

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for SERINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Abelmoschus esculentus	Fruit	440.0	4510.0	0.30609586354325435	--
Acacia senegal	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Acacia farnesiana	Leaf	3280.0	17600.0	1.5524961353748998	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Aesculus hippocastanum	Leaf				Jim Duke's personal files.
Allium schoenoprasum	Leaf	1260.0	15830.0	1.1511287525511196	USDA's Ag Handbook 8 and sequelae)
Allium ampeloprasum	Plant				--
Allium sativum var. sativum	Bulb	5.0	4560.0	1.0	--
Allium cepa	Bulb	350.0	3815.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Aloe vera	Leaf		23540.0	2.8994578607835177	--
Alpinia galanga	Leaf				--
Amaranthus sp.	Leaf	1110.0	13353.0	0.5894411778310612	--
Anacardium occidentale	Seed	8490.0	8637.0	-0.3712859895289362	--
Ananas comosus	Fruit	250.0	1852.0	-0.6323156765928126	USDA's Ag Handbook 8 and sequelae)
Angelica sinensis	Root				Jim Duke's personal files.
Apium graveolens	Pt	200.0	4105.0		USDA's Ag Handbook 8 and sequelae)
Apium graveolens	Shoot				--
Arachis hypogaea	Seed	12710.0	15362.0	0.917563694599728	--
Arctium lappa	Root	250.0	1250.0	-1.1895044313950447	USDA's Ag Handbook 8 and sequelae)
Artemisia dracunculus	Shoot				--
Artemisia dracunculus	Leaf				--
Artemisia dracunculus	Root				--
Artocarpus altilis	Seed	4960.0	11340.0	0.146745340760994	USDA's Ag Handbook 8 and sequelae)
Asimina triloba	Fruit	354.0	3666.0	0.008120190151666495	--
Asparagus officinalis	Shoot	1160.0	14968.0	-1.0	--
Avena sativa	Seed		4000.0	-1.2599694074180983	Jim Duke's personal files.*

Plant	Part	Low PPM	High PPM	StdDev	Reference
Averrhoa carambola	Fruit	430.0	4735.0	0.38553250633129615	USDA's Ag Handbook 8 and sequelae)
Bacopa monnieri	Plant				Wealth of India.
Basella alba	Leaf	570.0	8260.0	-0.5654537830285499	--
Bertholletia excelsa	Seed	7460.0	7718.0	-0.5474128088172994	USDA's Ag Handbook 8 and sequelae)
Beta vulgaris	Root	540.0	4259.0	0.5044937361249509	USDA's Ag Handbook 8 and sequelae)
Borago officinalis	Leaf				Jim Duke's personal files.
Borago officinalis	Sprout Seedling				Jim Duke's personal files.
Brassica rapa	Leaf	480.0	10258.0	-0.1123848390274692	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. viridis l.	Leaf	500.0	8195.0	-0.5801932631887451	--
Brassica napus var. napobrassica	Root	350.0	3385.0	0.012451729341143537	USDA's Ag Handbook 8 and sequelae)
Brassica rapa	Root	290.0	3565.0	0.11378761174513131	--
Brassica oleracea var. capitata l.	Leaf	710.0	9493.0	-0.28585718245130637	USDA's Ag Handbook 8 and sequelae)
Brassica chinensis	Leaf	480.0	10258.0	-0.1123848390274692	--
Brassica oleracea var. botrytis l.	Flower	1040.0	13440.0		--
Brassica oleracea var. italica	Leaf	1000.0	10740.0	-0.003085924608790074	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. sabellica l.	Leaf	1390.0	8945.0	-0.4101223382634146	--
Brassica oleracea var. botrytis l.	Leaf	1000.0	10740.0	-0.003085924608790074	--
Cajanus cajan	Seed	9780.0	11500.0	0.17740942246517039	--
Calathea allouia	Root	3085.0	3390.0	0.01526661496347653	--
Camellia sinensis	Leaf				--
Canavalia ensiformis	Seed				--
Capsicum annum	Fruit	340.0	4638.0	0.351286486996007	--
Capsicum frutescens	Fruit	800.0	6528.0	1.0185542864155581	USDA's Ag Handbook 8 and sequelae)
Carica papaya	Fruit	150.0	1343.0	-0.8120190151666494	USDA's Ag Handbook 8 and sequelae)
Carum carvi	Seed	9460.0	10500.0	-0.014241088185932402	Revised USDA data received 1993.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Castanea dentata	Seed	2077.0	3697.0	-1.3180395121453823	--
Castanea sativa	Seed	972.0	2139.0	-1.6166310077397998	--
Castanea mollissima	Seed	1820.0	3255.0	-1.4027490378531695	--
Ceratonia siliqua	Seed		23500.0	2.4772155502783995	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Chenopodium album	Leaf	2000.0	12740.0	0.4504365418587577	--
Cicer arietinum	Seed	9730.0	11000.0	0.08158416713961882	USDA's Ag Handbook 8 and sequelae)
Cichorium endivia	Leaf	490.0	7890.0	-0.6493554393250462	--
Citrullus lanatus	Seed		13700.0	0.5990405458975957	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrullus lanatus	Fruit		1885.0	-0.6206649689838999	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrus reticulata	Fruit	120.0	1773.0	-0.6602067645050584	--
Citrus paradisi	Fruit	150.0	3100.0	-0.19170709792847418	--
Citrus sinensis	Fruit	40.0	2410.0	-0.43531280247846904	--
Cnidioscolus chayamansa	Leaf	2045.0	10230.0	-0.11873415355801487	--
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	1720.0	3245.0	-1.4046655429596806	USDA's Ag Handbook 8 and sequelae)
Cocos nucifera	Leaf				Jim Duke's personal files.
