

## Dr. Duke's Phytochemical and Ethnobotanical Databases

### List of Plants for TANNIN

Plant	Part	Low PPM	High PPM	StdDev	Reference
Eucalyptus citriodora	Leaf		11600.0	-1.2077381028807002	--
Panax quinquefolius	Plant				--
Piscidia piscipula	Plant				--
Eriobotrya japonica	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
Cedrus deodora	Leaf		32000.0	-0.9586958606939968	--
Chamaemelum nobile	Plant				--
Schisandra chinensis	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Ocimum basilicum	Tissue Culture				--
Santalum album	Wood				--
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.
Teucrium marum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Quercus infectoria	Plant				--
Chamaesyce hypericifolia	Plant				--
Alpinia officinarum	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Acorus calamus	Rhizome		15000.0		--
Lonicera japonica	Plant		80000.0	-0.053082229266390064	--
Euphrasia officinalis	Shoot				Jim Duke's personal files.
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.
Acacia catechu	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Hedeoma pulegioides	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Pogostemon cablin	Plant		17000.0	-0.9728497702221048	--
Buxus sempervirens	Leaf				--
Calendula officinalis	Leaf		64500.0	-0.561937386622043	--
Iris x germanica	Rhizome				--
Illicium verum	Fruit				--
Mangifera indica	Flower		150000.0	1.0420282434519452	--
Euonymus atropurpureus	Root				--
Mangifera indica	Seed		1100.0	-0.9789348501337792	--
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.
Lycopus virginicus	Plant				--
Eriodictyon californicum	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Stillingia sylvatica	Plant				--
Tilia sp.	Flower				--
Solanum melongena	Fruit		2000.0	-0.892385057681694	--
Yucca baccata	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
Mentha x piperita	Plant				--
Acorus calamus	Plant				--
Santolina chamaecyparissus	Root				--
Genipa americana	Fruit				--
Ballota nigra	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cinnamomum aromaticum	Bark				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
Rosmarinus officinalis	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Arbutus unedo	Bark		450000.0	2.7022998904134328	--
Ephedra nevadensis	Plant				--
Juglans cinerea	Bark				--
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.
Anaphalis margaritacea	Plant				--
Arbutus unedo	Leaf		160000.0	0.6039221294970823	--
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.
Agrimonia eupatoria	Bark		52800.0	-0.7722965656367389	Wealth of India.
Iris versicolor	Rhizome				--
Symplocarpus foetidus	Plant				--
Vinca minor	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Vanilla planifolia	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
Acacia nilotica	Bark		27100.0	-0.9971131037044363	--
Aesculus hippocastanum	Wood				Jim Duke's personal files.
Rhus glabra	Leaf		270000.0	1.946796964817541	--
Acacia nilotica	Fruit		349500.0	2.460165206941449	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Sarcostemma acidum	Plant				--
Acacia nilotica	Seed		66100.0	-0.17202297185321858	--
Artemisia cina	Flower				--
Catha edulis	Leaf				--
Tsuga canadensis	Leaf		15000.0	-1.1662310625162495	--
Acacia nilotica	Wood		63500.0	0.39532807016866817	--
Caesalpinia pulcherrima	Leaf		7000.0	-1.263894686903192	--
Plantago ovata	Plant				--
Tsuga canadensis	Root Bark		245000.0	0.54974403267798	--
Caesalpinia pulcherrima	Wood		3000.0	-1.0047118271115913	--
Sclerocarya caffra	Leaf		200000.0	1.0922402514317946	--
Portulaca oleracea	Plant				--
Genista tinctoria	Plant				--
Paeonia lactiflora	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
Senecio aureus	Plant				--
Tamarindus indica	Bark		70000.0	-0.6218356919104978	--
Origanum majorana	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Cinnamomum aromaticum	Plant				--
Annona muricata	Plant				--
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.
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.
