

List of Plants



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*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 moschatus	Seed	133500.0	150000.0	-0.65	Wealth of India.
Abelmoschus esculentus	Seed	--	89200.0	-0.89	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Aconitum napellus	Root	--	250000.0	-0.27	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Acorus calamus	Rhizome	250000.0	400000.0	-0.22	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Actaea racemosa	Plant	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Aegle marmelos	Seed	--	175000.0	-0.55	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Aesculus hippocastanum	Seed	300000.0	600000.0	1.17	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Aframomum melegueta	Seed	220000.0	400000.0	0.36	Wealth of India.
Allium sativum var. sativum	Root	29600.0	80000.0	-0.99	*
Alocasia macrorrhiza	Root	215000.0	723900.0	1.71	*
Alpinia galanga	Rhizome	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Alpinia officinarum	Rhizome	200000.0	250000.0	-1.17	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Althaea officinalis	Root	39960.0	370000.0	0.23	*
Amorphophallus campanulatus	Root	67200.0	747747.0	1.81	*
Ananas comosus	Stem	100000.0	150000.0	1.0	Wealth of India.
Ananas comosus	Leaf	--	30000.0	-0.15	Wealth of India.
Ananas comosus	Fruit	--	19.0	-0.46	*
Andira inermis	Bark	--	--		*
Angelica sinensis	Root	33000.0	150000.0	-0.69	*
Arctium lappa	Root	28200.0	120000.0	-0.82	*
Arisaema triphyllum	Tuber	100000.0	170000.0	-1.25	*
Armoracia rusticana	Root	39600.0	220000.0	-0.4	*
Arracacia xanthorrhiza	Root	100000.0	250000.0	-0.27	*

Astragalus gummifer	Gum	10000.0	30000.0		*
Atropa belladonna	Root	--	--		*
Avena sativa	Seed	500000.0	600000.0	1.17	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Bactris gasipaes	Seed	--	208000.0	-0.41	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Berberis vulgaris	Bark	--	90000.0	0.07	*
Bletilla striata	Tuber	--	304800.0	-0.68	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Brunfelsia uniflorus	Bark	--	13000.0	-1.09	*
Caladium bicolor	Tuber	--	--		*
Calathea allouia	Root	130000.0	150000.0	-0.69	*
Camellia sinensis	Leaf	--	5000.0	-0.82	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Carthamus tinctorius	Flower	14000.0	100000.0		*
Carum carvi	Seed	--	45000.0	-1.07	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Carum carvi	Fruit	--	45000.0	-0.39	*
Castanea sativa	Seed	450000.0	580000.0	1.09	*
Castanospermum australe	Seed	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Caulophyllum thalictroides	Root	15400.0	140000.0	-0.74	*
Cephaelis ipecacuanha	Root	300000.0	400000.0	0.35	*
Ceratonia siliqua	Fruit	--	350000.0	0.08	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Chimaphila umbellata	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cimicifuga racemosa	Plant	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Cimicifuga racemosa	Root	16800.0	80000.0	-0.99	*
Cinchona spp	Bark	--	--		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Cnicus benedictus	Plant	10640.0	80000.0	-0.84	*
Coix lacryma-jobi	Seed	500000.0	790000.0	1.94	*
Cola acuminata	Seed	--	340000.0	0.12	*
Colchicum autumnale	Tuber	--	210000.0	-1.08	*
Colocasia esculenta	Root	245000.0	262000.0	-0.22	*
Colocasia esculenta	Leaf	--	700.0	-0.94	*
Coriandrum sativum	Fruit	--	100000.0	-0.3	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Costus speciosus	Rhizome	--	333333.0	-0.64	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Crataegus rhipidophylla	Fruit	150000.0	180000.0	-0.18	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Crataegus laevigata	Fruit	41850.0	180000.0	-0.18	*

