

**Dr. Duke's Phytochemical and Ethnobotanical Databases**

**List of Plants for TYROSINE**

Plant	Part	Low PPM	High PPM	StdDev	Reference
Abelmoschus esculentus	Fruit	480.0	8700.0	2.602797189816478	--
Abrus precatorius	Seed				Zaidi, Z. H., Sdiqui, B. S., Naim, Z. 1971. Chemical Investigations of Seeds of Abrus precatorius. Pak. J. Sci. Ind. Res., 14: 350.
Acacia farnesiana	Leaf	2240.0	12010.0	1.1112099488478182	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Albizia lebeck	Seed				Wealth of India.
Allium cepa	Bulb	290.0	3161.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Allium schoenoprasum	Leaf	810.0	10160.0	0.5975629898027675	USDA's Ag Handbook 8 and sequelae)
Allium ampeloprasum	Plant				--
Allium sativum var. sativum	Leaf				--
Allium sativum var. sativum	Bulb	0.6	6200.0	1.0	--
Aloe vera	Leaf		5073.0	-0.8148273240686774	--
Alpinia galanga	Leaf				--
Amaranthus sp.	Leaf	800.0	9624.0	0.44874419518214737	--
Anacardium occidentale	Seed	4910.0	4995.0	-0.6361609996504218	--
Ananas comosus	Fruit	58.0	889.0	-0.6338783019676755	--
Angelica sinensis	Root				Jim Duke's personal files.
Angelica archangelica	Leaf				--
Apium graveolens	Pt	90.0	1865.0		USDA's Ag Handbook 8 and sequelae)
Arachis hypogaea	Seed	10630.0	13198.0	1.2640830330319166	--
Arctium lappa	Root	180.0	900.0	-1.7927983636148572	USDA's Ag Handbook 8 and sequelae)
Artemisia dracunculus	Leaf				--
Artemisia dracunculus	Shoot				--
Artemisia dracunculus	Root				--
Artocarpus altilis	Fruit	190.0	645.0	-0.7349855635212965	--
Asimina triloba	Fruit	140.0	1501.0	-0.3802814000381016	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Asparagus officinalis</i>	Shoot	480.0	6194.0	-1.0	--
<i>Avena sativa</i>	Seed	2000.0	14000.0	1.4498681987287636	Jim Duke's personal files.*
<i>Averrhoa carambola</i>	Fruit	230.0	2530.0	0.04610946938270175	USDA's Ag Handbook 8 and sequelae)
<i>Basella alba</i>	Leaf	480.0	6955.0	-0.29229566086717174	--
<i>Bertholletia excelsa</i>	Seed	4570.0	4728.0	-0.6980121707739357	USDA's Ag Handbook 8 and sequelae)
<i>Beta vulgaris</i>	Root	350.0	2760.0	1.213042723775461	USDA's Ag Handbook 8 and sequelae)
<i>Brassica chinensis</i>	Leaf	290.0	6197.0	-0.5027520905731979	--
<i>Brassica oleracea</i> var. <i>botrytis</i> l.	Flower	430.0	5555.0		--
<i>Brassica oleracea</i> var. <i>viridis</i> l.	Leaf	420.0	6884.0	-0.3120085982143061	--
<i>Brassica nigra</i>	Leaf	1320.0	19440.0	3.1741271951746977	USDA's Ag Handbook 8 and sequelae)
<i>Brassica rapa</i>	Root	130.0	1600.0	-0.66156784685506	--
<i>Brassica oleracea</i> var. <i>capitata</i> l.	Leaf	210.0	2807.0	-1.443975437147642	USDA's Ag Handbook 8 and sequelae)
<i>Brassica rapa</i>	Leaf	290.0	6197.0	-0.5027520905731979	USDA's Ag Handbook 8 and sequelae)
<i>Brassica napus</i> var. <i>napobrassica</i>	Root	230.0	2225.0	0.3484594002519018	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>italica</i>	Leaf	630.0	6766.0	-0.34477094479123366	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>sabellica</i> l.	Leaf	1170.0	7530.0	-0.13264863305587218	--
<i>Brassica oleracea</i> var. <i>botrytis</i> l.	Leaf	630.0	6766.0	-0.34477094479123366	--
<i>Cajanus cajan</i>	Seed	4510.0	6015.0	-0.3998756268190205	--
<i>Calathea allouia</i>	Root	1805.0	1985.0	-0.03939106263717151	--
<i>Capsicum frutescens</i>	Fruit	420.0	3427.0	0.41780296779908704	USDA's Ag Handbook 8 and sequelae)
<i>Capsicum annuum</i>	Fruit	180.0	2455.0	0.01503141767564613	USDA's Ag Handbook 8 and sequelae)
<i>Carica papaya</i>	Fruit	50.0	448.0	-0.8166172460051626	USDA's Ag Handbook 8 and sequelae)
<i>Carum carvi</i>	Seed	6420.0	7125.0	-0.14274154462014257	Revised USDA data received 1993.
