

## Dr. Duke's Phytochemical and Ethnobotanical Databases

### List of Plants for TANNIN

Plant	Part	Low PPM	High PPM	StdDev	Reference
Zizyphus jujuba	Fruit		100000.0	0.05308235507533624	--
Zizyphus jujuba	Leaf		46000.0	-0.7877845180168476	--
Zanthoxylum americanum	Plant				--
Yucca baccata	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Warburgia ugandensis	Bark				--
Vitis vinifera	Seed				--
Viola tricolor	Plant				--
Vinca minor	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Viburnum prunifolium	Root Bark		20000.0	-1.4032939781516864	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Viburnum opulus	Fruit		30000.0	-0.6222515111796854	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Veronica officinalis	Plant				--
Verbena officinalis	Plant				--
Vanilla planifolia	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Vaccinium vitis-idaea	Leaf	60000.0	200000.0	1.0922402514317946	--
Vaccinium myrtillus	Leaf	60000.0	200000.0	1.0922402514317946	--
Vaccinium myrtillus	Fruit	50000.0	120000.0	0.2460348882910567	--
Urtica dioica	Leaf	59700.0	133000.0	0.27430739719115166	Jim Duke's personal files.
Ulmus rubra	Bark	30000.0	65000.0	-0.6655743179937075	--
Tussilago farfara	Leaf		170000.0	0.7260016599807604	--
Tussilago farfara	Flower		6000.0	-1.3938819360461085	--
Tussilago farfara	Rhizome				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Turnera diffusa	Leaf	8400.0	40000.0	-0.8610322363070544	--
Tsuga canadensis	Leaf		15000.0	-1.1662310625162495	--
Tsuga canadensis	Bark	100000.0	150500.0	0.08235618802917684	--
Tsuga canadensis	Root Bark		245000.0	0.54974403267798	--
Tridax procumbens	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Tilia sp.	Flower				--
Thymus vulgaris	Plant	80000.0	100000.0	0.23890746627510662	--
Thymus serpyllum	Plant	50000.0	75000.0	-0.12607965315176423	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Thymus vulgaris	Leaf	16800.0	100000.0	-0.12855505340498594	--
Thuja occidentalis	Branches		59000.0		--
Teucrium scorodonia	Leaf	80000.0	90000.0	-0.250634583888664	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium polium	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
Teucrium marum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium montanum	Plant		22000.0	-0.8998523463367307	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Teucrium chamaedrys	Plant		50000.0	-0.4910667725786353	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Terminalia catappa	Fruit	60000.0	200000.0	1.0178450211539385	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Terminalia chebula	Fruit	1090.0	355000.0	2.513227153575772	--
Terminalia arjuna	Fruit	70000.0	120000.0	0.2460348882910567	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Terminalia catappa	Bark		130000.0	-0.09697217891198255	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Terminalia bellirica	Fruit	170000.0	214000.0	1.152911794404943	--
Terminalia arjuna	Bark		158000.0	0.14796412715399127	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Terminalia bellirica	Bark	14000.0	70000.0	-0.6218356919104978	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Taraxacum officinale	Root				--
Tamarindus indica	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Tamarindus indica	Bl		70000.0		--
Tamarindus indica	Bark		70000.0	-0.6218356919104978	--
Tabernanthe iboga	Root				--
Syzygium aromaticum	Plant				--
Syzygium cumini	Fruit				Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Symplocarpus foetidus	Plant				--
Symphytum officinale	Plant	80000.0	90000.0	0.09291261850435828	--
Swertia chirata	Plant				--
Stillingia sylvatica	Plant				--
Sterculia urens	Bark				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Sterculia urens</i>	Gum		20000.0		--
<i>Stachys officinalis</i>	Plant	25200.0	150000.0	0.9688817051288484	--
<i>Spigelia marilandica</i>	Plant				--
<i>Solanum tuberosum</i>	Leaf		32000.0	-0.9586958606939968	--
<i>Solanum sessiliflorum</i>	Fruit	142.0	1420.0	-0.8979806811449499	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Solanum nigrum</i>	Plant	70000.0	100000.0	0.23890746627510662	--