<i>Crocus sativus</i>	Silk Stigma Style	119900.0	130300.0		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
<i>Crotalaria juncea</i>	Seed	--	411000.0	0.41	*
<i>Cucurbita foetidissima</i>	Root	259000.0	550000.0	0.98	*
<i>Curcuma longa</i>	Rhizome	300000.0	550000.0	0.73	*
<i>Curcuma zedoaria</i>	Rhizome	--	500000.0	0.42	*
<i>Curcuma xanthorrhiza</i>	Rhizome	300000.0	400000.0	-0.22	*
<i>Cycas revoluta</i>	Seed	68000.0	243700.0	-0.27	*
<i>Cyperus rotundus</i>	Root	--	92000.0	-0.94	*
<i>Cyphomandra betacea</i>	Fruit	10000.0	140000.0	-0.24	*
<i>Cypripedium pubescens</i>	Root	--	--		*
<i>Cyrtosperma chamissonis</i>	Root	135000.0	655340.0	1.42	*
<i>Daucus carota</i>	Root	14800.0	25200.0	-1.22	*
<i>Dioscorea villosa</i>	Root	48000.0	200000.0	-0.48	*
<i>Dioscorea bulbifera</i>	Tuber	--	800000.0	1.41	*
<i>Dioscorea alata</i>	Root	159000.0	743000.0	1.79	*
<i>Drynaria fortunei</i>	Rhizome	--	--		*
<i>Durio zibethinus</i>	Fruit	80000.0	2857000.0	3.91	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Echinacea purpurea</i>	Root	30120.0	120000.0	-0.82	*
<i>Eleocharis dulcis</i>	Tuber	70000.0	400000.0	-0.28	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Elettaria cardamomum</i>	Seed	200000.0	400000.0	0.36	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Fagopyrum esculentum</i>	Seed	--	670000.0	1.46	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Gentiana lutea</i>	Root	35200.0	160000.0	-0.65	*
<i>Ginkgo biloba</i>	Seed	407400.0	680000.0	1.5	*
<i>Gloriosa superba</i>	Bulb	--	--		*
<i>Glycine max</i>	Seed	--	10000.0	-1.22	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Glycine max</i>	Tissue Culture	--	--		*
<i>Glycyrrhiza glabra</i>	Root	7850.0	200000.0	-0.48	*
<i>Glycyrrhiza glabra</i>	Shoot	--	15000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Helianthus tuberosus</i>	Tuber	--	262600.0	-0.86	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>Hibiscus sabdariffa</i>	Seed	--	111000.0	-0.81	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Hordeum vulgare</i>	Seed	--	620000.0	1.25	*
<i>Hydnocarpus wightiana</i>	Fruit	--	--		*
<i>Hydrangea arborescens</i>	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Hydrastis canadensis</i>	Root	27700.0	180000.0	-0.57	*

<i>Ipomoea purga</i>	Tuber	--	--		*
<i>Ipomoea batatas</i>	Root	118000.0	201000.0	-0.48	*
<i>Iris x germanica</i>	Rhizome	200000.0	500000.0	0.42	*
<i>Iris versicolor</i>	Rhizome	--	--		*
<i>Jateorhiza palmata</i>	Root	300000.0	350000.0	0.14	*
<i>Jatropha curcas</i>	Seed	--	--		*
<i>Krameria triandra</i>	Root	--	--		*
<i>Lens culinaris</i>	Seed	--	285000.0	-0.1	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Levisticum officinale</i>	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Lindera benzoin</i>	Plant	--	--		*
<i>Linum usitatissimum</i>	Seed	2000.0	39000.0	-1.1	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCs Press, Champaign IL. 384 pp.
<i>Lolium temulentum</i>	Seed	--	--		*
<i>Lycopersicon esculentum</i>	Fruit	120.0	10000.0	-0.44	*
<i>Lycoris radiata</i>	Bulb	200000.0	551000.0		*
<i>Mangifera indica</i>	Seed	--	728000.0	1.69	*
<i>Manihot esculenta</i>	Root	280000.0	828400.0	2.14	*
<i>Manilkara zapota</i>	Fruit	29800.0	64000.0	-0.36	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Maranta arundinacea</i>	Rhizome	250000.0	695000.0	1.66	*
<i>Medicago sativa</i>	Plant	11280.0	60000.0	-0.99	*
<i>Melia azedarach</i>	Fruit	--	--		*
<i>Melilotus alba</i>	Seed	--	30000.0	-1.13	*
<i>Musa x paradisiaca</i>	Stem	--	50000.0	-1.0	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Musa x paradisiaca</i>	Fruit	7000.0	17500.0	-0.43	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Myrica cerifera</i>	Bark	13080.0	60000.0	-0.38	*
<i>Myrica cerifera</i>	Plant	--	--		*
<i>Myristica fragrans</i>	Seed	--	300000.0	-0.04	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
<i>Myristica fragrans</i>	Aril	--	317000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Nelumbo nucifera</i>	Rhizome	92500.0	570988.0	0.87	*
<i>Nicotiana tabacum</i>	Leaf	10000.0	20000.0	-0.42	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Oenothera biennis</i>	Seed	--	--		*
<i>Oryza sativa</i>	Seed	722000.0	749000.0	1.78	*
<i>Pachyrhizus erosus</i>	Tuber	97200.0	551645.0	0.36	*
<i>Paeonia moutan</i>	Root Bark	--	--		*
<i>Paeonia suffruticosa</i>	Root Bark	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Paeonia officinalis</i>	Root	140000.0	200000.0	-0.48	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Panax ginseng</i>	Root	25440.0	120000.0	-0.82	*

