

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for ALPHA-HUMULENE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Leaf				--
Acinos alpinus	Shoot		3.0	-0.39470951573514457	Velasco-Negueruela, A., Perez-Alonso, M.J., Jimenez, 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		3.0	-0.39470951573514457	Velasco-Negueruela, A., Perez-Alonso, M.J., Jimenez, 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.)
Acorus calamus	Plant				--
Acorus calamus	Rhizome				--
Agastache rugosa	Shoot				Jim Duke's personal files.
Alpinia galanga	Rhizome				--
Angelica archangelica	Root	18.0	50.0	1.4138559108869015	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Angelica archangelica	Root Essent. Oil				--
Apium graveolens	Seed	20.0	33.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Apium graveolens	Leaf	266.0	2500.0	3.7785413446723948	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Aralia cordata	Root		11.0	-0.7344706030581312	--
Artemisia capillaris	Essential Oil				--
Artemisia annua	Leaf	1.0	285.0	0.016038059526224918	--
Ballota nigra	Plant		8.0	-0.7037976499979834	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Boswellia sacra	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Callicarpa americana	Leaf		110.0	-0.2812251797065425	--
Canarium indicum	Essential Oil	100.0	250.0	-0.4788836425108706	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Centella asiatica	Shoot				Jim Duke's personal files.
Chrysanthemum parthenium	Shoot				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 verum	Root Bark				--
Cinnamomum verum	Leaf Essent. Oil		2000.0	-0.6471039886127844	--
Cinnamomum verum	Leaf		55.0	-0.3746507691796979	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
Cinnamomum verum	Stem Bark				--
Citrus reticulata	Fruit	0.7	1.0	-0.598173569962584	--
Citrus limon	Petiole		1.5		--
Citrus paradisi	Pericarp		7.0		--
Citrus aurantium	Plant				--
Citrus limon	Essential Oil		10.0	-0.48105436900291004	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus sinensis	Fruit	0.0	0.1	-0.5986253681056065	--
Citrus paradisi	Leaf		29.0	-0.41881559329428053	--
Cleonia lusitanica	Leaf		1.0	-0.4663777115715233	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	Stem Essent. Oil		84800.0		Jim Duke's personal files.
Coleus barbatus	Leaf Essent. Oil		84800.0	2.123092147042806	Jim Duke's personal files.
Copaifera spp	Plant				--
Coridothymus capitatus	Shoot		0.1	-0.4228137675452841	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.
Daucus carota	Root		12.0	-0.6793853078287713	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Elsholtzia blanda	Shoot		4.0	-0.3850183944213034	Bestman, H.J., Rauscher, J., Vostrowsky O., Pant, A.K., Dev. V., Perihar, R. and Mathela, C.S. 1992. Constituents of the Essential Oil of Elsholtzia blanda Benth. (Labiatae). J. Ess. Oils Res. 4: 121-124
Elsholtzia eriostachya	Shoot		3.0	-0.39470951573514457	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.
Eucalyptus citriodora	Leaf Essent. Oil		2000.0	-0.6471039886127844	--
Foeniculum vulgare	Essential Oil		1600.0	-0.46667330599314866	Jim Duke's personal files.
Galeopsis tetrahit	Shoot		6.0	-0.365636151793621	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Gossypium sp	Essential Oil		25400.0	-0.25140959553256953	--
Hedeoma pulegioides	Plant	30.0	150.0	0.6882757053085324	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hedychium flavum	Shoot		230.0	1.8051750225068064	--
Humulus lupulus	Essential Oil		400000.0	3.136732670792344	--
Humulus lupulus	Fruit				--
Hypericum perforatum	Plant	1.0	18.0	-0.6057643151172428	--
Hyptis suaveolens	Shoot		6.0	-0.365636151793621	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		6.0	-0.365636151793621	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		0.1	-0.4228137675452841	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	Leaf	1.0	140.0	-0.23026576726663947	--
Hyssopus officinalis	Flower	1.0	12.0	-0.8529274950889835	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Hyssopus officinalis	Shoot				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.
Illicium verum	Fruit	1.0	900.0	-0.1468774248768592	--
Isanthus brachiatus	Plant		17.0	-0.6155676486053169	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Juniperus communis	Fruit	19.0	192.0	-0.5022919640544935	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lavandula latifolia	Plant	0.0	51.0	-0.28225431001079904	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Leonotis leonurus	Se		39.0		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
Leonurus cardiaca	Plant	35.0	175.0	0.9333590425103838	--
Lepechinia calycina	Plant		10.0	-0.6841909830218353	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Leptospermum scoparium	Essential Oil				--
Lindera benzoin	Leaf		4.0	-0.461281770327533	--
Litsea glaucescens	Shoot	10.0	15.0	-0.2784160599690503	Tucker, et al, EB46(1):21-24.1992
Magnolia denudata	Twig				--
Magnolia denudata	Bulb				--
Magnolia denudata	Leaf				--
Magnolia denudata	Bark				--
Magnolia denudata	Flower				--
Melissa officinalis	Shoot	1.0	80.0	0.3515068254306274	--
Mentha spicata	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Mentha pulegium	Plant	70.0	140.0	0.5902423704277919	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Mentha spicata</i>	Essential Oil				--
<i>Micromeria myrtifolia</i>	Shoot		9.0	-0.3365627878520974	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of <i>Micromeria myrtifolia</i> Boiss. et Hohen. J. Ess. Oil Res., 4: 79-80.
