

List of Plants

BETA-CARYOPHYLLENE

Chemid

BETACARYOPHYLLENE

*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
<i>Achillea millefolium</i>	Leaf	1.0	65.0	-0.3	*
<i>Aesculus hippocastanum</i>	Flower Essent. Oil	--	13000.0		Jim Duke's personal files.
<i>Agastache rugosa</i>	Shoot	--	--		Jim Duke's personal files.
<i>Ageratum conyzoides</i>	Plant	34.0	270.0	-0.48	*
<i>Aloysia citrodora</i>	Plant	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
<i>Alpinia galanga</i>	Leaf Essent. Oil	--	1100.0	-0.4	*
<i>Alpinia galanga</i>	Rhizome	--	50.0	1.0	*
<i>Alpinia galanga</i>	Rhizome Essent. Oil	--	1100.0	1.0	*
<i>Alpinia galanga</i>	Leaf	--	350.0	-0.16	*
<i>Anethum graveolens</i>	Plant	--	--		Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
<i>Anethum graveolens</i>	Essential Oil	--	--		*
<i>Angelica archangelica</i>	Root Essent. Oil	--	110000.0	1.04	*
<i>Angelica archangelica</i>	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.
<i>Annona squamosa</i>	Leaf	--	--		*
<i>Apium graveolens</i>	Fruit Essent. Oil	5000.0	43000.0	-0.33	*
<i>Apium graveolens</i>	Seed Essent. Oil	5000.0	43000.0	-1.0	*
<i>Apium graveolens</i>	Seed	55.0	1290.0	0.86	*
<i>Apium graveolens</i>	Leaf Essent. Oil	--	5000.0	-0.38	*
<i>Aralia cordata</i>	Root	--	6.0		*
<i>Artemisia capillaris</i>	Essential Oil	--	--		*
<i>Artemisia salsoloides</i>	Shoot	--	500.0	0.6	V. Kaul, P. Weyerstahl, H. Wahlberg, H. Marschall, (1992); Volatile constituents of the essential oil and the absolute of <i>Artemisia salsoloides</i> Willd. from Ladakh, Flavour and Fragrance journal, Vol.7, 299-305.
<i>Artemisia annua</i>	Plant	15.0	2240.0	2.03	*
<i>Artemisia absinthium</i>	Plant	--	--		*
<i>Bidens pilosa</i>	Leaf Essent. Oil	--	730000.0	3.94	Jim Duke's personal files.
<i>Boswellia sacra</i>	Resin, Exudate, Sap	--	49100.0		Chiavari, G., Gtalletti, G. C., Piccaglia, R., Mohamud, M. A. 1991. Differentiation Between Resins <i>Boswellia carterii</i> and <i>Boswellia frereana</i> (Frankincense) of Somali Origin. J. Essent. Oil Res. 3 (3):185-186.
<i>Boswellia sacra</i>	Essential Oil	--	--		*
<i>Calamintha nepeta</i>	Plant	--	135.0	-0.65	J. Ethnopharmacology, 39: 167.

Camellia sinensis	Leaf	--	--		*
Carum carvi	Seed	20.0	1320.0	0.92	*
Centella asiatica	Shoot	--	--		Jim Duke's personal files.
Centella asiatica	Essential Oil	--	125000.0	0.19	Jim Duke's personal files.
Centella asiatica	Plant	--	--		*
Chamaemelum nobile	Plant	--	--		*
Chrysanthemum parthenium	Shoot	--	8.0	-0.39	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.
Chrysanthemum x morifolium	Plant	3.0	12.0	-0.81	Wealth of India.
Cinnamomum aromaticum	Leaf	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Cinnamomum camphora	Leaf	--	5.0	-0.33	*
Cinnamomum verum	Stem Bark	--	--		*
Cinnamomum verum	Bark Essent. Oil	--	13500.0		*
Cinnamomum verum	Leaf	30.0	60.0	-0.31	*
Cinnamomum aromaticum	Stem Bark	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Cinnamomum verum	Leaf Essent. Oil	--	18500.0	-0.3	*
Citrus paradisi	Pericarp	--	130.0		*
Citrus limon	Leaf Essent. Oil	100.0	3500.0	-0.39	Jim Duke's personal files.
Citrus sinensis	Fruit	1.0	2.0	-0.51	*
Citrus limon	Petiole	--	13.0		*
Citrus reticulata	Fruit	1.0	2.0	-0.51	*
Cleonia lusitanica	Leaf	2.0	5.0	-0.33	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	0.23	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	-0.0	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	-0.36	*
Daucus carota	Seed	55.0	170.0	-1.53	*
Dictamnus albus	Shoot	--	55.0	-0.3	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	-0.36	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	-0.3	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	--	--		*
Elsholtzia eriostachya	Shoot	--	9.0	-0.39	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	-0.36	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 Elsholtsia blanda Benth. (Labiatae). J. Ess. Oils Res. 4: 121-124