Cocos nucifera	Endosperm				Jim Duke's personal files.
Colocasia esculenta	Root	920.0	3135.0	-0.12829255177550616	--
Corchorus olitorius	Leaf	1820.0	14815.0	0.9209661008188389	--
Coriandrum sativum	Fruit				--
Crocus sativus	Bulb				--
Cryptotaenia japonica	Root				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cryptotaenia japonica	Shoot				--
Cucumis sativus	Fruit	160.0	4051.0	0.14404511225564912	--
Cucurbita pepo	Seed	11480.0	19825.0	1.772899923635598	--
Cucurbita foetidissima	Seed	12585.0	20180.0	1.8409358549167394	--
Cucurbita pepo	Fruit	440.0	6100.0	0.8674481392454163	--
Cucurbita spp	Fruit	480.0	7595.0	1.3952604991037385	--
Daucus carota	Root	350.0	2865.0	-0.28029637538148783	--
Daucus carota	Plant				--
Dioscorea pentaphylla	Root	710.0	3825.0	0.260161664106447	--
Fagopyrum esculentum	Seed		7110.0	-0.6639363192931697	--
Ficus carica	Fruit	370.0	1771.0	-0.6609128679965077	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Seed	9000.0	9873.0	-0.13440595836417363	USDA's Ag Handbook 8 and sequelae)
Foeniculum vulgare	Fruit	9000.0	9873.0	2.199512375864446	--
Fragaria spp	Fruit	230.0	2728.0	-0.3230423473380366	USDA's Ag Handbook 8 and sequelae)
Ginkgo biloba	Seed	2900.0	7935.0	-0.5058246480060101	USDA's Ag Handbook 8 and sequelae)
Glycine max	Seed	21150.0	23125.0	2.405346608784236	USDA's Ag Handbook 8 and sequelae)
Glycine max	Shoot				--
Glycine max	Plant				--
Harpagophytum procumbens	Root		450.0	-1.6398861309683237	--
Helianthus annuus	Seed	10750.0	11400.0	0.15824437140006012	--
Helianthus tuberosus	Tuber		2954.0	-0.9611294548660699	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.