Zanthoxylum americanum	Plant				--
Spigelia marilandica	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cichorium intybus	Plant				--
Mitchella repens	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Artemisia abrotanum	Plant				--
Conyza canadensis	Plant				--
Ocimum tenuiflorum	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Mentha pulegium	Plant		40000.0	-0.6370616203493836	--
Senna alata	Leaf				--
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.
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.
Artocarpus heterophyllus	Bark		33000.0	-0.945501524926249	--
Lantana camara	Leaf				--
Alisma plantago-aquatica	Plant				--
Argemone mexicana	Plant		11000.0	-1.060446678884554	--
Datura stramonium	Plant		70000.0	-0.1990770770371384	--
Morus alba	Stem				--
Thuja occidentalis	Branches		59000.0		--
Gossypium sp	Stem		17700.0	-1.3573651317646305	--
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.
Anacardium occidentale	Bark		90000.0	-0.44688118757765943	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Actinidia chinensis	Fruit		9500.0	-0.8200278577257989	--
Paeonia moutan	Root Bark				--
Capparis spinosa	Plant				--
Centaurea cyanus	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Cuminum cyminum	Fruit				--
Rosa laevigata	Fruit				--
Smilax china	Root				--
Cydonia oblonga	Seed				--
Lindera benzoin	Plant				--
Liquidambar orientalis	Plant				--
Cnicus benedictus	Plant		80000.0	-0.053082229266390064	--
Saussurea lappa	Root				--
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.
Myroxylon balsamum	Plant		4000.0	-1.1626430723240777	--
Althaea officinalis	Root		20000.0	-1.7590478728926933	--
Carum carvi	Plant				--
Cytisus scoparius	Flower				--
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.
Cinnamomum verum	Plant				--
Lythrum salicaria	Flower		137000.0	0.8221196855805931	--
Dipsacus fullonum	Plant				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
<i>Pistacia vera</i>	Plant				--
<i>Plantago psyllium</i>	Plant				--
<i>Lythrum salicaria</i>	Leaf		120000.0	0.11560400756237017	--
<i>Lythrum salicaria</i>	Root		85000.0	0.26612901398007555	--
<i>Prosopis juliflora</i>	Root		67000.0	-0.2946892008462297	--
<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>Lythrum salicaria</i>	Stem		105000.0	0.6451355188995392	--
<i>Prosopis juliflora</i>	Wood		9000.0	-0.8658648951499126	--
<i>Malva neglecta</i>	Flower				--
<i>Lavandula angustifolia</i>	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.
<i>Robinia pseudoacacia</i>	Bark		70000.0	-0.6218356919104978	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Citrus aurantium</i>	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Viburnum opulus</i>	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.
<i>Annona reticulata</i>	Bark				--
<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>Punica granatum</i>	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lepidium meyenii	Root				--
Vitis vinifera	Seed				--
Acacia senegal	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Taraxacum officinale	Root				--
Prunus persica	Fruit		8000.0	-0.8344992977169778	--
Cocos nucifera	Plant				Jim Duke's personal files.
Prunus persica	Leaf		8000.0	-1.251686733854824	--
Atropa bella-donna	Root		120000.0	1.3566088761423356	--
Croton eluteria	Bark				--
Hippophae rhamnoides	Fruit		18000.0	-0.7380230311091176	Abstract (See species file)
Dodonaea viscosa	Bark		58000.0	-0.7268083945102009	--
Dodonaea viscosa	Leaf		59800.0	-0.6193147659493717	--
Syzygium cumini	Fruit				Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
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.
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.
Sassafras albidum	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Guaiacum sp.	Wood				--
Schinus molle	Bark		230000.0	0.7778003427522096	--
Aspalathus linearis	Shoot		44000.0	-0.8290380397657579	--
Quercus rubra	Bark		160000.0	0.1654595775872751	--
Adiantum capillus-veneris	Plant				--



Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
Galium odoratum	Plant				--
Coffea arabica	Seed		90000.0	0.12467231877609526	--
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.
