Plant				Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Croton eluteria	Bark				--
Daucus carota	Shoot		24.0	-0.3613150429644966	--
Daucus carota	Seed	55.0	170.0	-1.5317399414153676	--
Dictamnus albus	Shoot		55.0	-0.29846741303211766	Baser, K.H.C., Kosar, M.Malyer, H. & Ozek, T. 1994. The Essential Oil Composition of Dictamnus albus from Turkey. Planta Med. 60:481-2
Dictamnus albus	Shoot		23.0	-0.36334238586554113	Baser, K.H.C., Kosar, M.Malyer, H. & Ozek, T. 1994. The Essential Oil Composition of Dictamnus albus from Turkey. Planta Med. 60:481-2
Dictamnus albus	Shoot		55.0	-0.29846741303211766	Baser, K.H.C., Kosar, M.Malyer, H. & Ozek, T. 1994. The Essential Oil Composition of Dictamnus albus from Turkey. Planta Med. 60:481-2
Elettaria cardamomum	Fruit Essent. Oil				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Elsholtzia eriostachya	Shoot		9.0	-0.391725186480164	Pant, A.K., Dev, V., Parihar, R., Mathela, C.S., Rauscher, J., Vostrowsky, O. and Bestmann, H.J. 1992. The Essential Oil from Elsholtzia eriostachya var. pusilla. J. Ess. Oil Res. 4: 547-549.
Elsholtzia blanda	Shoot		23.0	-0.36334238586554113	Bestman, H.J., Rauscher, J., Vostrowsky O., Pant, A.K., Dev, V., Parihar, R. and Mathela, C.S. 1992. Constituents of the Essential Oil of Elsholtzia blanda Benth. (Labiatae). J. Ess. Oils Res. 4: 121-124
Ephedra sinica	Shoot		15.0	-0.3795611290738971	--
Eruca sativa	Hs				--
Eucalyptus forrestiana	Leaf		645.0	-0.019025519618379304	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 sideroxylon	Shoot		240.0	0.0765910236611119	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus polyanthemos	Shoot		40.0	-0.3288775565477849	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus angulosa	Leaf		60.0	-0.30545233114792647	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 diversicolor	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus citriodora	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus moluccana	Shoot		12.0	-0.38564315777703057	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus brassiana	Leaf		5.0	-0.3323813476165163	Singh, A. K., Gupta, K. C., & Brophy, J. J. 1991. Chemical Constituents of the Leaf Essential Oil of Eucalyptus brassiana S. T. Blake. Journal of Essential Oil Res. 3: 45-7.
Eucalyptus leucoxydon	Leaf		170.0	-0.25159429821074664	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 blakelyi	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus citriodora	Leaf Essent. Oil	27000.0	35000.0	-0.19751887883201752	--
Eucalyptus viridis	Leaf	0.0	0.5	-0.33458463078212813	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 porosa	Leaf		195.0	-0.23935383617956943	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 cuprea	Leaf		13.0	-0.3284643997665397	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 incrassata	Leaf		350.0	-0.1634629715862706	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 tereticornis	Shoot		22.0	-0.36536972876658563	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus erythrandra	Leaf		85.0	-0.29321186911674924	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 siderophloia	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus oviformis	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus albens	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus dealbata	Shoot		250.0	0.09686445267155673	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus ceratocorys	Leaf		14.0	-0.32797478128529256	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 melliodora	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus botryoides	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus fasciculosa	Leaf		60.0	-0.30545233114792647	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 astringens	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus intertexta	Leaf		5.5	-0.3321365383758927	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 desquamata	Leaf		22.0	-0.32405783343531586	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 lansdowneana	Leaf		11.0	-0.3294436367290338	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		0.8	-0.33443774523775405	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		4.6	-0.3325771950090151	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 maideni	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus globulus	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus stoatei	Leaf		270.0	-0.20263245008603775	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 dolichorhyncha	Leaf		415.0	-0.13163777030520982	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 punctata	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus occidentalis	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus cladocalyx	Shoot		7.0	-0.395779872282253	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus camaldulensis	Shoot		0.1	-0.40976853829945986	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus bosistoana	Shoot		15.0	-0.3795611290738971	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus grandis	Leaf Essent. Oil		1000.0	-0.40004843704543974	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus populnea	Leaf		1.8	-0.333948126756507	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		27.0	-0.3216097410290804	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	-0.33267511870526445	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		40.0	-0.31524470077286826	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 behriana	Leaf		2.7	-0.33350747012338455	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 maculata	Shoot		30.0	-0.3491509855582297	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus tetraptera	Leaf		2670.0	0.9724519049069763	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
Foeniculum vulgare	Essential Oil		200.0	-0.688222365160617	Jim Duke's personal files.
