

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for PROLINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Abelmoschus esculentus	Fruit	450.0	14930.0	2.9987180634006636	--
Acacia farnesiana	Leaf	4080.0	21890.0	1.5418615186449842	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Allium cepa	Bulb	370.0	4033.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Allium schoenoprasum	Leaf	1850.0	23125.0	1.7207379254141373	USDA's Ag Handbook 8 and sequelae)
Allium ampeloprasum	Plant				--
Allium sativum var. sativum	Bulb	1.3	5800.0	1.0	--
Allium sativum var. sativum	Leaf				--
Aloe vera	Leaf		3339.0	-1.1450504019821863	--
Alpinia galanga	Leaf				--
Amaranthus sp.	Leaf	1210.0	14556.0	0.4796108569081685	--
Anacardium occidentale	Seed	6900.0	7019.0	-0.848087096872728	--
Ananas comosus	Fruit	31.0	963.0	-0.8357784281624211	--
Anastatica hierochuntica	Plant				--
Angelica sinensis	Root				Jim Duke's personal files.
Apium graveolens	Leaf	170.0	3208.0	-1.1640243366273353	USDA's Ag Handbook 8 and sequelae)
Arachis hypogaea	Seed	11540.0	15362.0	0.7909722522543554	--
Arctium lappa	Root	520.0	2600.0	0.43323535572821265	USDA's Ag Handbook 8 and sequelae)
Artemisia dracunculus	Leaf				--
Artemisia dracunculus	Root				--
Artocarpus altilis	Seed	3690.0	8440.0	-0.5689185321946043	USDA's Ag Handbook 8 and sequelae)
Asimina triloba	Fruit	282.0	3648.0	-0.0986392372232873	--
Asparagus officinalis	Shoot	1620.0	20903.0	1.4024674410990334	--
Astragalus membranaceus	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Avena sativa	Root		2.4	-1.2997594393680416	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Avena sativa	Shoot		1.3	-0.7081532669989642	--
Averrhoa carambola	Fruit	260.0	2860.0	-0.31497654912646694	USDA's Ag Handbook 8 and sequelae)
Basella alba	Leaf	700.0	10145.0	-0.15927483560902458	--
Bertholletia excelsa	Seed	7620.0	7884.0	-0.6781498636239054	USDA's Ag Handbook 8 and sequelae)
Beta vulgaris	Root	380.0	2997.0	0.6980948158657292	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. viridis l.	Leaf	670.0	10981.0	-0.038189267949905695	--
Brassica chinensis	Leaf	310.0	6625.0	-0.6691088047000515	--
Brassica oleracea var. italica	Leaf	1140.0	12244.0	0.14474263630065312	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. capitata l.	Leaf	2380.0	31821.0	2.980259571782197	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. botrytis l.	Flower	860.0	11110.0		--
Brassica rapa	Leaf	310.0	6625.0	-0.6691088047000515	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. sabellica l.	Leaf	1960.0	12610.0	0.19775378195045876	--
Brassica oleracea var. botrytis l.	Leaf	1140.0	12244.0	0.14474263630065312	--
Cajanus cajan	Seed	9550.0	11830.0	0.09707825475742879	--
Calathea allouia	Root	2610.0	2870.0	0.6133664747134254	--
Camellia sinensis	Leaf				--
Capsella bursa-pastoris	Plant				--
Capsicum frutescens	Fruit	870.0	7099.0	0.8487973914288358	--
Capsicum annuum	Fruit	370.0	5047.0	0.28544185332563193	--
Carica papaya	Fruit	100.0	895.0	-0.8544471302048274	USDA's Ag Handbook 8 and sequelae)
Carum carvi	Seed	9170.0	10180.0	-0.2270794734050652	Revised USDA data received 1993.
Castanea sativa	Seed	1010.0	2222.0	-1.7905020192942334	--
Castanea mollissima	Seed	1632.0	2904.0	-1.6565168249870692	--
Castanea dentata	Seed	2141.0	3811.0	-1.478328304112292	--
Ceratonia siliqua	Seed		18800.0	1.4663990822074793	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Chenopodium album	Leaf	2230.0	14205.0	0.42877229919483034	--
Cicer arietinum	Seed	7970.0	16530.0	1.0204366319475633	--
Cichorium endivia	Leaf	590.0	9500.0	-0.2526961168771247	--
Citrullus lanatus	Fruit		2827.0	-0.3240363604117524	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrullus lanatus	Seed		11800.0	0.09118447788174708	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrus sinensis	Fruit	60.0	3473.0	-0.14668369100889192	--
Citrus reticulata	Fruit	310.0	2499.0	-0.4140853937927713	USDA's Ag Handbook 8 and sequelae)
Citrus paradisi	Fruit		590.0	-0.9381817496597383	--
Cnidioscolus chayamansa	Leaf	620.0	3100.0	-1.179666969769901	--
Cocos nucifera	Seed	1380.0	2605.0	-1.7152581345146969	USDA's Ag Handbook 8 and sequelae)
Cocos nucifera	Leaf				Jim Duke's personal files.