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.
Psidium guajava	Root				--
Guarea rusbyi	Bark				--
Ligustrum vulgare	Bark		70000.0	-0.6218356919104978	--
Marsdenia reichenbachii	Plant				--
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.
Paeonia suffruticosa	Root Bark				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Coriandrum sativum	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Hydnocarpus kurzii	Seed				--
Anemone pulsatilla	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Frangula purshiana	Plant				--
Capsella bursa-pastoris	Plant				--

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>Sanguisorba minor</i>	Plant				--
<i>Schinus terebinthifolius</i>	Bark				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Dioscorea bulbifera</i>	Tuber				--
<i>Scutellaria churchilliana</i>	Plant				--
<i>Syzygium aromaticum</i>	Plant				--
<i>Tussilago farfara</i>	Flower		6000.0	-1.3938819360461085	--
<i>Warburgia ugandensis</i>	Bark				--
<i>Tussilago farfara</i>	Leaf		170000.0	0.7260016599807604	--
<i>Tussilago farfara</i>	Rhizome				--
<i>Viburnum prunifolium</i>	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.
<i>Catharanthus roseus</i>	Leaf				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Actaea cimicifuga</i>	Rhizome				--
<i>Berberis vulgaris</i>	Fruit		55600.0	-0.37527226866356317	Jim Duke's personal files.
<i>Ocimum sanctum</i>	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Acacia tortilis</i>	Bark				--
<i>Acacia tortilis</i>	Leaf				--
<i>Ailanthus altissima</i>	Leaf		120000.0	0.11560400756237017	--
<i>Mercurialis annua</i>	Root		33500.0	-1.3384342117729644	--
<i>Liquidambar styraciflua</i>	Plant				--
<i>Viola tricolor</i>	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Salvia sclarea	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Cynara cardunculus	Plant				--
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.
Bryonia alba	Root				--
Alnus glutinosa	Bark		200000.0	0.5153685862529519	--
Asclepias syriaca	Sprout Seedling				--
Fragaria spp	Leaf				--
Jateorhiza palmata	Root				--
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.
Rhododendron ferrugineum	Leaf				--
Ribes uva-crispa	Fruit				--
Sanguisorba officinalis	Hs		170000.0		--
Geranium thunbergii	Leaf		200000.0	1.0922402514317946	--
Oenothera biennis	Herb		110000.0		--
Rubus fruticosus	Leaf				--
Geranium thunbergii	Plant		50000.0	-0.4910667725786353	--
Haematoxylum campechianum	Wood		100000.0	1.2399802396022128	--
Acalypha indica	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Filipendula ulmaria	Leaf				--
Eupatorium odoratum	Leaf				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
Filipendula ulmaria	Shoot		93100.0	-0.0926152853107834	--
Tamarindus indica	Bl		70000.0		--
Filipendula ulmaria	Root		86200.0	0.3035168949684959	--
Tamarindus indica	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Ceiba pentandra	Bark		108200.0	-0.28767258863477646	--
Ajuga reptans	Plant		150000.0	0.9688817051288484	--
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.
Eucalyptus cornea	Plant		250000.0	2.428830182836332	--
Gardenia jasminoides	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
Pachira aquatica	Bark		27000.0	-0.9979878762261004	--
Prunus laurocerasus	Leaf				--
Cuminum cyminum	Seed				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Populus nigra	Plant				--
Pteridium aquilinum	Plant				--
Piper angustifolium	Leaf				--
Cinchona officinalis	Bark				--
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.
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.
