

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for PROLINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Glycine max	Seed	21350.0	23344.0	2.3591098196440687	USDA's Ag Handbook 8 and sequelae)
Sinapis alba	Seed	19440.0	20800.0	1.8593175405862599	--
Psophocarpus tetragonolobus	Seed	19240.0	20991.0	1.8968412533614334	--
Triticum aestivum	Seed	17526.0	20447.0	1.789967432682405	--
Secale cereale	Seed	14910.0	16745.0	1.0626753662232822	USDA's Ag Handbook 8 and sequelae)
Lupinus albus	Seed	14760.0	16480.0	1.0106136704880937	--
Pinus pinea	Seed	12900.0	13900.0	0.5037488591794668	--
Prunus dulcis	Seed	12550.0	13127.0	0.351885875016068	USDA's Ag Handbook 8 and sequelae)
Juglans cinerea	Seed	12360.0	12787.0	0.2850897370916753	--
Trigonella foenum-graecum	Seed	11980.0	17800.0	1.269939853018089	--
Helianthus annuus	Seed	11820.0	12500.0	0.2287059383143203	--
Lens culinaris	Seed	11720.0	13200.0	0.36622739874689353	USDA's Ag Handbook 8 and sequelae)
Arachis hypogaea	Seed	11540.0	15362.0	0.7909722522543554	--
Nigella sativa	Seed	11350.0	14520.0	0.6255535812768888	--
Vigna radiata	Seed	10950.0	12090.0	0.14815765434667028	USDA's Ag Handbook 8 and sequelae)
Papaver somniferum	Seed	10620.0	11392.0	0.011029112372475834	--
Cucurbita pepo	Seed	10000.0	10743.0	-0.11647292737143848	USDA's Ag Handbook 8 and sequelae)
Cajanus cajan	Seed	9550.0	11830.0	0.09707825475742879	--
Pistacia vera	Seed	9470.0	9851.0	-0.29171455980837463	--
Juglans nigra	Seed	9370.0	9800.0	-0.30173398049703354	USDA's Ag Handbook 8 and sequelae)
Mucuna pruriens	Seed	9225.0	19555.0	1.614725800245469	--
Carum carvi	Seed	9170.0	10180.0	-0.2270794734050652	Revised USDA data received 1993.
Phaseolus vulgaris	Seed	9160.0	10294.0	-0.20468312127747473	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Seed	9000.0	9873.0	-0.28739245676620806	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Fruit	9000.0	9873.0	1.6103706188646485	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Vigna angularis</i>	Seed	8740.0	10097.0	-0.24338558942778463	--
<i>Cucurbita foetidissima</i>	Seed	8290.0	15390.0	0.7964731106716583	--
<i>Sesamum indicum</i>	Seed	8100.0	14277.0	0.5778139885838669	--
<i>Cicer arietinum</i>	Seed	7970.0	16530.0	1.0204366319475633	--
<i>Bertholletia excelsa</i>	Seed	7620.0	7884.0	-0.6781498636239054	USDA's Ag Handbook 8 and sequelae)
<i>Anacardium occidentale</i>	Seed	6900.0	7019.0	-0.848087096872728	--
<i>Papaver bracteatum</i>	Seed	6800.0	8400.0	-0.57677690136218	--
<i>Psophocarpus tetragonolobus</i>	Tuber	6790.0	15939.0	1.66057243292518	--
<i>Pinus edulis</i>	Seed	6220.0	6610.0	-0.9284389216111886	USDA's Ag Handbook 8 and sequelae)
<i>Oenothera biennis</i>	Seed	5900.0	6297.0	-0.9899306603474678	--
<i>Juglans regia</i>	Seed	5530.0	5740.0	-1.0993584510059582	USDA's Ag Handbook 8 and sequelae)
<i>Moringa oleifera</i>	Shoot	4510.0	21135.0	1.4258944352803073	USDA's Ag Handbook 8 and sequelae)
<i>Acacia farnesiana</i>	Leaf	4080.0	21890.0	1.5418615186449842	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Macadamia spp</i>	Seed	3960.0	4075.0	-1.426463067606293	USDA's Ag Handbook 8 and sequelae)
<i>Artocarpus altilis</i>	Seed	3690.0	8440.0	-0.5689185321946043	USDA's Ag Handbook 8 and sequelae)
<i>Lens culinaris</i>	Sprout Seedling	3560.0	11865.0	-1.0	USDA's Ag Handbook 8 and sequelae)
<i>Ginkgo biloba</i>	Seed	3470.0	9475.0	-0.3655832299835854	USDA's Ag Handbook 8 and sequelae)