Hedychium flavum	Shoot		2690.0	5.0435811312200975	--
Houttuynia cordata	Shoot Essent. Oil				--
Humulus lupulus	Essential Oil				--
Humulus lupulus	Fruit		520.0	-0.4871544215252672	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Hyptis suaveolens	Shoot		7.0	-0.395779872282253	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		7.0	-0.395779872282253	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.
Hyssopus officinalis	Shoot		210.0	0.015770736629777373	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		230.0	0.056317594650667054	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		240.0	0.0765910236611119	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (Hyssopus officinalis L.) J. Agric. Food Chem. 42: 776-781.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Hyssopus officinalis	Shoot		240.0	0.0765910236611119	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		200.0	-0.004502692380667468	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		200.0	-0.004502692380667468	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Leaf	3.0	660.0	-0.011681242399672966	--
Hyssopus officinalis	Shoot		70.0	-0.26805726951645037	Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. J. Ess. Oil Res. 5: 609-611.
Hyssopus officinalis	Shoot		270.0	0.13741131069244641	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		330.0	0.2590518847551154	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Shoot		260.0	0.11713788168200157	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) J. Agric. Food Chem. 42: 776-781.
Hyssopus officinalis	Flower	40.0	415.0	0.7236924389584528	--
Hyssopus officinalis	Shoot		70.0	-0.26805726951645037	Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. J. Ess. Oil Res. 5: 609-611.
Lantana camara	Shoot		188.0	-0.028830807193201274	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Laurus nobilis	Leaf	4.0	180.0	-0.24669811339827577	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Laurus nobilis	Leaf Essent. Oil		200.0	-0.4048138384151673	--
Lavandula x hybrida	Shoot	20.0	45.0	-0.3187408420425625	Tucker, A.O., Maciarelo, M.J., Angell, S., Espailat, J.R., and French, E.C. 1993. The Essential Oil of Lavandula x hybrida Balb. ex Ging., a Distinct Hybrid from L. x heterophylla Poir. (Labiatae). J. Ess. Oil Res. 5: 443-445.
Leonotis leonurus	Se		155.0		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
Leptospermum scoparium	Essential Oil				--
Lindera benzoin	Leaf	30.0	100.0	-0.2858675918980429	--
Lindera benzoin	Fruit	60.0	135.0	-0.5010630039504591	--
Lindera benzoin	Shoot Essent. Oil		150000.0	0.9687636152211475	Tucker, A. O. and Debaggio, T. 2000. The Big Book of Herbs. Interweave Press, Inc. Loveland, CO. 688 pp.
Lippia alba	Leaf		300.0	-0.18794389564862507	Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp.
Lonicera japonica	Flower	0.047	0.085	-0.6987067919513607	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.
Magnolia denudata	Twig				--
Magnolia denudata	Bulb				--
Magnolia denudata	Bark				--
Magnolia denudata	Leaf				--
Magnolia denudata	Flower				--
Matricaria recutita	Plant				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Melaleuca alternifolia	Essential Oil		4400.0	-0.6585545633164767	--
Melaleuca alternifolia	Root Essent. Oil		900.0	-1.351320209582369	--
Melia azedarach	Wood				--
Melissa officinalis	Shoot	1.0	870.0	1.3538170513191368	--
Mentha aquatica	Shoot		75.0	-0.25792055501122796	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogeikagaku Kaishi 67(10): 1417-1419.
Mentha arvensis var. piperascens	Leaf		700.0	0.007903496850210601	--
Mentha pulegium	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Mentha aquatica	Shoot		75.0	-0.25792055501122796	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogeikagaku Kaishi 67(10): 1417-1419.
Mentha aquatica	Shoot		32.0	-0.34509629975614076	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogeikagaku Kaishi 67(10): 1417-1419.
