

List of Plants



Chemid

LYSINE

Dosage

LD50=181 (ivn mus)

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Part	Low PPM	High PPM	StdDev	*Reference
Abelmoschus esculentus	Fruit	810.0	8100.0	1.03	USDA's Ag Handbook 8 and sequelae)
Acacia farnesiana	Leaf	3760.0	20170.0	1.66	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Acacia farnesiana	Seed	1750.0	1800.0	-1.4	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.
Achillea millefolium	Plant	--	--		Tunon, H., Thorsell, W., and Bohlin, L. 1993. Mosquito Repelling Activity of Compounds Occurring in Achillea millefolium L. (Asteraceae). Economic Botany 48(2): 111-120, 1994.
Albizia lebeck	Seed	--	--		Wealth of India.
Allium schoenoprasum	Leaf	1630.0	17435.0	1.04	USDA's Ag Handbook 8 and sequelae)
Allium ampeloprasum	Plant	--	--		*
Allium sativum var. sativum	Leaf	--	--		*
Allium sativum var. sativum	Bulb	10.0	6552.0	1.0	*
Allium cepa	Bulb	560.0	6104.0	-1.0	USDA's Ag Handbook 8 and sequelae)
Aloe vera	Leaf	--	7748.0	-1.17	*
Alpinia galanga	Leaf	--	--		*
Amaranthus sp.	Leaf	1270.0	15278.0	0.55	*
Anacardium occidentale	Seed	8170.0	8311.0	-0.51	*
Ananas comosus	Fruit	46.0	1852.0	-0.59	*
Anethum graveolens	Fruit	10380.0	11242.0	1.85	*
Anethum graveolens	Seed	10380.0	11242.0	-0.12	USDA's Ag Handbook 8 and sequelae)
Angelica sinensis	Root	--	--		Jim Duke's personal files.
Annona reticulata	Fruit	370.0	1300.0	-0.73	*
Annona muricata	Fruit	600.0	3180.0	-0.24	*
Annona squamosa	Fruit	550.0	2055.0	-0.53	*
Apium graveolens	Pt	260.0	5410.0		USDA's Ag Handbook 8 and sequelae)

<i>Arachis hypogaea</i>	Seed	9390.0	10627.0	-0.2	*
<i>Arctium lappa</i>	Root	670.0	3350.0	-0.36	USDA's Ag Handbook 8 and sequelae)
<i>Artemisia dracunculus</i>	Shoot	--	--		*
<i>Artemisia dracunculus</i>	Leaf	--	--		*
<i>Artemisia dracunculus</i>	Root	--	--		*
<i>Artocarpus altilis</i>	Fruit	370.0	1258.0	-0.74	*
<i>Artocarpus altilis</i>	Seed	5700.0	13035.0	0.13	USDA's Ag Handbook 8 and sequelae)
<i>Asimina triloba</i>	Fruit	339.0	3831.0	-0.07	*
<i>Asparagus officinalis</i>	Shoot	1450.0	18710.0	0.31	*
<i>Avena sativa</i>	Seed	2000.0	7000.0	-0.69	Jim Duke's personal files.*
<i>Avena sativa</i>	Plant	--	14000.0	0.48	Jim Duke's personal files.*
<i>Averrhoa carambola</i>	Fruit	400.0	4400.0	0.07	USDA's Ag Handbook 8 and sequelae)
<i>Basella alba</i>	Leaf	860.0	12465.0	-0.09	*
<i>Benincasa hispida</i>	Fruit	90.0	2305.0	-0.47	*
<i>Bertholletia excelsa</i>	Seed	5410.0	5597.0	-0.88	USDA's Ag Handbook 8 and sequelae)
<i>Beta vulgaris</i>	Root	530.0	4180.0	0.41	USDA's Ag Handbook 8 and sequelae)
<i>Bixa orellana</i>	Seed	10130.0	14250.0	0.29	*
<i>Brassica oleracea</i> var. <i>gemmifera</i>	Leaf	1540.0	10996.0	-0.43	USDA's Ag Handbook 8 and sequelae)
<i>Brassica napus</i> var. <i>napobrassica</i>	Root	390.0	3770.0	0.03	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>sabellica</i> l.	Leaf	1970.0	12675.0	-0.04	*
<i>Brassica oleracea</i> var. <i>botrytis</i> l.	Flower	1070.0	13825.0		*
<i>Brassica oleracea</i> var. <i>viridis</i> l.	Leaf	750.0	12293.0	-0.13	*
<i>Brassica oleracea</i> var. <i>botrytis</i> l.	Leaf	1410.0	15143.0	0.52	*
<i>Brassica chinensis</i>	Leaf	890.0	19019.0	1.4	*
<i>Brassica rapa</i>	Root	360.0	4425.0	0.63	*
<i>Brassica oleracea</i> var. <i>italica</i>	Leaf	1410.0	15143.0	0.52	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i> var. <i>capitata</i> l.	Leaf	570.0	7621.0	-1.19	USDA's Ag Handbook 8 and sequelae)
<i>Brassica nigra</i>	Leaf	1130.0	16642.0	0.86	USDA's Ag Handbook 8 and sequelae)
<i>Brassica oleracea</i>	Stem	560.0	6222.0		*
<i>Brassica rapa</i>	Leaf	890.0	19019.0	1.4	USDA's Ag Handbook 8 and sequelae)
<i>Cajanus cajan</i>	Seed	13750.0	17010.0	0.67	*
<i>Calathea allouia</i>	Root	3810.0	4190.0	0.42	*
<i>Camellia sinensis</i>	Leaf	--	--		*

