

List of Plants

ALPHA-HUMULENE

Chemid

ALPHAHUMULENE

*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
Achillea millefolium	Leaf	--	--		*
Acinos alpinus	Shoot	--	3.0	-0.39	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	--	3.0	-0.39	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.)
Acorus calamus	Plant	--	--		*
Acorus calamus	Rhizome	--	--		*
Agastache rugosa	Shoot	--	--		Jim Duke's personal files.
Alpinia galanga	Rhizome	--	--		*
Angelica archangelica	Root	18.0	50.0	1.41	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	3.78	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Aralia cordata	Root	--	11.0	-0.73	*
Artemisia annua	Leaf	1.0	285.0	0.02	*
Artemisia capillaris	Essential Oil	--	--		*
Ballota nigra	Plant	--	8.0	-0.7	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	-0.28	*
Canarium indicum	Essential Oil	100.0	250.0	-0.48	*
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	Leaf Essent. Oil	--	2000.0	-0.65	*
Cinnamomum verum	Leaf	--	55.0	-0.37	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	--	--		*
Cinnamomum verum	Root Bark	--	--		*
Citrus limon	Petiole	--	1.5		*

Citrus paradisi	Pericarp	--	7.0		*
Citrus aurantium	Plant	--	--		*
Citrus limon	Essential Oil	--	10.0	-0.48	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus sinensis	Fruit	--	0.1	-0.6	*
Citrus paradisi	Leaf	--	29.0	-0.42	*
Citrus reticulata	Fruit	0.7	1.0	-0.6	*
Cleonia lusitanica	Leaf	--	1.0	-0.47	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	2.12	Jim Duke's personal files.
Copaifera spp	Plant	--	--		*
Coridothymus capitatus	Shoot	--	0.1	-0.42	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	-0.68	*
Elsholtzia blanda	Shoot	--	4.0	-0.39	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	-0.39	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.
Eucalyptus citriodora	Leaf Essent. Oil	--	2000.0	-0.65	*
Foeniculum vulgare	Essential Oil	--	1600.0	-0.47	Jim Duke's personal files.
Galeopsis tetrahit	Shoot	--	6.0	-0.37	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Gossypium sp	Essential Oil	--	25400.0	-0.25	*
Hedeoma pulegioides	Plant	30.0	150.0	0.69	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hedychium flavum	Shoot	--	230.0	1.81	*
Humulus lupulus	Fruit	--	--		*
Humulus lupulus	Essential Oil	--	400000.0	3.14	*
Hypericum perforatum	Plant	1.0	18.0	-0.61	*
Hyptis suaveolens	Shoot	--	6.0	-0.37	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	-0.37	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	Leaf	1.0	140.0	-0.23	*
Hyssopus officinalis	Flower	1.0	12.0	-0.85	*
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.
Hyssopus officinalis	Shoot	--	0.1	-0.42	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	-0.15	*
Isanthus brachiatus	Plant	--	17.0	-0.62	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Juniperus communis	Fruit	19.0	192.0	-0.5	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lavandula latifolia	Plant	--	51.0	-0.28	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	0.93	*
Lepechinia calycina	Plant	--	10.0	-0.68	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Leptospermum scoparium	Essential Oil	--	--		*
Lindera benzoin	Leaf	--	4.0	-0.46	*
Litsea glaucescens	Shoot	10.0	15.0	-0.28	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	0.35	*
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	0.59	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Mentha spicata	Essential Oil	--	--		*
Micromeria fruticosa	Shoot	--	50.0	0.06	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 varia	Shoot	--	18.0	-0.25	*
Micromeria varia	Shoot	--	18.0	-0.25	Pedro, L.G., et al. 1995. Composition of the Essential oil of Micromeria varia Benth. ssp. thymoides (Sol. ex Lowe) Perez var. thymoides, and endemic species of the Madeira Archipelago. flav. & Fragr. J. 10(3): 199-202.
Micromeria fruticosa	Shoot	--	50.0	0.06	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 myrtifolia	Shoot	--	9.0	-0.34	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of Micromeria myrtifolia Boiss. et Hohen. J. Ess. Oil Res., 4: 79-80.
Minthostachys mollis	Shoot	1.0	5.0	-0.38	Alkire, B.H., Tucker, A.O., and Maciarelo, M.J. 1994. Tipo (Minthostachys mollis (Lamiaceae): An Ecuadorian Mint. Econ. Bot. 48(1): 60-64.
Murraya koenigii	Leaf	--	14.0	-0.44	*
Myristica fragrans	Essential Oil	--	30000.0	-0.21	*
Myrtus communis	Plant	3.0	4.0	-0.74	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Nepeta racemosa	Shoot	--	16.0	-0.27	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	18.0	170.0	0.88	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	-0.27	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	--	16.0	-0.63	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	-0.12	*
Ocimum basilicum	Essential Oil	--	31300.0	-0.2	*