<i>Micromeria fruticosa</i>	Shoot		50.0	0.060773186015391556	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. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
<i>Micromeria varia</i>	Shoot		18.0	-0.24934269602752668	--
<i>Micromeria varia</i>	Shoot		18.0	-0.24934269602752668	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. flav. & Fragr. J. 10(3): 199-202.
<i>Micromeria fruticosa</i>	Shoot		50.0	0.060773186015391556	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. Aromatic Plants of the Holy Land and the Sinai. Part VII. J. Ess. Oil Res 3: 477-479.
<i>Minthostachys mollis</i>	Shoot	1.0	5.0	-0.3753272731074622	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>Murraya koenigii</i>	Leaf		14.0	-0.444295299514232	--
<i>Myristica fragrans</i>	Essential Oil		30000.0	-0.20980400443514668	--
<i>Myrtus communis</i>	Plant	3.0	4.0	-0.7430109839502796	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Nepeta racemosa</i>	Shoot		16.0	-0.2687249386552091	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
Nepeta cataria	Plant	18.0	170.0	0.8843423750700136	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.
Nepeta racemosa	Shoot		16.0	-0.2687249386552091	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 gratissimum	Plant	1.0	9.0	-0.6939943165099094	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Ocimum kilimandscharicum	Flower	0.0	230.0	-0.1416107623827925	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum kilimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum basilicum	Shoot Essent. Oil	6700.0	11800.0	0.818288975563984	--
Ocimum basilicum	Plant		16.0	-0.6253709820933909	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 tenuiflorum	Leaf	9.0	205.0	-0.11985370698018302	--
Ocimum basilicum	Essential Oil		31300.0	-0.1980459026032663	--
Ocimum kilimandscharicum	Leaf	8.0	47.0	-0.3882399458303387	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum kilimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum basilicum	Leaf Essent. Oil		5650.0	-0.5249878546134739	--
Ocimum basilicum	Plant		16.0	-0.6253709820933909	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.
Origanum vulgare	Plant		40.0	-0.39009097837961365	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four Origanum vulgare Subspecies of Anatolian Origin. J. Ess. Oil Res., 5: 425-431.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Origanum vulgare	Plant		10.0	-0.6841909830218353	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 onites	Shoot		20.0	-0.22996045339984428	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		55.0	0.10922879258459753	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum vulgare	Plant	6.0	376.0	2.903829073613269	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum vulgare	Plant		120.0	0.3941757006663108	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 majorana	Essential Oil				--
Origanum syriacum	Shoot		20.0	-0.22996045339984428	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum majorana	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum vulgare	Plant		24.0	-0.5469443141887985	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		0.0	-0.42378287967666817	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	Shoot Essent. Oil		5800.0	-0.5745433232683291	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Origanum onites	Shoot		20.0	-0.22996045339984428	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		55.0	0.10922879258459753	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Panax quinquefolius	Plant				--
Panax ginseng	Root Essent. Oil				--
Panax ginseng	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Perilla frutescens	Shoot Essent. Oil		13000.0	1.096855435330446	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.
Petasites hybridus	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pimenta racemosa	Leaf	0.0	36.0	-0.40692506372496984	--
Pimenta dioica	Fruit		405.0	-0.3953664035391883	--
Pimenta dioica	Leaf Essent. Oil				--
Pinus sylvestris	Leaf Essent. Oil		4600.0	-0.5601171534351933	--
Pinus strobus	Leaf Essent. Oil				--
Piper nigrum	Fruit Essent. Oil	2100.0	19500.0	-1.0	--
Piper nigrum	Leaf Essent. Oil				--
Piper nigrum	Fruit				--
Plectranthus coleoides	Shoot		80.0	0.3515068254306274	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Plectranthus incanus	Shoot		25.0	-0.1815048468306383	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.
Psidium guajava	Fruit		6000.0	2.4133120522501676	--
Psidium guajava	Pericarp Essent. Oil				--
Ptychopetalum olacoides	Root Essent. Oil		92000.0		Uber Bucek, E., Fournier, G., Dadoun, H. 1987. Volatile Constituents of Ptychopetalum olacoides Root Oil. Planta Med. 53, 2: 231.