<i>Capsicum frutescens</i>	Fruit	890.0	7262.0	0.82	USDA's Ag Handbook 8 and sequelae)
<i>Capsicum annuum</i>	Fruit	380.0	5183.0	0.28	USDA's Ag Handbook 8 and sequelae)
<i>Carica papaya</i>	Fruit	250.0	2238.0	-0.49	USDA's Ag Handbook 8 and sequelae)
<i>Carum carvi</i>	Seed	10310.0	11445.0	-0.09	Revised USDA data received 1993.
<i>Castanea mollissima</i>	Seed	2313.0	4116.0	-1.08	*
<i>Castanea dentata</i>	Seed	2687.0	4784.0	-0.99	*
<i>Castanea sativa</i>	Seed	1189.0	2617.0	-1.28	*
<i>Ceratonia siliqua</i>	Seed	--	26320.0	1.93	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Chenopodium album</i>	Seed	3540.0	22550.0	1.42	*
<i>Cicer arietinum</i>	Seed	12910.0	14595.0	0.34	USDA's Ag Handbook 8 and sequelae)
<i>Cichorium intybus</i>	Leaf	350.0	7956.0	-1.12	USDA's Ag Handbook 8 and sequelae)
<i>Cichorium endivia</i>	Leaf	630.0	10145.0	-0.62	*
<i>Citrullus lanatus</i>	Seed	--	8932.0	-0.43	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Citrullus lanatus</i>	Fruit	--	7303.0	0.83	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Citrus paradisi</i>	Fruit	160.0	1760.0	-0.61	*
<i>Citrus aurantiifolia</i>	Fruit	140.0	1190.0	-0.76	USDA's Ag Handbook 8 and sequelae)
<i>Citrus sinensis</i>	Fruit	470.0	3548.0	-0.15	USDA's Ag Handbook 8 and sequelae)
<i>Citrus reticulata</i>	Fruit	40.0	2579.0	-0.4	*
<i>Cnidioscolus chayamansa</i>	Leaf	3040.0	15190.0	0.53	*
<i>Cocos nucifera</i>	Seed	1470.0	2775.0	-1.26	USDA's Ag Handbook 8 and sequelae)
<i>Cocos nucifera</i>	Leaf	--	--		Jim Duke's personal files.
<i>Cocos nucifera</i>	Endosperm	--	--		Jim Duke's personal files.
<i>Colocasia esculenta</i>	Root	670.0	2280.0	-1.34	*
<i>Colocasia esculenta</i>	Leaf	2460.0	17155.0	0.98	*
<i>Corchorus olitorius</i>	Leaf	1540.0	17825.0	1.13	*
<i>Coriandrum sativum</i>	Leaf	--	--		*
<i>Coriandrum sativum</i>	Fruit	--	--		*
<i>Crocus sativus</i>	Bulb	--	--		*
<i>Cryptotaenia japonica</i>	Root	--	--		*
<i>Cucumis sativus</i>	Fruit	220.0	5570.0	0.38	*
<i>Cucurbita pepo</i>	Fruit	470.0	6429.0	0.6	*
<i>Cucurbita spp</i>	Fruit	650.0	10285.0	1.6	*
<i>Cucurbita foetidissima</i>	Seed	10130.0	33000.0	2.83	*
<i>Cucurbita pepo</i>	Seed	15580.0	21120.0	1.22	*
<i>Daucus carota</i>	Root	400.0	3275.0	-0.42	*
<i>Dioscorea pentaphylla</i>	Root	520.0	2800.0	-0.86	*
<i>Eryngium creticus</i>	Shoot	--	3980.0	-1.35	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Fagopyrum esculentum	Seed	--	7110.0	-0.68	*
Ficus carica	Fruit	300.0	1436.0	-0.69	USDA's Ag Handbook 8 and sequelae)
Fragaria spp	Fruit	250.0	2966.0	-0.3	USDA's Ag Handbook 8 and sequelae)
Ginkgo biloba	Seed	2060.0	5640.0	-0.87	USDA's Ag Handbook 8 and sequelae)
Glycine max	Seed	24290.0	26560.0	1.96	USDA's Ag Handbook 8 and sequelae)
Glycine max	Shoot	--	--		*
Harpagophytum procumbens	Root	--	--		*
Helianthus tuberosus	Tuber	--	4288.0	-0.81	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	9370.0	9900.0	-0.3	*
Humulus lupulus	Fruit	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Hypericum perforatum	Plant	--	--		*
Ipomoea batatas	Root	810.0	3280.0	-0.42	*
Juglans regia	Seed	3880.0	4025.0	-1.09	USDA's Ag Handbook 8 and sequelae)
Juglans cinerea	Seed	7700.0	7966.0	-0.56	*
Juglans nigra	Seed	7210.0	7540.0	-0.62	USDA's Ag Handbook 8 and sequelae)
Lablab purpureus	Seed	190.0	18000.0	0.8	*
Lactuca sativa	Leaf	840.0	14000.0	0.26	*
Lagenaria siceraria	Fruit	210.0	4700.0	0.15	*
Lens culinaris	Seed	19570.0	22035.0	1.35	USDA's Ag Handbook 8 and sequelae)
Lens culinaris	Sprout Seedling	7120.0	23735.0	0.41	USDA's Ag Handbook 8 and sequelae)
Lentinus edodes	Fruit	--	--		*
Lepidium meyenii	Root	--	5450.0	1.57	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Linum usitatissimum	Plant	--	0.209	-1.26	*
Linum usitatissimum	Seed	--	2.5	-1.64	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Lupinus albus	Seed	19330.0	21585.0	1.28	*
Lycopersicon esculentum	Fruit	20.0	5455.0	0.35	*
Macadamia spp	Seed	3240.0	3330.0	-1.19	USDA's Ag Handbook 8 and sequelae)
Malus domestica	Fruit	20.0	746.0	-0.87	*
Mangifera indica	Fruit	410.0	3200.0	-0.24	*
Manihot esculenta	Root	1000.0	3175.0	-0.52	*
Medicago sativa	Plant	--	--		*
Melia azedarach	Seed	--	--		*
Melicococcus bijugatas	Fruit	170.0	545.0	-0.92	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Mentha spicata	Leaf	1410.0	9760.0	-0.71	*
Mentha x piperita	Leaf	1610.0	7540.0	-1.21	USDA's Ag Handbook 8 and sequelae)
Momordica charantia	Seed	--	149.0	-1.62	Jim Duke's personal files.
Moringa oleifera	Shoot	5370.0	25165.0	1.04	USDA's Ag Handbook 8 and sequelae)