<i>Solanum melongena</i>	Fruit		2000.0	-0.892385057681694	--
<i>Smilax china</i>	Root				--
<i>Simarouba amara</i>	Bark	200000.0	270000.0	1.1277093514178864	--
<i>Serenoa repens</i>	Root		75800.0	-0.020511406931147124	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Serenoa repens</i>	Stem		54800.0	-0.5063597006118161	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Senna occidentalis</i>	Seed				--
<i>Senna alata</i>	Leaf				--
<i>Senecio aureus</i>	Plant				--
<i>Scutellaria churchilliana</i>	Plant				--
<i>Scutellaria lateriflora</i>	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Scutellaria galericulata</i>	Plant	28600.0	35000.0	-0.7100590442347579	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Sclerocarya caffra</i>	Leaf		200000.0	1.0922402514317946	--
<i>Sclerocarya caffra</i>	Bark	35000.0	100000.0	-0.3594039354112402	--
<i>Schisandra chinensis</i>	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Schinus terebinthifolius	Bark				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Schinus molle	Bark		230000.0	0.7778003427522096	--
Saussurea lappa	Root				--
Satureja hortensis	Plant	40000.0	85000.0	0.01991519461898411	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Sassafras albidum	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Sarcostemma acidum	Plant				--
Santolina chamaecyparissus	Root				--
Santalum album	Wood				--
Sanguisorba officinalis	Hs		170000.0		--
Sanguisorba officinalis	Plant		170000.0	1.260871400670345	--
Sanguisorba minor	Plant				--
Sambucus canadensis	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Sambucus nigra	Leaf	4400.0	30000.0	-0.9831117667907324	--
Salvia sclarea	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Salvia officinalis	Plant	20000.0	80000.0	-0.053082229266390064	--
Salix alba	Bark	20160.0	120000.0	-0.18444943107840175	--
Rumex acetosella	Root	80000.0	140000.0	1.9797402259493415	--
Rumex hymenosepalus	Plant	180000.0	350000.0	3.8887786605438155	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Rumex crispus	Root	30000.0	60000.0	-0.5127851732786817	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rubus fruticosus	Leaf				--
Rubus idaeus	Leaf	16900.0	120000.0	0.11560400756237017	--
Rubus idaeus	Fruit		6200.0	-0.8518650257063927	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Rosmarinus officinalis	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Rosa canina	Fruit	3740.0	20000.0	-0.7187277777875456	--
Rosa laevigata	Fruit				--
Robinia pseudoacacia	Bark		70000.0	-0.6218356919104978	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Ribes uva-crispa	Fruit				--
Rhus glabra	Leaf		270000.0	1.946796964817541	--
Rhus coriaria	Leaf	210000.0	280000.0	2.068876495301219	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Rhododendron ponticum	Leaf	50000.0	120000.0	0.11560400756237017	--
Rhododendron ferrugineum	Leaf				--
Rhizophora mangle	Bark	10000.0	520000.0	3.314640655578367	--
Quillaja saponaria	Bark		150000.0	0.07798232542085588	--
Quercus suber	Cork	20000.0	65000.0		--
Quercus infectoria	Plant				--
Quercus rubra	Bark		160000.0	0.1654595775872751	--
Quercus alba	Bark	78500.0	200000.0	0.5153685862529519	--
Quercus robur	Bark	80000.0	200000.0	0.5153685862529519	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Punica granatum	Root		70000.0	-0.2012194983751788	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
Punica granatum	Root Bark	20000.0	280000.0	0.8535499454737059	--
Punica granatum	Fruit Juice		1700.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Punica granatum	Pericarp	104000.0	336000.0	1.0	--
Punica granatum	Stem Bark	100000.0	250000.0	1.3814745788840543	--
Punica granatum	Leaf		110000.0	-0.006475522921307877	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pteridium aquilinum	Plant				--
Psidium guajava	Bark	110000.0	300000.0	1.3901411079171442	--
Psidium guajava	Root				--
Psidium guajava	Leaf	90000.0	100000.0	-0.12855505340498594	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Prunus armeniaca	Fruit	600.0	1000.0	-0.9020326843424801	--
Prunus persica	Leaf		8000.0	-1.251686733854824	--
