

# C DELTA-3-CARENE

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DELTA3CARENE

\*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
Abies alba	Leaf	2	4	-0.4250752105699259	--
Abies alba	Resin, Exudate, Sap	--	--		--
Anethum graveolens	Leaf	--	0.1	-0.4906741021305423	--
Angelica archangelica	Root	30	505	1.4140772728836788	--
Aralia cordata	Root	2	2	-0.7240415695827254	--
Capsicum annuum	Fruit	--	--		--
Capsicum frutescens	Fruit	--	--		--
Carum carvi	Fruit	90	180	-0.31208082478300797	--
Carum carvi	Plant	100	100	-0.29930598714761825	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Carum carvi	Seed	90	180	-0.16222142113076254	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cinnamomum verum	Bark	3	12		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cinnamomum verum	Leaf	--	9.4	-0.3342459761013801	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.
Citrus aurantium	Plant	--	--		--
Citrus limon	Petiole	--	1		--
Citrus paradisi	Pericarp	--	0		--
Citrus reticulata	Fruit	0	5	-0.6048308539868422	--
Citrus sinensis	Fruit	7	9	-0.5981394247478974	--
Coridothymus capitatus	Shoot	0.1	0.1	-0.3104474088399082	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.
Cuminum cyminum	Fruit	--	270	-0.1615236669067504	--
Cuminum cyminum	Seed	270	270	1.2977713690461004	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cymbopogon nardus	Plant	--	--		--
Daucus carota	Seed	12	120	-1.1355499479153377	--
Ferula gummosa	Plant	--	--		--
Hyptis suaveolens	Shoot	0	0	-0.3115189774690341	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	--	0	-0.3115189774690341	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.

<b>Plant</b>	<b>Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference</b>
Illicium verum	Fruit	25	465	0.16468350849180752	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Juniperus communis	Fruit	2	20	-0.5797379943407993	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Juniperus sabina	Plant	--	--		--
Lantana camara	Shoot	--	104	0.8029123968219586	--
Laurus nobilis	Leaf	15	162	2.232520909065303	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lavandula angustifolia	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lavandula x intermedia	Plant	2	8	-0.6817525262806858	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lepechinia calycina	Plant	870	870	2.901605264292188	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Levisticum officinale	Root	1	10	-0.6900357033009535	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Monarda didyma	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Monarda fistulosa	Plant	1	93	-0.3284051803425256	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Myrtus communis	Plant	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Nardostachys jatamansi	Plant	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum gratissimum	Plant	10	245	0.30346301474689075	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum majorana	Plant	--	--		--
Origanum minutiflorum	Shoot	11	15	-0.15078368310014095	Baser, K.H.C., Tumen, G., Sezik, E. 1991. The Essential Oil of Origanum minutiflorum O. Schwarz and P.H. Davis. J. Ess. Oil Res. 3: 445-446.
Origanum onites	Shoot	0.1	0.1	-0.3104474088399082	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 sipyleum	Shoot	0.1	0.1	-0.3104474088399082	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum sipyleum	Shoot	--	0.2	-0.3093758402107822	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum sipyleum	Shoot	1	2	-0.290087604886515	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum sipyleum	Shoot	--	12	-0.1829307419739196	Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142.
Origanum vulgare	Plant	0	0	-0.7150087470748657	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	0.1	0.1	-0.3104474088399082	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Origanum vulgare	Plant	25	25	-0.6110830570930539	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	-0.7150087470748657	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	2	96	-0.31593409754470814	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum vulgare	Plant	2	96	-0.31593409754470814	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Petroselinum crispum	Leaf	0.12	0.12	-0.49033769755843665	--
Pimenta dioica	Fruit	30	30	-0.5630094212434373	--
Pinus mugo	Leaf	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
Pinus roxburghii	Resin, Exudate, Sap	376000	675000		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pinus sylvestris	Root Essent. Oil	400000	500000		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
Pinus sylvestris	Resin Essent. Oil	13000	360000		--
Piper nigrum	Fruit	500	2000	2.7325194789368674	--
Ribes nigrum	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rosmarinus eriocalyx	Shoot	0.1	0.1	-0.3104474088399082	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus eriocalyx	Shoot	--	--		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	330	0.6568103606850512	--
Rosmarinus officinalis	Shoot	--	0.54	-0.30573250687175385	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986.
Rosmarinus officinalis	Shoot	--	--		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	-0.17221505568266005	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	0.1	-0.3104474088399082	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	38	455	4.564118285054058	Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246.
Rosmarinus x mendizabalii	Shoot	0.1	0.1	-0.3104474088399082	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 sclarea	Plant	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Plant	Part	Low PPM	High PPM	StdDev	Reference
Satureja cuneifolia	Shoot	15	15	-0.15078368310014095	Tumen, G. 1991. The Volatile Constituents of Satureja cuneifolia. J. Ess. Oil Res., 3: 365-366.
Satureja montana	Plant	1	15	-0.6526533330857786	--
Satureja obovata	Leaf	0.01	0.01	-0.4921879227050181	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	--	--		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	--	--		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	--	--		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	Shoot	1	30	0.009951611268752202	Fitoterapia No.60: 277.
Satureja thymbra	Shoot	0.1	0.1	-0.3104474088399082	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.
Sideritis athoa	Shoot	8	8	-0.22579348713895775	Ozek, T., Baser, K.H.C. and Tumen, G. 1993. The Essential Oil of Sideritis athoa Papanikolaou Et Kokkini. J. Ess. Oil Res. 5: 669-670.
Sideritis pauli	Shoot	13	13	-0.17221505568266005	Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992.
Thymus capitatus	Plant	1	20	-0.6318681950894163	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus orospedanus	Plant	--	--		J. Nat. Prod.

<b>Plant</b>	<b>Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference</b>
Thymus vulgaris	Plant	510	510	1.4050753285540967	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus zygis	Shoot	0.1	0.1	-0.3104474088399082	Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JEO5: 153-8.
Trachyspermum ammi	Fruit	126	320	-0.07788080141994064	--
Vetiveria zizanioides	Root	--	--		--