<i>Ephedra sinica</i>	Shoot	--	15.0	-0.38	*
<i>Eruca sativa</i>	Hs	--	--		*
<i>Eucalyptus maculata</i>	Shoot	--	30.0	-0.35	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.
<i>Eucalyptus tetraptera</i>	Leaf	--	2670.0	0.97	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 Inccrassatae.Flavour and Fragrance J.9(3):113-7
<i>Eucalyptus forrestiana</i>	Leaf	--	645.0	-0.02	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 Inccrassatae.Flavour and Fragrance J.9(3):113-7
<i>Eucalyptus sideroxylon</i>	Shoot	--	240.0	0.08	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.
<i>Eucalyptus polyanthemus</i>	Shoot	--	40.0	-0.33	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.
<i>Eucalyptus angulosa</i>	Leaf	--	60.0	-0.31	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 Inccrassatae.Flavour and Fragrance J.9(3):113-7
<i>Eucalyptus diversicolor</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus citriodora</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus moluccana</i>	Shoot	--	12.0	-0.39	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.
<i>Eucalyptus brassiana</i>	Leaf	--	5.0	-0.33	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.
<i>Eucalyptus leucoxylon</i>	Leaf	--	170.0	-0.25	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
<i>Eucalyptus blakelyi</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus citriodora</i>	Leaf Essent. Oil	27000.0	35000.0	-0.2	*
<i>Eucalyptus viridis</i>	Leaf	--	0.5	-0.33	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
<i>Eucalyptus porosa</i>	Leaf	--	195.0	-0.24	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
<i>Eucalyptus cuprea</i>	Leaf	--	13.0	-0.33	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
<i>Eucalyptus inccrassata</i>	Leaf	--	350.0	-0.16	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 Inccrassatae.Flavour and Fragrance J.9(3):113-7
<i>Eucalyptus tereticornis</i>	Shoot	--	22.0	-0.37	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.
<i>Eucalyptus erythrandra</i>	Leaf	--	85.0	-0.29	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 Inccrassatae.Flavour and Fragrance J.9(3):113-7

<i>Eucalyptus siderophloia</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus oviformis</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus albens</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus dealbata</i>	Shoot	--	250.0	0.1	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.
<i>Eucalyptus ceratocorys</i>	Leaf	--	14.0	-0.33	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
<i>Eucalyptus melliodora</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus botryoides</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus fasciculosa</i>	Leaf	--	60.0	-0.31	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
<i>Eucalyptus astringens</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus intertexta</i>	Leaf	--	5.5	-0.33	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
<i>Eucalyptus desquamata</i>	Leaf	--	22.0	-0.32	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
<i>Eucalyptus lansdowneana</i>	Leaf	--	11.0	-0.33	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
<i>Eucalyptus ochrophloia</i>	Leaf	--	0.8	-0.33	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
<i>Eucalyptus largisparsa</i>	Leaf	--	4.6	-0.33	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
<i>Eucalyptus maideni</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus globulus</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus stoatei</i>	Leaf	--	270.0	-0.2	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
<i>Eucalyptus dolichorhyncha</i>	Leaf	--	415.0	-0.13	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
<i>Eucalyptus punctata</i>	Shoot	--	0.1	-0.41	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.
<i>Eucalyptus occidentalis</i>	Shoot	--	0.1	-0.41	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.