Mentha spicata	Essential Oil				--
Mentha x piperita	Leaf	8.0	80.0	-0.2956599615229847	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Mentha pulegium	Essential Oil				--
Mentha longifolia	Shoot	30.0	4155.0	8.013638481250267	--
Mentha aquatica	Shoot		115.0	-0.1768268389694486	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Nogeikagaku Kaishi 67(10): 1417-1419.
Mentha aquatica	Leaf	70.0	850.0	0.08134626903727397	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Mentha rotundifolia</i>	Leaf		600.0	-0.04105835127449831	--
<i>Mentha spicata</i>	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Mentha aquatica</i>	Shoot		32.0	-0.34509629975614076	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
<i>Micromeria fruticosa</i>	Shoot		645.0	0.8976648985841279	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of <i>Micromeria fruticosa</i> (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. <i>Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res</i> 3: 477-479.
<i>Micromeria myrtifolia</i>	Shoot		130.0	-0.14641669545378133	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of <i>Micromeria myrtifolia</i> Boiss. et Hohen. <i>J. Ess. Oil Res.</i> , 4: 79-80.
<i>Micromeria fruticosa</i>	Shoot		645.0	0.8976648985841279	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of <i>Micromeria fruticosa</i> (L.) Druce subsp. <i>barbata</i> (Boiss et. Ky.), P.H. Davis. <i>Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res</i> 3: 477-479.
<i>Micromeria juliana</i>	Leaf		365.0	-0.15611869436756426	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393.
<i>Micromeria varia</i>	Shoot		155.0	-0.09573312292766925	--
<i>Micromeria fruticosa</i>	Leaf		2640.0	0.9577633504695636	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393.
<i>Micromeria varia</i>	Shoot		155.0	-0.09573312292766925	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Minthostachys mollis</i>	Shoot	11.0	32.0	-0.34509629975614076	Alkire, B.H., Tucker, A.O., and Maciarelo, M.J. 1994. Tipo (<i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. Econ. Bot. 48(1): 60-64.
<i>Monarda didyma</i>	Leaf				Flavour and Fragrance Journal, 6: 80.
<i>Monarda didyma</i>	Flower		30.0	-0.5961530809679855	Flavour and Fragrance Journal, 6: 80.
<i>Monarda citriodora</i>	Leaf		50.0	-0.31034851596039736	Collins, J.E., Bishop, C.D., Deans, S.G. and Svoboda, K.P. 1994. Composition of the Essential Oil from the Leaves and Flowers of <i>Monarda citriodora</i> var. <i>citriodora</i> grown in the United Kingdom. J. Ess. Oil Res. 6: 27-9.
<i>Monarda citriodora</i>	Flower		50.0	-0.5275896773354433	Collins, J.E., Bishop, C.D., Deans, S.G. and Svoboda, K.P. 1994. Composition of the Essential Oil from the Leaves and Flowers of <i>Monarda citriodora</i> var. <i>citriodora</i> grown in the United Kingdom. J. Ess. Oil Res. 6: 27-9.
<i>Montanoa tomentosa</i>	Plant				--
<i>Murraya koenigii</i>	Leaf	23.0	7540.0	3.356893908580301	--
<i>Myrciaria dubia</i>	Fruit				--
<i>Myristica fragrans</i>	Seed Essent. Oil				--
<i>Myristica fragrans</i>	Seed				--
<i>Myrrhis odorata</i>	Leaf Essent. Oil		17000.0	-0.3047404096508881	--
<i>Myrtus communis</i>	Shoot	7.0	40.0	-0.3288775565477849	--
<i>Nepeta cataria</i>	Plant		1800.0	1.4674777688994798	--
<i>Nepeta racemosa</i>	Shoot		240.0	0.0765910236611119	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>Nepeta racemosa</i>	Shoot		240.0	0.0765910236611119	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum basilicum	Plant		35.0	-0.7823361395544459	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
Ocimum suave	Shoot		110.0	-0.18696355347467103	J. Nat. Prod. 44: 308.
Ocimum gratissimum	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Ocimum basilicum	Shoot Essent. Oil	2300.0	13900.0	-1.1154717314686748	--
Ocimum basilicum	Plant		35.0	-0.7823361395544459	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
Ocimum kilimandscharicum	Leaf	90.0	165.0	-0.2540423906169821	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum kilimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum gratissimum	Leaf	115.0	215.0	-0.22956146655462764	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of Ocimum gratissimum L. J. Ess. Oil Res. 4: 231-234.