Colocasia esculenta	Root	600.0	2045.0	0.0629658333697197	--
Corchorus olitorius	Leaf	1130.0	20052.0	1.2756470768298402	--
Coriandrum sativum	Fruit				--
Crocus sativus	Bulb				--
Cucumis sativus	Fruit	120.0	3038.0	-0.2661084761331091	--
Cucurbita pepo	Fruit	260.0	17100.0	3.5944692903421607	--
Cucurbita foetidissima	Seed	8290.0	15390.0	0.7964731106716583	--
Cucurbita spp	Fruit	370.0	5855.0	0.5072699599471664	--
Cucurbita pepo	Seed	10000.0	10743.0	-0.11647292737143848	USDA's Ag Handbook 8 and sequelae)
Daucus carota	Root	290.0	2375.0	0.28312608990720195	--
Dioscorea pentaphylla	Root	480.0	2585.0	0.42322807134014523	--
Fagopyrum esculentum	Seed		5965.0	-1.0551551244383455	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ficus carica	Fruit	490.0	2346.0	-0.4560899733881857	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Fruit	9000.0	9873.0	1.6103706188646485	--
Foeniculum vulgare	Seed	9000.0	9873.0	-0.28739245676620806	USDA's Ag Handbook 8 and sequelae)
Fragaria spp	Fruit	190.0	1898.0	-0.5790837750793335	USDA's Ag Handbook 8 and sequelae)
Ginkgo biloba	Seed	3470.0	9475.0	-0.3655832299835854	USDA's Ag Handbook 8 and sequelae)
Glechoma hederacea	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Glycine max	Shoot				--
Glycine max	Seed	21350.0	23344.0	2.3591098196440687	USDA's Ag Handbook 8 and sequelae)
Harpagophytum procumbens	Root				--
Helianthus annuus	Seed	11820.0	12500.0	0.2287059383143203	--
Helianthus tuberosus	Tuber		2573.0	-0.9342964673469841	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
Hordeum vulgare	Root	57.0	219.0	-1.1552542528043488	--
Humulus lupulus	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Hypericum perforatum	Plant				--
Ipomoea batatas	Root	710.0	2840.0	0.5933519059372906	--
Ipomoea aquatica	Leaf	880.0	11685.0	0.06377752586829968	--
Juglans regia	Seed	5530.0	5740.0	-1.0993584510059582	USDA's Ag Handbook 8 and sequelae)
Juglans cinerea	Seed	12360.0	12787.0	0.2850897370916753	--
Juglans nigra	Seed	9370.0	9800.0	-0.30173398049703354	USDA's Ag Handbook 8 and sequelae)
Lactuca purpureus	Seed	1070.0	12822.0	0.29196581011330397	--
Lactuca sativa	Leaf	480.0	8000.0	-0.4699549105238691	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Lens culinaris</i>	Sprout Seedling	3560.0	11865.0	-1.0	USDA's Ag Handbook 8 and sequelae)
<i>Lens culinaris</i>	Seed	11720.0	13200.0	0.36622739874689353	USDA's Ag Handbook 8 and sequelae)
<i>Lentinus edodes</i>	Fruit				--
<i>Lepidium meyenii</i>	Root		50.0	-1.2680029902432413	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
<i>Linum usitatissimum</i>	Seed		0.191	-2.226996902840283	--
<i>Lippia javanica</i>	Plant				Neidlein, R., Staehle, R. 1974. Constituents of <i>Lippia javanica</i> . III. Deutsche Apot. Ztit., 114: 1588.