<i>Eucalyptus cladocalyx</i>	Shoot	--	7.0	-0.4	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus camaldulensis</i>	Shoot	--	0.1	-0.41	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus bosistoana</i>	Shoot	--	15.0	-0.38	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus grandis</i>	Leaf Essent. Oil	--	1000.0	-0.4	*
<i>Eucalyptus populnea</i>	Leaf	--	1.8	-0.33	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus melanophloia</i>	Leaf	--	27.0	-0.32	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus odorata</i>	Leaf	--	4.4	-0.33	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus sparsa</i>	Leaf	--	40.0	-0.32	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus behriana</i>	Leaf	--	2.7	-0.33	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Foeniculum vulgare</i>	Essential Oil	--	200.0	-0.69	Jim Duke's personal files.
<i>Hedychium flavum</i>	Shoot	--	2690.0	5.04	*
<i>Houttuynia cordata</i>	Shoot Essent. Oil	--	--		*
<i>Humulus lupulus</i>	Essential Oil	--	--		*
<i>Humulus lupulus</i>	Fruit	--	520.0	-0.49	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Hyptis suaveolens</i>	Shoot	--	7.0	-0.4	Mallvarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. <i>J. Ess. Oil Res.</i> 5: 321.
<i>Hyptis suaveolens</i>	Shoot	--	7.0	-0.4	Mallvarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. <i>J. Ess. Oil Res.</i> 5: 321.
<i>Hyssopus officinalis</i>	Shoot	--	210.0	0.02	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	230.0	0.06	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	240.0	0.08	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	240.0	0.08	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	200.0	-0.0	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Hyssopus officinalis</i>	Shoot	--	200.0	-0.0	Kerrola, K., Galambosi, B. and Kallio, H. 1994. Volatile Components and Odor Intensity of Four Phenotypes of Hyssop (<i>Hyssopus officinalis</i> L.) <i>J. Agric. Food Chem.</i> 42: 776-781.
<i>Hyssopus officinalis</i>	Leaf	3.0	660.0	-0.01	*

Hyssopus officinalis	Shoot	--	70.0	-0.27	Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two Hyssopus officinalis cultivars. J. Ess. Oil Res. 5: 609-611.
Hyssopus officinalis	Shoot	--	270.0	0.14	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	--	330.0	0.26	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	--	260.0	0.12	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	Flower	40.0	415.0	0.72	*
Hyssopus officinalis	Shoot	--	70.0	-0.27	Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two Hyssopus officinalis cultivars. J. Ess. Oil Res. 5: 609-611.
Lantana camara	Shoot	--	188.0	-0.03	*
Laurus nobilis	Leaf	4.0	180.0	-0.25	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Laurus nobilis	Leaf Essent. Oil	--	200.0	-0.4	*
Lavandula x hybrida	Shoot	20.0	45.0	-0.32	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	-0.29	*
Lindera benzoin	Fruit	60.0	135.0	-0.5	*
Lindera benzoin	Shoot Essent. Oil	--	150000.0	0.97	Tucker, A. O. and Debaggio, T. 2000. The Big Book of Herbs. Interweave Press, Inc. Loveland, CO. 688 pp.
Lippia alba	Leaf	--	300.0	-0.19	Grenand, P., Moretti, C., and Jacquemin, H. 1987. Pharmacopees Traditionnelles en Guyane. l'ORSTROM, Paris. 569 pp.
Lonicera japonica	Flower	0.047	0.085	-0.7	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.
Melaleuca alternifolia	Essential Oil	--	4400.0	-0.66	*
Melaleuca alternifolia	Root Essent. Oil	--	900.0	-1.35	*
Melia azedarach	Wood	--	--		*
Melissa officinalis	Shoot	1.0	870.0	1.35	*
Mentha spicata	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	-0.35	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 Nogeikagaku Kaishi</i> 67(10): 1417-1419.
<i>Mentha aquatica</i>	Shoot	--	75.0	-0.26	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 Nogeikagaku Kaishi</i> 67(10): 1417-1419.
<i>Mentha arvensis</i> var. <i>piperascens</i>	Leaf	--	700.0	0.01	*
<i>Mentha pulegium</i>	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Mentha aquatica</i>	Shoot	--	75.0	-0.26	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 Nogeikagaku Kaishi</i> 67(10): 1417-1419.
<i>Mentha aquatica</i>	Shoot	--	32.0	-0.35	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 Nogeikagaku Kaishi</i> 67(10): 1417-1419.
<i>Mentha spicata</i>	Essential Oil	--	--		*
<i>Mentha x piperita</i>	Leaf	8.0	80.0	-0.3	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Mentha pulegium</i>	Essential Oil	--	--		*
<i>Mentha longifolia</i>	Shoot	30.0	4155.0	8.01	*
<i>Mentha aquatica</i>	Shoot	--	115.0	-0.18	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 Nogeikagaku Kaishi</i> 67(10): 1417-1419.
<i>Mentha aquatica</i>	Leaf	70.0	850.0	0.08	*
<i>Mentha rotundifolia</i>	Leaf	--	600.0	-0.04	*
<i>Micromeria varia</i>	Shoot	--	155.0	-0.1	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.
<i>Micromeria fruticosa</i>	Shoot	--	645.0	0.9	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	-0.15	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	0.9	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	-0.16	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	-0.1	*
<i>Micromeria fruticosa</i>	Leaf	--	2640.0	0.96	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>Minthostachys mollis</i>	Shoot	11.0	32.0	-0.35	Alkire, B.H., Tucker, A.O., and Maciarelo, M.J. 1994. Tipo (<i>Minthostachys mollis</i> (Lamiaceae): An Ecuadorian Mint. <i>Econ. Bot.</i> 48(1): 60-64.
<i>Monarda didyma</i>	Leaf	--	--		Flavour and Fragrance Journal, 6: 80.
<i>Monarda didyma</i>	Flower	--	30.0	-0.6	Flavour and Fragrance Journal, 6: 80.
<i>Monarda citriodora</i>	Leaf	--	50.0	-0.31	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. <i>J. Ess. Oil Res.</i> 6: 27-9.
<i>Monarda citriodora</i>	Flower	--	50.0	-0.53	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. <i>J. Ess. Oil Res.</i> 6: 27-9.