Hordeum vulgare	Seed		5000.0	-1.0683188967669957	Jim Duke's personal files.*

Plant	Part	Low PPM	High PPM	StdDev	Reference
Humulus lupulus	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Ipomoea batatas	Root	850.0	3400.0	0.020896386208142517	--
Ipomoea aquatica	Leaf	1220.0	16200.0	1.235030408847616	--
Juglans cinerea	Seed	16400.0	16967.0	1.2251627641947473	--
Juglans regia	Seed	7820.0	8115.0	-0.47132755608881166	USDA's Ag Handbook 8 and sequelae)
Juglans nigra	Seed	12400.0	12965.0	0.45817742056903543	USDA's Ag Handbook 8 and sequelae)
Lablab purpureus	Seed	13150.0	14510.0	0.7542774595249887	--
Lactuca sativa	Leaf	390.0	6500.0	-0.9645535535199923	--
Lens culinaris	Seed	12930.0	14560.0	0.7638599850575438	USDA's Ag Handbook 8 and sequelae)
Lens culinaris	Sprout Seedling	4450.0	14835.0	0.08372002158534232	USDA's Ag Handbook 8 and sequelae)
Lentinus edodes	Fruit				--
Lepidium meyenii	Root		5040.0	0.9441788703333645	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Linum usitatissimum	Seed		0.248	-2.0265239206958663	--
Lupinus albus	Seed	18690.0	20870.0	1.9731747072660002	--
Lycium barbarum	Fruit		1400.0	-0.7918950656603455	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Lycopersicon esculentum	Fruit	57.0	3967.0	0.11438876561478017	--
Macadamia spp	Seed	3510.0	3610.0	-1.3347131065720281	USDA's Ag Handbook 8 and sequelae)
Malus domestica	Fruit	80.0	497.0	-1.1107007920496865	USDA's Ag Handbook 8 and sequelae)
Mangifera indica	Fruit	220.0	3150.0	-0.17405451064224267	--
Manihot esculenta	Root	760.0	2415.0	-0.5336360813914572	--
Melia azedarach	Seed				--
Mentha x piperita	Leaf	1460.0	6840.0	-0.887454734220509	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mentha spicata	Leaf	1280.0	8860.0	-0.42939704308828536	USDA's Ag Handbook 8 and sequelae)
Momordica charantia	Seed		39.9	-2.018924594647529	Jim Duke's personal files.
Moringa oleifera	Shoot	4140.0	19400.0	1.0	USDA's Ag Handbook 8 and sequelae)
Mucuna pruriens	Seed	7650.0	16220.0	1.0819998327383737	--
Murraya sp	Fruit	410.0	1181.0	-0.8692133979740395	--
Musa x paradisiaca	Fruit	410.0	1826.0	-0.6414950219816531	USDA's Ag Handbook 8 and sequelae)
Myrciaria dubia	Fruit				Jim Duke's personal files.
Nasturtium officinale	Herb	600.0	12000.0	1.0	--
Nelumbo nucifera	Seed	2520.0	7636.0	-0.5631281506906898	--
Nelumbo nucifera	Rhizome	600.0	2870.0	1.0	--
Nigella sativa	Seed	4210.0	5385.0	-0.9945334501663213	--
Ocimum basilicum	Leaf		5610.0	-1.1663710510980512	USDA's Ag Handbook 8 and sequelae)
Oenothera biennis	Seed	8300.0	8858.0	-0.3289312266750426	--
Opuntia ficus-indica	Seed		7665.0	-0.5575702858818078	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Opuntia ficus-indica	Bud		3830.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Oryza sativa	Plant				--
Pachyrhizus erosus	Tuber	470.0	4330.0	-0.5054828984851184	--
Panax quinquefolius	Plant	289.0	1240.0	-1.3409887493313337	--
Panax ginseng	Leaf				--
Panax ginseng	Root				--
Papaver bracteatum	Seed	7400.0	8850.0	-0.3304644307602514	--
Papaver somniferum	Seed	9870.0	10588.0	0.002624156751364612	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Perideridia gairdneri	Root		2667.0	-0.3917658460258744	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	810.0	3148.0	-0.17476061413369193	--
Phaseolus vulgaris	Fruit	990.0	10175.0	2.3061340030732844	USDA's Ag Handbook 8 and sequelae)
Phaseolus vulgaris	Sprout Seedling	2240.0	24086.0	1.180736904993277	USDA's Ag Handbook 8 and sequelae)
Phaseolus lunatus	Seed	4270.0	15900.0	1.020671669330021	--
Phaseolus vulgaris	Seed	11750.0	13205.0	0.5041735431253	USDA's Ag Handbook 8 and sequelae)
Phoenix dactylifera	Fruit	60.0	1960.0	-0.5941860880545526	--
Phyllanthus emblica	Fruit	183.0	905.0	-0.9666556797940374	--
Pinellia ternata	Tuber				--
