

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**List of Plants for BETA-ELEMENE**

<b>Plant</b>	<b>Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference</b>
Achillea millefolium	Leaf	--	--		--
Acinos alpinus	Shoot	10	10	-0.30609371712231803	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	Rhizome	60	750	1.0692741796807936	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Agastache rugosa	Essential Oil	--	--		Jim Duke's personal files.
Agastache rugosa	Tissue Culture	--	--		Jim Duke's personal files.
Agathosma betulina	Leaf Essent. Oil	--	--		--
Ageratum conyzoides	Plant	2	16	-0.41647408954357296	--
Alpinia officinarum	Rhizome	--	--		Wealth of India.
Anethum graveolens	Fruit	12	77	-0.4611977234510915	--
Anethum graveolens	Seed	12	77	-0.6456318401912606	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Angelica archangelica	Root	0	90	-1	--
Angelica archangelica	Root Essent. Oil	--	--		--
Aniba rosaeodora	Essential Oil	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Apium graveolens	Fruit Essent. Oil	--	35000	1.6778472777341984	--
Apium graveolens	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Apium graveolens	Seed	1	875	1.4124808434543825	--
Apium graveolens	Leaf Essent. Oil	--	--		--
Apium graveolens	Seed Essent. Oil	--	35000		--
Arctium lappa	Root	--	--		Jim Duke's personal files.
Artemisia annua	Plant	3	80	-0.17954660749211812	--
Artemisia capillaris	Essential Oil	--	--		--
Boswellia sacra	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Carum carvi	Essential Oil	--	--		--
Carum carvi	Seed Essent. Oil	--	--		--
Centella asiatica	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Centella asiatica	Essential Oil	--	30000	-0.48593246550536906	Jim Duke's personal files.
Chrysanthemum x morifolium	Flower	--	--		Wealth of India.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Chrysanthemum x morifolium	Plant	2	6	-0.45349400861411276	Wealth of India.
Cinnamomum camphora	Leaf	--	--		--
Cinnamomum verum	Leaf	--	120	0.21030818830483441	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	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus reticulata	Fruit	0.7	1	-0.565275335737646	--
Citrus sinensis	Fruit	0.7	1	-0.565275335737646	--
Citrus sinensis	Pericarp Essent. Oil	--	--		Jim Duke's personal files.
Coleus barbatus	Root Essent. Oil	--	14000	-1	Jim Duke's personal files.
Collinsonia canadensis	Plant	16	16	-0.41647408954357296	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Copaifera spp	Gum	3900	14400		--
Croton eluteria	Bark	--	--		--
Croton lechleri	Plant	--	--		Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Cuminum cyminum	Fruit	--	30	-0.5255615099967239	--
Cuminum cyminum	Seed	30	30	-0.7668490032631218	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cymbopogon winterianus	Plant	40	70	-0.21656652656265793	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Daucus carota	Plant	--	--		--
Dracocephalum thymiflora	Plant	148	148	0.07218884218755264	--
Eucalyptus albens	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus angulosa	Leaf	--	22	-0.30442449979057584	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 astringens	Shoot	--	85	-0.05169017436859748	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus behriana	Leaf	2.7	2.7	-0.40579532509916183	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 blakelyi	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus bosistoana	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus botryoides	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus camaldulensis	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus ceratocorys	Leaf	--	26	-0.2834150023172938	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 citriodora	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus cladocalyx	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus cuprea	Leaf	10	10	-0.367452992210422	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 dealbata	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus desquamata	Leaf	0	15	-0.34119112036881943	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 diversicolor	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus dolichorhyncha	Leaf	--	65	-0.0785724019527937	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	--	44	-0.1888722636875245	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 fasciculosa	Leaf	0	1.3	-0.4131486492148104	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 forrestiana	Leaf	--	55	-0.13109614563599886	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 globulus	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus incrassata	Leaf	--	240	0.8405931125032962	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 intertexta	Leaf	5.5	5.5	-0.3910886768678643	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
<i>Eucalyptus lansdowneana</i>	Leaf	2.4	2.4	-0.40737103740965785	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus largisparsa</i>	Leaf	85	85	0.026475085413616428	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus leucoxylon</i>	Leaf	0	5.5	-0.3910886768678643	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus maculata</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus maideni</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus melanophloia</i>	Leaf	1	1	-0.4147243615253066	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus melliodora</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus moluccana</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven <i>Eucalyptus</i> Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Eucalyptus occidentalis</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus ochrophloia</i>	Leaf	0.5	0.5	-0.41735054870946686	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus odorata</i>	Leaf	4.4	4.4	-0.3968662886730168	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus oviformis</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus paniculata</i>	Shoot	--	6	-0.31966190606918315	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus polyanthemus</i>	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264.