Montanoa tomentosa	Plant	--	--		*
Murraya koenigii	Leaf	23.0	7540.0	3.36	*
Myrciaria dubia	Fruit	--	--		*
Myristica fragrans	Seed Essent. Oil	--	--		*
Myristica fragrans	Seed	--	--		*
Myrrhis odorata	Leaf Essent. Oil	--	17000.0	-0.3	*
Myrtus communis	Shoot	7.0	40.0	-0.33	*
Nepeta racemosa	Shoot	--	240.0	0.08	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 cataria	Plant	--	1800.0	1.47	*
Nepeta racemosa	Shoot	--	240.0	0.08	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	--	35.0	-0.78	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	-0.19	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	-1.12	*
Ocimum basilicum	Plant	--	35.0	-0.78	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	-0.25	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum killimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum gratissimum	Leaf	115.0	215.0	-0.23	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	-0.42	*
Ocimum tenuiflorum	Leaf	30.0	3060.0	1.16	*
Ocimum kilimandscharicum	Flower	25.0	945.0	2.54	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum killimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum gratissimum	Flower	145.0	220.0	0.06	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	0.01	*
Origanum syriacum	Shoot	--	185.0	-0.03	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum vulgare	Plant	--	--		*
Origanum vulgare	Shoot	--	360.0	0.32	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	-0.16	*
Origanum syriacum	Shoot	--	200.0	-0.0	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	0.33	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	-0.83	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	-0.78	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	0.36	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	0.13	*

Origanum vulgare	Plant	--	720.0	0.09	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	0.06	*
Origanum syriacum	Shoot	--	200.0	-0.0	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	--	--		*
Pelargonium citrosum	Shoot	--	5.0	-0.4	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.
Perilla frutescens	Plant	--	--		Kang, R., Helms, R., Stout, M.J., Jaber, H., Chen, Z., and Nakatsu, T. 1992. Antimicrobial Activity of the Volatile Constituents of Perilla frutescens and Its Synergistic Effects with Polygodial. J. Agric. Food Chem., 40: 2328-2330.
Perilla frutescens	Shoot Essent. Oil	--	167000.0	1.23	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.
Perilla frutescens	Leaf Essent. Oil	--	38000.0	-0.18	Kang, R., Helms, R., Stout, M.J., Jaber, H., Chen, Z., and Nakatsu, T. 1992. Antimicrobial Activity of the Volatile Constituents of Perilla frutescens and Its Synergistic Effects with Polygodial. J. Agric. Food Chem., 40: 2328-2330.
Petroselinum crispum	Seed	6.6	770.0	-0.25	*
Petroselinum crispum	Fruit Essent. Oil	11000.0	62100.0	-0.18	*
Petroselinum crispum	Leaf	--	2.46	-0.33	*
Pimenta dioica	Leaf Essent. Oil	--	--		*
Pimenta racemosa	Leaf	--	110.0	-0.28	*
Pimpinella anisum	Plant	--	--		*
Pimpinella anisum	Seed Essent. Oil	--	--		*
Pimpinella anisum	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.
Pinus sylvestris	Essential Oil	--	--		*
Pinus sylvestris	Leaf Essent. Oil	--	13900.0	-0.32	*
Pinus strobus	Leaf Essent. Oil	--	--		*
Piper nigrum	Essential Oil	--	--		*
Piper nigrum	Seed	--	--		*
Piper cubeba	Fruit Essent. Oil	--	34000.0	-0.41	*
Piper nigrum	Fruit Essent. Oil	160000.0	352000.0	2.21	*
Piper nigrum	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
Piper nigrum	Leaf Essent. Oil	--	30000.0	-0.23	*
Pistacia lentiscus	Plant	--	--		*
Plectranthus coleoides	Shoot	--	150.0	-0.11	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	-0.21	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	0.31	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	-0.19	*