Ocimum basilicum	Essential Oil	6800.0	37700.0	-0.423331277266507	--
Ocimum tenuiflorum	Leaf	30.0	3060.0	1.163403112593341	--
Ocimum kilimandscharicum	Flower	25.0	945.0	2.540622635220822	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum kilimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum gratissimum	Flower	145.0	220.0	0.055199253541165755	Charles, D.J. and Simon, J.E. 1992. A New Geraniol Chemotype of Ocimum gratissimum L. J. Ess. Oil Res. 4: 231-234.
Ocimum basilicum	Leaf Essent. Oil		70000.0	0.01096743109356414	--
Origanum vulgare	Plant				--
Origanum vulgare	Shoot		360.0	0.31987217178644994	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Origanum vulgare	Essential Oil		74500.0	-0.16338482301308704	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Origanum syriacum	Shoot		200.0	-0.004502692380667468	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum onites	Shoot		365.0	0.33000888629167235	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Origanum vulgare	Plant		1.0	-0.8256753309920853	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		35.0	-0.7823361395544459	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 minutiflorum	Shoot	165.0	380.0	0.36041902980733964	Baser, K.H.C., Tumen, G., Sezik, E. 1991. The Essential Oil of Origanum minutiflorum O. Schwarz and P.H. Davis. J. Ess. Oil Res. 3: 445-446.
Origanum majorana	Plant	35.0	750.0	0.12906156273708783	--
Origanum vulgare	Plant		720.0	0.09082109970387661	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	Shoot Essent. Oil	15000.0	90600.0	0.05911203848804346	--
Origanum syriacum	Shoot		200.0	-0.004502692380667468	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum syriacum	Shoot		185.0	-0.034912835896334725	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Panax ginseng	Shoot				--
Panax ginseng	Flower Essent. Oil				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Pelargonium citrosum</i>	Shoot		5.0	-0.39983455808434193	Matsuda, B. M., et al. 1996. Essential Oil Analysis and Field Evaluation of the Citrosa Plant ' <i>Pelargonium citrosum</i> ' as a Repellent Against Populations of <i>Aedes</i> Mosquitoes. <i>J. Am. Mosq. Contr. Assoc.</i> 12(1):69-74.
<i>Perilla frutescens</i>	Shoot Essent. Oil		167000.0	1.2291016085622715	Nguyen, X. D., La, D. M., Lu'u, D. C., Leclercq, P. A. 1995. Essential Oil Constituents from the Aerial Parts of <i>Perilla frutescens</i> (L.) Britton. <i>J. Essent. Oil Res.</i> , 7(4): 429-432.
<i>Perilla frutescens</i>	Leaf Essent. Oil		38000.0	-0.1796486236955391	Kang, R., Helms, R., Stout, M.J., Jaber, H., Chen, Z., and Nakatsu, T. 1992. Antimicrobial Activity of the Volatile Constituents of <i>Perilla frutescens</i> and Its Synergistic Effects with Polygodial. <i>J. Agric. Food Chem.</i> , 40: 2328-2330.
<i>Perilla frutescens</i>	Plant				Kang, R., Helms, R., Stout, M.J., Jaber, H., Chen, Z., and Nakatsu, T. 1992. Antimicrobial Activity of the Volatile Constituents of <i>Perilla frutescens</i> and Its Synergistic Effects with Polygodial. <i>J. Agric. Food Chem.</i> , 40: 2328-2330.
<i>Petroselinum crispum</i>	Seed	6.6	770.0	-0.2508424294303912	--
<i>Petroselinum crispum</i>	Fruit Essent. Oil	11000.0	62100.0	-0.1770999112945981	--
<i>Petroselinum crispum</i>	Leaf		2.46	-0.33362497855888384	--
<i>Pimenta dioica</i>	Leaf Essent. Oil				--
<i>Pimenta racemosa</i>	Leaf	0.0	110.0	-0.280971407085572	--
<i>Pimpinella anisum</i>	Seed Essent. Oil				--
<i>Pimpinella anisum</i>	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp.