Prunus domestica	Bark		68000.0	-0.6393311423437816	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Prunus spinosa	Fruit				--
Prunus persica	Fruit		8000.0	-0.8344992977169778	--
Prunus cerasus	Bark	50000.0	70000.0	-0.6218356919104978	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Prunus serotina	Bark				--
Prunus laurocerasus	Leaf				--
Prunella vulgaris	Plant	45000.0	105800.0	0.3235844779821407	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Prosopis juliflora	Root		67000.0	-0.2946892008462297	--
Prosopis juliflora	Bark	6000.0	84000.0	-0.49936753887751095	--
Prosopis juliflora	Wood		9000.0	-0.8658648951499126	--
Portulaca oleracea	Plant				--
Populus nigra	Plant				--
Polygonum hydropiper	Plant		35000.0	-0.7100590442347579	--
Pogostemon cablin	Plant		17000.0	-0.9728497702221048	--
Plantago ovata	Plant				--
Plantago major	Plant	40000.0	57000.0	-0.3888703791391115	--
Plantago psyllium	Plant				--
Pistacia lentiscus	Leaf		113000.0	0.03014833622379554	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pistacia vera	Plant				--
Piscidia piscipula	Plant				--
Piper angustifolium	Leaf				--
Piper betel	Leaf	10000.0	20500.0	-1.0990873207502265	--
Pinus insularis	Bark	70000.0	100000.0	-0.3594039354112402	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pinus sylvestris	Bark		169000.0	0.2441891045370524	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pinus kesiya	Bark	70000.0	100000.0	-0.3594039354112402	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Phytolacca americana	Root				--
Phyllanthus emblica	Leaf	18000.0	22000.0	-1.080775391177675	--
Phyllanthus emblica	Twig				--
Phyllanthus emblica	Fruit		280000.0	1.7896551540168204	--



Plant	Part	Low PPM	High PPM	StdDev	Reference
Phyllanthus emblica	Bark	80000.0	166400.0	0.22144501897378338	--
Phoenix dactylifera	Fruit	200.0	18000.0	-0.7380230311091176	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Peumus boldus	Leaf				--
Peucedanum ostruthium	Root				--
Persea americana	Leaf		47000.0	-0.7755765649684798	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pausinystalia johimbe	Bark				--
Paullinia cupana	Seed	50000.0	120000.0	0.49709318567481553	--
Panax quinquefolius	Plant				--
Paeonia moutan	Root Bark				--
Paeonia suffruticosa	Root Bark				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Paeonia lactiflora	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
Paeonia officinalis	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Pachira aquatica	Bark		27000.0	-0.9979878762261004	--
Origanum majorana	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Origanum creticum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Ononis spinosa	Plant		5000.0	-1.148043587547003	--
Oenothera biennis	Herb		110000.0		--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ocimum sanctum	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Ocimum basilicum	Tissue Culture				--
Ocimum tenuiflorum	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Ocimum basilicum	Plant		50000.0	-0.4910667725786353	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Nigella sativa	Seed				--
Nepeta cataria	Leaf				--
Myrtus communis	Plant		140000.0	0.8228868573581	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Myroxylon balsamum	Plant		4000.0	-1.1626430723240777	--
Morus alba	Stem				--
Mitchella repens	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Mimosa pudica	Root		100000.0	0.7334775263353299	--
Mercurialis annua	Root		33500.0	-1.3384342117729644	--
Menyanthes trifoliata	Plant		30000.0	-0.783056468120132	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Mentha aquatica	Leaf		74000.0	-0.44596183266254885	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Mentha pulegium	Plant		40000.0	-0.6370616203493836	--
Mentha arvensis var. piperascens	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mentha x piperita	Plant				--
Melicoccus bijugatas	Fruit	18800.0	60225.0	-0.33065199535742784	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Melia azedarach	Bark	180000.0	260000.0	1.0402320992514673	--
Medicago sativa	Hay	27000.0	28000.0		--
Matricaria recutita	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.
