

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for TANNIN

Plant	Part	Low PPM	High PPM	StdDev	Reference
Acacia tortilis	Bark				--
Acacia nilotica	Seed		66100.0	-0.17202297185321858	--
Acacia nilotica	Bark		27100.0	-0.9971131037044363	--
Acacia catechu	Plant				--
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				--
Acalypha indica	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Achillea millefolium	Plant	28000.0	40000.0	-0.6370616203493836	--
Acorus calamus	Rhizome		15000.0		--
Acorus calamus	Plant				--
Actaea cimicifuga	Rhizome				--
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.
Actinidia chinensis	Fruit		9500.0	-0.8200278577257989	--
Adiantum capillus-veneris	Plant				--
Aegle marmelos	Fruit		90000.0	-0.04339391153252399	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Aegle marmelos	Petiole		200000.0		Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Aesculus hippocastanum	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Aesculus hippocastanum	Wood				Jim Duke's personal files.
Agrimonia eupatoria	Shoot	30000.0	210000.0	1.6607008042164362	--
Agrimonia eupatoria	Leaf	50000.0	80000.0	-0.37271411437234203	--
Agrimonia eupatoria	Bark		52800.0	-0.7722965656367389	Wealth of India.
Ailanthus altissima	Leaf		120000.0	0.11560400756237017	--
Ajuga reptans	Plant		150000.0	0.9688817051288484	--
Albizia julibrissin	Bark				--
Albizia lebbeck	Bark	70000.0	110000.0	-0.271926683244821	Wealth of India.
Aleurites moluccana	Bark	40000.0	60000.0	-0.709312944076917	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Alisma plantago-aquatica	Plant				--
Alnus glutinosa	Bark		200000.0	0.5153685862529519	--
Aloysia citrodora	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.
Alpinia officinarum	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Althaea officinalis	Root		20000.0	-1.7590478728926933	--
Ammi majus	Seed		4500.0	-0.9367271518852576	--
Anacardium occidentale	Bark		90000.0	-0.44688118757765943	--
Anaphalis margaritacea	Plant				--
Anemone pulsatilla	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Annona squamosa	Plant				--
Annona reticulata	Bark				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Annona muricata	Plant				--
Anogeissus latifolia	Leaf	322000.0	329000.0	2.6670661946712415	--
Anogeissus latifolia	Bark	100000.0	150000.0	0.07798232542085588	--
Apocynum cannabinum	Plant				--
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.
Arbutus unedo	Leaf		160000.0	0.6039221294970823	--
Arbutus unedo	Bark		450000.0	2.7022998904134328	--
Arctostaphylos uva-ursi	Leaf	6960.0	70000.0	-0.49479364485602007	--
Arctostaphylos uva-ursi	Plant	60000.0	200000.0	1.69885594398259	--
Areca catechu	Seed	150000.0	250000.0	2.1109169422359373	--
Argemone mexicana	Plant		11000.0	-1.060446678884554	--
Armoracia rusticana	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2- 6, Springer-Verlag, Berlin, 1969- 1979.
Artemisia cina	Flower				--
Artemisia absinthium	Leaf	40000.0	77000.0	-0.40933797351744544	--
Artemisia dracunculus	Plant				--
Artemisia abrotanum	Plant				--
Artocarpus heterophyllus	Bark		33000.0	-0.945501524926249	--
Asclepias syriaca	Sprout Seedling				--
Aspalathus linearis	Shoot		44000.0	-0.8290380397657579	--
Aspidosperma quebracho-blanco	Bark	30000.0	40000.0	-0.8842674484097555	--
Atropa bella-donna	Root		120000.0	1.3566088761423356	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Azadirachta indica	Stem Bark		60000.0	-0.4287334899984996	--
Ballota nigra	Plant				--
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.
Borago officinalis	Plant		30000.0	-0.783056468120132	--
Bryonia alba	Root				--
Buxus sempervirens	Leaf				--
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.
Caesalpinia pulcherrima	Wood		3000.0	-1.0047118271115913	--
Caesalpinia pulcherrima	Leaf		7000.0	-1.263894686903192	--
Calendula officinalis	Leaf		64500.0	-0.561937386622043	--
Camellia sinensis	Leaf	33800.0	270000.0	1.946796964817541	--
Capparis spinosa	Plant				--
Capsella bursa-pastoris	Plant				--
Carum carvi	Plant				--
Castanea sativa	Leaf		90000.0	-0.250634583888664	--
Castanea sativa	Bark	40000.0	120000.0	-0.18444943107840175	--
Castanea sativa	Seed	20000.0	28000.0	-0.6449974728145933	--
Catalpa bignonioides	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.
