

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for GAMMA-CADINENE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Leaf				--
Agastache rugosa	Tissue Culture				Jim Duke's personal files.
Ageratum conyzoides	Shoot		2520.0	5.377506816867179	R. Vera, (1993); Chemical composition of the essential oil Ageratum conyzoides L. (Asteraceae) from Reunion, Flavour Fragr. J., Vol.8, 257-260.
Aloysia citrodora	Plant	2.0	14.0	-0.45984857009077795	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Alpinia officinarum	Rhizome				Wealth of India.
Angelica archangelica	Root	2.0	14.0	1.0	--
Angelica archangelica	Plant				--
Aniba rosaeodora	Plant				--
Artemisia salsoloides	Shoot		50.0	-0.1218975256470905	V. Kaul, P. Weyerstahl, H. Wahlberg, H. Marschall, (1992); Volatile constituents of the essential oil and the absolute of Artemisia salsoloides Willd. from Ladakh, Flavour and Fragrance journal, Vol.7, 299-305.
Artemisia herba-alba	Plant				--
Boswellia sacra	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Callicarpa americana	Leaf		3.0	-0.4545809267588206	--
Cananga odorata	Flower				--
Cannabis sativa	Plant				Turner, C. E., El Sohly, M. A., Boeren, E. G. 1980. Constituents of Cannabis sativa L. XVII. A Review of the Natural Constituents. J Natural Products, 432: 169-234.
Cannabis sativa	Essential Oil				--
Chrysanthemum x morifolium	Plant	20.0	75.0	0.5048602026128912	Wealth of India.
Cinnamomum verum	Leaf Essent. Oil				--
Cinnamomum verum	Leaf		24.0	-0.2185114629097392	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Citrus paradisi	Pericarp				--
Citrus sinensis	Fruit	1.0	2.0	-0.9084313290424243	--
Citrus reticulata	Fruit	1.0	2.0	-0.9084313290424243	--
Copaifera spp	Gum				--
Coridothymus capitatus	Shoot		0.1	-0.23299885224282407	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.
Cymbopogon winterianus	Plant	40.0	158.0	1.8174967294064082	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
Elsholtzia pilosa	Shoot		36.0	-0.15306823851964102	--
Elsholtzia polystachya	Leaf		10.0	-0.37589110547579346	Mathela, C.S., Melkani, A.B., Bisht, J.C., Pant, A.K., Bestmann, H.J., Erler, J., Kobold, U., Rauscher, J. and Vostrowsky, O. 1992. Chemical Varieties of Essential Oils from Elsholtzia polystachya from Two Different Locations in India. Planta Medica 58: 376-379.
Elsholtzia polystachya	Leaf		10.0	-0.37589110547579346	Mathela, C.S., Melkani, A.B., Bisht, J.C., Pant, A.K., Bestmann, H.J., Erler, J., Kobold, U., Rauscher, J. and Vostrowsky, O. 1992. Chemical Varieties of Essential Oils from Elsholtzia polystachya from Two Different Locations in India. Planta Medica 58: 376-379.
Eucalyptus globulus	Fruit Essent. Oil				--
Eucalyptus globulus	Leaf Essent. Oil		1000.0	-0.7812021248174129	--
Humulus lupulus	Fruit		60.0	0.07091843089178781	--
Hyssopus officinalis	Plant				--
Juniperus communis	Fruit	16.0	164.0	1.8269938624979614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Laurus nobilis	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lavandula angustifolia	Flower				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Levisticum officinale	Root	0.0	5.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lindera benzoin	Leaf		3.0	-0.4545809267588206	--
Lycopus uniflorus	Plant		8.0	-0.5547379575698274	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Melissa officinalis	Shoot	1.0	25.0	-0.17755951291950214	Deutsche Apot. Ziti. 129(4):155-163. W. Schulze et al. Die Melisse.
Mentha spicata	Leaf	2.0	33.0	-0.11733883554584716	--
Mentha longifolia	Shoot	1.0	75.0	-0.06623553837467899	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Metrosideros sclerocarpa	Leaf	53.0	212.0	1.894872308691561	--
Micromeria croatica	Leaf		360.0	3.5585999586755634	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 varia	Shoot		15.0	-0.19982430782846677	--
Micromeria varia	Shoot		24.0	-0.1797859924103986	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.