<i>Eucalyptus populnea</i>	Leaf	8	8	-0.377957740947063	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364
<i>Eucalyptus porosa</i>	Leaf	10	10	-0.367452992210422	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 <i>Eucalyptus</i> . Part VI. Subgenus <i>Symphyomyrtus</i> , Section <i>Adnataria</i> . <i>Flavour and Fragrance J.</i> 10(6):359-364



Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus punctata	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus saligna	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus siderophloia	Shoot	--	0.1	-0.3396749847658091	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus sideroxylon	Shoot	--	40	-0.20433230002082983	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus sparsa	Leaf	25	25	-0.28866737668561426	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 stoatei	Leaf	--	150	0.36787941935444984	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 tereticornis	Shoot	--	35	-0.2212925362044112	Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264.
Eucalyptus tetraptera	Leaf	--	120	0.21030818830483441	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

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus viridis	Leaf	0	0.5	-0.41735054870946686	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
Glechoma hederacea	Plant	9	53	-0.2795003889825756	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hedera helix	Leaf	--	--		--
Hypericum perforatum	Plant	0.25	4.5	-0.4590469964746937	--
Hyssopus officinalis	Shoot	42	42	-0.19754820554739727	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	--	42	-0.19754820554739727	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	Plant	--	--		--
Illicium verum	Fruit	1	650	0.32349269549885196	--
Juniperus communis	Fruit	10	100	-0.4297005513117395	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Laurus nobilis	Plant	--	--		--
Laurus nobilis	Leaf Essent. Oil	--	--		--
Levisticum officinale	Root	12	125	1	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
Lindera benzoin	Fruit	50	105	-0.4228533399770978	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lindera benzoin	Leaf	--	0.5	-0.41735054870946686	--
Lycium chinense	Fruit	--	360	-0.07364556191036901	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Magnolia denudata	Bark	--	--		--
Magnolia denudata	Bulb	--	--		--
Magnolia denudata	Leaf	--	--		--
Magnolia denudata	Twig	--	--		--
Marrubium vulgare	Plant	--	--		--
Melaleuca alternifolia	Leaf	0.001	0.001	-0.4199714835192588	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Melissa officinalis	Shoot	4	32	-0.23146867791456002	Deutsche Apot. Ztit. 129(4):155-163. W. Schulze et al. Die Melisse.
Mentha aquatica	Shoot	29	29	-0.24164481962470882	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	--	65	-0.11953111910292297	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	--	65	-0.11953111910292297	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	--	55	-0.1534515914700857	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	--	29	-0.24164481962470882	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of Mentha aquatica Containing Sesquiterpene Alcohols as Major Components. Nippon Noeikagaku Kaishi 67(10): 1417-1419.