<i>Nelumbo nucifera</i>	Seed	3440.0	10424.0	-0.17914342148285398	--
<i>Rehmannia glutinosa</i>	Root	3000.0	4000.0	1.3672485652811677	--
<i>Zea mays</i>	Seed	2920.0	12147.0	0.15935583041046553	--
<i>Calathea allouia</i>	Root	2610.0	2870.0	0.6133664747134254	--
<i>Vicia faba</i>	Seed	2520.0	13265.0	0.37899724864420387	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea var. capitata l.</i>	Leaf	2380.0	31821.0	2.980259571782197	USDA's Ag Handbook 8 and sequelae)
<i>Chenopodium album</i>	Leaf	2230.0	14205.0	0.42877229919483034	--
<i>Castanea dentata</i>	Seed	2141.0	3811.0	-1.478328304112292	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Brassica oleracea var. sabellica l.	Leaf	1960.0	12610.0	0.19775378195045876	--
Allium schoenoprasum	Leaf	1850.0	23125.0	1.7207379254141373	USDA's Ag Handbook 8 and sequelae)
Pisum sativum	Seed	1730.0	8183.0	-0.6194085540962777	--
Phaseolus vulgaris	Sprout Seedling	1690.0	18172.0	1.0	USDA's Ag Handbook 8 and sequelae)
Psophocarpus tetragonolobus	Leaf	1680.0	7257.0	-0.5775704329768899	--
Castanea mollissima	Seed	1632.0	2904.0	-1.6565168249870692	--
Asparagus officinalis	Shoot	1620.0	20903.0	1.4024674410990334	--
Mentha x piperita	Leaf	1540.0	7215.0	-0.5836536791989987	USDA's Ag Handbook 8 and sequelae)
Cocos nucifera	Seed	1380.0	2605.0	-1.7152581345146969	USDA's Ag Handbook 8 and sequelae)
Rosmarinus officinalis	Leaf	1360.0	4220.0	-1.0174470705136651	USDA's Ag Handbook 8 and sequelae)
Nelumbo nucifera	Rhizome	1360.0	6500.0	1.0	--
Mentha spicata	Leaf	1350.0	9345.0	-0.27514619222062164	USDA's Ag Handbook 8 and sequelae)
Amaranthus sp.	Leaf	1210.0	14556.0	0.4796108569081685	--
Brassica oleracea var. botrytis l.	Leaf	1140.0	12244.0	0.14474263630065312	--
Brassica oleracea var. italica	Leaf	1140.0	12244.0	0.14474263630065312	USDA's Ag Handbook 8 and sequelae)
Corchorus olitorius	Leaf	1130.0	20052.0	1.2756470768298402	--
Spinacia oleracea	Plant	1120.0	13301.0	1.2034784447687357	USDA's Ag Handbook 8 and sequelae)
Lablab purpureus	Seed	1070.0	12822.0	0.29196581011330397	--
Phaseolus lunatus	Seed	1020.0	10855.0	-0.09446949370222676	--
Castanea sativa	Seed	1010.0	2222.0	-1.7905020192942334	--
Prunus armeniaca	Fruit	1010.0	7400.0	0.9314338519400758	USDA's Ag Handbook 8 and sequelae)
Nasturtium officinale	Herb	960.0	19200.0	1.0	USDA's Ag Handbook 8 and sequelae)
Ipomoea aquatica	Leaf	880.0	11685.0	0.06377752586829968	--
Capsicum frutescens	Fruit	870.0	7099.0	0.8487973914288358	--
Brassica oleracea var. botrytis l.	Flower	860.0	11110.0		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Valerianella locusta	Plant	780.0	10830.0	0.7712093500636632	--
Manihot esculenta	Root	760.0	2415.0	0.309812181608715	--
Solanum tuberosum	Tuber	740.0	6700.0	-0.13308264485534704	--
Ipomoea batatas	Root	710.0	2840.0	0.5933519059372906	--
Basella alba	Leaf	700.0	10145.0	-0.15927483560902458	--
Phaseolus vulgaris	Fruit	680.0	6989.0	0.8185980204778843	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. viridis l.	Leaf	670.0	10981.0	-0.038189267949905695	--
Phyllanthus emblica	Fruit	652.0	3225.0	-0.2147695455164916	--
Pisum sativum	Fruit	630.0	6231.0	0.6104969006522369	--
Persea americana	Fruit	620.0	2993.0	-0.27846276424940747	--
Cnidioscolus chayamansa	Leaf	620.0	3100.0	-1.179666969769901	--
Colocasia esculenta	Root	600.0	2045.0	0.0629658333697197	--
Cichorium endivia	Leaf	590.0	9500.0	-0.2526961168771247	--
