

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for METHIONINE

Plant	Part	Low PPM	High PPM	StdDev	Reference
Helianthus annuus	Seed	4940.0	20500.0	4.1793275654576725	--
Cucurbita foetidissima	Seed	2610.0	19000.0	3.791998979709676	--
Nigella sativa	Seed	13100.0	16750.0	3.2110061010876816	--
Bertholletia excelsa	Seed	10140.0	10346.0	1.557371259000904	--
Allium sativum var. sativum	Bulb	0.1	9900.0	1.0	--
Sesamum indicum	Seed	3120.0	9413.0	1.3164528786656502	--
Cucurbita pepo	Seed	5195.0	7885.0	0.9218941593170248	--
Juglans cinerea	Seed	6111.0	6321.0	0.5180395539104474	--
Spinacia oleracea	Plant	530.0	6294.0	2.224241040054928	USDA's Ag Handbook 8 and sequelae)
Pinus pinea	Seed	4300.0	6050.0	0.44806218941864273	--
Ipomoea aquatica	Leaf	440.0	5845.0	2.2923149568098555	--
Moringa oleifera	Shoot	1230.0	5765.0	1.0	USDA's Ag Handbook 8 and sequelae)
Oenothera biennis	Seed	5400.0	5763.0	0.3739533200121928	--
Citrullus lanatus	Seed		5742.0	0.36853071981172086	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Colocasia esculenta	Leaf	790.0	5510.0	2.0138870768236075	--
Glycine max	Seed	4920.0	5380.0	0.2750554211178711	USDA's Ag Handbook 8 and sequelae)
Corchorus olitorius	Leaf	460.0	5290.0	1.8310389168326386	--
Sinapis alba	Seed	4800.0	5136.0	0.2120499711695304	--
Papaver bracteatum	Seed	4500.0	5050.0	0.18984313225331192	--
Papaver somniferum	Seed	4700.0	5042.0	0.1877773797959893	--
Juglans nigra	Seed	4730.0	4945.0	0.1627301312509522	USDA's Ag Handbook 8 and sequelae)
Opuntia ficus-indica	Seed		4830.0	0.13303493967693916	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Phaseolus vulgaris	Sprout Seedling	440.0	4731.0	1.4123467390935749	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Ceratonia siliqua</i>	Seed		4700.0	0.09946646224544615	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Amaranthus</i> sp.	Leaf	360.0	4331.0	1.0339871648720063	--
<i>Carum carvi</i>	Seed	3610.0	4005.0	-0.07999578248445874	Revised USDA data received 1993.
<i>Avena sativa</i>	Seed	1000.0	4000.0	-0.0812868777702854	Jim Duke's personal files.*
<i>Hordeum vulgare</i>	Seed	1000.0	4000.0	-0.0812868777702854	Jim Duke's personal files.*
<i>Nasturtium officinale</i>	Herb	200.0	4000.0	1.0	USDA's Ag Handbook 8 and sequelae)
<i>Triticum aestivum</i>	Seed	1000.0	4000.0	-0.0812868777702854	--
<i>Mucuna pruriens</i>	Seed	1875.0	3975.0	-0.08774235419941867	--
<i>Pistacia vera</i>	Seed	3810.0	3963.0	-0.09084098288540264	--
<i>Psophocarpus tetragonolobus</i>	Seed	3560.0	3884.0	-0.11124028840146377	--
<i>Pisum sativum</i>	Seed	820.0	3879.0	-0.11253138368729042	--
<i>Acacia farnesiana</i>	Leaf	700.0	3860.0	0.6425258768913413	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Allium schoenoprasum</i>	Leaf	300.0	3850.0	0.6342145968917519	USDA's Ag Handbook 8 and sequelae)
<i>Vigna unguiculata</i>	Seed	420.0	3805.0	-0.1316395939175249	USDA's Ag Handbook 8 and sequelae)
<i>Vigna unguiculata</i>	Seed	3460.0	3779.0	-0.1383532894038235	USDA's Ag Handbook 8 and sequelae)