<i>Lupinus albus</i>	Seed	14760.0	16480.0	1.0106136704880937	--
<i>Lycium barbarum</i>	Fruit		6500.0	0.6843480896141092	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Lycopersicon esculentum</i>	Fruit	170.0	2810.0	-0.32870353592235396	--
<i>Lycopersicon esculentum</i>	Root		541.0	-0.940431214607169	--
<i>Lycopodium clavatum</i>	Pollen Or Spore				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Macadamia spp</i>	Seed	3960.0	4075.0	-1.426463067606293	USDA's Ag Handbook 8 and sequelae)
<i>Malus domestica</i>	Plant	20.0	435.0	-1.0472597877182985	--
<i>Mangifera indica</i>	Fruit	180.0	2000.0	-0.551080722015724	--
<i>Manihot esculenta</i>	Root	760.0	2415.0	0.309812181608715	--
<i>Melia azedarach</i>	Seed				--
<i>Mentha x piperita</i>	Leaf	1540.0	7215.0	-0.5836536791989987	USDA's Ag Handbook 8 and sequelae)
<i>Mentha spicata</i>	Leaf	1350.0	9345.0	-0.27514619222062164	USDA's Ag Handbook 8 and sequelae)
<i>Momordica charantia</i>	Fruit				Jim Duke's personal files.
<i>Moringa oleifera</i>	Shoot	4510.0	21135.0	1.4258944352803073	USDA's Ag Handbook 8 and sequelae)
<i>Morus alba</i>	Leaf				--
<i>Mucuna pruriens</i>	Seed	9225.0	19555.0	1.614725800245469	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Murraya sp	Fruit	50.0	1440.0	-0.7048229741296588	--
Musa x paradisiaca	Fruit	400.0	1554.0	-0.6735254442350362	USDA's Ag Handbook 8 and sequelae)
Myrciaria dubia	Fruit				Jim Duke's personal files.
Nasturtium officinale	Herb	960.0	19200.0	1.0	USDA's Ag Handbook 8 and sequelae)
Nelumbo nucifera	Seed	3440.0	10424.0	-0.17914342148285398	--
Nelumbo nucifera	Rhizome	1360.0	6500.0	1.0	--
Nigella sativa	Seed	11350.0	14520.0	0.6255535812768888	--
Ocimum basilicum	Leaf		5880.0	-0.7770140055446013	USDA's Ag Handbook 8 and sequelae)
Oenothera biennis	Seed	5900.0	6297.0	-0.9899306603474678	--
Opuntia ficus-indica	Bud		3995.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Opuntia ficus-indica	Seed		10500.0	-0.16421252006446033	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Pachyrhizus erosus	Tuber	470.0	4330.0	-0.5931933207228488	--
Panax ginseng	Leaf				--
Panax ginseng	Root				--
Panax quinquefolius	Plant	175.0	1120.0	-0.9274280071141	--
Papaver somniferum	Seed	10620.0	11392.0	0.011029112372475834	--
Papaver bracteatum	Seed	6800.0	8400.0	-0.57677690136218	--
Passiflora incarnata	Plant				--
Perideridia gairdneri	Root		5524.0	2.3839886591088133	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
Persea americana	Fruit	620.0	2993.0	-0.27846276424940747	--
Phaseolus vulgaris	Seed	9160.0	10294.0	-0.20468312127747473	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Phaseolus vulgaris	Fruit	680.0	6989.0	0.8185980204778843	USDA's Ag Handbook 8 and sequelae)
Phaseolus vulgaris	Sprout Seedling	1690.0	18172.0	1.0	USDA's Ag Handbook 8 and sequelae)
Phaseolus lunatus	Seed	1020.0	10855.0	-0.09446949370222676	--
Phoenix dactylifera	Fruit	120.0	1590.0	-0.6636420137419976	--
Phyllanthus emblica	Fruit	652.0	3225.0	-0.2147695455164916	--
Pinus pinea	Seed	12900.0	13900.0	0.5037488591794668	--
Pinus edulis	Seed	6220.0	6610.0	-0.9284389216111886	USDA's Ag Handbook 8 and sequelae)
Pistacia vera	Seed	9470.0	9851.0	-0.29171455980837463	--
Pisum sativum	Seed	1730.0	8183.0	-0.6194085540962777	--
Pisum sativum	Root		575.0	-0.9177480366608831	--
Pisum sativum	Shoot		23.0	-0.7059620352156295	--
Pisum sativum	Fruit	630.0	6231.0	0.6104969006522369	--
Portulaca oleracea	Herb	540.0	13200.0	-1.0	--
Prosopis glandulosa	Leaf				Carman, N. J., Dossaji, S. F., Mabry, T. J. 1974. A Populational Survey of Amino Acids in Prosopis Species from North and South America. Biochem. Syst. Ecol. 2: 73.