Ravensara aromatica	Bark	--	22.0		*
Rosmarinus officinalis	Shoot	12.0	90.0	-0.23	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 x lavandulaceus	Shoot	29.0	240.0	0.08	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	-0.21	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	Leaf	--	38.0	-0.32	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	0.12	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	0.31	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	-0.37	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
Rosmarinus officinalis	Leaf	--	38.0	-0.32	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	0.39	*
Rosmarinus officinalis	Shoot	31.0	150.0	-0.11	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	0.12	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 x mendizabalii	Shoot	8.0	65.0	-0.28	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	1.82	*
Rosmarinus officinalis	Shoot Essent. Oil	--	12200.0	-1.14	*
Salvia sclarea	Plant	1.0	30.0	-0.79	Flavour and Fragrance Journal, 6: 153.
Salvia officinalis	Et	--	41000.0		*
Salvia dorisiana	Shoot	90.0	115.0	-0.18	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	0.04	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia officinalis	Essential Oil	18900.0	66000.0	-0.22	*
Salvia canariensis	Leaf	--	2105.0	0.7	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, Barcelone Spain
Salvia triloba	Plant	500.0	2280.0	2.08	*
Salvia officinalis	Leaf Essent. Oil	--	11000.0	-0.34	*
Salvia gilliesii	Shoot	--	720.0	1.05	Velasco-Negueruela, A. et al. 1993. The Essential Oil of Salvia gilliesii Benth. J. Ess. Oil Res. 5: 319-320.
Sambucus nigra	Flower Essent. Oil	--	--		*
Sassafras albidum	Leaf	30.0	90.0	-0.29	*
Satureja obovata	Leaf	--	95.0	-0.29	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	-0.29	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. <i>Phytochemistry</i> 35(1): 83.
Satureja cuneifolia	Shoot	--	5.0	-0.4	Tumen, G. 1991. The Volatile Constituents of Satureja cuneifolia. <i>J. Ess. Oil Res.</i> , 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	0.15	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. <i>Phytochemistry</i> 35(1): 83.
Satureja thymbra	Shoot	--	1590.0	2.81	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. <i>Z. Lebensm Unters Forsch</i> 197: 20-23.
Satureja cilicica	Shoot	--	55.0	-0.3	Tumen, G. Baser, K.H.C. and Kirimer, N. 1993. The Essential Oil of Satureja cilicica P.H. Davis. <i>J. Ess. Oil Res.</i> 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. <i>Phytochemistry</i> 35(1): 83.
Satureja subspicata	Plant	--	65.0	-0.74	Stanic, G., Petricic, J., and Blazevic, N. 1991. Gas Chromatographic Investigations of Essential Oils of Satureja montana and Satureja subspicata from Yugoslavia. <i>J. Ess. Oil Res.</i> , 3: 153-158.
Satureja montana	Plant	20.0	1050.0	0.51	<i>J. Ethnopharmacology</i> , 39: 167.
Sideritis mugronensis	Leaf	20.0	65.0	-0.3	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. <i>J. Ess. Oil Res.</i> , 3: 395-397.
Sideritis athoa	Shoot	--	7.0	-0.4	Ozek, T., Baser, K.H.C. and Tumen, G. 1993. The Essential Oil of Sideritis athoa Papanikolaou Et Kokkini. <i>J. Ess. Oil Res.</i> 5: 669-670.
Sideritis scardica	Shoot	--	105.0	-0.2	Menkovic, N., et al. 1991. The Essential Oil of Sideritis scardica. <i>Pl. Med.</i> 57. Suppl. 2. pp. A137-A132.
Sideritis mugronensis	Flower	15.0	20.0	-0.63	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. <i>J. Ess. Oil Res.</i> , 3: 395-397.
Sideritis pauli	Shoot	--	13.0	-0.38	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. <i>FFJ7</i> : 47-8. 1992.
Sideritis germanicolpitana	Plant	23.0	47.0	-0.77	<i>J. Essential Oil</i> , 4: 533.
Stevia rebaudiana	Flower	--	150.0	-0.18	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	--	13.0	-0.33	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
Syzygium aromaticum	Essential Oil	--	495000.0	2.81	*
Syzygium aromaticum	Leaf	2295.0	14520.0	6.77	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Syzygium aromaticum	Flower	--	--		*
Syzygium aromaticum	Fruit	2230.0	69365.0	2.0	*
Tagetes lucida	Shoot	--	80.0	-0.25	Bicchi, C., Fresia, M., Rubiolo, P., Monti, D., Franz, C., Goehler, I. 1997. Constituents of Tagetes lucida Cav. ssp. lucida essential oil. <i>Flavor & Fragrance</i> , 12(1): 47-52.
Tagetes minuta	Fruit Essent. Oil	--	5800.0	-0.64	*
Tagetes lucida	Leaf	--	280.0	-0.2	Tramil
Tagetes filifolia	Essential Oil	--	2700.0	-0.67	Hussain, R.A., et. al. 1990. Sweetening Agents of Plant Origin: Phenylpropanoid Constituents of Seven Sweet-Tasting Plants. <i>Econ. Bot.</i> 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	-0.65	*
Tanacetum parthenium	Essential Oil	--	--		*
Tanacetum parthenium	Shoot	--	8.0	-0.39	Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. <i>Flavor and Fragrance Journal</i> 11(6): 367-71.

