

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for CHOLINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Valeriana officinalis	Leaf	52000.0	58000.0	3.080709728318331	--
Valeriana officinalis	Root	3540.0	30000.0	3.1398996373571895	--
Valeriana officinalis	Stem		30000.0		--
Marrubium vulgare	Plant	2000.0	20000.0	1.2675004445952598	--
Lagenaria siceraria	Fruit	640.0	16020.0	2.729694763242453	--
Trigonella foenum-graecum	Leaf		13500.0	0.3414380440163458	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Capsella bursa-pastoris	Plant	2000.0	10000.0	-0.0905357460425182	--
Urtica dioica	Leaf		4900.0	-0.18794929272516134	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Urtica dioica	Inflorescence		4800.0		Jim Duke's personal files.
Moringa oleifera	Fruit		4230.0	0.27421908226876107	--
Moringa oleifera	Leaf		4230.0	-0.22919225965734855	--
Elettaria cardamomum	Seed		4195.0	2.3743243649568977	--
Pimpinella anisum	Seed		3950.0	2.1437280155533487	--
Matricaria recutita	Flower	3400.0	3800.0	0.9502552681394969	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pinus sylvestris	Flower		3400.0	0.43193421279068084	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cuminum cyminum	Seed		3003.0	1.2524025343894258	--
Pisum sativum	Seed	1970.0	2800.0	1.0613369877407708	--
Elettaria cardamomum	Pericarp		2663.0	1.0	--
Acorus calamus	Root		2600.0	-0.10560488367164568	--
Angelica sinensis	Root		2470.0	-0.12100326278601606	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lens culinaris	Seed		2230.0	0.5248475217814931	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Luffa aegyptiaca	Fruit	104.0	2090.0	-0.17147370460856706	--
Vigna mungo	Seed		2060.0	0.3648418915831121	--
Pisum sativum	Fruit		2060.0	-0.17772173433114644	--
Vigna unguiculata	Seed		2020.0	0.3271935080070224	--
Vigna unguiculata	Seed		2020.0	0.3271935080070224	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Panax quinquefolius	Plant	1000.0	2000.0	-1.1769646985527404	--
Marrubium vulgare	Flower		2000.0	-1.3821894809301754	--
Marrubium vulgare	Shoot		2000.0	1.9120747724470146	--
Hamamelis virginiana	Leaf		2000.0	-0.3664636272077626	--
Panax ginseng	Root	1000.0	2000.0	-0.17667432573797054	--
Marrubium vulgare	Leaf		2000.0	-0.3664636272077626	--
Vigna radiata	Seed	1670.0	1856.0	0.17283513534505482	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Triticum aestivum	Seed	530.0	1800.0	0.12012739833852928	--
Avena sativa	Seed	134.0	1712.0	0.03730095447113204	--
Medicago sativa	Shoot		1710.0	1.5234568202999696	--
Piper nigrum	Seed		1642.0	-0.028583716787024864	--
Hordeum vulgare	Seed	928.0	1617.0	-0.0521139565220809	--
Coriandrum sativum	Seed		1387.0	-0.26859216208459646	--
Sesamum indicum	Seed		1320.0	-0.3316532045745466	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Brassica oleracea var. capitata l.	Leaf		1200.0	-0.41570896085813536	Wealth of India.
Helianthus annuus	Seed		1200.0	-0.4445983553028156	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Linum usitatissimum	Seed	910.0	1180.0	-0.46342254709086045	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Taraxacum officinale	Root	390.0	1120.0	-0.280909507435247	--
Digitalis lanata	Leaf		1000.0	-0.4280202942707286	--
Hypericum perforatum	Shoot	34.0	1000.0	0.572012868491687	--
Solanum tuberosum	Tuber	330.0	1000.0		--
Oryza sativa	Seed		880.0	-0.7457854239115329	--
Allium cepa	Bulb		830.0		Dakshinamurti, K. 1955. Choline Content of South Indian Foods. Curr. Sci., 24: 194-195.
Solanum melongena	Fruit		520.0	-0.49845392675688743	--
Trigonella foenum-graecum	Seed		500.0	-1.1034450678843846	--
Syzygium cumini	Fruit	70.0	430.0	-0.5171980159246256	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Zea mays	Seed		430.0	-1.1693297391425415	--
Capparis spinosa	Fruit		370.0	-0.5296940753697843	--
Capsicum annuum	Seed		360.0	-1.2352144104006983	--
Prunus serotina	Leaf		356.0	-0.4676627878592786	--
Vicia faba	Fruit	50.0	340.0	-0.5359421050923636	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Coffea arabica	Seed		300.0	-1.291686985764833	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Capsicum annuum	Pericarp		297.0	-1.0	--
Carica papaya	Leaf		200.0	-0.47726562792110133	Jim Duke's personal files.
Citrus sinensis	Fruit	70.0	160.0	-0.5734302834278399	--
Triticum aestivum	Shoot		121.0	-0.6059015450850461	--
Pisum sativum	Shoot		121.0	-0.6059015450850461	--
Capparis spinosa	Leaf		100.0	-0.4834212946273979	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Zea mays	Shoot		85.0	-0.6541437736274379	--
Daucus carota	Shoot		73.0	-0.6702245164749019	--
Pisum sativum	Root		61.0	-0.40634707268231035	--
Triticum aestivum	Root		48.0	-0.40788691059374743	--
Lycopersicon esculentum	Shoot		48.0	-0.7037260640737851	--
Lycopersicon esculentum	Root		36.0	-0.4093082994350739	--
Daucus carota	Root		36.0	-0.4093082994350739	--
Zea mays	Root		36.0	-0.4093082994350739	--
Glycine max	Seed		2.49	-1.5717062507078938	--
Avena sativa	Shoot		0.3	-0.7676470168924543	--
Avena sativa	Root		0.2	-0.4135487761450312	--
Chrysanthemum cinerariifolium	Plant				--
Areca catechu	Seed				--
Hyoscyamus niger	Plant				--
Pistacia lentiscus	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Cichorium intybus	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Convallaria majalis	Plant				--
Lycium chinense	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Gossypium sp	Seed				--
Aloe vera	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Astragalus membranaceus	Root				Chemical Constituents of Oriental Herbs (3 diff. books)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ballota nigra	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Strophanthus gratus	Seed				--
Chelidonium majus	Fruit				--
Dictamnus albus	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Sambucus nigra	Bark				--
Sambucus nigra	Flower				--
Crataegus sp.	Plant				--
Sambucus nigra	Leaf				--
Althaea officinalis	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Humulus lupulus	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Capparis spinosa	Plant				--
Pueraria montana	Root				--
Alisma plantago-aquatica	Rhizome				--
Artemisia cina	Flower				--
Lactuca sativa	Leaf				--
Strophanthus hispidus	Seed				--
Anastatica hierochuntica	Plant				--
Centaurea calcitrapa	Plant				--
Pimpinella anisum	Plant				--
Hypericum perforatum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Leonurus cardiaca	Plant				--
Artemisia abrotanum	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Stachys officinalis	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Teucrium scordium	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Euphorbia hirta	Plant				--
Gloriosa superba	Bulb				--
Arachis hypogaea	Seed				--
Ganoderma lucidum	Fruit				--
Medicago sativa	Plant				--
Nerium oleander	Plant				--
Atropa bella-donna	Root				--
Ginkgo biloba	Leaf				Jim Duke's personal files.
Catharanthus roseus	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
Malva neglecta	Plant				--
Lycium barbarum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Menyanthes trifoliata	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Mucuna pruriens	Seed				--
Tussilago farfara	Flower				--
Hyssopus officinalis	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Rhizophora mangle	Leaf				--
Tussilago farfara	Leaf				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lycium chilense	Root				--
Strychnos nux-vomica	Seed				--
Papaver somniferum	Plant				--
Pinellia ternata	Stem				--
Asparagus officinalis	Rhizome				--
Crataegus monogyna	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Helianthus tuberosus	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Allium sativum var. sativum	Bulb				--
Foeniculum vulgare	Seed				--
Crataegus laevigata	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Amorphophallus konjac	Root				--
Glechoma hederacea	Plant				--
Artemisia vulgaris	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
Ilex paraguariensis	Leaf				--
Mentha x piperita	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Teucrium botrys	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Chrysanthemum x morifolium	Flower				--
Apium graveolens	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