Ocimum kilimandscharicum	Leaf	8.0	47.0	-0.39	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	-0.52	*
Ocimum basilicum	Plant	--	16.0	-0.63	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 gratissimum	Plant	1.0	9.0	-0.69	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Ocimum kilimandscharicum	Flower	--	230.0	-0.14	Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum killimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128.
Ocimum basilicum	Shoot Essent. Oil	6700.0	11800.0	0.82	*
Origanum onites	Shoot	--	20.0	-0.23	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	0.11	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	2.9	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum vulgare	Plant	--	120.0	0.39	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	-0.23	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	-0.55	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	--	--	-0.42	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	-0.57	*
Origanum onites	Shoot	--	20.0	-0.23	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	0.11	Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of Origanum syriacum L. Essential Oil. J. Ess. Oil Res. 3: 121-123.
Origanum vulgare	Plant	--	40.0	-0.39	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	--	10.0	-0.68	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.
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	1.1	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 dioica	Fruit	--	405.0	-0.4	*
Pimenta dioica	Leaf Essent. Oil	--	--		*
Pimenta racemosa	Leaf	--	36.0	-0.41	*
Pinus strobus	Leaf Essent. Oil	--	--		*
Pinus sylvestris	Leaf Essent. Oil	--	4600.0	-0.56	*
Piper nigrum	Leaf Essent. Oil	--	--		*
Piper nigrum	Fruit	--	--		*

Piper nigrum	Fruit Essent. Oil	2100.0	19500.0	-1.0	*
Plectranthus incanus	Shoot	--	25.0	-0.18	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.
Plectranthus coleoides	Shoot	--	80.0	0.35	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.
Psidium guajava	Fruit	--	6000.0	2.41	*
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	0.05	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum tenuifolium	Shoot	8.0	640.0	5.78	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum californicum	Shoot	--	468.0	4.11	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Rheum palmatum	Rhizome	--	1.0		*
Rosmarinus eriocalyx	Shoot	22.0	80.0	0.35	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	--	0.1	-0.42	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	0.06	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	-0.02	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	-0.06	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	-0.3	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	-0.45	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	-1.34	*
Rosmarinus eriocalyx	Shoot	22.0	80.0	0.35	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	3.0	40.0	-0.04	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	-0.06	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	-0.45	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.
Salvia officinalis	Leaf	110.0	616.0	0.58	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Salvia canariensis	Leaf	--	110.0	-0.28	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	Essential Oil	--	19300.0	-0.31	*
Salvia officinalis	Leaf Essent. Oil	--	29000.0	0.26	*
Salvia dorisiana	Shoot	4.3	5.7	-0.37	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of Salvia dorisiana Standley. J. Ess. Oil Res. 6: 97-8.
Salvia officinalis	Et	--	21000.0		*
Sassafras albidum	Leaf	--	8.4	-0.45	*

Satureja thymbra	Shoot	--	75.0	0.3	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	2.4	*
Saussurea lappa	Root Essent. Oil	--	--		*
Scutellaria churchilliana	Plant	--	11.0	-0.67	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria lateriflora	Essential Oil	--	42000.0	-0.1	*
Scutellaria parvula	Plant	--	19.0	-0.6	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria galericulata	Plant	--	16.0	-0.63	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Sideritis mugronensis	Flower	10.0	15.0	-0.84	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	-0.39	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
Sideritis mugronensis	Leaf	10.0	15.0	-0.44	Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397.
Stevia rebaudiana	Leaf	--	30.0	-0.42	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
Stevia rebaudiana	Flower	--	260.0	-0.04	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
Syzygium aromaticum	Leaf	290.0	1740.0	2.49	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Syzygium aromaticum	Essential Oil	--	30000.0	-0.21	*
Syzygium aromaticum	Fruit	250.0	850.0	-0.17	*
Syzygium aromaticum	Flower	775.0	850.0	1.88	*
Tagetes filifolia	Essential Oil	--	5300.0	-0.43	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.
Tagetes minuta	Flower Essent. Oil	--	4000.0		*
Tagetes lucida	Shoot	--	12.0	-0.31	Bicchi, C., Fresia, M., Rubiolo, P., Monti, D., Franz, C., Goehler, I. 1997. Constituents of Tagetes lucida Cav. ssp. lucida essential oil. Flavor & Fragrance, 12(1): 47-52.
Tamarindus indica	Fruit Essent. Oil	--	20000.0	1.0	*
Tanacetum 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.
Teucrium scorodonia	Shoot	--	1.11	-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. Phytochemistry 29(4): 1165-9.
Teucrium arduini	Shoot	--	20.0	-0.23	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	-0.33	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 kotschyianum	Leaf	--	550.0	0.47	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 asiaticum	Shoot	--	1.92	-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. 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	-0.23	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	-0.41	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 divaricatum	Leaf	--	--	-0.47	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	-0.41	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 micropodioides	Leaf	--	44.0	-0.39	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 cyprum	Leaf	--	50.0	-0.38	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 funkii	Shoot	--	16.0	-0.27	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	--	--	-0.42	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	-0.68	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus longicaulis	Shoot	--	--	-0.42	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.
Thymus longicaulis	Shoot	--	--	-0.42	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	-0.27	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	--	25.0	-0.18	Iglesias, J., Vila, R., Canigual, S., Bellakdhar, and Il Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. J. Ess. Oil Res. 3: 43-4.
Thymus capitatus	Shoot	--	10.0	-0.33	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.
Trichostemma dichotomum	Shoot	--	11.0	-0.32	Tucker, A.O. and Maciarello, M.J. 1990. The Essential Oil of Trichostemma dichotomum. J. Ess. Oil Res. 2: 149-150.
Umbellularia californica	Plant	45.0	180.0	0.98	*