<i>Castanea sativa</i>	Seed	568.0	1251.0	-1.5034673093374482	--
<i>Castanea mollissima</i>	Seed	1536.0	2735.0	-1.1596952571003898	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Castanea dentata	Seed	1585.0	2822.0	-1.1395415047118291	--
Ceratonia siliqua	Seed		16450.0	2.0174163981767372	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Chenopodium album	Leaf	1750.0	11148.0	0.8718782306333135	--
Cicer arietinum	Seed	4790.0	5415.0	-0.5388670226021978	USDA's Ag Handbook 8 and sequelae)
Cichorium endivia	Leaf	400.0	6441.0	-0.43500622138022904	--
Citrullus lanatus	Seed		10200.0	0.5695893587686409	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrullus lanatus	Fruit		1413.0	-0.4167463140410469	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrus paradisi	Fruit		61.0	-0.9769799928135696	--
Citrus sinensis	Fruit	160.0	1208.0	-0.501692988706999	USDA's Ag Handbook 8 and sequelae)
Citrus reticulata	Fruit	110.0	887.0	-0.634707050013197	USDA's Ag Handbook 8 and sequelae)
Cnidioscolus chayamansa	Leaf	2170.0	10850.0	0.7891394231763269	--
Coccinia grandis	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cocos nucifera	Seed	1030.0	1945.0	-1.3427005948815731	USDA's Ag Handbook 8 and sequelae)
Cocos nucifera	Leaf				Jim Duke's personal files.
Colocasia esculenta	Root	550.0	1875.0	-0.2171558581279968	--
Colocasia esculenta	Leaf	1780.0	12415.0	1.223656985827951	--
Corchorus olitorius	Leaf	830.0	11965.0	1.0987158336278033	--
Coriandrum sativum	Fruit				--
Crocus sativus	Bulb				--
Cryptotaenia japonica	Shoot				--
Cryptotaenia japonica	Root				--
Cucumis sativus	Fruit	90.0	2278.0	-0.058312784353005145	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cucurbita pepo	Fruit	130.0	5000.0	1.0696133056017336	--
Cucurbita spp	Fruit	310.0	4905.0	1.0302477734394633	--
Cucurbita pepo	Seed	9275.0	12235.0	1.041001842799917	--
Cucurbita foetidissima	Seed	11350.0	13680.0	1.375739454311069	--
Daucus carota	Root	200.0	1640.0	-0.5969261030402144	--
Dioscorea pentaphylla	Root	350.0	1885.0	-0.2009954221742854	--
Fagopyrum esculentum	Seed		2750.0	-1.1562204722058103	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Ficus carica	Fruit	320.0	1532.0	-0.36743580533251863	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Fruit	4100.0	4498.0	0.8615975461758414	--
Foeniculum vulgare	Seed	4100.0	4498.0	-0.7512922058241537	USDA's Ag Handbook 8 and sequelae)
Ginkgo biloba	Seed	610.0	1665.0	-1.407563246247056	USDA's Ag Handbook 8 and sequelae)
Glechoma hederacea	Plant				Oriental Materia Medica (three volumes by Dr. Hsu and collaborators)
Glycine max	Shoot				--
Glycine max	Seed	13800.0	15090.0	1.7023692344015355	USDA's Ag Handbook 8 and sequelae)
Helianthus tuberosus	Tuber		1715.0	-0.8793170369065902	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.
Helianthus annuus	Seed	6660.0	7035.0	-0.16359025398761914	--
Hordeum vulgare	Seed	2000.0	6000.0	-0.4033504117135999	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.