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Plantago asiatica	Plant				--
Adonis vernalis	Plant				--
Teucrium montanum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Crataegus laevigata	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Borago officinalis	Leaf				--
Gymnema sylvestre	Leaf				Willaman, J. J., Li, H. L. 1970. Alkaloid-Bearing Plants and their Contained Alkaloids. 1957-1968. Lloydia 33S: 1-286.
Crataegus laevigata	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Crataegus rhipidophylla	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Petasites hybridus	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Crataegus rhipidophylla	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Hypericum perforatum	Leaf				--
Withania somnifera	Root				--
Abrus precatorius	Seed				=ICMR(Indian Council of Medical Research). 1976. Medicinal Plants of India. Vol. 1. Indian Council of Med. Res. Cambridge Printing Works, New Delhi. 487 pp.; ICMR. 1987. Medicinal Plants of India. Vol. 2. Indian Council of Med. Res. Camb. Printing Works, New Delhi. 600pp

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lippia javanica	Plant				Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Ztit., 114: 1588.
Canavalia ensiformis	Seed				--
Medicago sativa	Tissue Culture				--
Chamaemelum nobile	Plant				--
Morus alba	Leaf				--
Olea europaea	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Euphrasia officinalis	Plant				Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
Trifolium pratense	Plant				--
Aesculus hippocastanum	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Glycyrrhiza glabra	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Paullinia cupana	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Pachyrhizus erosus	Tuber				--
Plantago major	Seed				--
Peumus boldus	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cephaelis ipecacuanha	Plant				--
Digitalis purpurea	Leaf				--
Phaseolus vulgaris	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
Teucrium chamaedrys	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Achillea millefolium	Plant				Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in Achillea millefolium L. (Asteraceae). Economic Botany 48(2): 111-120, 1994.
Acorus calamus	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Arnica montana	Flower				--
Symphytum officinale	Root				--
Satureja montana	Shoot				--
Sinapis alba	Seed				--
Taraxacum mongolicum	Plant				--