Panax ginseng	Rhizome	--	--	*	
Panax quinquefolius	Plant	80000.0	320000.0	0.9	*
Parthenium integrifolium	Root	19200.0	120000.0	-0.82	*
Paullinia cupana	Seed	50000.0	60000.0	-1.01	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Perideridia gairdneri	Root	--	693000.0	1.58	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.
Phoenix dactylifera	Fruit	--	206000.0	-0.14	Abstract (See species file)
Phyllanthus emblica	Fruit	1800.0	8910.0	-0.44	*
Physostigma venenosum	Seed	480000.0	500000.0	0.77	*
Phytelephas aequatorialis	Mesocarp	16900.0	129020.0		KOZIOL & PEDERSEN. 1993. PHYTELEPHAS AEQUATORIALIS(AREACEAE) IN HUMAN AND ANIMAL NUTRITION. ECON. BOT. 47:401-307.
Phytelephas aequatorialis	Seed	--	1.0	-1.26	KOZIOL & PEDERSEN. 1993. PHYTELEPHAS AEQUATORIALIS(AREACEAE) IN HUMAN AND ANIMAL NUTRITION. ECON. BOT. 47:401-307.
Phytolacca americana	Root	--	--		*
Pimpinella anisum	Seed	--	50000.0	-1.05	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pinellia ternata	Tuber	--	690000.0	0.95	*
Piper methysticum	Root	--	430000.0	0.48	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Piper betel	Leaf	10000.0	31000.0	-0.13	*
Piper nigrum	Fruit	280000.0	565000.0	0.41	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pistacia lentiscus	Seed	--	--		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Pisum sativum	Seed	329000.0	434000.0	0.5	*
Polygonum multiflorum	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
Polypodium vulgare	Rhizome	--	63000.0	-2.36	*
Prosopis juliflora	Fruit	--	163600.0	-0.21	*
Prunus persica	Seed	--	36000.0	-1.11	*
Psidium guajava	Seed	130000.0	132000.0	-0.72	*
Psoralea esculenta	Root	--	698400.0	1.6	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.
Pteridium aquilinum	Rhizome	--	450000.0	0.1	*
Pueraria pseudohirsuta	Root	100000.0	150000.0	-0.69	*
Pueraria montana	Root	130000.0	400000.0	0.35	*
Punica granatum	Seed	--	--	-1.26	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Quillaja saponaria	Bark	--	--		*
Rauvolfia serpentina	Seed	126000.0	203000.0	-0.43	*
Rheum officinale	Root	150000.0	160000.0	-0.65	*
Ribes uva-crispa	Fruit	--	15000.0	-0.43	*

Rosa canina	Fruit	33660.0	180000.0	-0.18	*
Rumex hymenosepalus	Plant	250000.0	400000.0	1.48	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Ruscus aculeatus	Root	36240.0	120000.0	-0.82	*
Salix alba	Bark	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Sanguinaria canadensis	Plant	--	--		*
Sassafras albidum	Plant	--	--		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
Senna obtusifolia	Seed	--	2000.0	-1.25	*
Sesamum indicum	Seed	150000.0	200000.0	-0.45	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Simaba cedron	Seed	--	360000.0	0.2	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Smilax officinalis	Root	52500.0	250000.0	-0.27	*
Smilax spp	Root	52500.0	250000.0	-0.27	*
Solanum tuberosum	Tuber	150000.0	800000.0	1.41	*
Stellaria media	Plant	9960.0	120000.0	-0.55	*
Stellaria media	Root	--	15300.0	-1.26	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Terminalia bellirica	Leaf	99800.0	127000.0	2.44	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Teucrium montanum	Leaf	--	22000.0	-0.37	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Theobroma cacao	Seed	50000.0	90000.0	-0.89	*
Theobroma cacao	Hb	--	60000.0		*
Trigonella foenum-graecum	Seed	19500.0	150000.0	-0.65	*
Triticum aestivum	Seed	542000.0	800000.0	1.98	*
Tulipa gesneriana	Bulb	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Turnera diffusa	Leaf	10500.0	50000.0	0.38	*
Turnera diffusa	Branches	--	60000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Ulmus rubra	Bark	13120.0	210000.0	1.86	*
Uncaria catechu	Plant	--	--		*
Viburnum prunifolium	Bark	--	55000.0	-0.46	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Vigna aconitifolia	Seed	--	266000.0	-0.18	*
Vigna unguiculata	Seed	390000.0	400000.0	0.36	*
Vigna unguiculata	Seed	390000.0	400000.0	0.36	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Viscum album	Stem	--	--		*
Withania somnifera	Root	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Xanthosoma sagittifolium	Root	257000.0	805640.0	2.05	*
Zea mays	Seed	--	--		*

Zingiber officinale	Rhizome	123000.0	500000.0	0.42	*
Zingiber officinale	Root	35000.0	600000.0	1.19	*