

Dr. Duke's Phytochemical and Ethnobotanical Database

List of Plants for CARYOPHYLLENE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Achillea millefolium	Leaf	4	160	-0.5782062507598946	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Agastache foeniculum	Plant	8	100	-0.4439011295451728	--
Agastache nepetoides	Plant	90	100	-0.4439011295451728	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Agastache nepetoides	Essential Oil	184000	184000	2.6881581812844435	Jim Duke's personal files.
Agastache rugosa	Essential Oil	--	--		Jim Duke's personal files.
Aloysia citrodora	Plant	30	266	-0.22395459569098666	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Amomum compactum	Seed	--	--		Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
Angelica archangelica	Root	8	20	-0.6816330830044597	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Angelica archangelica	Root Essent. Oil	--	--		--
Apium graveolens	Seed Essent. Oil	--	1700		--
Arctium lappa	Root	--	--		Jim Duke's personal files.
Artemisia pallens	Plant	--	--		--
Avena sativa	Seed	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ballota nigra	Plant	35	35	-0.5300247723194024	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Boswellia sacra	Essential Oil	--	--		--
Calendula officinalis	Flower	--	--		--
Cananga odorata	Flower	--	--		--
Capsicum annum	Fruit	--	--		--
Capsicum frutescens	Fruit	--	--		--
Carica papaya	Fruit	--	--		--
Carthamus tinctorius	Flower	43	50	-0.7466837902953343	--
Carthamus tinctorius	Leaf	27	28	-0.6518220503422282	--
Cinnamomum camphora	Leaf	--	--		--
Cinnamomum verum	Bark	135	1316		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cinnamomum verum	Root Bark	--	--		--
Cinnamomum verum	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus aurantiifolia	Fruit	30	250	-0.3885919789508993	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus aurantium	Plant	--	--		--
Citrus limon	Essential Oil	11	28	-0.7680967243064245	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Citrus limon	Leaf Essent. Oil	--	--		Jim Duke's personal files.
Citrus paradisi	Fruit	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Citrus reticulata	Fruit	2	9	-0.395772877445224	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus sinensis	Pericarp	--	--		--
Citrus sinensis	Pericarp Essent. Oil	--	--		Jim Duke's personal files.
Collinsonia canadensis	Tuber	--	--		--
Collinsonia canadensis	Plant	2	6	-0.5684491667879048	--
Copaifera spp	Gum	151800	480600		--
Coriandrum sativum	Fruit	1	8	-0.39580267370453653	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Coriandrum sativum	Essential Oil	--	--		--
Cuminum cyminum	Fruit	144	320	-0.38650624079902074	--
Cuminum cyminum	Seed	144	320	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cunila origanoides	Shoot	--	140	-0.3931486540744339	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Curcuma longa	Essential Oil	--	13400	-0.5168789270461833	--
Curcuma longa	Tuber	--	--		--
Curcuma longa	Rhizome	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cymbopogon citratus	Plant	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cymbopogon nardus	Plant	96	384	-0.06760705957777	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cymbopogon winterianus	Plant	84	147	-0.38162711092380686	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cynara cardunculus	Essential Oil	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Daucus carota	Root	200	200	-0.39328066246203247	--
Daucus carota	Seed	134	1000	1	--
Dracocephalum parviflora	Plant	50	50	-0.5101500855253494	--
Dracocephalum thymiflora	Plant	250	250	-0.24515426160464315	--
Drimys winteri	Bark	--	--		--
Echinacea angustifolia	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Echinacea pallida	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Echinacea purpurea	Shoot	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Echinacea spp	Root	42	42	-0.6463900093826075	Economic & Medicinal Plant Research, 5: 253.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Elettaria cardamomum	Fruit Essent. Oil	--	--		--
Elsholtzia cristata	Shoot	38	38	-0.4425453830634053	Kobold, U., Vostrowsky, O., Bestmann, H.J., Bisht, J.C., Pant, A.K., Melkani, A.B. and Mathela, C.S. 1987. Terpenoids from Elsholtzia Species; II. Constituents of Essential Oil from a New Chemotype of Elsholtzia cristata. Planta Medica 1987: 268-271.