Mucuna pruriens	Seed	9700.0	20564.0	1.15	*
Murraya sp	Fruit	600.0	1728.0	-0.62	*
Musa x paradisiaca	Fruit	600.0	1728.0	-0.62	USDA's Ag Handbook 8 and sequelae)
Nasturtium officinale	Herb	1340.0	26800.0	1.0	USDA's Ag Handbook 8 and sequelae)
Nelumbo nucifera	Seed	2640.0	8000.0	-0.56	*
Nelumbo nucifera	Rhizome	940.0	4500.0	1.0	*
Nigella sativa	Seed	16200.0	20700.0	1.17	*
Ocimum basilicum	Leaf	--	6180.0	-1.52	USDA's Ag Handbook 8 and sequelae)
Oenothera biennis	Seed	3100.0	3842.0	-1.12	*
Opuntia ficus-indica	Seed	--	6275.0	-0.79	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Opuntia ficus-indica	Bud	--	6005.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Oryza sativa	Hay	--	--		*
Pachyrhizus erosus	Tuber	510.0	4700.0	-0.71	*
Panax ginseng	Leaf	--	--		*
Panax quinquefolius	Plant	2080.0	2100.0	-0.99	*
Panax ginseng	Root	--	--		*
Papaver bracteatum	Seed	7200.0	8150.0	-0.53	*
Papaver somniferum	Seed	10990.0	11789.0	-0.04	*
Perideridia gairdneri	Root	--	2984.0	-0.69	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	750.0	3653.0	-0.12	J. Ethnobiology.
Petroselinum crispum	Plant	2190.0	18724.0	1.07	USDA's Ag Handbook 8 and sequelae)
Phaseolus vulgaris	Fruit	880.0	9044.0	1.28	USDA's Ag Handbook 8 and sequelae)
Phaseolus vulgaris	Sprout Seedling	2390.0	25700.0	0.97	USDA's Ag Handbook 8 and sequelae)
Phaseolus acutifolius	Seed	17800.0	19400.0	0.99	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Phaseolus lunatus	Seed	4520.0	19010.0	0.94	*
Phaseolus vulgaris	Seed	14830.0	16667.0	0.62	USDA's Ag Handbook 8 and sequelae)
Phoenix dactylifera	Fruit	30.0	2450.0	-0.43	*
Phyllanthus emblica	Fruit	170.0	1168.0	-0.76	*
Pinus edulis	Seed	4340.0	4615.0	-1.01	USDA's Ag Handbook 8 and sequelae)
Pinus pinea	Seed	9010.0	9655.0	-0.33	USDA's Ag Handbook 8 and sequelae)
Pistacia vera	Seed	12780.0	13295.0	0.16	*
Pisum sativum	Fruit	2020.0	19980.0	4.11	*
Pisum sativum	Seed	3170.0	14995.0	0.39	*
Portulaca oleracea	Herb	650.0	13200.0	-1.0	*