Marsdenia reichenbachii	Plant				--
Marrubium vulgare	Flower	26000.0	29000.0	-1.0048129490429472	--
Marrubium vulgare	Plant	65000.0	70000.0	-0.1990770770371384	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Manilkara zapota	Fruit	31600.0	64500.0	-0.2894083913825676	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Mangifera indica	Seed		1100.0	-0.9789348501337792	--
Mangifera indica	Flower		150000.0	1.0420282434519452	--
Malva neglecta	Flower				--
Mahonia aquifolium	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Maclura pomifera	Wood	90000.0	100000.0	1.2399802396022128	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Lythrum salicaria	Leaf		120000.0	0.11560400756237017	--
Lythrum salicaria	Stem		105000.0	0.6451355188995392	--
Lythrum salicaria	Flower		137000.0	0.8221196855805931	--
Lythrum salicaria	Root		85000.0	0.26612901398007555	--
Lycopus virginicus	Plant				--
Lonicera japonica	Plant		80000.0	-0.053082229266390064	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Liquidambar styraciflua	Plant				--
Liquidambar orientalis	Plant				--
Lindera benzoin	Plant				--
Ligustrum vulgare	Leaf	60000.0	100000.0	-0.12855505340498594	--
Ligustrum vulgare	Bark		70000.0	-0.6218356919104978	--
Lepidium meyenii	Root				--
Leonurus cardiaca	Plant	21000.0	90000.0	0.09291261850435828	--
Lavandula angustifolia	Plant		120000.0	0.5308971618166033	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Lavandula angustifolia	Flower	50000.0	120000.0	0.5345469560565174	--
Lantana camara	Leaf				--
Lagochilus inebrians	Plant	20000.0	40000.0	-0.6370616203493836	--
Krameria triandra	Root				--
Juniperus virginiana	Bark	21000.0	86000.0	-0.4818720884442271	--
Juniperus communis	Fruit		50000.0	-0.42929897796396493	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Juglans regia	Leaf	90000.0	110000.0	-0.006475522921307877	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Juglans nigra	Fruit		147000.0	0.5065208081322793	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Juglans regia	Fruit		122000.0	0.26533014161262874	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Juglans cinerea	Bark				--
Juglans nigra	Pericarp	33600.0	280000.0	-1.0	--
Juglans regia	Bark	53000.0	75100.0	-0.577222293305624	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Jatropha curcas	Resin, Exudate, Sap	116000.0	187000.0	-0.7543266834114022	--
Jatropha gossypifolia	Leaf				--
Jateorhiza palmata	Root				--
Iris x germanica	Rhizome				--
Iris versicolor	Rhizome				--
Illicium verum	Fruit				--
Ilex paraguariensis	Leaf	40000.0	160000.0	0.6039221294970823	--
Hyssopus officinalis	Plant	50000.0	80000.0	-0.053082229266390064	Lawrence Review of Natural Products, Jan-87.
Hydnocarpus kurzii	Seed				--
Holarrhena pubescens	Bark		11400.0	-1.1344523896057144	--
Hippophae rhamnoides	Fruit		18000.0	-0.7380230311091176	Abstract (See species file)
Hippophae rhamnoides	Shoot	40000.0	50000.0	-0.7390474791398953	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Hedeoma pulegioides	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Hamelia patens	Bark		150000.0	0.07798232542085588	--
Haematoxylum campechianum	Wood		100000.0	1.2399802396022128	--
Guarea rusbyi	Bark				--
Guaiacum sp.	Wood				--
Gossypium sp	Stem		17700.0	-1.3573651317646305	--
Gleditsia triacanthos	Leaf				--
Glechoma hederacea	Plant	30000.0	70000.0	-0.1990770770371384	--
Ginkgo biloba	Leaf				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Geranium thunbergii	Leaf		200000.0	1.0922402514317946	--
Geranium thunbergii	Plant		50000.0	-0.4910667725786353	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Gentiana lutea	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.
Genista tinctoria	Plant				--
Genipa americana	Fruit				--
Gelsemium sempervirens	Root				--
Gaultheria procumbens	Leaf				--
Gardenia jasminoides	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
Galium odoratum	Plant				--
Frangula alnus	Bark				--
Frangula purshiana	Plant				--
Fragaria spp	Leaf				--
Filipendula ulmaria	Leaf				--
Filipendula ulmaria	Root		86200.0	0.3035168949684959	--
Filipendula ulmaria	Shoot		93100.0	-0.0926152853107834	--
Ficus carica	Stem Bark		5000.0	-0.9527410888855545	Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Ficus carica	Leaf		36000.0	-0.9098640485005256	Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
Fallopia japonica	Leaf	170000.0	240000.0	1.5805583733665067	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Fallopia japonica	Stem	30000.0	130000.0	1.2185893134769075	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Euphrasia officinalis	Shoot				Jim Duke's personal files.