Acacia leucophloea	Plant				--
Prunus serotina	Bark				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Senna occidentalis</i>	Seed				--
<i>Hamelia patens</i>	Bark		150000.0	0.07798232542085588	--
<i>Krameria triandra</i>	Root				--
<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>Peucedanum ostruthium</i>	Root				--
<i>Solanum tuberosum</i>	Leaf		32000.0	-0.9586958606939968	--
<i>Swertia chirata</i>	Plant				--
<i>Cornus florida</i>	Bark		30000.0	-0.9717447005761747	--
<i>Mahonia aquifolium</i>	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Ononis spinosa</i>	Plant		5000.0	-1.148043587547003	--
<i>Phytolacca americana</i>	Root				--
<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>Collinsonia canadensis</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>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>Mimosa pudica</i>	Root		100000.0	0.7334775263353299	--
<i>Annona squamosa</i>	Plant				--
<i>Punica granatum</i>	Fruit Juice		1700.0		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
Acacia melanoxylon	Plant				--
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.
Scutellaria lateriflora	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Holarrhena pubescens	Bark		11400.0	-1.1344523896057144	--
Tabernanthe iboga	Root				--
Borago officinalis	Plant		30000.0	-0.783056468120132	--
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.
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.
Phyllanthus emblica	Fruit		280000.0	1.7896551540168204	--
Armoracia rusticana	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Castanea sativa	Leaf		90000.0	-0.250634583888664	--
Ammi majus	Seed		4500.0	-0.9367271518852576	--
Azadirachta indica	Stem Bark		60000.0	-0.4287334899984996	--
Frangula alnus	Bark				--
Polygonum hydropiper	Plant		35000.0	-0.7100590442347579	--
Nepeta cataria	Leaf				--
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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Tridax procumbens	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Cola acuminata	Seed				--
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.
Verbena officinalis	Plant				--
Phyllanthus emblica	Twig				--
Zizyphus jujuba	Fruit		100000.0	0.05308235507533624	--
Albizia julibrissin	Bark				--
Zizyphus jujuba	Leaf		46000.0	-0.7877845180168476	--
Gaultheria procumbens	Leaf				--
Origanum creticum	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Jatropha gossypifolia	Leaf				--
Quillaja saponaria	Bark		150000.0	0.07798232542085588	--
Prunus spinosa	Fruit				--
Veronica officinalis	Plant				--
Nigella sativa	Seed				--
Sterculia urens	Bark				--
Sterculia urens	Gum		20000.0		--
Artemisia dracunculus	Plant				--
Gleditsia triacanthos	Leaf				--
Aesculus hippocastanum	Flower				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
<i>Ficus carica</i>	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.
<i>Pausinystalia johimbe</i>	Bark				--
<i>Apocynum cannabinum</i>	Plant				--
<i>Berberis vulgaris</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>Croton lechleri</i>	Plant				Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
<i>Sanguisorba officinalis</i>	Plant		170000.0	1.260871400670345	--
<i>Mentha aquatica</i>	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.
<i>Teucrium chamaedrys</i>	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.
<i>Gelsemium sempervirens</i>	Root				--
<i>Chrysanthemum balsamita</i>	Plant				--
<i>Peumus boldus</i>	Leaf				--
<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>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>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.



Plant	Part	Low PPM	High PPM	StdDev	Reference
Prunus armeniaca	Fruit	600.0	1000.0	-0.9020326843424801	--
Terminalia chebula	Fruit	1090.0	355000.0	2.513227153575772	--
Rosa canina	Fruit	3740.0	20000.0	-0.7187277777875456	--
Sambucus nigra	Leaf	4400.0	30000.0	-0.9831117667907324	--
Prosopis juliflora	Bark	6000.0	84000.0	-0.49936753887751095	--
Arctostaphylos uva-ursi	Leaf	6960.0	70000.0	-0.49479364485602007	--
Turnera diffusa	Leaf	8400.0	40000.0	-0.8610322363070544	--
Rhizophora mangle	Bark	10000.0	520000.0	3.314640655578367	--
Piper betel	Leaf	10000.0	20500.0	-1.0990873207502265	--
Ceratonia siliqua	Bark	12000.0	500000.0	3.1396861512455287	--
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.