<i>Pimpinella anisum</i>	Plant				--
<i>Pinus sylvestris</i>	Essential Oil				--
<i>Pinus sylvestris</i>	Leaf Essent. Oil		13900.0	-0.3232063399585825	--
<i>Pinus strobus</i>	Leaf Essent. Oil				--
<i>Piper nigrum</i>	Essential Oil				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Piper nigrum	Seed				--
Piper cubeba	Fruit Essent. Oil		34000.0	-0.40802833391075616	--
Piper nigrum	Fruit Essent. Oil	160000.0	352000.0	2.205325345517652	--
Piper nigrum	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
Piper nigrum	Leaf Essent. Oil		30000.0	-0.22730263739281492	--
Pistacia lentiscus	Plant				--
Plectranthus coleoides	Shoot		150.0	-0.10586983743289166	Buchbauer, G., Jorovetz, L., Wasicky, M. and Nikiforov, A. 1993. Volatile Constituents of the Headspace and Essential Oil of Plectranthus coleoides Marginatus (Labiatae). J. Ess. Oil Res. 5: 311-313.
Plectranthus incanus	Shoot		100.0	-0.20723698248511585	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.
Populus tacamahacca	Plant				--
Psidium guajava	Fruit				--
Ptychopetalum olacoides	Root Essent. Oil		77000.0	0.31448110708963317	Uber Bucek, E., Fournier, G., Dadoun, H. 1987. Volatile Constituents of Ptychopetalum olacoides Root Oil. Planta Med. 53, 2: 231.
Ravensara aromatica	Leaf		300.0	-0.18794389564862507	--
Ravensara aromatica	Bark		22.0		--
Rosmarinus x lavandulaceus	Shoot	29.0	240.0	0.0765910236611119	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus officinalis	Shoot	50.0	100.0	-0.20723698248511585	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rosmarinus officinalis	Leaf		38.0	-0.31622393773536245	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
Rosmarinus officinalis	Resin, Exudate, Sap				--
Rosmarinus eriocalyx	Shoot	50.0	260.0	0.11713788168200157	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus tomentosus	Shoot	55.0	355.0	0.30973545728122753	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus officinalis	Shoot		18.0	-0.37347910037076365	Tucker, A. O. and Maciarelo, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
Rosmarinus officinalis	Leaf		38.0	-0.31622393773536245	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33.
Rosmarinus officinalis	Essential Oil	145000.0	153000.0	0.3911205209785834	--
Rosmarinus officinalis	Shoot	31.0	150.0	-0.10586983743289166	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus eriocalyx	Shoot	50.0	260.0	0.11713788168200157	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rosmarinus x mendizabalii	Shoot	8.0	65.0	-0.2781939840216728	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus officinalis	Plant	12.0	2075.0	1.8180153467039157	--
Rosmarinus officinalis	Shoot Essent. Oil		12200.0	-1.1415055308027873	--
Rosmarinus officinalis	Shoot	12.0	90.0	-0.2275104114955607	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Salvia officinalis	Et		41000.0		--
Salvia dorisiana	Shoot	90.0	115.0	-0.1768268389694486	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of Salvia dorisiana Standley. J. Ess. Oil Res. 6: 97-8.
Salvia officinalis	Leaf	500.0	760.0	0.03728060572503595	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia officinalis	Essential Oil	18900.0	66000.0	-0.22342680293575198	--
Salvia canariensis	Leaf		2105.0	0.6958174630023709	Casnigueral, S., Iglesias, J., Vila, R., Virgili, A. and Ibanez, C. 1994. The Essential Oil from Leaves of Salvia canariensis L. Flav. & Frag. J. 9:201-204. S. Canigueral, Facultat de Farmacia, Universitat de Barcelona, Ave. Diagonal 643, E-08028, Barcelona Spain
Salvia triloba	Plant	500.0	2280.0	2.079325177430859	--
Salvia officinalis	Leaf Essent. Oil		11000.0	-0.34048091992384494	--
Salvia gilliesii	Shoot		720.0	1.0497156161624641	Velasco-Negueruela, A. et al. 1993. The Essential Oil of Salvia gilliesii Benth. J. Ess. Oil Res. 5: 319-320.
Salvia sclarea	Plant	1.0	30.0	-0.7887095500599811	Flavour and Fragrance Journal, 6: 153.
