

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for CHOLINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.Cambr. Printing Works,New Delhi.600pp
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.
Acorus calamus	Root		2600.0	-0.10560488367164568	--
Adonis vernalis	Plant				--
Aesculus hippocastanum	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Alisma plantago-aquatica	Rhizome				--
Allium sativum var. sativum	Bulb				--
Allium cepa	Bulb		830.0		Dakshinamurti, K. 1955. Choline Content of South Indian Foods. Curr. Sci., 24: 194-195.
Aloe vera	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Althaea officinalis	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Amorphophallus konjac	Root				--
Anastatica hierochuntica	Plant				--
Angelica sinensis	Root		2470.0	-0.12100326278601606	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Apium graveolens	Root				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
<i>Arachis hypogaea</i>	Seed				--
<i>Areca catechu</i>	Seed				--
<i>Arnica montana</i>	Flower				--
<i>Artemisia cina</i>	Flower				--
<i>Artemisia abrotanum</i>	Plant				--
<i>Artemisia vulgaris</i>	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
<i>Asparagus officinalis</i>	Rhizome				--
<i>Astragalus membranaceus</i>	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
<i>Atropa bella-donna</i>	Root				--
<i>Avena sativa</i>	Root		0.2	-0.4135487761450312	--
<i>Avena sativa</i>	Shoot		0.3	-0.7676470168924543	--
<i>Avena sativa</i>	Seed	134.0	1712.0	0.03730095447113204	--
<i>Ballota nigra</i>	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Borago officinalis</i>	Leaf				--
<i>Brassica oleracea</i> var. <i>capitata</i> l.	Leaf		1200.0	-0.41570896085813536	Wealth of India.
<i>Canavalia ensiformis</i>	Seed				--
<i>Capparis spinosa</i>	Leaf		100.0	-0.4834212946273979	--
<i>Capparis spinosa</i>	Fruit		370.0	-0.5296940753697843	--
<i>Capparis spinosa</i>	Plant				--
<i>Capsella bursa-pastoris</i>	Plant	2000.0	10000.0	-0.0905357460425182	--
<i>Capsicum annuum</i>	Pericarp		297.0	-1.0	--
<i>Capsicum annuum</i>	Seed		360.0	-1.2352144104006983	--
<i>Carica papaya</i>	Leaf		200.0	-0.47726562792110133	Jim Duke's personal files.
<i>Catharanthus roseus</i>	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Centaurea calcitrapa	Plant				--
Cephaelis ipecacuanha	Plant				--
Chamaemelum nobile	Plant				--
Chelidonium majus	Fruit				--
Chrysanthemum cinerariifolium	Plant				--
Chrysanthemum x morifolium	Flower				--
Cichorium intybus	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Citrus sinensis	Fruit	70.0	160.0	-0.5734302834278399	--
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.
Convallaria majalis	Plant				--
Coriandrum sativum	Seed		1387.0	-0.26859216208459646	--
Crataegus laevigata	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Crataegus rhipidophylla	Fruit				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.
Crataegus rhipidophylla	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Crataegus monogyna	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Crataegus sp.	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Crataegus laevigata</i>	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Cuminum cyminum</i>	Seed		3003.0	1.2524025343894258	--
<i>Daucus carota</i>	Shoot		73.0	-0.6702245164749019	--
<i>Daucus carota</i>	Root		36.0	-0.4093082994350739	--
<i>Dictamnus albus</i>	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Digitalis purpurea</i>	Leaf				--
<i>Digitalis lanata</i>	Leaf		1000.0	-0.4280202942707286	--
<i>Elettaria cardamomum</i>	Seed		4195.0	2.3743243649568977	--
<i>Elettaria cardamomum</i>	Pericarp		2663.0	1.0	--
<i>Euphorbia hirta</i>	Plant				--
<i>Euphrasia officinalis</i>	Plant				Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
<i>Foeniculum vulgare</i>	Seed				--
<i>Ganoderma lucidum</i>	Fruit				--
<i>Ginkgo biloba</i>	Leaf				Jim Duke's personal files.
<i>Glechoma hederacea</i>	Plant				--
<i>Gloriosa superba</i>	Bulb				--
<i>Glycine max</i>	Seed		2.49	-1.5717062507078938	--
<i>Glycyrrhiza glabra</i>	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
<i>Gossypium sp</i>	Seed				--
<i>Gymnema sylvestre</i>	Leaf				Willaman, J. J., Li, H. L. 1970. Alkaloid-Bearing Plants and their Contained Alkaloids. 1957-1968. Lloydia 33S: 1-286.
