

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for CARYOPHYLLENE-OXIDE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Acinos alpinus	Shoot		3.0	-0.3926872831083181	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Acinos alpinus	Shoot		6.0	-0.3861085815952244	Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.)
Agastache rugosa	Shoot				Jim Duke's personal files.
Ageratum conyzoides	Shoot		300.0	0.25860416668796105	R. Vera, (1993); Chemical composition of the essential oil Ageratum conyzoides L. (Asteraceae) from Reunion, Flavour Fragr. J., Vol.8, 257-260.
Ageratum conyzoides	Plant	1.0	8.0	-0.39965795736454124	--
Aloysia citrodora	Plant	20.0	140.0	-0.15146472508588207	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Alpinia galanga	Rhizome				--
Alpinia galanga	Leaf Essent. Oil		10400.0	0.3753129945230765	--
Alpinia galanga	Seed				--
Alpinia galanga	Leaf		100.0	-0.021104757556764116	--
Apium graveolens	Seed	125.0	200.0	-1.3209276708861737	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Artemisia annua	Leaf	30.0	700.0	2.5915887501581745	--
Artemisia annua	Plant				--
Artemisia annua	Shoot	75.0	2920.0	6.004003488123152	Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands

Plant	Part	Low PPM	High PPM	StdDev	Reference
Boswellia sacra	Resin, Exudate, Sap		32900.0		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.
Callicarpa americana	Leaf		10.0	-0.4130087837140049	--
Centella asiatica	Shoot				Jim Duke's personal files.
Chrysanthemum x morifolium	Plant	15.0	57.0	-0.30752562113988746	Wealth of India.
Cinnamomum verum	Root Bark				--
Cinnamomum verum	Leaf	25.0	50.0	-0.238829216533009	--
Cinnamomum verum	Plant				--
Citrus limon	Leaf Essent. Oil	0.8	15600.0	1.322705019532784	Jim Duke's personal files.
Copaifera spp	Gum				--
Coriandrum sativum	Seed Essent. Oil		3610.0		--
Coriandrum sativum	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Cuminum cyminum	Seed		435.0	1.097913908269028	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cuminum cyminum	Fruit		435.0	-0.5007242267296801	--
Daucus carota	Seed	310.0	350.0	0.22301376261714642	--
Daucus carota	Root	310.0	350.0		--
Dracocephalum thymiflora	Plant		46.0	-0.3282083904964424	--
Elsholtzia eriostachya	Shoot		0.8	-0.3975116642179201	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus behriana	Leaf		2.7	-0.4447965547245367	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 globulus	Leaf Essent. Oil		3000.0	-0.9728987333753536	--
Eucalyptus tetraptera	Leaf		95.0	-0.042877203454388606	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 forrestiana	Leaf		27.0	-0.3389824676620817	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 ceratocorys	Leaf		10.0	-0.4130087837140049	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 cuprea	Leaf		8.0	-0.4217177620730547	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 fasciculosa	Leaf		5.0	-0.4347812296116294	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus desquamata	Leaf		60.0	-0.19528432473776003	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		2.4	-0.4461029014783941	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		10.0	-0.4130087837140049	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	-0.4365230252834394	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 citriodora	Leaf Essent. Oil		1000.0	-1.3372802814560105	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus stoatei	Leaf		80.0	-0.10819454114726207	Bignell, C.M., Dunlop, P.J., Brophy, J. J., and Jackson, J.F. 1994. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part I. Subgenus Symphyomyrtus, Section Dumaria, Series Incrassatae. Flavour and Fragrance J. 9(3):113-7
Eucalyptus erythrandra	Leaf		7.0	-0.42607225125257964	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 angulosa	Leaf		4.0	-0.4391357187911543	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 melanophloia	Leaf		1.0	-0.452199186329729	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		105.0	6.676883408603721E-4	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 sparsa	Leaf		25.0	-0.34769144602113145	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 intertexta	Leaf		5.5	-0.432603985021867	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		34.0	-0.30850104340540735	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		35.0	-0.3041465542258825	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 leucoxydon	Leaf		7.0	-0.42607225125257964	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 viridis	Leaf	0.0	0.5	-0.4543764309194915	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		13.0	-0.3999453161754302	Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364
Eucalyptus populnea	Leaf		1.8	-0.448715594986109	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
Galeopsis tetrahit	Shoot		128.0	-0.11857472006274614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Houttuynia cordata	Shoot				--
Humulus lupulus	Essential Oil				--
Hyptis suaveolens	Shoot		265.0	0.18185264903520085	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		265.0	0.18185264903520085	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.