Eupatorium odoratum	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Euonymus atropurpureus	Root				--
Eucalyptus citriodora	Leaf		11600.0	-1.2077381028807002	--
Eucalyptus citriodora	Resin, Exudate, Sap		482000.0	1.4131379750921393	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Eucalyptus cornea	Plant		250000.0	2.428830182836332	--
Eriodictyon californicum	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Eriobotrya japonica	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
Ephedra nevadensis	Plant				--
Dodonaea viscosa	Bark		58000.0	-0.7268083945102009	--
Dodonaea viscosa	Leaf		59800.0	-0.6193147659493717	--
Dipsacus fullonum	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Dioscorea bulbifera	Tuber				--
Datura stramonium	Plant		70000.0	-0.1990770770371384	--
Cytisus scoparius	Flower				--
Cynara cardunculus	Plant				--
Cydonia oblonga	Seed				--
Cuscuta europaea	Root		60000.0	-0.5127851732786817	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cuminum cyminum	Fruit				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cuminum cyminum	Seed				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Croton eluteria	Bark				--
Croton lechleri	Plant				Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Cornus florida	Bark		30000.0	-0.9717447005761747	--
Coriaria myrtifolia	Leaf	100000.0	200000.0	1.0922402514317946	--
Coriandrum sativum	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Conyza canadensis	Plant				--
Collinsonia canadensis	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.
Cola acuminata	Seed				--
Coffea arabica	Seed		90000.0	0.12467231877609526	--
Cocos nucifera	Plant				Jim Duke's personal files.
Cnicus benedictus	Plant		80000.0	-0.053082229266390064	--
Citrus aurantium	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cinnamomum aromaticum	Bark				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
Cinnamomum verum	Plant				--
Cinnamomum aromaticum	Plant				--
Cinchona officinalis	Bark				--



Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Cimicifuga racemosa</i>	Root				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
<i>Cichorium intybus</i>	Plant				--
<i>Chrysanthemum balsamita</i>	Plant				--
<i>Chimaphila umbellata</i>	Plant		40000.0	-0.6370616203493836	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Chamaesyce hypericifolia</i>	Plant				--
<i>Chamaemelum nobile</i>	Plant				--
<i>Ceratonia siliqua</i>	Bark	12000.0	500000.0	3.1396861512455287	--
<i>Ceratonia siliqua</i>	Fruit		15000.0	-0.7669659110914757	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Centella asiatica</i>	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.
<i>Centaurea cyanus</i>	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Ceiba pentandra</i>	Bark		108200.0	-0.28767258863477646	--
<i>Cedrus deodora</i>	Leaf		32000.0	-0.9586958606939968	--
<i>Catharanthus roseus</i>	Leaf				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Catha edulis</i>	Leaf				--
<i>Catalpa bignonioides</i>	Bark		60000.0	-0.709312944076917	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Castanea sativa</i>	Leaf		90000.0	-0.250634583888664	--
<i>Castanea sativa</i>	Bark	40000.0	120000.0	-0.18444943107840175	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Castanea sativa	Seed	20000.0	28000.0	-0.6449974728145933	--
Carum carvi	Plant				--
Capsella bursa-pastoris	Plant				--
Capparis spinosa	Plant				--
Camellia sinensis	Leaf	33800.0	270000.0	1.946796964817541	--
Calendula officinalis	Leaf		64500.0	-0.561937386622043	--
Caesalpinia pulcherrima	Wood		3000.0	-1.0047118271115913	--
Caesalpinia pulcherrima	Leaf		7000.0	-1.263894686903192	--
Byrsonima crassifolia	Bark	172500.0	282600.0	1.2379306891475748	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Buxus sempervirens	Leaf				--
Bryonia alba	Root				--
Borago officinalis	Plant		30000.0	-0.783056468120132	--
Berberis vulgaris	Fruit		55600.0	-0.37527226866356317	Jim Duke's personal files.