Elsholtzia pilosa	Shoot	12	12	-0.45513670613902546	--
Elsholtzia polystachya	Leaf	38	38	-0.646245095828415	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	--	38	-0.646245095828415	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 citriodora	Leaf	15	780	-0.23243507090347945	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Eucalyptus citriodora	Leaf Essent. Oil	--	28000	-0.887674564369413	--
Eucalyptus globulus	Leaf Essent. Oil	--	167000	1.3972655179888909	--
Ficus carica	Leaf Essent. Oil	--	--		--
Ficus carica	Leaf	--	--		Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Galeopsis tetrahit	Shoot	40	40	-0.44157681974989604	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Gossypium sp	Essential Oil	--	75100	0.6422698981824196	--
Hedeoma hispida	Plant	474	474	0.05164106118654781	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hedeoma pulegioides	Plant	30	150	-0.37765217356499625	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hibiscus sabdariffa	Calyx	--	--		--
Houttuynia cordata	Essential Oil	--	--		--
Humulus lupulus	Plant	--	--		--
Hypericum perforatum	Essential Oil	--	--		--
Hypericum perforatum	Plant	26	468	0.04369118646892662	--
Hyptis spicata	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Illicium verum	Fruit	85	3600	-0.28877451025385453	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Isanthus brachiatus	Plant	30	30	-0.53664966791742	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Juniperus communis	Fruit	12	120	-0.39246549266153086	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Lantana camara	Leaf	400	1600	0.22487519922919882	--
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
<i>Lavandula angustifolia</i>	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lavandula latifolia</i>	Plant	0	191	-0.3233280296612515	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lavandula x intermedia</i>	Plant	147	440	0.006591771120027748	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Leonurus cardiaca</i>	Plant	40	200	-0.3114032175848197	--
<i>Lepechinia calycina</i>	Plant	285	285	-0.19877999241851957	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lepechinia schiediana</i>	Plant	200	200	-0.3114032175848197	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lippia javanica</i>	Essential Oil	--	--		--
<i>Lycopus europeus</i>	Plant	125	125	-0.4107766515550845	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lycopus virginicus</i>	Plant	30	80	-0.4704007119372434	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Melaleuca alternifolia</i>	Leaf	0.001	154	-0.5815524234681825	--
<i>Mentha aquatica</i>	Leaf	--	--		Jim Duke's personal files.
<i>Mentha arvensis</i> var. <i>piperascens</i>	Plant	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
<i>Mentha longifolia</i>	Shoot	110	9995	4.379447073242362	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Mentha pulegium</i>	Plant	10	60	-0.49690029432931404	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mentha pulegium	Essential Oil	--	1000	-0.7498359032671668	--
Mentha spicata	Leaf	3	1950	0.42006860721265904	--
Mentha spicata	Essential Oil	--	12000	-0.5431805211356492	--
Micromeria croatica	Leaf	300	300	-0.5001288875665106	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.
Moldavica parviflora	Plant	50	50	-0.5101500855253494	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Moldavica thymiflora	Plant	250	250	-0.24515426160464315	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Murraya koenigii	Leaf	--	6840	3.1471993644672898	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Myristica fragrans	Essential Oil	--	--		--
Myroxylon balsamum	Plant	--	--		--
Myrtus communis	Plant	3	4	-0.5710991250271118	--
Nepeta cataria	Plant	40	3200	3.663534141225774	--
Ocimum basilicum	Plant	18	3196	3.6582342247473596	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Ocimum canum	Shoot	130	270	-0.33019203869633307	--
Ocimum gratissimum	Plant	5	125	-0.4107766515550845	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum gratissimum	Shoot	1155	1155	0.09839722753150715	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.
Origanum majorana	Plant	52	1307	1.1553486678162894	--
Origanum majorana	Essential Oil	--	61000	0.37737527199565624	--
Origanum onites	Plant	82	82	-0.46775075369803637	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Origanum onites	Shoot	430	430	-0.2527069736155936	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 vulgare	Plant	1	920	0.6425817485297227	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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.
