

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for THREONINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Glycine max	Seed	15850.0	17330.0	2.0563226508170747	USDA's Ag Handbook 8 and sequelae)
Lupinus albus	Seed	13310.0	14860.0	1.503797204218498	--
Psophocarpus tetragonolobus	Seed	11790.0	12863.0	1.0570792621709848	--
Sinapis alba	Seed	10950.0	11720.0	0.8013964340486475	--
Phaseolus acutifolius	Seed	10700.0	11665.0	0.7890932358450354	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Lens culinaris	Seed	10060.0	11325.0	0.7130371014954339	USDA's Ag Handbook 8 and sequelae)
Juglans cinerea	Seed	9400.0	9725.0	0.3551258810267202	--
Helianthus annuus	Seed	9280.0	9805.0	0.37302144205015586	--
Vigna unguiculata	Seed	9260.0	10112.0	0.4416956574775903	USDA's Ag Handbook 8 and sequelae)
Phaseolus vulgaris	Seed	9090.0	10216.0	0.4649598868080567	USDA's Ag Handbook 8 and sequelae)
Papaver somniferum	Seed	9050.0	9708.0	0.35132307430924015	--
Trigonella foenum-graecum	Seed	8980.0	9880.0	0.3897985305096268	--
Vigna radiata	Seed	7820.0	8598.0	0.10302216510907004	USDA's Ag Handbook 8 and sequelae)
Pinus pinea	Seed	7610.0	8190.0	0.011754803889548075	--
Carum carvi	Seed	7560.0	8390.0	0.056493706448137275	Revised USDA data received 1993.
Arachis hypogaea	Seed	7430.0	9570.0	0.32045323154381355	--
Prunus dulcis	Seed	7390.0	7730.0	-0.0911446719952071	USDA's Ag Handbook 8 and sequelae)
Sesamum indicum	Seed	7360.0	12396.0	0.952613924696679	--
Juglans nigra	Seed	7300.0	7630.0	-0.1135141232745017	USDA's Ag Handbook 8 and sequelae)
Pistacia vera	Seed	7220.0	7511.0	-0.14013377029686228	--
Cajanus cajan	Seed	7190.0	8580.0	0.09899566387879702	--
Cicer arietinum	Seed	7160.0	8090.0	-0.010614647389746526	USDA's Ag Handbook 8 and sequelae)
Vigna angularis	Seed	6740.0	7787.0	-0.07839408476600916	--
Papaver bracteatum	Seed	6350.0	7800.0	-0.07548605609970087	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mucuna pruriens	Seed	6250.0	13250.0	1.143649038621855	--
Cucurbita pepo	Seed	6205.0	9701.0	0.3497572127196895	--
Foeniculum vulgare	Seed	6020.0	6604.0	-0.3430246934000643	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Fruit	6020.0	6604.0	1.4907979518720285	--
Anacardium occidentale	Seed	5920.0	6022.0	-0.47321489984555887	--
Anethum graveolens	Fruit	5750.0	6227.0	1.3340819873960998	--
Anethum graveolens	Seed	5750.0	6227.0	-0.4273575247230049	USDA's Ag Handbook 8 and sequelae)
Secale cereale	Seed	5320.0	5975.0	-0.48372854194682735	USDA's Ag Handbook 8 and sequelae)
Cucurbita foetidissima	Seed	4605.0	26000.0	3.995754076731917	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Bertholletia excelsa	Seed	4600.0	4759.0	-0.7557410695030496	USDA's Ag Handbook 8 and sequelae)
Psophocarpus tetragonolobus	Tuber	4510.0	10587.0	1.7166275671075264	--
Juglans regia	Seed	4480.0	4650.0	-0.7801237713974808	USDA's Ag Handbook 8 and sequelae)
Bixa orellana	Seed	4360.0	7600.0	-0.12022495865829007	--
Moringa oleifera	Shoot	4110.0	19260.0	1.2868384427185613	USDA's Ag Handbook 8 and sequelae)
Artocarpus altilis	Seed	3850.0	8800.0	0.14820845669324514	USDA's Ag Handbook 8 and sequelae)
Pinus edulis	Seed	3670.0	3900.0	-0.9478946559921904	USDA's Ag Handbook 8 and sequelae)
Oenothera biennis	Seed	3500.0	4600.0	-0.7913084970371281	--
Lens culinaris	Sprout Seedling	3280.0	10935.0	-0.38414936877248523	USDA's Ag Handbook 8 and sequelae)
Avena sativa	Seed	3000.0	7000.0	-0.2544416663340577	Jim Duke's personal files.*
Triticum aestivum	Seed	3000.0	6000.0	-0.4781361791270037	--
Phaseolus lunatus	Seed	2900.0	10320.0	0.48822411613852307	--
Calathea allouia	Root	2815.0	3095.0	-0.18381844453366453	--
Ginkgo biloba	Seed	2680.0	7300.0	-0.18733331249617388	USDA's Ag Handbook 8 and sequelae)