<i>Asparagus officinalis</i>	Shoot	290.0	3742.0	-1.0	--
<i>Cnidioscolus chayamansa</i>	Leaf	745.0	3720.0	0.5261679568970884	--
<i>Trigonella foenum-graecum</i>	Seed	3120.0	3720.0	-0.15358821377657803	--
<i>Phaseolus vulgaris</i>	Seed	3250.0	3653.0	-0.17088889060665519	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>botrytis</i> l.	Leaf	340.0	3652.0	0.46965125289987986	--
<i>Brassica oleracea</i> var. <i>italica</i>	Leaf	340.0	3652.0	0.46965125289987986	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>botrytis</i> l.	Flower	280.0	3615.0		--
<i>Vigna radiata</i>	Sprout Seedling	340.0	3571.0	-0.6432645750200348	USDA's Ag Handbook 8 and sequelae)
<i>Lens culinaris</i>	Sprout Seedling	1050.0	3500.0	-0.7690821640735394	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Valerianella locusta	Plant	250.0	3470.0	0.7678021792085732	--
Brassica oleracea var. viridis l.	Leaf	210.0	3442.0	0.29511437290850057	--
Arachis hypogaea	Seed	2630.0	3430.0	-0.22847174035452394	--
Brassica nigra	Leaf	230.0	3387.0	0.24940233291075833	USDA's Ag Handbook 8 and sequelae)
Psophocarpus tetragonolobus	Tuber	1430.0	3357.0	1.6722129344313175	--
Foeniculum vulgare	Fruit	3010.0	3302.0	2.8858333444863127	--
Foeniculum vulgare	Seed	3010.0	3302.0	-0.2615237796716863	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Fruit	400.0	3292.0	2.8735190369416084	USDA's Ag Handbook 8 and sequelae)
Mentha spicata	Leaf	460.0	3180.0	0.07735883691925587	--
Vigna radiata	Seed	2860.0	3145.0	-0.30206417164664323	USDA's Ag Handbook 8 and sequelae)
Chenopodium album	Leaf	490.0	3121.0	0.028322284921677862	--
Phaseolus lunatus	Seed	680.0	3017.0	-0.33511621096380556	--
Phaseolus acutifolius	Seed	2680.0	2920.0	-0.36016345950884265	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Juglans regia	Seed	2800.0	2905.0	-0.36403674536632263	USDA's Ag Handbook 8 and sequelae)
Cicer arietinum	Seed	2320.0	2860.0	-0.3756566029387625	--
Lupinus albus	Seed	2550.0	2850.0	-0.3782387935104158	--
Portulaca oleracea	Herb	90.0	2814.0	-1.0	--
Lepidium meyenii	Root		2800.0	2.9802528050357973	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Anacardium occidentale	Seed	2740.0	2787.0	-0.39450659411183164	--
Zea mays	Seed	670.0	2787.0	-0.39450659411183164	USDA's Ag Handbook 8 and sequelae)
Secale cereale	Seed	2480.0	2785.0	-0.3950230322261623	USDA's Ag Handbook 8 and sequelae)
Psophocarpus tetragonolobus	Leaf	640.0	2765.0	-0.267559283063708	--
Basella alba	Leaf	190.0	2755.0	-0.27587056306329755	--
Cajanus cajan	Seed	1860.0	2720.0	-0.41180727094190883	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cucurbita spp	Fruit	170.0	2690.0	2.1321977227504227	--
Lactuca sativa	Leaf	160.0	2667.0	-0.3490098270596851	--
Mentha x piperita	Leaf	530.0	2480.0	-0.5044307630520085	USDA's Ag Handbook 8 and sequelae)
Vigna aconitifolia	Seed	2200.0	2436.0	-0.48514148317686273	--
Vigna angularis	Seed	2100.0	2426.0	-0.48772367374851605	--