Mentha longifolia	Shoot	0	275	0.5927988006074945	--
Mentha spicata	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Mentha spicata	Essential Oil	--	--		--
Metrosideros sclerocarpa	Leaf	47	188	0.5674696453506294	--
Micromeria varia	Shoot	0	0	-0.3400141894894808	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 varia	Shoot	0	--		--
Moldavica thymiflora	Plant	148	148	0.07218884218755264	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Murraya koenigii	Leaf	5	155	0.3941412911960524	--
Myroxylon balsamum	Plant	--	--		--
Myrtus communis	Plant	3	4	-0.4608979924282207	--
Nepeta cataria	Plant	4	155	0.09810278553693051	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	Plant	12	12	-0.43128205717178886	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 basilicum	Shoot Essent. Oil	4900	81600	1.4135003647459183	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum basilicum	Essential Oil	--	16100	-0.9072086362241611	--
Ocimum gratissimum	Plant	5	65	-0.23507648609792783	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Ocimum gratissimum	Shoot	425	425	1.1016058861149356	Vostrowsky, O., Garbe, W., Bestmann, H.J. and Maia, J.G.S. 1990. Essential Oil of Alfavaca, Ocimum gratissimum, from Brazilian Amazon. Zeitschr. Naturforschung 45(C): 1073-6.
Ocimum tenuiflorum	Leaf	120	1080	5.252587581892528	--
Opopanax chironium	Essential Oil	--	--		--
Origanum vulgare	Plant	6	30	-0.3646462028448172	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum vulgare	Shoot Essent. Oil	--	1100	-0.7456415586325718	--
Panax ginseng	Root	--	--		--
Panax ginseng	Root Essent. Oil	--	150000	1	--
Panax ginseng	Shoot	--	--		--
Panax ginseng	Flower Essent. Oil	--	29000		--
Panax quinquefolius	Plant	--	--		--
Pelargonium graveolens	Essential Oil	--	--		--
Perilla frutescens	Shoot Essent. Oil	--	4000	-0.6678588061133466	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Petasites hybridus	Rhizome	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Petroselinum crispum	Leaf	5.4	5.4	-0.39161391430469633	--
Pimenta dioica	Plant	--	--		--
Pimpinella anisum	Seed Essent. Oil	--	--		--
Pinus sylvestris	Essential Oil	--	--		--
Piper cubeba	Fruit	1200	2400	2.7200166626234608	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Piper cubeba	Fruit Essent. Oil	10000	10000	-0.16391702274241896	--
Piper nigrum	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Piper nigrum	Fruit Essent. Oil	--	900	-0.8343192281159078	--
Pogostemon cablin	Plant	--	--		--
Pycnanthemum incanum	Shoot	22	190	0.30447478548661133	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum pilosum	Flower	28	105	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum pilosum	Leaf	28	105	0.13152257278002671	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum tenuifolium	Shoot	16	1600	5.087261389256558	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Pycnanthemum virginianum</i>	Shoot	240	1160	3.5947606051013974	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Rheum palmatum</i>	Rhizome	--	0.5	-1.3361915461944083	--
<i>Rosmarinus officinalis</i>	Shoot	3	200	0.33839525785377406	Bandoni, A.L., Mizrahi, I., and Juarez, M.A. 1991. The Essential Oil of <i>Rosmarinus officinalis</i> Growing in Argentina. J. Ess. Oil Res., 3: 11.
<i>Rosmarinus officinalis</i>	Resin, Exudate, Sap	--	--		--
<i>Salvia gilliesii</i>	Shoot	5.5	5.5	-0.3213579296875413	Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. J. Ess. Oil Res. 5: 319-320.
<i>Saussurea lappa</i>	Root	--	--		--
<i>Scutellaria baicalensis</i>	Root Essent. Oil	--	--		--
<i>Scutellaria lateriflora</i>	Essential Oil	--	92000	1.3931411017295305	--
<i>Stevia rebaudiana</i>	Flower	--	110	1	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>	Leaf	--	6	-0.38846248968370406	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.
<i>Tagetes lucida</i>	Shoot	--	18	-0.27895733922858784	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>Tamarindus indica</i>	Fruit Essent. Oil	--	3000	-0.6796110268758718	--
<i>Tanacetum vulgare</i>	Plant	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Thymus funkii	Shoot	0	0	-0.3400141894894808	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 funkii	Shoot	--	0	-0.3400141894894808	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.
Umbellularia californica	Plant	280	1120	3.6705249758440224	--
Valeriana officinalis	Root	--	--		--
Zingiber officinale	Rhizome	2	500	0.26691736651361464	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Zingiber officinale	Rhizome Essent. Oil	--	3000		--