Macadamia spp	Seed	2630.0	2705.0	-1.2152095987797609	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Nigella sativa</i>	Seed	2615.0	3345.0	-1.0720451105922753	--
<i>Thymus vulgaris</i>	Plant	2520.0	2722.0	-1.0265192446716156	USDA's Ag Handbook 8 and sequelae)
<i>Vicia faba</i>	Seed	2080.0	10950.0	0.629151659198079	USDA's Ag Handbook 8 and sequelae)
<i>Cnidioscolus chayamansa</i>	Leaf	2045.0	10230.0	0.14772893607653187	--
<i>Pisum sativum</i>	Seed	2030.0	9603.0	0.3278351504659808	--
<i>Nelumbo nucifera</i>	Seed	2000.0	6060.0	-0.4647145083594269	--
<i>Acacia farnesiana</i>	Leaf	2000.0	10730.0	0.3153628468971734	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Castanea dentata</i>	Seed	1904.0	3389.0	-1.0622025520293856	--
<i>Psophocarpus tetragonolobus</i>	Leaf	1820.0	7862.0	-0.6461852655700264	--
<i>Castanea mollissima</i>	Seed	1806.0	3214.0	-1.1013490917681512	--
<i>Phaseolus vulgaris</i>	Sprout Seedling	1760.0	18925.0	1.3707697029783192	USDA's Ag Handbook 8 and sequelae)
<i>Colocasia esculenta</i>	Leaf	1670.0	11645.0	0.6221329036989475	--
<i>Chenopodium album</i>	Leaf	1630.0	10383.0	0.1990249127876482	--
<i>Mentha x piperita</i>	Leaf	1540.0	7215.0	-0.8631035461719366	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>sabellica</i> l.	Leaf	1470.0	9460.0	-0.11042728658725609	--
<i>Lablab purpureus</i>	Seed	1430.0	11789.0	0.8168313554313608	--
<i>Ipomoea aquatica</i>	Leaf	1400.0	18590.0	2.9505679249976584	--
<i>Rosmarinus officinalis</i>	Leaf	1360.0	4220.0	-1.8672306719875797	USDA's Ag Handbook 8 and sequelae)
<i>Mentha spicata</i>	Leaf	1350.0	9340.0	-0.15065942518421008	--
<i>Nasturtium officinale</i>	Herb	1330.0	26600.0	1.0	USDA's Ag Handbook 8 and sequelae)
<i>Zea mays</i>	Seed	1290.0	5366.0	-0.6199585002377315	USDA's Ag Handbook 8 and sequelae)
<i>Spinacia oleracea</i>	Plant	1220.0	14489.0	0.9163251148553258	USDA's Ag Handbook 8 and sequelae)
<i>Cocos nucifera</i>	Seed	1210.0	2285.0	-1.3091612941527981	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>gemmifera</i>	Leaf	1200.0	8568.0	-0.40948618349128063	USDA's Ag Handbook 8 and sequelae)
<i>Allium schoenoprasum</i>	Leaf	1110.0	13875.0	1.3697801459590087	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Vigna unguiculata	Seed	1100.0	10165.0	0.45355146665561646	USDA's Ag Handbook 8 and sequelae)
Acacia farnesiana	Seed	1050.0	1100.0	-1.574239291812439	Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
Vigna unguiculata	Fruit	1040.0	8560.0	2.3038919214076166	USDA's Ag Handbook 8 and sequelae)
Rehmannia glutinosa	Root	1000.0	16000.0	3.682810775852547	--
Pisum sativum	Fruit	990.0	9792.0	2.816024728395267	--
Amaranthus sp.	Leaf	990.0	11910.0	0.7109788764338875	--
Brassica oleracea var. italica	Leaf	910.0	9773.0	-0.005488458413534491	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. botrytis l.	Leaf	910.0	9773.0	-0.005488458413534491	--
Corchorus olitorius	Leaf	890.0	13350.0	1.193764539597335	--
Asparagus officinalis	Shoot	850.0	10968.0	-0.13544765054428673	--
Phaseolus vulgaris	Fruit	790.0	8119.0	2.1205716552699916	USDA's Ag Handbook 8 and sequelae)
Vigna radiata	Sprout Seedling	780.0	8192.0	-0.986620334205834	USDA's Ag Handbook 8 and sequelae)
Solanum tuberosum	Tuber	750.0	4300.0	-0.35834239480644015	--
Valerianella locusta	Plant	750.0	10415.0	0.2436687095937672	--
Capsicum frutescens	Fruit	740.0	6038.0	1.2555161590514035	USDA's Ag Handbook 8 and sequelae)
Castanea sativa	Seed	729.0	1604.0	-1.4614972573647944	--
Ipomoea batatas	Root	720.0	3019.0	-0.20658975958591963	--
Brassica oleracea var. botrytis l.	Flower	720.0	9300.0		--
Colocasia esculenta	Root	690.0	2350.0	-0.4070372565590599	--
Brassica nigra	Leaf	660.0	9720.0	-0.023257652960522495	USDA's Ag Handbook 8 and sequelae)