Pinus edulis	Seed	4910.0	5220.0	-1.0261557844237532	USDA's Ag Handbook 8 and sequelae)
Pinus pinea	Seed	10190.0	15300.0	0.9056813629393596	--
Pistacia vera	Seed	13510.0	14054.0	0.666884826668086	--
Pisum sativum	Seed	1810.0	8562.0	-0.3856597778277689	--
Pisum sativum	Fruit	1250.0	12364.0	3.0789642744644996	--
Portulaca oleracea	Herb	450.0	8440.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Prunus domestica	Fruit	200.0	1351.0	-0.8091946012008524	USDA's Ag Handbook 8 and sequelae)
Prunus persica	Fruit	320.0	2592.0	-0.37105738475658634	--
Prunus cerasus	Fruit				--
Prunus dulcis	Seed	9010.0	9424.0	-0.2204570376465186	USDA's Ag Handbook 8 and sequelae)
Prunus armeniaca	Fruit	830.0	6080.0	0.8603871043309238	USDA's Ag Handbook 8 and sequelae)
Psidium cattleianum	Fruit	170.0	880.0	-0.9754819734371531	--
Psidium guajava	Fruit	240.0	1728.0	-0.6760940930626668	USDA's Ag Handbook 8 and sequelae)
Psophocarpus tetragonolobus	Seed	12350.0	13474.0	0.5557275304904465	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Psophocarpus tetragonolobus</i>	Leaf	1490.0	6436.0	-0.9790662724469538	--
<i>Psophocarpus tetragonolobus</i>	Tuber	4640.0	10892.0	1.667447844953693	--
<i>Psoralea esculenta</i>	Root		1857.0	-0.8477773168438192	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>Pyrus communis</i>	Fruit	140.0	865.0	-0.9807777496230227	--
<i>Raphanus sativus</i>	Root	210.0	4070.0	0.3980910596007637	--
<i>Rehmannia glutinosa</i>	Root	1000.0	9000.0	3.1735682832210954	--
<i>Ribes nigrum</i>	Fruit Juice		60.0		--
<i>Rosmarinus officinalis</i>	Leaf	1290.0	4000.0	-1.5314566366044275	USDA's Ag Handbook 8 and sequelae)
<i>Salvia officinalis</i>	Plant				Stitt, Paul. Why George should eat broccoli.
<i>Santalum album</i>	Fruit				--
<i>Scutellaria baicalensis</i>	Root				--
<i>Secale cereale</i>	Seed	6810.0	7645.0	-0.5614032960948299	USDA's Ag Handbook 8 and sequelae)
<i>Sechium edule</i>	Fruit	510.0	7285.0	1.285814457929103	--
<i>Senna obtusifolia</i>	Seed		7590.0	-0.5719440741806404	--
<i>Sesamum indicum</i>	Seed	6150.0	13751.0	0.6088147219408019	--
<i>Sinapis alba</i>	Seed	10810.0	11567.0	0.19025000667879424	--
<i>Solanum tuberosum</i>	Tuber	90.0	5250.0	-0.20083549160250516	--
<i>Solanum melongena</i>	Fruit	410.0	5576.0	0.6824490244857101	--
<i>Spinacia oleracea</i>	Plant	1040.0	12351.0	1.0594826529274783	USDA's Ag Handbook 8 and sequelae)
<i>Theobroma cacao</i>	Seed		8800.0	-0.3400469562928065	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Tilia</i> sp.	Flower				--
<i>Trifolium pratense</i>	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Trigonella foenum-graecum	Seed	12150.0	13365.0	0.5348376248294764	--
Triticum aestivum	Seed	1000.0	7567.0	-0.5763520359256158	--
Urtica dioica	Leaf				Jim Duke's personal files.
Vaccinium corymbosum	Fruit	200.0	1300.0	-0.8272002402328085	--
Valeriana officinalis	Rhizome				--
Valerianella locusta	Plant	630.0	8750.0	0.281506096403855	--
Vicia faba	Seed	2460.0	12950.0	0.4553026629092689	USDA's Ag Handbook 8 and sequelae)
Vigna angularis	Seed	9760.0	11275.0	0.13428805756867232	--
Vigna unguiculata	Seed		12030.0	0.2789841931102547	--
Vigna radiata	Sprout Seedling	330.0	3466.0	-1.2644569265786192	USDA's Ag Handbook 8 and sequelae)
Vigna radiata	Seed	11760.0	12930.0	0.45146965269624684	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Seed		12030.0	0.2789841931102547	--
Vitis vinifera	Fruit	320.0	1646.0	-0.7050443362120865	USDA's Ag Handbook 8 and sequelae)
Zea mays	Seed	1530.0	6365.0	-0.8067159497282409	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Tuber				--
Zingiber officinale	Rhizome	450.0	2596.0	-1.0	--
Zingiber officinale	Shoot				--
Zingiber officinale	Root	450.0	2596.0	-0.4317372218630029	USDA's Ag Handbook 8 and sequelae)