<i>Pouteria campechiana</i>	Fruit	840.0	2130.0	-0.51	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Pouteria caimito</i>	Fruit	--	3160.0	-0.25	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Prunus persica</i>	Fruit	230.0	1863.0	-0.58	*
<i>Prunus armeniaca</i>	Fruit	970.0	7105.0	0.77	USDA's Ag Handbook 8 and sequelae)
<i>Prunus dulcis</i>	Seed	6660.0	6966.0	-0.7	USDA's Ag Handbook 8 and sequelae)
<i>Prunus domestica</i>	Fruit	170.0	1149.0	-0.77	USDA's Ag Handbook 8 and sequelae)
<i>Psidium guajava</i>	Fruit	230.0	1656.0	-0.64	USDA's Ag Handbook 8 and sequelae)
<i>Psidium cattleianum</i>	Fruit	160.0	825.0	-0.85	*
<i>Psophocarpus tetragonolobus</i>	Leaf	2280.0	9849.0	-0.69	*
<i>Psophocarpus tetragonolobus</i>	Tuber	5920.0	13897.0	1.68	*
<i>Psophocarpus tetragonolobus</i>	Seed	21360.0	23304.0	1.52	*
<i>Psoralea esculenta</i>	Root	--	2743.0	-0.91	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	-0.84	*
<i>Raphanus sativus</i>	Root	350.0	6785.0	2.8	*
<i>Rehmannia glutinosa</i>	Root	2000.0	4000.0	0.24	*
<i>Rosmarinus officinalis</i>	Leaf	1430.0	4435.0	-1.92	USDA's Ag Handbook 8 and sequelae)
<i>Sambucus canadensis</i>	Plant	260.0	1287.0	-1.1	*
<i>Santalum album</i>	Fruit	--	--		*
<i>Scutellaria baicalensis</i>	Root	--	--		*
<i>Secale cereale</i>	Seed	6050.0	6795.0	-0.72	USDA's Ag Handbook 8 and sequelae)
<i>Sechium edule</i>	Fruit	430.0	6145.0	0.53	*
<i>Senna obtusifolia</i>	Seed	--	9500.0	-0.35	*
<i>Sesamum indicum</i>	Seed	2890.0	8729.0	-0.46	*
<i>Sinapis alba</i>	Seed	15190.0	16252.0	0.56	*
<i>Solanum tuberosum</i>	Tuber	1260.0	6800.0	-0.16	*
<i>Solanum melongena</i>	Fruit	510.0	6320.0	0.57	*
<i>Spinacia oleracea</i>	Plant	1740.0	20664.0	1.31	USDA's Ag Handbook 8 and sequelae)
<i>Spinacia oleracea</i>	Leaf	--	--		*
<i>Stachys officinalis</i>	Shoot	--	--		*
<i>Tamarindus indica</i>	Fruit	1390.0	2026.0	-0.54	USDA's Ag Handbook 8 and sequelae)
<i>Theobroma cacao</i>	Seed	--	800.0	-1.53	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Thymus vulgaris</i>	Plant	2070.0	2236.0	-0.98	USDA's Ag Handbook 8 and sequelae)