Catha edulis	Leaf				--
Catharanthus roseus	Leaf				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Cedrus deodora	Leaf		32000.0	-0.9586958606939968	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ceiba pentandra	Bark		108200.0	-0.28767258863477646	--
Centaurea cyanus	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Centella asiatica	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.
Ceratonia siliqua	Bark	12000.0	500000.0	3.1396861512455287	--
Ceratonia siliqua	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.
Chamaemelum nobile	Plant				--
Chamaesyce hypericifolia	Plant				--
Chimaphila umbellata	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.
Chrysanthemum balsamita	Plant				--
Cichorium intybus	Plant				--
Cimicifuga 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.
Cinchona officinalis	Bark				--
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				--
Citrus aurantium	Fruit				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
Cnicus benedictus	Plant		80000.0	-0.053082229266390064	--
Cocos nucifera	Plant				Jim Duke's personal files.
Coffea arabica	Seed		90000.0	0.12467231877609526	--
Cola acuminata	Seed				--
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.
Conyza canadensis	Plant				--
Coriandrum sativum	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Coriaria myrtifolia	Leaf	100000.0	200000.0	1.0922402514317946	--
Cornus florida	Bark		30000.0	-0.9717447005761747	--
Croton eluteria	Bark				--
Croton lechleri	Plant				Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Cuminum cyminum	Fruit				--
Cuminum cyminum	Seed				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
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.
Cydonia oblonga	Seed				--
Cynara cardunculus	Plant				--
Cytisus scoparius	Flower				--
Datura stramonium	Plant		70000.0	-0.1990770770371384	--
Dioscorea bulbifera	Tuber				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Dipsacus fullonum	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Dodonaea viscosa	Bark		58000.0	-0.7268083945102009	--
Dodonaea viscosa	Leaf		59800.0	-0.6193147659493717	--
Ephedra nevadensis	Plant				--
Eriobotrya japonica	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
Eriodictyon californicum	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
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	--
Euonymus atropurpureus	Root				--
Eupatorium odoratum	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Euphrasia officinalis	Shoot				Jim Duke's personal files.
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.
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.
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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
Filipendula ulmaria	Shoot		93100.0	-0.0926152853107834	--
Filipendula ulmaria	Leaf				--
Filipendula ulmaria	Root		86200.0	0.3035168949684959	--
Fragaria spp	Leaf				--
Frangula purshiana	Plant				--
Frangula alnus	Bark				--
Galium odoratum	Plant				--
Gardenia jasminoides	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
Gaultheria procumbens	Leaf				--
Gelsemium sempervirens	Root				--
Genipa americana	Fruit				--
Genista tinctoria	Plant				--
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.
Geranium thunbergii	Leaf		200000.0	1.0922402514317946	--
Geranium thunbergii	Plant		50000.0	-0.4910667725786353	--
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.
Glechoma hederacea	Plant	30000.0	70000.0	-0.1990770770371384	--
Gleditsia triacanthos	Leaf				--
Gossypium sp	Stem		17700.0	-1.3573651317646305	--
Guaiacum sp.	Wood				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Guarea rusbyi	Bark				--
Haematoxylum campechianum	Wood		100000.0	1.2399802396022128	--
Hamelia patens	Bark		150000.0	0.07798232542085588	--
Hedeoma pulegioides	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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.
Holarrhena pubescens	Bark		11400.0	-1.1344523896057144	--
Hydnocarpus kurzii	Seed				--
Hyssopus officinalis	Plant	50000.0	80000.0	-0.053082229266390064	Lawrence Review of Natural Products, Jan-87.
Ilex paraguariensis	Leaf	40000.0	160000.0	0.6039221294970823	--
Illicium verum	Fruit				--
Iris versicolor	Rhizome				--
Iris x germanica	Rhizome				--
Jateorhiza palmata	Root				--
Jatropha gossypifolia	Leaf				--
Jatropha curcas	Resin, Exudate, Sap	116000.0	187000.0	-0.7543266834114022	--
Juglans regia	Bark	53000.0	75100.0	-0.577222293305624	--
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				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Juglans nigra	Pericarp	33600.0	280000.0	-1.0	--
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.
Juniperus virginiana	Bark	21000.0	86000.0	-0.4818720884442271	--
Krameria triandra	Root				--
Lagochilus inebrians	Plant	20000.0	40000.0	-0.6370616203493836	--
Lantana camara	Leaf				--
Lavandula angustifolia	Flower	50000.0	120000.0	0.5345469560565174	--
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.