Sambucus nigra	Flower Essent. Oil				--
Sassafras albidum	Leaf	30.0	90.0	-0.2907637767105138	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Satureja cuneifolia	Shoot		5.0	-0.39983455808434193	Tumen, G. 1991. The Volatile Constituents of Satureja cuneifolia. J. Ess. Oil Res., 3: 365-366.
Satureja hortensis	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Satureja obovata	Leaf		985.0	0.147444764005631	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja thymbra	Shoot		1590.0	2.813503940071165	Lagouri, V., Blekas, G., Tsimidou, M., Kokkini, S., and Boskou, D. 1993. Composition and Antioxidant Activity of Essential Oils from Oregano Plants Grown Wild in Greece. Z. Lebensm Unters Forsch 197: 20-23.
Satureja cilicica	Shoot		55.0	-0.29846741303211766	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.
Satureja obovata	Leaf				Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja subspicata	Plant		65.0	-0.7440956765212348	Stanic, G., Petricic, J., and Blazevic, N. 1991. Gas Chromatographic Investigations of Essential Oils of Satureja montana and Satureja subspicata from Yugoslavia. J. Ess. Oil Res., 3: 153-158.
Satureja montana	Plant	20.0	1050.0	0.5114661930691998	J. Ethnopharmacology, 39: 167.
Satureja obovata	Leaf		95.0	-0.28831568430427834	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.
Satureja obovata	Leaf		95.0	-0.28831568430427834	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Sideritis mugronensis</i>	Leaf	20.0	65.0	-0.303004238741691	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
<i>Sideritis athoa</i>	Shoot		7.0	-0.395779872282253	Ozek, T., Baser, K.H.C. and Tumen, G. 1993. The Essential Oil of <i>Sideritis athoa</i> Papanikolaou Et Kokkini. J. Ess. Oil Res. 5: 669-670.
<i>Sideritis scardica</i>	Shoot		105.0	-0.19710026797989344	Menkovic, N., et al. 1991. The Essential Oil of <i>Sideritis scardica</i> . Pl. Med. 57. Suppl. 2. pp. A137-A132.
<i>Sideritis mugronensis</i>	Flower	15.0	20.0	-0.6304347827842566	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of <i>Sideritis mugronensis</i> Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
<i>Sideritis pauli</i>	Shoot		13.0	-0.38361581487598606	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of <i>Sideritis pauli</i> Pau. FFJ7: 47-8. 1992.
<i>Sideritis germanicolpitana</i>	Plant	23.0	47.0	-0.7670399543411615	J. Essential Oil, 4: 533.
<i>Stevia rebaudiana</i>	Flower		150.0	-0.18477265917273208	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
<i>Stevia rebaudiana</i>	Leaf		13.0	-0.3284643997665397	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
<i>Syzygium aromaticum</i>	Essential Oil		495000.0	2.8069272425728666	--
<i>Syzygium aromaticum</i>	Leaf	2295.0	14520.0	6.774430907684983	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
<i>Syzygium aromaticum</i>	Flower				--
<i>Syzygium aromaticum</i>	Fruit	2230.0	69365.0	1.9999529994158691	--
<i>Tagetes lucida</i>	Shoot		80.0	-0.24778384050600555	Bicchi, C., Fresia, M., Rubiolo, P., Monti, D., Franz, C., Goehler, I. 1997. Constituents of <i>Tagetes lucida</i> Cav. ssp. <i>lucida</i> essential oil. Flavor & Fragrance, 12(1): 47-52.
<i>Tagetes minuta</i>	Fruit Essent. Oil		5800.0	-0.6397785658600676	--
<i>Tagetes lucida</i>	Leaf		280.0	-0.19773626527356686	Tramil

Plant	Part	Low PPM	High PPM	StdDev	Reference
Tagetes filifolia	Essential Oil		2700.0	-0.6705629593010096	Hussain, R.A., et. al. 1990. Sweetening Agents of Plant Origin: Phenylpropanoid Constituents of Seven Sweet-Tasting Plants. Econ. Bot. 44 2: 174-182. Program Collab. Res. Pharm. Sci. Coll. Pharmacy Univ. Illinois at Chicago IL 60680, USA.