<i>Hamamelis virginiana</i>	Leaf		2000.0	-0.3664636272077626	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Helianthus tuberosus	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Helianthus annuus	Seed		1200.0	-0.4445983553028156	--
Hordeum vulgare	Seed	928.0	1617.0	-0.0521139565220809	--
Humulus lupulus	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Hyoscyamus niger	Plant				--
Hypericum perforatum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Hypericum perforatum	Leaf				--
Hypericum perforatum	Shoot	34.0	1000.0	0.572012868491687	--
Hyssopus officinalis	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Ilex paraguariensis	Leaf				--
Lactuca sativa	Leaf				--
Lagenaria siceraria	Fruit	640.0	16020.0	2.729694763242453	--
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.
Leonurus cardiaca	Plant				--
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.
Lippia javanica	Plant				Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Ztit., 114: 1588.
Luffa aegyptiaca	Fruit	104.0	2090.0	-0.17147370460856706	--
Lycium barbarum	Plant				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
Lycium chinense	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Lycium chilense	Root				--
Lycopersicon esculentum	Shoot		48.0	-0.7037260640737851	--
Lycopersicon esculentum	Root		36.0	-0.4093082994350739	--
Malva neglecta	Plant				--
Marrubium vulgare	Flower		2000.0	-1.3821894809301754	--
Marrubium vulgare	Plant	2000.0	20000.0	1.2675004445952598	--
Marrubium vulgare	Leaf		2000.0	-0.3664636272077626	--
Marrubium vulgare	Shoot		2000.0	1.9120747724470146	--
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.
Medicago sativa	Shoot		1710.0	1.5234568202999696	--
Medicago sativa	Plant				--
Medicago sativa	Tissue Culture				--
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.
Menyanthes trifoliata	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Moringa oleifera	Fruit		4230.0	0.27421908226876107	--
Moringa oleifera	Leaf		4230.0	-0.22919225965734855	--
Morus alba	Leaf				--
Mucuna pruriens	Seed				--
Nerium oleander	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Olea europaea	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Oryza sativa	Seed		880.0	-0.7457854239115329	--
Pachyrhizus erosus	Tuber				--
Panax quinquefolius	Plant	1000.0	2000.0	-1.1769646985527404	--
Panax ginseng	Root	1000.0	2000.0	-0.17667432573797054	--
Papaver somniferum	Plant				--
Paullinia cupana	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Petasites hybridus	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Peumus boldus	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Phaseolus vulgaris	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pimpinella anisum	Plant				--
Pimpinella anisum	Seed		3950.0	2.1437280155533487	--
Pinellia ternata	Stem				--
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.
Piper nigrum	Seed		1642.0	-0.028583716787024864	--
Pistacia lentiscus	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Pisum sativum	Root		61.0	-0.40634707268231035	--
Pisum sativum	Shoot		121.0	-0.6059015450850461	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Pisum sativum	Fruit		2060.0	-0.17772173433114644	--
Pisum sativum	Seed	1970.0	2800.0	1.0613369877407708	--
Plantago asiatica	Plant				--
Plantago major	Seed				--
Prunus serotina	Leaf		356.0	-0.4676627878592786	--
Pueraria montana	Root				--
Rhizophora mangle	Leaf				--
Sambucus nigra	Bark				--
Sambucus nigra	Leaf				--
Sambucus nigra	Flower				--
Satureja montana	Shoot				--
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.
Sinapis alba	Seed				--
Solanum tuberosum	Tuber	330.0	1000.0		--
Solanum melongena	Fruit		520.0	-0.49845392675688743	--
Stachys officinalis	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Strophanthus hispidus	Seed				--
Strophanthus gratus	Seed				--
Strychnos nux-vomica	Seed				--
Symphytum officinale	Root				--
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.
Taraxacum mongolicum	Plant				--
Taraxacum officinale	Root	390.0	1120.0	-0.280909507435247	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Teucrium montanum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium botrys	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium chamaedrys	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium scordium	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Trifolium pratense	Plant				--
Trigonella foenum-graecum	Seed		500.0	-1.1034450678843846	--
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.
Triticum aestivum	Root		48.0	-0.40788691059374743	--
Triticum aestivum	Shoot		121.0	-0.6059015450850461	--
Triticum aestivum	Seed	530.0	1800.0	0.12012739833852928	--
Tussilago farfara	Leaf				--
Tussilago farfara	Flower				--
Urtica dioica	Inflorescence		4800.0		Jim Duke's personal files.
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.
Valeriana officinalis	Leaf	52000.0	58000.0	3.080709728318331	--
Valeriana officinalis	Root	3540.0	30000.0	3.1398996373571895	--
Valeriana officinalis	Stem		30000.0		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
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.
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.
Vigna mungo	Seed		2060.0	0.3648418915831121	--
Withania somnifera	Root				--
Zea mays	Seed		430.0	-1.1693297391425415	--
Zea mays	Root		36.0	-0.4093082994350739	--
Zea mays	Shoot		85.0	-0.6541437736274379	--