Leonurus cardiaca	Plant	21000.0	90000.0	0.09291261850435828	--
Lepidium meyenii	Root				--
Ligustrum vulgare	Leaf	60000.0	100000.0	-0.12855505340498594	--
Ligustrum vulgare	Bark		70000.0	-0.6218356919104978	--
Lindera benzoin	Plant				--
Liquidambar orientalis	Plant				--
Liquidambar styraciflua	Plant				--
Lonicera japonica	Plant		80000.0	-0.053082229266390064	--
Lycopus virginicus	Plant				--
Lythrum salicaria	Root		85000.0	0.26612901398007555	--
Lythrum salicaria	Leaf		120000.0	0.11560400756237017	--
Lythrum salicaria	Stem		105000.0	0.6451355188995392	--
Lythrum salicaria	Flower		137000.0	0.8221196855805931	--
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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mahonia aquifolium	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Malva neglecta	Flower				--
Mangifera indica	Seed		1100.0	-0.9789348501337792	--
Mangifera indica	Flower		150000.0	1.0420282434519452	--
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.
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.
Marsdenia reichenbachii	Plant				--
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.
Medicago sativa	Hay	27000.0	28000.0		--
Melia azedarach	Bark	180000.0	260000.0	1.0402320992514673	--
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.
Mentha x piperita	Plant				--
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.
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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mercurialis annua	Root		33500.0	-1.3384342117729644	--
Mimosa pudica	Root		100000.0	0.7334775263353299	--
Mitchella repens	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Morus alba	Stem				--
Myroxylon balsamum	Plant		4000.0	-1.1626430723240777	--
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.
Nepeta cataria	Leaf				--
Nigella sativa	Seed				--
Ocimum sanctum	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.
Ocimum tenuiflorum	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Ocimum basilicum	Tissue Culture				--
Oenothera biennis	Herb		110000.0		--
Ononis spinosa	Plant		5000.0	-1.148043587547003	--
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.
Pachira aquatica	Bark		27000.0	-0.9979878762261004	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Paeonia officinalis</i>	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<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 lactiflora</i>	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
<i>Panax quinquefolius</i>	Plant				--
<i>Paullinia cupana</i>	Seed	50000.0	120000.0	0.49709318567481553	--
<i>Pausinystalia johimbe</i>	Bark				--
<i>Persea americana</i>	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.
<i>Peucedanum ostruthium</i>	Root				--
<i>Peumus boldus</i>	Leaf				--
<i>Phoenix dactylifera</i>	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.
<i>Phyllanthus emblica</i>	Bark	80000.0	166400.0	0.22144501897378338	--
<i>Phyllanthus emblica</i>	Twig				--
<i>Phyllanthus emblica</i>	Leaf	18000.0	22000.0	-1.080775391177675	--
<i>Phyllanthus emblica</i>	Fruit		280000.0	1.7896551540168204	--
<i>Phytolacca americana</i>	Root				--
<i>Pinus insularis</i>	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.
<i>Pinus kesiya</i>	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
Piper betel	Leaf	10000.0	20500.0	-1.0990873207502265	--
Piper angustifolium	Leaf				--
Piscidia piscipula	Plant				--
Pistacia vera	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.
Plantago psyllium	Plant				--
Plantago ovata	Plant				--
Plantago major	Plant	40000.0	57000.0	-0.3888703791391115	--
Pogostemon cablin	Plant		17000.0	-0.9728497702221048	--
Polygonum hydropiper	Plant		35000.0	-0.7100590442347579	--
Populus nigra	Plant				--
Portulaca oleracea	Plant				--
Prosopis juliflora	Wood		9000.0	-0.8658648951499126	--
Prosopis juliflora	Root		67000.0	-0.2946892008462297	--
Prosopis juliflora	Bark	6000.0	84000.0	-0.49936753887751095	--
Prunella vulgaris	Plant	45000.0	105800.0	0.3235844779821407	--
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				--
Prunus armeniaca	Fruit	600.0	1000.0	-0.9020326843424801	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
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.
Psidium guajava	Root				--
Psidium guajava	Bark	110000.0	300000.0	1.3901411079171442	--
Pteridium aquilinum	Plant				--
Punica granatum	Pericarp	104000.0	336000.0	1.0	--
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	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.
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.
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	--
Quercus suber	Cork	20000.0	65000.0		--
Quercus infectoria	Plant				--
Quillaja saponaria	Bark		150000.0	0.07798232542085588	--
Rhizophora mangle	Bark	10000.0	520000.0	3.314640655578367	--
Rhododendron ponticum	Leaf	50000.0	120000.0	0.11560400756237017	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rhododendron ferrugineum	Leaf				--
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.