Ipomoea aquatica	Leaf	800.0	10625.0	0.7266688470762532	--
Ipomoea batatas	Root	460.0	2504.0	0.7993355633604495	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Juglans nigra	Seed	7490.0	7830.0	0.02057334542509072	USDA's Ag Handbook 8 and sequelae)
Juglans regia	Seed	4390.0	4555.0	-0.7380880232247519	USDA's Ag Handbook 8 and sequelae)
Juglans cinerea	Seed	9770.0	10108.0	0.5482773447485537	--
Lablab purpureus	Seed	1550.0	12788.0	1.1691055792467455	--
Lactuca sativa	Leaf	320.0	5333.0	-0.742639102797481	--
Larrea tridentata	Plant		3100.0	-0.6773474514027521	--
Lens culinaris	Sprout Seedling	2520.0	8400.0	-0.3285354483410115	USDA's Ag Handbook 8 and sequelae)
Lens culinaris	Seed	7500.0	8445.0	0.16303952610284742	USDA's Ag Handbook 8 and sequelae)
Lentinus edodes	Fruit				--
Lepidium meyenii	Root		3060.0	1.6978558023868027	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Linum usitatissimum	Seed		0.133	-1.7932335597859743	--
Lupinus albus	Seed	13600.0	15185.0	1.7243762054005387	--
Lycopersicon esculentum	Fruit	38.0	2479.0	0.02497639422190393	--
Macadamia spp	Seed	3370.0	3465.0	-0.9905890588975241	USDA's Ag Handbook 8 and sequelae)
Malus domestica	Fruit	40.0	249.0	-0.8990776765345502	--
Mangifera indica	Fruit	100.0	1600.0	-0.3392583717847882	--
Manihot esculenta	Root	400.0	1270.0	-1.194862233275358	--
Mentha x piperita	Leaf	1130.0	5295.0	-0.7531896889832713	USDA's Ag Handbook 8 and sequelae)
Mentha spicata	Leaf	990.0	6850.0	-0.32144859638053946	USDA's Ag Handbook 8 and sequelae)
Momordica charantia	Seed		517.0	-1.673500116845535	Jim Duke's personal files.
Moringa oleifera	Shoot	3470.0	16260.0	1.0	USDA's Ag Handbook 8 and sequelae)
Mucuna pruriens	Seed	7975.0	16907.0	2.1232815112982575	--
Murraya sp	Fruit	320.0	922.0	-0.620203959216571	--
Musa x paradisiaca	Fruit	240.0	932.0	-0.6160602189889636	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Nasturtium officinale</i>	Herb	630.0	12600.0	1.0	USDA's Ag Handbook 8 and sequelae)
<i>Nelumbo nucifera</i>	Seed	1000.0	3030.0	-1.0913578208403276	--
<i>Nelumbo nucifera</i>	Rhizome	290.0	1390.0	1.0	--
<i>Nigella sativa</i>	Seed	12925.0	16530.0	2.035948584281161	--
<i>Ocimum basilicum</i>	Leaf		4320.0	-1.0238955187502574	USDA's Ag Handbook 8 and sequelae)
<i>Oenothera biennis</i>	Seed	3400.0	3629.0	-0.9525980773834556	--
<i>Opuntia ficus-indica</i>	Seed		6590.0	-0.26667553919347564	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
<i>Opuntia ficus-indica</i>	Bud		3220.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
<i>Oryza sativa</i>	Plant				--
<i>Pachyrhizus erosus</i>	Tuber	230.0	2120.0	-0.7238216106661497	--
<i>Panax quinquefolius</i>	Plant				--
<i>Panax ginseng</i>	Root				--
<i>Panax ginseng</i>	Leaf				--
<i>Papaver somniferum</i>	Seed	6810.0	7305.0	-0.10104412588518938	--
<i>Papaver bracteatum</i>	Seed	6700.0	8100.0	0.08311947352752048	--
<i>Passiflora incarnata</i>	Stem				--
<i>Passiflora incarnata</i>	Seed				--
<i>Passiflora incarnata</i>	Leaf				--
<i>Perideridia gairdneri</i>	Root		1905.0	-0.16867455026686262	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.
<i>Persea americana</i>	Fruit	390.0	1904.0	-0.21328866886552253	--
<i>Phaseolus vulgaris</i>	Sprout Seedling	1440.0	15484.0	1.3555058802029287	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Phaseolus lunatus	Seed	2200.0	8450.0	0.16419778773437388	--
Phaseolus vulgaris	Seed	6080.0	6833.0	-0.21038402390128882	USDA's Ag Handbook 8 and sequelae)
Phaseolus acutifolius	Seed	11250.0	12260.0	1.0467931509575494	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Phaseolus vulgaris	Fruit	420.0	4317.0	0.7865958480561471	USDA's Ag Handbook 8 and sequelae)
Phoenix dactylifera	Fruit	10.0	1730.0	-0.2853897488258916	--
Phyllanthus emblica	Fruit	116.0	575.0	-0.7639917451145484	--
Pinus pinea	Seed	8780.0	11400.0	0.8475721503349954	--
Pinus edulis	Seed	4240.0	4505.0	-0.7496706395400166	USDA's Ag Handbook 8 and sequelae)
Pistacia vera	Seed	7140.0	7427.0	-0.07278254207594334	--
Pisum sativum	Fruit	990.0	9792.0	3.0552936226712077	--
Pisum sativum	Seed	1130.0	5345.0	-0.5550826854435684	--
Plantago ovata	Seed				--
Plantago major	Plant				--
Portulaca oleracea	Herb	220.0	4400.0	-1.0	--
Prunus dulcis	Seed	7050.0	7374.0	-0.085060115370124	USDA's Ag Handbook 8 and sequelae)
Prunus armeniaca	Fruit	290.0	2125.0	-0.12171200983539862	USDA's Ag Handbook 8 and sequelae)
Prunus domestica	Fruit	60.0	405.0	-0.8344353289838745	USDA's Ag Handbook 8 and sequelae)
Prunus persica	Fruit	180.0	1458.0	-0.3980994830168135	--
Prunus cerasus	Fruit				--
Psidium guajava	Fruit	100.0	720.0	-0.7039075118142408	USDA's Ag Handbook 8 and sequelae)
Psidium cattleianum	Fruit	70.0	360.0	-0.8530821600081079	--
Psophocarpus tetragonolobus	Tuber	3530.0	8286.0	1.6435482614290524	--
Psophocarpus tetragonolobus	Seed	14570.0	15896.0	1.8890810094036037	--
Psophocarpus tetragonolobus	Leaf	1260.0	5443.0	-0.7120979322596672	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Psoralea esculenta	Root		1899.0	-0.17837081183908945	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.