Brassica oleracea var. gemmifera	Leaf	320.0	2285.0	-0.6665007230440037	USDA's Ag Handbook 8 and sequelae)
Senna obtusifolia	Seed		2270.0	-0.5280058466663077	--
Vicia faba	Seed	430.0	2265.0	-0.5292969419521343	USDA's Ag Handbook 8 and sequelae)
Phaseolus vulgaris	Fruit	220.0	2261.0	1.6039139290826174	USDA's Ag Handbook 8 and sequelae)
Cichorium endivia	Leaf	140.0	2254.0	-0.6922656910427311	--
Pinus edulis	Seed	2070.0	2200.0	-0.5460811806678808	USDA's Ag Handbook 8 and sequelae)
Artocarpus altilis	Seed	960.0	2195.0	-0.5473722759537075	USDA's Ag Handbook 8 and sequelae)
Phoenix dactylifera	Fruit	5.0	2190.0	1.5164823455152185	--
Nelumbo nucifera	Seed	720.0	2182.0	-0.5507291236968568	--
Lablab purpureus	Seed	140.0	2105.0	-0.5706119910985873	--
Abelmoschus esculentus	Fruit	210.0	2100.0	1.4056535776128818	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea var. sabellica l.	Leaf	320.0	2060.0	-0.8535045230347672	--
Ocimum basilicum	Leaf		2020.0	-0.8867496430331252	USDA's Ag Handbook 8 and sequelae)
Avena sativa	Plant		2000.0	0.009670052634868679	Jim Duke's personal files.*
Thymus vulgaris	Plant	1370.0	1980.0	-6.446701756579119E-4	USDA's Ag Handbook 8 and sequelae)
Capsicum frutescens	Fruit	240.0	1958.0	1.2307904104780838	USDA's Ag Handbook 8 and sequelae)
Brassica chinensis	Leaf	90.0	1923.0	-0.9673690590291433	--
Brassica rapa	Leaf	90.0	1923.0	-0.9673690590291433	USDA's Ag Handbook 8 and sequelae)
Opuntia ficus-indica	Bud		1890.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Castanea mollissima	Seed	1014.0	1804.0	-0.6483359273053518	--
Pouteria caimito	Fruit		1780.0	1.011595736182351	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Bixa orellana	Seed	1280.0	1660.0	-0.6855194715371594	--
Brassica oleracea var. capitata l.	Leaf	120.0	1604.0	-1.232498891016048	USDA's Ag Handbook 8 and sequelae)
Castanea dentata	Seed	893.0	1589.0	-0.7038530245958979	--
Solanum tuberosum	Tuber	310.0	1568.0	-0.1844753136354797	--
Calathea allouia	Root	1415.0	1560.0	0.8332587726498054	--
Anethum graveolens	Fruit	1430.0	1549.0	0.7271352318996868	--
Anethum graveolens	Seed	1430.0	1549.0	-0.7141817868825112	USDA's Ag Handbook 8 and sequelae)
Ginkgo biloba	Seed	550.0	1520.0	-0.7216701395403058	USDA's Ag Handbook 8 and sequelae)
Ipomoea batatas	Root	230.0	1510.0	0.7466864326342412	--
Citrus sinensis	Fruit	200.0	1510.0	0.6791094324753408	USDA's Ag Handbook 8 and sequelae)
Solanum melongena	Fruit	60.0	1487.0	0.6507865251225214	--
Rosmarinus officinalis	Leaf	470.0	1460.0	-1.3521813230101367	USDA's Ag Handbook 8 and sequelae)
Brassica oleracea	Stem	130.0	1445.0		--
Persea americana	Fruit	290.0	1438.0	0.5904464181534714	--
Prunus persica	Fruit	170.0	1377.0	0.5153291421307765	--
Capsicum annuum	Fruit	100.0	1364.0	0.49932054232266115	USDA's Ag Handbook 8 and sequelae)
Raphanus sativus	Root	70.0	1355.0	0.4783121785859922	--
Brassica rapa	Root	110.0	1350.0	0.46965494458443574	--
Beta vulgaris	Root	170.0	1341.0	0.4540719233816342	USDA's Ag Handbook 8 and sequelae)
Lycopersicon esculentum	Fruit	16.0	1322.0	0.44760045063490406	--