Portulaca oleracea	Herb	540.0	13200.0	-1.0	--
Arctium lappa	Root	520.0	2600.0	0.43323535572821265	USDA's Ag Handbook 8 and sequelae)
Ficus carica	Fruit	490.0	2346.0	-0.4560899733881857	USDA's Ag Handbook 8 and sequelae)
Sechium edule	Fruit	480.0	6855.0	0.7818096958649071	--
Lactuca sativa	Leaf	480.0	8000.0	-0.4699549105238691	--
Dioscorea pentaphylla	Root	480.0	2585.0	0.42322807134014523	--
Pachyrhizus erosus	Tuber	470.0	4330.0	-0.5931933207228488	--
Solanum melongena	Fruit	460.0	5700.0	0.4647163008799166	--
Abelmoschus esculentus	Fruit	450.0	14930.0	2.9987180634006636	--
Zingiber officinale	Rhizome	410.0	2376.0	-1.0	--
Zingiber officinale	Root	410.0	2376.0	0.2837932421997398	USDA's Ag Handbook 8 and sequelae)
Musa x paradisiaca	Fruit	400.0	1554.0	-0.6735254442350362	USDA's Ag Handbook 8 and sequelae)
Beta vulgaris	Root	380.0	2997.0	0.6980948158657292	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Capsicum annuum	Fruit	370.0	5047.0	0.28544185332563193	--
Allium cepa	Bulb	370.0	4033.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Cucurbita spp	Fruit	370.0	5855.0	0.5072699599471664	--
Prunus domestica	Fruit	340.0	2297.0	-0.469542420448155	USDA's Ag Handbook 8 and sequelae)
Brassica chinensis	Leaf	310.0	6625.0	-0.6691088047000515	--
Citrus reticulata	Fruit	310.0	2499.0	-0.4140853937927713	USDA's Ag Handbook 8 and sequelae)
Brassica rapa	Leaf	310.0	6625.0	-0.6691088047000515	USDA's Ag Handbook 8 and sequelae)
Prunus persica	Fruit	290.0	2349.0	-0.45526635418043243	--
Daucus carota	Root	290.0	2375.0	0.28312608990720195	--
Asimina triloba	Fruit	282.0	3648.0	-0.0986392372232873	--
Averrhoa carambola	Fruit	260.0	2860.0	-0.31497654912646694	USDA's Ag Handbook 8 and sequelae)
Cucurbita pepo	Fruit	260.0	17100.0	3.5944692903421607	--
Vaccinium corymbosum	Fruit	250.0	1624.0	-0.6543076627207944	--
Psidium guajava	Fruit	250.0	1800.0	-0.6059886691992721	USDA's Ag Handbook 8 and sequelae)
Sambucus canadensis	Fruit	250.0	1238.0	-0.7602800007850423	USDA's Ag Handbook 8 and sequelae)
Vitis vinifera	Fruit	220.0	1132.0	-0.7893812127923229	USDA's Ag Handbook 8 and sequelae)
Fragaria spp	Fruit	190.0	1898.0	-0.5790837750793335	USDA's Ag Handbook 8 and sequelae)
Mangifera indica	Fruit	180.0	2000.0	-0.551080722015724	--
Psidium cattleianum	Fruit	180.0	930.0	-0.8448382394477065	--
Raphanus sativus	Root	180.0	3490.0	1.0270008960868768	--
Panax quinquefolius	Plant	175.0	1120.0	-0.9274280071141	--
Lycopersicon esculentum	Fruit	170.0	2810.0	-0.32870353592235396	--
Apium graveolens	Leaf	170.0	3208.0	-1.1640243366273353	USDA's Ag Handbook 8 and sequelae)
Phoenix dactylifera	Fruit	120.0	1590.0	-0.6636420137419976	--
Cucumis sativus	Fruit	120.0	3038.0	-0.2661084761331091	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Pyrus communis</i>	Fruit	110.0	679.0	-0.9137477131630594	--
<i>Carica papaya</i>	Fruit	100.0	895.0	-0.8544471302048274	USDA's Ag Handbook 8 and sequelae)
<i>Citrus sinensis</i>	Fruit	60.0	3473.0	-0.14668369100889192	--
<i>Hordeum vulgare</i>	Root	57.0	219.0	-1.1552542528043488	--
<i>Murraya</i> sp	Fruit	50.0	1440.0	-0.7048229741296588	--
<i>Ananas comosus</i>	Fruit	31.0	963.0	-0.8357784281624211	--
<i>Malus domestica</i>	Plant	20.0	435.0	-1.0472597877182985	--
<i>Allium sativum</i> var. <i>sativum</i>	Bulb	1.3	5800.0	1.0	--
<i>Santalum album</i>	Fruit				--
<i>Zea mays</i>	Root		69.0	-1.2553270966850225	--