Pyrus communis	Fruit	30.0	185.0	-0.9255976139912376	--
Raphanus sativus	Root	130.0	2520.0	0.8251922608863878	--
Rehmannia glutinosa	Root	1000.0	3000.0	1.6008931866645344	--
Rosmarinus officinalis	Leaf	1000.0	3100.0	-1.3626248647151018	USDA's Ag Handbook 8 and sequelae)
Salvia officinalis	Plant				Stitt, Paul. Why George should eat broccoli.
Sambucus nigra	Fruit	2200.0	2900.0	0.19942785780417618	--
Sambucus nigra	Fruit Juice				--
Sambucus canadensis	Fruit	510.0	2524.0	0.04362322524613731	USDA's Ag Handbook 8 and sequelae)
Secale cereale	Seed	3390.0	3800.0	-0.9129855295852501	USDA's Ag Handbook 8 and sequelae)
Sechium edule	Fruit	350.0	5000.0	1.0696133056017336	--
Senna obtusifolia	Seed		4420.0	-0.7693610872759667	--
Sesamum indicum	Seed	4220.0	11818.0	0.9444028227306089	--
Sinapis alba	Seed	7440.0	7961.0	0.050919800171084426	--
Solanum melongena	Fruit	250.0	3593.0	0.48658905557737014	--
Solanum tuberosum	Tuber	770.0	3900.0	-0.04040961385631203	--
Spinacia oleracea	Plant	1080.0	12826.0	1.690477622671528	USDA's Ag Handbook 8 and sequelae)
Stachys officinalis	Shoot				--
Theobroma cacao	Seed		5700.0	-0.4728461096051886	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Thymus vulgaris	Plant	2410.0	2603.0	-0.79834365352232	USDA's Ag Handbook 8 and sequelae)
Tilia sp.	Fruit				--
Trifolium pratense	Plant				--



Plant	Part	Low PPM	High PPM	StdDev	Reference
Trigonella foenum-graecum	Seed	6410.0	8400.0	0.15261517141910913	--
Triticum aestivum	Seed	1000.0	9000.0	0.2916065672022864	--
Urtica dioica	Leaf				Jim Duke's personal files.
Vaccinium corymbosum	Fruit	80.0	520.0	-0.7867823163663892	--
Valeriana officinalis	Root				--
Valerianella locusta	Plant	360.0	5000.0	-0.2147865177464563	--
Vicia faba	Seed	1960.0	10315.0	0.5962293762937498	USDA's Ag Handbook 8 and sequelae)
Vigna radiata	Seed	7140.0	7850.0	0.02520639195119663	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Seed	1210.0	8631.0	0.20612685879563236	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Fruit	1150.0	9465.0	2.919793317228445	USDA's Ag Handbook 8 and sequelae)
Vigna angularis	Seed	5910.0	6828.0	-0.21154228553281532	--
Vigna radiata	Sprout Seedling	520.0	5462.0	-1.0269704318619173	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Seed	7860.0	8584.0	0.19523919945928347	USDA's Ag Handbook 8 and sequelae)
Vitis vinifera	Fruit	120.0	617.0	-0.7465880361585973	USDA's Ag Handbook 8 and sequelae)
Zea mays	Seed	1230.0	5117.0	-0.6078994158411758	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Root	200.0	1122.0	-1.4340366854424644	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Rhizome	200.0	1122.0	-1.0	--