Prunus domestica	Fruit	340.0	2297.0	-0.469542420448155	USDA's Ag Handbook 8 and sequelae)
Prunus persica	Fruit	290.0	2349.0	-0.45526635418043243	--
Prunus cerasus	Fruit				--
Prunus dulcis	Seed	12550.0	13127.0	0.351885875016068	USDA's Ag Handbook 8 and sequelae)
Prunus armeniaca	Fruit	1010.0	7400.0	0.9314338519400758	USDA's Ag Handbook 8 and sequelae)
Psidium cattleianum	Fruit	180.0	930.0	-0.8448382394477065	--
Psidium guajava	Fruit	250.0	1800.0	-0.6059886691992721	USDA's Ag Handbook 8 and sequelae)
Psophocarpus tetragonolobus	Seed	19240.0	20991.0	1.8968412533614334	--
Psophocarpus tetragonolobus	Leaf	1680.0	7257.0	-0.5775704329768899	--
Psophocarpus tetragonolobus	Tuber	6790.0	15939.0	1.66057243292518	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Psoralea esculenta	Root		1266.0	-0.45674580251724606	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
Punica granatum	Fruit				--
Pyrus communis	Fruit	110.0	679.0	-0.9137477131630594	--
Raphanus sativus	Root	180.0	3490.0	1.0270008960868768	--
Rehmannia glutinosa	Root	3000.0	4000.0	1.3672485652811677	--
Ribes nigrum	Fruit Juice		98.0		--
Rosa damascena	Pollen Or Spore				--
Rosmarinus officinalis	Leaf	1360.0	4220.0	-1.0174470705136651	USDA's Ag Handbook 8 and sequelae)
Sambucus canadensis	Fruit	250.0	1238.0	-0.7602800007850423	USDA's Ag Handbook 8 and sequelae)
Santalum album	Fruit				--
Scutellaria baicalensis	Root				--
Secale cereale	Seed	14910.0	16745.0	1.0626753662232822	USDA's Ag Handbook 8 and sequelae)
Sechium edule	Fruit	480.0	6855.0	0.7818096958649071	--
Senna obtusifolia	Seed		5360.0	-1.1740129580979266	--
Sesamum indicum	Seed	8100.0	14277.0	0.5778139885838669	--
Silybum marianum	Tissue Culture				--
Sinapis alba	Seed	19440.0	20800.0	1.8593175405862599	--
Solanum tuberosum	Tuber	740.0	6700.0	-0.13308264485534704	--
Solanum melongena	Fruit	460.0	5700.0	0.4647163008799166	--
Spinacia oleracea	Plant	1120.0	13301.0	1.2034784447687357	USDA's Ag Handbook 8 and sequelae)
Tamarindus indica	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Terminalia chebula	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Theobroma cacao	Seed		7200.0	-0.8125279763894483	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Trigonella foenum-graecum	Seed	11980.0	17800.0	1.269939853018089	--
Triticum aestivum	Seed	17526.0	20447.0	1.789967432682405	--
Triticum aestivum	Root		173.0	-1.1859432582610887	--
Triticum aestivum	Shoot		12.0	-0.7070727978707761	--
Urtica dioica	Leaf				Jim Duke's personal files.
Vaccinium corymbosum	Fruit	250.0	1624.0	-0.6543076627207944	--
Valerianella locusta	Plant	780.0	10830.0	0.7712093500636632	--
Vicia faba	Seed	2520.0	13265.0	0.37899724864420387	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Seed		14050.0	0.5332177435578753	--
Vigna angularis	Seed	8740.0	10097.0	-0.24338558942778463	--
Vigna unguiculata	Seed		14050.0	0.5332177435578753	--
Vigna radiata	Seed	10950.0	12090.0	0.14815765434667028	USDA's Ag Handbook 8 and sequelae)
Vitis vinifera	Fruit	220.0	1132.0	-0.7893812127923229	USDA's Ag Handbook 8 and sequelae)
Zea mays	Root		69.0	-1.2553270966850225	--
Zea mays	Shoot		11.0	-0.7071737762939713	--
Zea mays	Seed	2920.0	12147.0	0.15935583041046553	--
Zingiber officinale	Root	410.0	2376.0	0.2837932421997398	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Rhizome	410.0	2376.0	-1.0	--