Isanthus brachiatus	Plant		1.0	-0.41281971968234893	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Juniperus communis	Fruit		15.0	-0.895044555279303	--
Juniperus communis	Fruit Essent. Oil				--
Lantana camara	Shoot		18.0	-0.3597937755428494	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Laurus nobilis	Plant				--
Lavandula latifolia	Plant	6.0	24.0	-0.3695739292095523	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lavandula x hybrida	Shoot	14.0	25.0	-0.3444434720122974	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.
Lavandula angustifolia	Flower				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lavandula x intermedia	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Leonotis leonurus	Se		42.0		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
Lindera benzoin	Leaf		4.0	-0.4391357187911543	--
Litsea glaucescens	Shoot	4.0	27.0	-0.34005767100356826	Tucker, et al, EB46(1):21-24.1992
Lycopus europeus	Plant		16.0	-0.3846159432870468	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Magnolia denudata	Flower				--
Magnolia denudata	Twig				--
Magnolia denudata	Bulb				--
Magnolia denudata	Leaf				--
Magnolia denudata	Bark				--
Melissa officinalis	Plant	0.5	225.0	0.008356674487496966	J. Aromatherapy 1: 11.
Mentha longifolia	Shoot	0.0	835.0	1.4318059365230096	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Mentha aquatica	Shoot		3.0	-0.3926872831083181	Umamoto, 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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mentha aquatica	Shoot		1.0	-0.3970730841170472	Umamoto, 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		6.0	-0.3861085815952244	Umamoto, 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 x piperita	Essential Oil				--
Mentha aquatica	Shoot		3.0	-0.3926872831083181	Umamoto, 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		1.0	-0.3970730841170472	Umamoto, 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.
Micromeria fruticosa	Shoot		500.0	0.6971842675608764	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of Micromeria fruticosa (L.) Druce subsp. barbata (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
Micromeria thymifolia	Leaf		55.0	-0.21705677063538453	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.
Micromeria fruticosa	Shoot		500.0	0.6971842675608764	Fleisher, Z. and Fleisher, A. 1991. The Essential Oil of Micromeria fruticosa (L.) Druce subsp. barbata (Boiss et. Ky.), P.H. Davis. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
Micromeria croatica	Leaf		265.0	0.6973859570648441	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of Micromeria congesta. J. Ess. Oil Res., 3: 387-393.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Moldavica thymiflora	Plant		46.0	-0.3282083904964424	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Myrtus communis	Plant	2.0	3.0	-0.4090592161629753	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Nepeta cataria	Plant	285.0	2365.0	4.032095440217275	Bourrel, C., Perineau, F., Michel, G., Bessiere, J.M. 1993. Catnip (Nepeta cataria L.) Essential Oil: Analysis of Chemical Constituents, Bacteriostatic and Fungistatic Properties. J. Ess. Oil Res., 5: 159-167.
Ocimum basilicum	Essential Oil				--
Ocimum tenuiflorum	Leaf	100.0	1260.0	5.030102690692117	--
Origanum syriacum	Shoot		45.0	-0.30058546192500585	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum onites	Shoot		100.0	-0.17997593418495428	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. Flav. & Frag. J. 8: 331-7.
Origanum syriacum	Shoot		45.0	-0.30058546192500585	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum vulgare	Plant	84.0	336.0	0.21706461981273312	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum syriacum	Shoot		55.0	-0.2786564568813601	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Perilla frutescens	Shoot Essent. Oil		21000.0		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.
Pimenta dioica	Plant				--
Pimenta racemosa	Leaf	0.0	18.0	-0.3781728702778057	--
Piper nigrum	Fruit Essent. Oil		9000.0	1.0	--
Piper auritum	Leaf				Tramil

Plant	Part	Low PPM	High PPM	StdDev	Reference
Piper nigrum	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
Pogostemon cablin	Plant				--
Psidium guajava	Pericarp Essent. Oil				--
Psidium guajava	Leaf				Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Psidium guajava	Essential Oil				--
Ptychopetalum olacoides	Root Essent. Oil		29000.0		Uber Bucek, E., Fournier, G., Dadoun, H. 1987. Volatile Constituents of Ptychopetalum olacoides Root Oil. Planta Med. 53, 2: 231.