Pycnanthemum beadlei	Shoot		49.0	0.05108206470155036	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum tenuifolium	Shoot	8.0	640.0	5.778534761181696	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum californicum	Shoot		468.0	4.111661895201011	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Rheum palmatum	Rhizome		1.0		--
Rosmarinus x lavandulaceus	Shoot	3.0	40.0	-0.03613802712302039	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	19.0	38.0	-0.05552026975070278	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		12.0	-0.4476925936768922	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 eriocalyx	Shoot	22.0	80.0	0.3515068254306274	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 tomentosus	Shoot		0.1	-0.4228137675452841	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	50.0	0.060773186015391556	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		42.0	-0.016755784495338003	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
Rosmarinus x mendizabalii	Shoot	4.0	38.0	-0.05552026975070278	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		13.0	-0.2977983025967326	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		12.0	-0.4476925936768922	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 officinalis	Shoot Essent. Oil		2500.0	-1.3406010876261014	--
Rosmarinus eriocalyx	Shoot	22.0	80.0	0.3515068254306274	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	4.3	5.7	-0.3685434881877733	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of Salvia dorisiana Standley. J. Ess. Oil Res. 6: 97-8.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Salvia officinalis	Et		21000.0		--
Salvia officinalis	Leaf	110.0	616.0	0.5782902434464878	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia canariensis	Leaf		110.0	-0.2812251797065425	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 officinalis	Essential Oil		19300.0	-0.306582227205239	--
Salvia officinalis	Leaf Essent. Oil		29000.0	0.25622083823143005	--
Sassafras albidum	Leaf	0.0	8.4	-0.4538077231696806	--
Satureja thymbra	Shoot		75.0	0.30305121886142145	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 montana	Plant	8.0	325.0	2.403859065721492	--
Saussurea lappa	Root Essent. Oil				--
Scutellaria churchilliana	Plant		11.0	-0.6743876495337613	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria lateriflora	Essential Oil		42000.0	-0.101267679833174	--
Scutellaria parvula	Plant		19.0	-0.5959609816291688	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria galericulata	Plant		16.0	-0.6253709820933909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Sideritis mugronensis	Leaf	10.0	15.0	-0.4425966524329019	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
Sideritis mugronensis	Flower	10.0	15.0	-0.8431387327122928	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
Sideritis pauli	Shoot		3.0	-0.39470951573514457	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Stevia rebaudiana</i>	Leaf		30.0	-0.4171169462129504	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>	Flower		260.0	-0.04372313861588544	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>	Flower	775.0	850.0	1.881400128799953	--
<i>Syzygium aromaticum</i>	Leaf	290.0	1740.0	2.4875695628615198	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
<i>Syzygium aromaticum</i>	Essential Oil		30000.0	-0.20980400443514668	--
<i>Syzygium aromaticum</i>	Fruit	250.0	850.0	-0.1719773217114379	--
<i>Tagetes lucida</i>	Shoot		12.0	-0.3074894239105738	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 filifolia</i>	Essential Oil		5300.0	-0.43320793924087375	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.
<i>Tagetes minuta</i>	Flower Essent. Oil		4000.0		--
<i>Tamarindus indica</i>	Fruit Essent. Oil		20000.0	1.0	--
<i>Tanacetum parthenium</i>	Shoot				Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of <i>Tanacetum parthenium</i> (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71.
<i>Teucrium micropodioides</i>	Leaf		44.0	-0.39333588707432904	Arnold, N., Bellomaria, B., Velentini G. and Rifaiani, 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 cyprum	Leaf		50.0	-0.3831440045863484	Arnold, N., Bellomaria, B., Velentini G. and Rapaia, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium scorodonia	Shoot		1.11	-0.4130257350183045	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		20.0	-0.22996045339984428	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		9.5	-0.3317172271951768	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		550.0	0.4661795360787012	Arnold, N., Bellomaria, B., Velentini G. and Rapaia, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium asiaticum	Shoot		1.92	-0.4051759267540931	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six Teucrium Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9.
Teucrium oxylepis	Shoot				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		20.0	-0.22996045339984428	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 pseudoscorodonia	Shoot		1.52	-0.4090523752796296	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium divaricatum	Leaf		0.0	-0.4680763586528534	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. J. Ethnopharm. 35: 105-113.
Teucrium polium	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
Teucrium oxylepis	Shoot		0.96	-0.4144794032153807	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.
Thymus riatarum	Shoot		25.0	-0.1815048468306383	Iglesias, J., Vila, R., Canigueral, S., Bellakdhar, and I Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. J. Ess. Oil Res. 3: 43-4.
Thymus capitatus	Shoot		10.0	-0.3268716665382562	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 funkii	Shoot		16.0	-0.2687249386552091	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		0.0	-0.42378287967666817	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 capitatus	Plant		10.0	-0.6841909830218353	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus longicaulis	Shoot		0.0	-0.42378287967666817	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 orospedanus	Plant				J. Nat. Prod.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Thymus longicaulis	Shoot		0.0	-0.42378287967666817	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		16.0	-0.2687249386552091	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.
Trichostemma dichotomum	Shoot		11.0	-0.317180545224415	Tucker, A.O. and Maciarelo, M.J. 1990. The Essential Oil of Trichostemma dichotomum. J. Ess. Oil Res. 2: 149-150.
Umbellularia californica	Plant	45.0	180.0	0.9823757099507541	--