Cucurbita pepo	Fruit	110.0	1310.0	0.43282328158125916	--
Petroselinum crispum	Plant	150.0	1282.0	-0.36062849626303595	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Cichorium intybus</i>	Leaf	50.0	1224.0	-1.5483275310004487	USDA's Ag Handbook 8 and sequelae)
<i>Averrhoa carambola</i>	Fruit	110.0	1210.0	0.3096802061342183	USDA's Ag Handbook 8 and sequelae)
<i>Pachyrhizus erosus</i>	Tuber	130.0	1200.0	-0.5663988884194827	--
<i>Cocos nucifera</i>	Seed	620.0	1170.0	-0.8120468095481715	USDA's Ag Handbook 8 and sequelae)
<i>Vitis vinifera</i>	Fruit	220.0	1132.0	0.21362860728552646	USDA's Ag Handbook 8 and sequelae)
<i>Apium graveolens</i>	Pt	50.0	1120.0		USDA's Ag Handbook 8 and sequelae)
<i>Allium cepa</i>	Bulb	100.0	1090.0	-1.0	--
<i>Pisum sativum</i>	Fruit	110.0	1088.0	0.1594456540888285	--
<i>Nelumbo nucifera</i>	Rhizome	220.0	1050.0	1.0	--
<i>Citrus reticulata</i>	Fruit	130.0	1048.0	0.11018842391001216	USDA's Ag Handbook 8 and sequelae)
<i>Castanea sativa</i>	Seed	468.0	1028.0	-0.8487139156656485	--
<i>Cucumis sativus</i>	Fruit	40.0	1012.0	0.06585691674907745	--
<i>Rehmannia glutinosa</i>	Root		1000.0	-0.1363514355245136	--
<i>Dioscorea pentaphylla</i>	Root	180.0	970.0	-0.18829483953385212	--
<i>Brassica napus</i> var. <i>napobrassica</i>	Root	100.0	965.0	-0.19695207353540853	USDA's Ag Handbook 8 and sequelae)
<i>Macadamia</i> spp	Seed	920.0	950.0	-0.8688550021245444	USDA's Ag Handbook 8 and sequelae)
<i>Lagenaria siceraria</i>	Fruit	40.0	900.0	-0.07206332775160827	--
<i>Perideridia gairdneri</i>	Root		889.0	-0.3285420303590661	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.
<i>Helianthus tuberosus</i>	Tuber		858.0	-0.921338732376355	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.
<i>Asimina triloba</i>	Fruit	70.0	836.0	-0.1508748960377144	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Manihot esculenta	Root	260.0	825.0	-0.4393546255789883	--
Ananas comosus	Fruit	110.0	815.0	-0.17673494188159297	USDA's Ag Handbook 8 and sequelae)
Benincasa hispida	Fruit	30.0	770.0	-0.23214932583276135	--
Zingiber officinale	Root	130.0	737.0	-0.5917219440063812	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Rhizome	130.0	737.0	-1.0	--
Vaccinium corymbosum	Fruit	110.0	715.0	-0.2998780173286338	--
Citrullus lanatus	Fruit		707.0	-0.30972946336439705	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Sambucus canadensis	Fruit	140.0	693.0	-0.32696949392698277	USDA's Ag Handbook 8 and sequelae)
Colocasia esculenta	Root	200.0	680.0	-0.6904144116241244	--
Daucus carota	Root	70.0	575.0	-0.8722163256568093	--
Mangifera indica	Fruit	50.0	550.0	-0.5030640918162512	--
Musa x paradisiaca	Fruit	170.0	490.0	-0.5769499370844757	USDA's Ag Handbook 8 and sequelae)
Murraya sp	Fruit	170.0	490.0	-0.5769499370844757	--
Arctium lappa	Root	90.0	450.0	-1.0886471756957197	USDA's Ag Handbook 8 and sequelae)
Prunus armeniaca	Fruit	60.0	440.0	-0.638521474807996	USDA's Ag Handbook 8 and sequelae)