Tamarindus indica	Fruit Essent. Oil		5000.0	-0.6463530405252964	--
Tanacetum parthenium	Essential Oil				--
Tanacetum parthenium	Shoot		8.0	-0.39375252938120847	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
Teucrium asiaticum	Shoot		0.15	-0.40966717115440776	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		19.84	-0.36974878943284184	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 gnaphalodes	Shoot		60.0	-0.28833069852689525	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 polium	Shoot		4.0	-0.40186190098538643	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 chamaedrys	Plant		420.0	-0.29158353062823544	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium arduini	Shoot		120.0	-0.16669012446422618	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 micropodioides	Leaf		170.0	-0.25159429821074664	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		530.0	-0.07533164496179456	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 oxylepis	Shoot		5.2	-0.3994290895041331	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 arduini	Shoot		245.0	0.0867277381663343	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 salviastrum	Shoot		10.8	-0.3880759692582839	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 kotschyannum	Leaf		245.0	-0.21487291211721496	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 cyprium	Leaf		600.0	-0.04105835127449831	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 scorodonia	Shoot		10.52	-0.38864362527057644	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 polium	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium oxylepis	Shoot		1.74	-0.40644369594174695	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
Thymus riatarum	Shoot		300.0	0.19823159772378093	Iglesias, J., Vila, R., Canigueral, S., Bellakdhar, and Il Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. <i>J. Ess. Oil Res.</i> 3: 43-4.
Thymus x citriodorus	Plant		370.0	-0.35531763568358743	Stahl-Biskup, E. and Holthuijzen, J. 1995. Essential oil and glycosidally bound volatiles of lemon-scented thyme, Thymus x citriodorus (Pers.) Schreb. <i>Flav. & Fragr. J.</i> 10: 225-229.
Thymus zygis	Shoot		0.1	-0.40976853829945986	Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. <i>JEO5</i> : 153-8.
Thymus longicaulis	Shoot		22.0	-0.36536972876658563	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. <i>J. Ess. Oil Res.</i> 5: 291-5.
Thymus cilicicus	Shoot		200.0	-0.004502692380667468	Tumen, G., Koyuncu, M., Kirimer, N., and Baser, K.H.C. 1994. Composition of the Essential Oil of Thymus cilicicus Boiss. & Bal. <i>J. Ess. Oil Res.</i> 6: 97-8.
Thymus vulgaris	Plant	15.0	605.0	-0.05576734192343301	--
Thymus vulgaris	Essential Oil		17800.0	-0.5639001479089814	--
Thymus funkii	Shoot		210.0	0.015770736629777373	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.
Thymus zygis	Shoot	0.1	460.0	0.5226064618908983	De Cunha, A.P. and Salguiero, L.R. 1991. The Chemical Polymorphism of Thymus zygis ssp. sylvestris from Central Portugal. <i>J. Ess. Oil Res.</i> 3: 409-12.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Thymus longicaulis	Shoot		28.0	-0.3532056713603187	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		210.0	0.015770736629777373	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 longicaulis	Shoot		28.0	-0.3532056713603187	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.
Trifolium pratense	Flower		5.0	-0.6818573355086633	Buchnauer, G., Jirovetz, L., Nikiforov, A. 1996. Comparative Investigation of Essential Clover Flower Oils from Austria Using Gas Chromatography-Flame Ionization Detection, Gas Chromatography-Mass Spectrometry, and Gas Chrom.-Olfactometry. J. Agr. Food Chem. 44:1827-8
Valeriana officinalis	Leaf Essent. Oil	2500.0	13600.0	-0.32499336547223034	--
Valeriana officinalis	Leaf	6.0	345.0	-0.16591106399250605	Father Nature's Farmacy: The aggregate of all these three-letter citations.
Valeriana officinalis	Root Essent. Oil				--
Vitex agnus-castus	Leaf Essent. Oil		63800.0	-0.025964429521824612	Jim Duke's personal files.
Vitex agnus-castus	Leaf		2.0	-0.33385020306025753	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.
Vitex agnus-castus	Fruit				Jim Duke's personal files.
Vitex agnus-castus	Flower				Jim Duke's personal files.
Zea mays	Root				--
Zingiber officinale	Rhizome	0.7	45.0	-1.0	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Zingiber officinale	Rhizome Essent. Oil		900.0	-1.0	--