Pycnanthemum tenuifolium	Shoot	2.0	320.0	0.30246217677525256	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum loomisii	Shoot				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Rosmarinus officinalis	Shoot		38.0	-0.3159357654555579	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	0.1	75.0	-0.27368108946552483	--
Rosmarinus eriocalyx	Shoot	16.0	35.0	-0.32251446696865166	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	13.0	60.0	-0.26769195435953735	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	12.0	75.0	-0.2347984467940687	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		18.0	-0.3781728702778057	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, 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 eriocalyx	Shoot	16.0	35.0	-0.32251446696865166	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	24.0	35.0	-0.32251446696865166	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	0.1	38.0	-0.3159357654555579	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		18.0	-0.3781728702778057	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaïd, 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 x mendizabali	Shoot	13.0	44.0	-0.30277836242937045	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 dorisiana	Shoot	6.9	7.3	-0.38325781093955036	Tucker, A.O. & Maciarelo, M.J. 1994. The Essential Oil of Salvia dorisiana Standley. J. Ess. Oil Res. 6: 97-8.
Salvia sclarea	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Salvia canariensis	Leaf		28.0	-0.33462797848255676	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 officinalis	Plant	55.0	308.0	0.16441757054150238	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia officinalis	Essential Oil		13100.0		--
Salvia gilliesii	Shoot		205.0	0.050278618773326254	Velasco-Negueruela, A. et al. 1993. The Essential Oil of Salvia gilliesii Benth. J. Ess. Oil Res. 5: 319-320.
Satureja montana	Plant	10.0	285.0	0.12117178006870569	--
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 obovata	Leaf		175.0	0.3054819309076032	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		60.0	-0.19528432473776003	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		60.0	-0.19528432473776003	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.
Saussurea lappa	Root Essent. Oil				--
Scutellaria parvula	Plant		20.0	-0.37709493624829954	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria churchilliana	Plant		14.0	-0.38837644680642036	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Stevia rebaudiana	Leaf	20.0	190.0	0.3707992686004767	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Stevia rebaudiana</i>	Flower		265.0		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				--
<i>Syzygium aromaticum</i>	Leaf	75.0	712.0	2.643842620312473	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
<i>Syzygium aromaticum</i>	Plant				--
<i>Syzygium aromaticum</i>	Fruit		2455.0	1.3957687820089826	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
<i>Tagetes lucida</i>	Shoot		12.0	-0.37295117856903687	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>Tanacetum parthenium</i>	Fruit Essent. Oil		4000.0	-1.0	--
<i>Teucrium arduini</i>	Shoot		13.0	-0.3707582780646723	Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of <i>Teucrium arduini</i> L. J. Ess. Oil Res. 4: 223-225.
<i>Teucrium divaricatum</i>	Leaf		80.0	-0.10819454114726207	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. J. Ethnopharm. 35: 105-113.
<i>Teucrium arduini</i>	Shoot		13.0	-0.3707582780646723	Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of <i>Teucrium arduini</i> L. J. Ess. Oil Res. 4: 223-225.
<i>Teucrium micropodioides</i>	Leaf		68.0	-0.16044841130156084	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. J. Ethnopharm. 35: 105-113.
<i>Teucrium cyprium</i>	Leaf		275.0	0.740930848860093	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. J. Ethnopharm. 35: 105-113.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium kotschyianum	Leaf		27.0	-0.3389824676620817	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.
Thymus capitatus	Shoot		0.0	-0.39926598462141183	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. Flav. & Fragr. J. 8: 331-7.
Thymus cilicicus	Shoot		370.0	0.4121072019934814	Tumen, G., Koyuncu, M., Kirimer, N., and Baser, K.H.C. 1994. Composition of the Essential Oil of Thymus cilicicus Boiss. & Bal. J. Ess. Oil Res. 6: 97-8.
Thymus capitatus	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus funkii	Shoot		135.0	-0.10322441653219411	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 mastichina	Plant		1.0	-0.41281971968234893	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus funkii	Shoot		135.0	-0.10322441653219411	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 riatarum	Shoot		205.0	0.050278618773326254	Iglesias, J., Vila, R., Canigueral, S., Bellakdhar, and Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. J. Ess. Oil Res. 3: 43-4.
Trichostemma dichotomum	Shoot		2.0	-0.3948801836126827	Tucker, A.O. and Maciarelo, M.J. 1990. The Essential Oil of Trichostemma dichotomum. J. Ess. Oil Res. 2: 149-150.
Vitex agnus-castus	Flower				Jim Duke's personal files.
Vitex agnus-castus	Leaf		1.6	-0.44958649282201407	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Vitex agnus-castus	Leaf Essent. Oil		11700.0	0.6121610007755034	Jim Duke's personal files.
Vitex agnus-castus	Fruit				Jim Duke's personal files.