Prunus domestica	Fruit	60.0	405.0	-0.6816215512144603	USDA's Ag Handbook 8 and sequelae)
Annona muricata	Fruit	70.0	370.0	-0.7247216276209246	--
Psidium guajava	Plant	50.0	360.0	-0.8361372178283119	--
Phyllanthus emblica	Fruit	20.0	355.0	-0.7431930889379808	--
Artocarpus altilis	Fruit	100.0	340.0	-0.7616645502550369	--
Panax quinquefolius	Plant	34.0	340.0	-0.8464519406388384	--
Pouteria campechiana	Fruit	130.0	330.0	-0.773978857799741	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Pyrus communis	Fruit	50.0	309.0	-0.7998389036436195	--
Ficus carica	Fruit	60.0	287.0	-0.8269303802419685	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Annona squamosa</i>	Fruit	70.0	260.0	-0.8601790106126695	--
<i>Psoralea esculenta</i>	Root		253.0	-1.4297421953570428	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>Citrus paradisi</i>	Fruit	3.0	222.0	-0.9069733792825451	--
<i>Psidium cattleianum</i>	Fruit	40.0	205.0	-0.927907702108542	--
<i>Tamarindus indica</i>	Fruit	140.0	204.0	-0.9291391328630124	USDA's Ag Handbook 8 and sequelae)
<i>Acacia farnesiana</i>	Seed	175.0	200.0	-1.0625192949985425	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.
<i>Carica papaya</i>	Fruit	10.0	179.0	-0.9599249017247726	--
<i>Citrus aurantiifolia</i>	Fruit	20.0	170.0	-0.9710077785150063	USDA's Ag Handbook 8 and sequelae)
<i>Sechium edule</i>	Fruit	10.0	145.0	-1.0017935473767665	--
<i>Annona reticulata</i>	Fruit	40.0	140.0	-1.0079507011491187	--
<i>Malus domestica</i>	Plant	20.0	124.0	-0.9578509469925256	--
<i>Fragaria</i> spp	Fruit	10.0	119.0	-1.0338107469929971	USDA's Ag Handbook 8 and sequelae)
<i>Chrysophyllum cainito</i>	Fruit	20.0	60.0	-1.1064651615067513	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Linum usitatissimum</i>	Seed		0.09	-1.1141398667164637	--
<i>Melicoccus bijugatas</i>	Fruit		0.0	-1.1803510067749758	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Trifolium pratense</i>	Plant				--
<i>Panax ginseng</i>	Leaf				--
<i>Cryptotaenia japonica</i>	Root				--
<i>Stachys officinalis</i>	Shoot				--
<i>Angelica sinensis</i>	Root				Jim Duke's personal files.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Melia azedarach	Seed				--
Lentinus edodes	Fruit				--
Glycine max	Shoot				--
Anastatica hierochuntica	Plant				--
Medicago sativa	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Albizia lebeck	Seed				Wealth of India.
Coriandrum sativum	Leaf				--
Oryza sativa	Plant				--
Alpinia galanga	Leaf				--
Coffea arabica	Seed				--
Cocos nucifera	Endosperm				Jim Duke's personal files.
Cocos nucifera	Leaf				Jim Duke's personal files.
Crocus sativus	Bulb				--
Capsella bursa-pastoris	Plant				--
Trigonella foenum-graecum	Leaf				--
Allium sativum var. sativum	Leaf				--
Scutellaria baicalensis	Root				--
Punica granatum	Fruit				--
Fagopyrum esculentum	Seed				--
Panax ginseng	Root				--
Allium ampeloprasum	Plant				--
Urtica dioica	Leaf				Jim Duke's personal files.
Spinacia oleracea	Leaf				--
Zea mays	Pollen Or Spore				--