<i>Zea mays</i>	Shoot		11.0	-0.7071737762939713	--
<i>Linum usitatissimum</i>	Seed		0.191	-2.226996902840283	--
<i>Rosa damascena</i>	Pollen Or Spore				--
<i>Allium sativum</i> var. <i>sativum</i>	Leaf				--
<i>Fagopyrum esculentum</i>	Seed		5965.0	-1.0551551244383455	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
<i>Silybum marianum</i>	Tissue Culture				--
<i>Passiflora incarnata</i>	Plant				--
<i>Vigna unguiculata</i>	Seed		14050.0	0.5332177435578753	--
<i>Avena sativa</i>	Root		2.4	-1.2997594393680416	--
<i>Avena sativa</i>	Shoot		1.3	-0.7081532669989642	--
<i>Lycopersicon esculentum</i>	Root		541.0	-0.940431214607169	--
<i>Morus alba</i>	Leaf				--
<i>Angelica sinensis</i>	Root				Jim Duke's personal files.
<i>Anastatica hierochuntica</i>	Plant				--
<i>Lentinus edodes</i>	Fruit				--
<i>Melia azedarach</i>	Seed				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Glycine max	Shoot				--
Lycium barbarum	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.
Pisum sativum	Root		575.0	-0.9177480366608831	--
Pisum sativum	Shoot		23.0	-0.7059620352156295	--
Aloe vera	Leaf		3339.0	-1.1450504019821863	--
Coriandrum sativum	Fruit				--
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.
Alpinia galanga	Leaf				--
Lepidium meyenii	Root		50.0	-1.2680029902432413	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
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.
Cocos nucifera	Leaf				Jim Duke's personal files.
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.
Astragalus membranaceus	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Crocus sativus	Bulb				--
Senna obtusifolia	Seed		5360.0	-1.1740129580979266	--
Capsella bursa-pastoris	Plant				--

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.
Prunus cerasus	Fruit				--
Perideridia gairdneri	Root		5524.0	2.3839886591088133	Izidoost, 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.
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.
Myrciaria dubia	Fruit				Jim Duke's personal files.
Tamarindus indica	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Helianthus tuberosus	Tuber		2573.0	-0.9342964673469841	Izidoost, 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.
Panax ginseng	Root				--
Panax ginseng	Leaf				--
Vigna unguiculata	Seed		14050.0	0.5332177435578753	--
Triticum aestivum	Root		173.0	-1.1859432582610887	--
Triticum aestivum	Shoot		12.0	-0.7070727978707761	--
Lycopodium clavatum	Pollen Or Spore				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Glechoma hederacea	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
Lippia javanica	Plant				Neidlein, R., Staehle, R. 1974. Constituents of Lippia javanica. III. Deutsche Apot. Ztit., 114: 1588.
Punica granatum	Fruit				--
Artemisia dracunculus	Leaf				--
Scutellaria baicalensis	Root				--
Momordica charantia	Fruit				Jim Duke's personal files.
Humulus lupulus	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Citrus paradisi	Fruit		590.0	-0.9381817496597383	--
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.
Hypericum perforatum	Plant				--
Urtica dioica	Leaf				Jim Duke's personal files.
Camellia sinensis	Leaf				--
Allium ampeloprasum	Plant				--
Ocimum basilicum	Leaf		5880.0	-0.7770140055446013	USDA's Ag Handbook 8 and sequelae)
Ribes nigrum	Fruit Juice		98.0		--
Artemisia dracunculus	Root				--
Harpagophytum procumbens	Root				--