Trifolium pratense	Plant	--	--		*
Trigonella foenum-graecum	Seed	15310.0	18525.0	0.87	*
Trigonella foenum-graecum	Leaf	--	--		*
Triticum aestivum	Plant	15000.0	18000.0	0.98	*
Triticum aestivum	Seed	2000.0	9000.0	-0.42	*
Tulipa gesneriana	Stem	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Urtica dioica	Leaf	--	--		Jim Duke's personal files.
Vaccinium corymbosum	Fruit	120.0	780.0	-0.86	*
Valerianella locusta	Plant	1010.0	14025.0	0.49	*
Vicia faba	Seed	3660.0	19265.0	0.97	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Fruit	1840.0	15144.0	2.86	USDA's Ag Handbook 8 and sequelae)
Vigna angularis	Seed	14970.0	17294.0	0.7	*
Vigna radiata	Sprout Seedling	1666.0	17437.0	-1.38	USDA's Ag Handbook 8 and sequelae)
Vigna aconitifolia	Seed	12480.0	13818.0	0.23	*
Vigna unguiculata	Seed	16460.0	17975.0	0.8	USDA's Ag Handbook 8 and sequelae)
Vigna radiata	Seed	16640.0	18296.0	0.84	USDA's Ag Handbook 8 and sequelae)
Vigna unguiculata	Seed	1940.0	18069.0	0.81	USDA's Ag Handbook 8 and sequelae)
Vitis vinifera	Fruit	150.0	772.0	-0.87	USDA's Ag Handbook 8 and sequelae)
Zea mays	Seed	1370.0	5699.0	-0.87	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Root	570.0	3110.0	-0.58	USDA's Ag Handbook 8 and sequelae)
Zingiber officinale	Rhizome	570.0	3110.0	-1.0	*