Berberis vulgaris	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Ballota nigra	Plant				--
Azadirachta indica	Stem Bark		60000.0	-0.4287334899984996	--
Atropa bella-donna	Root		120000.0	1.3566088761423356	--
Aspidosperma quebracho-blanco	Bark	30000.0	40000.0	-0.8842674484097555	--
Aspalathus linearis	Shoot		44000.0	-0.8290380397657579	--
Asclepias syriaca	Sprout Seedling				--
Artocarpus heterophyllus	Bark		33000.0	-0.945501524926249	--
Artemisia cina	Flower				--
Artemisia absinthium	Leaf	40000.0	77000.0	-0.40933797351744544	--
Artemisia dracunculus	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Artemisia abrotanum	Plant				--
Armoracia rusticana	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Argemone mexicana	Plant		11000.0	-1.060446678884554	--
Areca catechu	Seed	150000.0	250000.0	2.1109169422359373	--
Arctostaphylos uva-ursi	Plant	60000.0	200000.0	1.69885594398259	--
Arctostaphylos uva-ursi	Leaf	6960.0	70000.0	-0.49479364485602007	--
Arbutus unedo	Leaf		160000.0	0.6039221294970823	--
Arbutus unedo	Bark		450000.0	2.7022998904134328	--
Araucaria bidwillii	Wood		3000.0	-1.0047118271115913	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Araucaria bidwillii	Leaf		7000.0	-1.263894686903192	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Apocynum cannabinum	Plant				--
Anogeissus latifolia	Leaf	322000.0	329000.0	2.6670661946712415	--
Anogeissus latifolia	Bark	100000.0	150000.0	0.07798232542085588	--
Annona reticulata	Bark				--
Annona muricata	Plant				--
Annona squamosa	Plant				--
Anemone pulsatilla	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Anaphalis margaritacea	Plant				--
Anacardium occidentale	Bark		90000.0	-0.44688118757765943	--
Ammi majus	Seed		4500.0	-0.9367271518852576	--
Althaea officinalis	Root		20000.0	-1.7590478728926933	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Alpinia officinarum</i>	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Aloysia citrodora</i>	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
<i>Alnus glutinosa</i>	Bark		200000.0	0.5153685862529519	--
<i>Alisma plantago-aquatica</i>	Plant				--
<i>Aleurites moluccana</i>	Bark	40000.0	60000.0	-0.709312944076917	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Albizia julibrissin</i>	Bark				--
<i>Albizia lebbek</i>	Bark	70000.0	110000.0	-0.271926683244821	Wealth of India.
<i>Ajuga reptans</i>	Plant		150000.0	0.9688817051288484	--
<i>Ailanthus altissima</i>	Leaf		120000.0	0.11560400756237017	--
<i>Agrimonia eupatoria</i>	Shoot	30000.0	210000.0	1.6607008042164362	--
<i>Agrimonia eupatoria</i>	Bark		52800.0	-0.7722965656367389	Wealth of India.
<i>Agrimonia eupatoria</i>	Leaf	50000.0	80000.0	-0.37271411437234203	--
<i>Aesculus hippocastanum</i>	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Aesculus hippocastanum</i>	Wood				Jim Duke's personal files.
<i>Aegle marmelos</i>	Fruit		90000.0	-0.04339391153252399	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Aegle marmelos</i>	Petiole		200000.0		Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
<i>Adiantum capillus-veneris</i>	Plant				--
<i>Actinidia chinensis</i>	Fruit		9500.0	-0.8200278577257989	--
<i>Actaea cimicifuga</i>	Rhizome				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Actaea racemosa	Root				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Acorus calamus	Plant				--
Acorus calamus	Rhizome		15000.0		--
Achillea millefolium	Plant	28000.0	40000.0	-0.6370616203493836	--
Acalypha indica	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Acacia senegal	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Acacia nilotica	Resin, Exudate, Sap	170000.0	200000.0	-0.6588112916807376	--
Acacia melanoxylon	Plant				--
Acacia tortilis	Leaf				--
Acacia nilotica	Wood		63500.0	0.39532807016866817	--
Acacia nilotica	Fruit		349500.0	2.460165206941449	--
Acacia leucophloea	Plant				--
Acacia tortilis	Bark				--
Acacia nilotica	Seed		66100.0	-0.17202297185321858	--
Acacia nilotica	Bark		27100.0	-0.9971131037044363	--
Acacia catechu	Plant				--