Abelmoschus esculentus	Fruit	650.0	6500.0	1.4475659616717724	USDA's Ag Handbook 8 and sequelae)
Manihot esculenta	Root	650.0	2065.0	-0.4924296880050165	--
Lactuca sativa	Leaf	590.0	9833.0	0.014627610884942494	--
Panax quinquefolius	Plant	584.0	1070.0	-1.2992802612381582	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Brassica oleracea var. viridis l.	Leaf	550.0	9014.0	-0.25995673503926836	--
Basella alba	Leaf	550.0	7970.0	-0.6099763408327679	--
Persea americana	Fruit	530.0	2565.0	-0.18818289830907564	--
Artocarpus altilis	Fruit	520.0	1770.0	-0.5186582080129573	--
Nelumbo nucifera	Rhizome	510.0	2440.0	1.0	--
Cichorium endivia	Leaf	500.0	8051.0	-0.5828196472798239	--
Brassica chinensis	Leaf	490.0	10471.0	0.2285284810920811	--
Brassica oleracea	Stem	490.0	5445.0		--
Brassica rapa	Leaf	490.0	10471.0	0.2285284810920811	USDA's Ag Handbook 8 and sequelae)
Prunus armeniaca	Fruit	470.0	3445.0	0.17762624953924613	USDA's Ag Handbook 8 and sequelae)
Portulaca oleracea	Herb	470.0	9400.0	-1.0	--
Dioscorea pentaphylla	Root	470.0	2530.0	-0.35310519459319256	--
Brassica napus var. napobrassica	Root	460.0	4445.0	0.22067202021034055	USDA's Ag Handbook 8 and sequelae)
Sechium edule	Fruit	440.0	6285.0	1.358192135777012	--
Beta vulgaris	Root	440.0	3470.0	-0.07145998210477424	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. capitata l.	Leaf	420.0	5615.0	-1.3995320607979895	USDA's Ag Handbook 8 and sequelae)
Solanum melongena	Fruit	380.0	4957.0	0.8061528762968172	--
Daucus carota	Root	380.0	3110.0	-0.17932410603650892	--
Zingiber officinale	Root	360.0	2057.0	-0.4948266685368329	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Rhizome	360.0	2057.0	-1.0	--
Pachyrhizus erosus	Tuber	350.0	3225.0	-0.7131368451098462	--
Musa x paradisiaca	Fruit	340.0	1321.0	-0.7053040118582944	USDA's Ag Handbook 8 and sequelae)
Murraya sp	Fruit	340.0	979.0	-0.847470748862983	--
Psidium guajava	Fruit	310.0	2232.0	-0.32660840539258834	USDA's Ag Handbook 8 and sequelae)
Capsicum annuum	Fruit	310.0	4228.0	0.5031132526815597	--
Raphanus sativus	Root	290.0	5620.0	0.5727285358208635	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cucurbita spp	Fruit	280.0	4430.0	0.5870830798012882	--
Allium cepa	Bulb	280.0	3052.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Sambucus canadensis	Fruit	270.0	1336.0	-0.6990686286563343	USDA's Ag Handbook 8 and sequelae)
Prunus persica	Fruit	270.0	2187.0	-0.3453145549984684	--
Arctium lappa	Root	260.0	1300.0	-0.7216409513599528	USDA's Ag Handbook 8 and sequelae)
Asimina triloba	Fruit	254.0	2812.0	-0.08550692158346714	--
Cichorium intybus	Leaf	250.0	5712.0	-1.367011082098785	USDA's Ag Handbook 8 and sequelae)
Brassica rapa	Root	250.0	3075.0	-0.18981089586320535	--
Cucurbita pepo	Fruit	250.0	3452.0	0.18053609503349416	--
Ficus carica	Fruit	240.0	1149.0	-0.7768030725741027	USDA's Ag Handbook 8 and sequelae)
Averrhoa carambola	Fruit	230.0	2530.0	-0.20273212578031571	USDA's Ag Handbook 8 and sequelae)
Psidium cattleianum	Fruit	220.0	1140.0	-0.7805443024952787	--
Mangifera indica	Fruit	190.0	2250.0	-0.31912594555023627	--
Apium graveolens	Pt	190.0	4105.0		USDA's Ag Handbook 8 and sequelae)
Fragaria spp	Fruit	190.0	2254.0	-0.3174631766963803	USDA's Ag Handbook 8 and sequelae)
Vaccinium corymbosum	Fruit	180.0	1170.0	-0.7680735360913586	--
Vitis vinifera	Fruit	180.0	926.0	-0.8695024361765752	USDA's Ag Handbook 8 and sequelae)
Lagenaria siceraria	Fruit	180.0	4035.0	0.42288465548300735	--
Prunus domestica	Fruit	160.0	1081.0	-0.8050701430896549	USDA's Ag Handbook 8 and sequelae)
Citrus sinensis	Fruit	150.0	1132.0	-0.7838698402029908	USDA's Ag Handbook 8 and sequelae)
Cucumis sativus	Fruit	150.0	3797.0	0.32394990867857487	--