Panax quinquefolius	Plant	--	--		--
Panax quinquefolius	Root Essent. Oil	--	8670	-1	--
Pelargonium graveolens	Essential Oil	--	--		--
Peperomia pelucida	Leaf	--	--		Tramil
Phytolacca americana	Fruit	--	--		--
Pilocarpus microphyllus	Leaf	450	475	-0.4025321835747805	--
Pimenta dioica	Leaf	760	760	-0.24358897993110573	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Pimenta dioica	Fruit	--	1341	-0.3560842600409065	--
Pimenta racemosa	Leaf	90	305	-0.497340410309604	--
Pinus sylvestris	Leaf	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Pinus sylvestris	Leaf Essent. Oil	--	--		--
Piper auritum	Leaf	--	--		Tramil
Piper betel	Leaf	60	5000	2.1210397339256697	--
Piper cubeba	Fruit	3700	7400	-0.17554872486616202	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Piper nigrum	Seed Essent. Oil	--	--		--
Piper nigrum	Fruit	1000	6000	-0.21726348790373295	--
Pogostemon cablin	Plant	--	--		--
Populus balsamifera	Plant	--	--		--
Psidium guajava	Essential Oil	--	--		--
Psidium guajava	Pericarp Essent. Oil	--	--		--
Pycnanthemum beadlei	Shoot	49	49	-0.43721828483910447	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pycnanthemum californicum	Shoot	144	144	-0.3912115274474154	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Pycnanthemum clinopodioides</i>	Shoot	42	704	-0.12001379966482724	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum incanum</i>	Shoot	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum loomisii</i>	Shoot	330	672	-0.13551081268097512	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum montanum</i>	Shoot	42	56	-0.4338283132418221	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum muticum</i>	Shoot	29	300	-0.3156635889936944	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum pilosum</i>	Flower	1	350	-0.6667770826537408	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum pilosum</i>	Leaf	1	350	-0.4722441149974449	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum pycnanthemoides</i>	Shoot	1	1102	0.07273029972351219	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum setosum</i>	Shoot	1060	1643	0.3347266760277625	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum tenuifolium</i>	Shoot	28	2460	0.7303847895962885	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum torreyi</i>	Shoot	140	140	-0.3931486540744339	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Pycnanthemum verticillatum</i>	Shoot	315	315	-0.30839936414237507	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	72	1015	0.030597795585860108	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Ribes nigrum</i>	Fruit	--	119000	3.1497138144144925	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Ribes nigrum</i>	Leaf	34	34	-0.6484758776339403	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Rosmarinus officinalis</i>	Plant	16	340	-0.12590614084032536	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Salvia officinalis</i>	Leaf	1	1430	0.1300669724943753	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Salvia officinalis</i>	Essential Oil	--	33000	-0.14865660979366116	--
<i>Sarracenia flava</i>	Essential Oil	--	--		--
<i>Sarracenia flava</i>	Leaf Essent. Oil	--	--		--
<i>Sassafras albidum</i>	Root	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Satureja douglasii</i>	Plant	1	39	-0.5247248558409883	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Satureja obovata</i>	Shoot	1	60	-0.4318911866148036	Fitoterapia No.60: 277.
<i>Satureja vulgaris</i>	Plant	106	106	-0.43595125482755165	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Saussurea lappa</i>	Root Essent. Oil	--	--		--
<i>Schinus molle</i>	Fruit	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Scutellaria churchilliana	Plant	68	68	-0.48630046137248584	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria galericulata	Plant	176	176	-0.3432027164553045	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Scutellaria lateriflora	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Scutellaria parvula	Plant	47	47	-0.51412502288416	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Stevia rebaudiana	Leaf	--	--		--
Syzygium aromaticum	Flower	74400	8160	1.4134608729490745	--
Syzygium aromaticum	Fruit	7440	8160	-0.15290356778862352	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Syzygium aromaticum	Essential Oil	16000	16000	-0.468033109451461	--
Tagetes minuta	Flower Essent. Oil	--	5200		--
Tanacetum parthenium	Fruit Essent. Oil	--	--		--
Tanacetum vulgare	Plant	--	--		--
Thymus capitatus	Plant	300	310	-0.1656555144284313	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus capitatus	Shoot	200	200	-0.36409175466915655	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Thymus mastichina	Plant	130	130	-0.40415175595706687	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Thymus orospedanus	Plant	718	718	0.3749359663698094	J. Nat. Prod.
Thymus serpyllum	Plant	135	2292	2.4604531006257675	--
Thymus vulgaris	Essential Oil	--	13600	-0.5131215564619739	--
Trifolium pratense	Leaf	--	--		--
Trifolium pratense	Flower	--	--		--
Trifolium pratense	Fruit	--	--		--
Vaccinium corymbosum	Fruit	--	--		--
Vaccinium myrtillus	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Valeriana officinalis	Root	29	1520	1.7213037548491001	Father Nature's Pharmacy: The aggregate of all these three-letter citations.
Valeriana officinalis	Essential Oil	--	--		--
Valeriana officinalis	Rhizome Essent. Oil	--	--		--
Valeriana officinalis	Leaf Essent. Oil	--	51000	-0.5095909536194779	--
Valeriana officinalis	Root Essent. Oil	--	76000	1	--
Valeriana officinalis	Leaf	115	1300	0.05756656381480434	Father Nature's Pharmacy: The aggregate of all these three-letter citations.
Zea mays	Leaf	--	--		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Zea mays	Husk Essent. Oil	--	--		--
Zingiber officinale	Essential Oil	--	--		--