Teucrium asiaticum	Shoot	--	0.15	-0.41	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.
Teucrium pseudoscorodonia	Shoot	--	19.84	-0.37	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.
Teucrium gnaphalodes	Shoot	--	60.0	-0.29	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian Teucrium Species. <i>J. Ess. Oil Res.</i> 5: 397-402.
Teucrium polium	Shoot	--	4.0	-0.4	Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian Teucrium Species. <i>J. Ess. Oil Res.</i> 5: 397-402.
Teucrium chamaedrys	Plant	--	420.0	-0.29	List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium arduini	Shoot	--	120.0	-0.17	Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of Teucrium arduini L. <i>J. Ess. Oil Res.</i> 4: 223-225.
Teucrium micropodioides	Leaf	--	170.0	-0.25	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
Teucrium divaricatum	Leaf	--	530.0	-0.08	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
Teucrium oxylepis	Shoot	--	5.2	-0.4	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.
Teucrium arduini	Shoot	--	245.0	0.09	Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of Teucrium arduini L. <i>J. Ess. Oil Res.</i> 4: 223-225.
Teucrium salviastrum	Shoot	--	10.8	-0.39	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.
Teucrium kotschyannum	Leaf	--	245.0	-0.21	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
Teucrium cyprium	Leaf	--	600.0	-0.04	Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
Teucrium scorodonia	Shoot	--	10.52	-0.39	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.
Teucrium polium	Plant	--	--		Rizk, A.F.M., <i>The Phytochemistry of the Flora of Qatar</i> , Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
Teucrium oxylepis	Shoot	--	1.74	-0.41	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 longicaulis	Shoot	--	28.0	-0.35	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 riatarum	Shoot	--	300.0	0.2	Iglesias, J., Vila, R., Canigüeral, S., Bellakdhar, and I 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	-0.36	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	-0.41	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	-0.37	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	-0.0	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	-0.06	*

Thymus vulgaris	Essential Oil	--	17800.0	-0.56	*
Thymus funkii	Shoot	--	210.0	0.02	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 zygis	Shoot	0.1	460.0	0.52	De Cunha, A.P. and Salguiero, L.R. 1991. The Chemical Polymorphism of Thymus zygis ssp. sylvestris from Central Portugal. J. Ess. Oil Res. 3: 409-12.
Thymus longicaulis	Shoot	--	28.0	-0.35	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	0.02	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.
Trifolium pratense	Flower	--	5.0	-0.68	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	-0.32	*
Valeriana officinalis	Leaf	6.0	345.0	-0.17	Father Nature's Pharmacy: The aggregate of all these three-letter citations.
Valeriana officinalis	Root Essent. Oil	--	--		*
Vitex agnus-castus	Leaf Essent. Oil	--	63800.0	-0.03	Jim Duke's personal files.
Vitex agnus-castus	Leaf	--	2.0	-0.33	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	*
Zingiber officinale	Rhizome Essent. Oil	--	900.0	-1.0	*