Murraya koenigii	Leaf		0.0	-0.4883051358801179	--
Ocimum basilicum	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Ocimum basilicum	Essential Oil				--
Ocimum basilicum	Leaf Essent. Oil		22800.0	1.411528302781677	--
Opopanax chironium	Essential Oil				--
Origanum onites	Shoot		75.0	-0.06623553837467899	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Origanum vulgare	Plant		0.0	-0.6812571408752266	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	-0.23322150019191376	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	200.0	9700.0		--
Origanum vulgare	Plant	50.0	200.0	2.481722441759754	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum onites	Shoot		0.0	-0.23322150019191376	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		0.0	-0.6812571408752266	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		0.0	-0.6812571408752266	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		7.0	-0.5705528554830023	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 ginseng	Flower Essent. Oil				--
Pelargonium graveolens	Essential Oil				--
Petroselinum crispum	Leaf				--
Pimenta dioica	Fruit		51.0	-0.08104963530490027	--
Pimenta dioica	Leaf		50.0	0.07376501614150445	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Pimenta racemosa</i>	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pinus sylvestris</i>	Leaf Essent. Oil		2500.0	-0.6303261779642645	--
<i>Pinus sylvestris</i>	Resin, Exudate, Sap				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Pinus sylvestris</i>	Essential Oil				--
<i>Pinus sylvestris</i>	Wood				--
<i>Piper nigrum</i>	Fruit Essent. Oil				--
<i>Piper nigrum</i>	Fruit				--
<i>Rheum palmatum</i>	Rhizome		0.5		--
<i>Rosmarinus officinalis</i>	Resin, Exudate, Sap				--
<i>Rosmarinus officinalis</i>	Leaf		1.0	-0.4770637328396855	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of <i>Rosmarinus officinalis</i> L. from Egypt. Flavour and Fragrance J. 9: 29-33.
<i>Rosmarinus officinalis</i>	Plant				--
<i>Rosmarinus officinalis</i>	Leaf		1.0	-0.4770637328396855	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of <i>Rosmarinus officinalis</i> L. from Egypt. Flavour and Fragrance J. 9: 29-33.
<i>Rosmarinus officinalis</i>	Leaf		5.0	-0.4320981206779557	Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of <i>Rosmarinus officinalis</i> L. from Egypt. Flavour and Fragrance J. 9: 29-33.
<i>Salvia officinalis</i>	Plant	2.0	14.0	-0.45984857009077795	--
<i>Salvia officinalis</i>	Leaf Essent. Oil				--
<i>Salvia gilliesii</i>	Shoot		36.0	-0.15306823851964102	Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. J. Ess. Oil Res. 5: 319-320.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Salvia dorisiana	Shoot	5.0	5.6	-0.2207532150428935	Tucker, A.O. & Maciarello, M.J. 1994. The Essential Oil of Salvia dorisiana Standley. J. Ess. Oil Res. 6: 97-8.
Sassafras albidum	Leaf	0.3	5.0	-0.4320981206779557	--
Satureja thymbra	Shoot		37.0	-0.15084175902874455	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	3.0	70.0	0.42578571304701673	--
Scutellaria parvula	Plant		9.0	-0.5389230596566524	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Sideritis pauli	Shoot		6.0	-0.21986262324653497	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
Stevia rebaudiana	Leaf		35.0	-0.09485602946498227	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		80.0		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	25.0	160.0	1.3103193505890738	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
Syzygium aromaticum	Fruit				--
Tagetes lucida	Shoot		30.0	-0.16642711546501981	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		4000.0		--
Tanacetum vulgare	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium scorodonia	Shoot		1.22	-0.23050519521302001	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 oxylepis	Shoot		7.9	-0.21563231221383175	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 kotschyianum	Leaf		0.0	-0.4883051358801179	Arnold, N., Bellomaria, B., Velentini 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		0.0	-0.4883051358801179	Arnold, N., Bellomaria, B., Velentini 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 salviastrum	Shoot		1.9	-0.22899118915921052	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	Shoot		0.5	-0.23210826044646554	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 arduini	Shoot		68.0	-0.08182089481095425	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 gnaphalodes	Shoot		1.5	-0.22988178095556908	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 asiaticum	Shoot		0.1	-0.23299885224282407	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium pseudoscorodonia	Shoot		0.56	-0.23197467167701175	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 oxylepis	Shoot		0.99	-0.23101728549592623	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		68.0	-0.08182089481095425	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		0.0	-0.4883051358801179	Arnold, N., Bellomaria, B., Velentini 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		0.0	-0.4883051358801179	Arnold, N., Bellomaria, B., Velentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some Teucrium Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113.
Thymus mastichina	Plant		5.0	-0.6021826513093521	Lawrence, B.M., <i>Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.</i>
Thymus funkii	Shoot		16.0	-0.1975978283375703	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.
Thymus riatarum	Shoot		25.0	-0.17755951291950214	Iglesias, J., Vila, R., Canigüeral, S., Bellakdhar, and Il Idrissi, A. 1991. Analysis of the Essential Oil of Thymus riatarum. <i>J. Ess. Oil Res.</i> 3: 43-4.
Thymus capitatus	Shoot		0.1	-0.23299885224282407	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. <i>Flav. & Fragr. J.</i> 8: 331-7.
Thymus funkii	Shoot		16.0	-0.1975978283375703	Vila, R., et al. 1995. Composition and study of the variability of the essential oil of Thymus funkii Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Turnera diffusa	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Valeriana officinalis	Root				--
Vitex agnus-castus	Leaf		0.2	-0.4860568552720314	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.