Ribes uva-crispa	Fruit				--
Robinia pseudoacacia	Bark		70000.0	-0.6218356919104978	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Rosa laevigata	Fruit				--
Rosa canina	Fruit	3740.0	20000.0	-0.7187277777875456	--
Rosmarinus officinalis	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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.
Rubus fruticosus	Leaf				--
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.
Rumex acetosella	Root	80000.0	140000.0	1.9797402259493415	--
Salix alba	Bark	20160.0	120000.0	-0.18444943107840175	--
Salvia sclarea	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Salvia officinalis	Plant	20000.0	80000.0	-0.053082229266390064	--
Sambucus nigra	Leaf	4400.0	30000.0	-0.9831117667907324	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Sambucus canadensis</i>	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Sanguisorba officinalis</i>	Plant		170000.0	1.260871400670345	--
<i>Sanguisorba officinalis</i>	Hs		170000.0		--
<i>Sanguisorba minor</i>	Plant				--
<i>Santalum album</i>	Wood				--
<i>Santolina chamaecyparissus</i>	Root				--
<i>Sarcostemma acidum</i>	Plant				--
<i>Sassafras albidum</i>	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Satureja hortensis</i>	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.
<i>Saussurea lappa</i>	Root				--
<i>Schinus terebinthifolius</i>	Bark				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Schinus molle</i>	Bark		230000.0	0.7778003427522096	--
<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.
<i>Sclerocarya caffra</i>	Leaf		200000.0	1.0922402514317946	--
<i>Sclerocarya caffra</i>	Bark	35000.0	100000.0	-0.3594039354112402	--
<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>Scutellaria churchilliana</i>	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Senecio aureus	Plant				--
Senna occidentalis	Seed				--
Senna alata	Leaf				--
Serenoa repens	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.
Serenoa repens	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.
Simarouba amara	Bark	200000.0	270000.0	1.1277093514178864	--
Smilax china	Root				--
Solanum nigrum	Plant	70000.0	100000.0	0.23890746627510662	--
Solanum sessiliflorum	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.
Solanum melongena	Fruit		2000.0	-0.892385057681694	--
Solanum tuberosum	Leaf		32000.0	-0.9586958606939968	--
Spigelia marilandica	Plant				--
Stachys officinalis	Plant	25200.0	150000.0	0.9688817051288484	--
Sterculia urens	Gum		20000.0		--
Sterculia urens	Bark				--
Stillingia sylvatica	Plant				--
Swertia chirata	Plant				--
Symphytum officinale	Plant	80000.0	90000.0	0.09291261850435828	--
Symplocarpus foetidus	Plant				--
Syzygium cumini	Fruit				Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Syzygium aromaticum	Plant				--
Tabernanthe iboga	Root				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Tamarindus indica	Bl		70000.0		--
Tamarindus indica	Bark		70000.0	-0.6218356919104978	--
Tamarindus indica	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Taraxacum officinale	Root				--
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.
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.
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 marum	Plant				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
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 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.
Thuja occidentalis	Branches		59000.0		--
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	--
Thymus vulgaris	Plant	80000.0	100000.0	0.23890746627510662	--
Tilia sp.	Flower				--
Tridax procumbens	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Tsuga canadensis	Bark	100000.0	150500.0	0.08235618802917684	--
Tsuga canadensis	Root Bark		245000.0	0.54974403267798	--
Tsuga canadensis	Leaf		15000.0	-1.1662310625162495	--
Turnera diffusa	Leaf	8400.0	40000.0	-0.8610322363070544	--
Tussilago farfara	Flower		6000.0	-1.3938819360461085	--
Tussilago farfara	Rhizome				--
Tussilago farfara	Leaf		170000.0	0.7260016599807604	--
Ulmus rubra	Bark	30000.0	65000.0	-0.6655743179937075	--
Urtica dioica	Leaf	59700.0	133000.0	0.27430739719115166	Jim Duke's personal files.
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	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Vanilla planifolia	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Verbena officinalis	Plant				--
Veronica officinalis	Plant				--
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.
Vinca minor	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Viola tricolor	Plant				--
Vitis vinifera	Seed				--
Warburgia ugandensis	Bark				--
Yucca baccata	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Zanthoxylum americanum	Plant				--
Zizyphus jujuba	Fruit		100000.0	0.05308235507533624	--
Zizyphus jujuba	Leaf		46000.0	-0.7877845180168476	--