Phyllanthus emblica	Fruit	135.0	668.0	-0.9767510272502877	--
Carica papaya	Fruit	110.0	985.0	-0.8449765955821991	USDA's Ag Handbook 8 and sequelae)
Pyrus communis	Fruit	100.0	618.0	-0.9975356379234878	--
Citrus reticulata	Fruit	100.0	806.0	-0.9193855017922554	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ananas comosus	Fruit	78.0	859.0	-0.8973538144786632	--
Lycopersicon esculentum	Fruit	65.0	3637.0	0.2574391545243345	--
Malus domestica	Fruit	30.0	435.0	-1.0736073129874002	--
Phoenix dactylifera	Fruit	10.0	980.0	-0.8470550566495191	--
Allium sativum var. sativum	Bulb	2.0	10000.0	1.0	--
Citrus paradisi	Fruit		100.0	-1.2128642044978408	--
Hypericum perforatum	Plant				--
Urtica dioica	Leaf				Jim Duke's personal files.
Ocimum basilicum	Leaf		5880.0	-1.3106860880630495	USDA's Ag Handbook 8 and sequelae)
Allium ampeloprasum	Plant				--
Ribes nigrum	Fruit Juice		17.0		--
Theobroma cacao	Seed		1400.0	-1.5071309379745554	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Spinacia oleracea	Leaf				--
Zingiber officinale	Tuber				--
Cryptotaenia japonica	Shoot				--
Cryptotaenia japonica	Root				--
Stachys officinalis	Shoot				--
Linum usitatissimum	Seed		0.195	-1.8202596354546852	--
Trifolium pratense	Plant				--
Allium sativum var. sativum	Leaf				--
Fagopyrum esculentum	Seed		5850.0	-0.5116903560459456	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Camellia sinensis	Leaf				--
Angelica sinensis	Root				Jim Duke's personal files.
Anastatica hierochuntica	Plant				--
Lentinus edodes	Fruit				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Albizia lebbbeck	Seed				Wealth of India.
Medicago sativa	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Avena sativa	Plant		16000.0	1.1658056814606805	Jim Duke's personal files.*
Melia azedarach	Seed				--
Ceratonia siliqua	Seed		16920.0	1.9646079005719668	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Alpinia galanga	Leaf				--
Psoralea esculenta	Root		1477.0	-0.6686077570935165	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.
Zingiber officinale	Shoot				--
Aloe vera	Leaf		14652.0	1.6302832433742858	--
Lepidium meyenii	Root		3310.0	-0.11939959274110076	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Coriandrum sativum	Leaf				--
Cocos nucifera	Leaf				Jim Duke's personal files.
Citrullus lanatus	Fruit		3180.0	0.06746781297128561	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Crocus sativus	Bulb				--
Citrullus lanatus	Seed		15300.0	1.6022227898473942	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Senna obtusifolia	Seed		5940.0	-0.49155784989458046	--
Oryza sativa	Hay				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Perideridia gairdneri	Root		2413.0	-0.38816103487100634	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.
Myrciaria dubia	Fruit				Jim Duke's personal files.
Glycine max	Shoot				--
Prunus cerasus	Fruit				--
Coccinia grandis	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Helianthus tuberosus	Tuber		3431.0	-0.64514832719124	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.
Trigonella foenum-graecum	Leaf				--
Opuntia ficus-indica	Bud		3845.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Opuntia ficus-indica	Seed		7330.0	-0.1806224771123855	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Scutellaria baicalensis	Root				--
Momordica charantia	Seed		17.8	-1.8163214935569654	Jim Duke's personal files.
Pouteria caimito	Fruit		2190.0	-0.3440674783580764	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Panax ginseng	Leaf				--
Panax ginseng	Root				--
Humulus lupulus	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
Eryngium creticus	Shoot		5045.0	-1.1513907921742734	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.