Thymus vulgaris	Leaf	16800.0	100000.0	-0.12855505340498594	--
Rubus idaeus	Leaf	16900.0	120000.0	0.11560400756237017	--
Phyllanthus emblica	Leaf	18000.0	22000.0	-1.080775391177675	--
Melicococcus 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.
Lagochilus inebrians	Plant	20000.0	40000.0	-0.6370616203493836	--
Salvia officinalis	Plant	20000.0	80000.0	-0.053082229266390064	--
Quercus suber	Cork	20000.0	65000.0		--
Punica granatum	Root Bark	20000.0	280000.0	0.8535499454737059	--
Castanea sativa	Seed	20000.0	28000.0	-0.6449974728145933	--
Salix alba	Bark	20160.0	120000.0	-0.18444943107840175	--
Juniperus virginiana	Bark	21000.0	86000.0	-0.4818720884442271	--
Leonurus cardiaca	Plant	21000.0	90000.0	0.09291261850435828	--
Stachys officinalis	Plant	25200.0	150000.0	0.9688817051288484	--
Marrubium vulgare	Flower	26000.0	29000.0	-1.0048129490429472	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Medicago sativa	Hay	27000.0	28000.0		--
Achillea millefolium	Plant	28000.0	40000.0	-0.6370616203493836	--
Scutellaria galericulata	Plant	28600.0	35000.0	-0.7100590442347579	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Agrimonia eupatoria	Shoot	30000.0	210000.0	1.6607008042164362	--
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.
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.
Glechoma hederacea	Plant	30000.0	70000.0	-0.1990770770371384	--
Ulmus rubra	Bark	30000.0	65000.0	-0.6655743179937075	--
Aspidosperma quebracho-blanco	Bark	30000.0	40000.0	-0.8842674484097555	--
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.
Juglans nigra	Pericarp	33600.0	280000.0	-1.0	--
Camellia sinensis	Leaf	33800.0	270000.0	1.946796964817541	--
Sclerocarya caffra	Bark	35000.0	100000.0	-0.3594039354112402	--
Plantago major	Plant	40000.0	57000.0	-0.3888703791391115	--
Aleurites moluccana	Bark	40000.0	60000.0	-0.709312944076917	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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.
Artemisia absinthium	Leaf	40000.0	77000.0	-0.40933797351744544	--
Ilex paraguariensis	Leaf	40000.0	160000.0	0.6039221294970823	--
Castanea sativa	Bark	40000.0	120000.0	-0.18444943107840175	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
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.
Prunella vulgaris	Plant	45000.0	105800.0	0.3235844779821407	--
Vaccinium myrtillus	Fruit	50000.0	120000.0	0.2460348882910567	--
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.
Agrimonia eupatoria	Leaf	50000.0	80000.0	-0.37271411437234203	--
Lavandula angustifolia	Flower	50000.0	120000.0	0.5345469560565174	--
Hyssopus officinalis	Plant	50000.0	80000.0	-0.053082229266390064	Lawrence Review of Natural Products, Jan-87.
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.
Rhododendron ponticum	Leaf	50000.0	120000.0	0.11560400756237017	--
Paullinia cupana	Seed	50000.0	120000.0	0.49709318567481553	--
Juglans regia	Bark	53000.0	75100.0	-0.577222293305624	--
Urtica dioica	Leaf	59700.0	133000.0	0.27430739719115166	Jim Duke's personal files.
Vaccinium myrtillus	Leaf	60000.0	200000.0	1.0922402514317946	--
Vaccinium vitis-idaea	Leaf	60000.0	200000.0	1.0922402514317946	--
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.
Ligustrum vulgare	Leaf	60000.0	100000.0	-0.12855505340498594	--
Arctostaphylos uva-ursi	Plant	60000.0	200000.0	1.69885594398259	--
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.
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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Albizia lebbek	Bark	70000.0	110000.0	-0.271926683244821	Wealth of India.
Solanum nigrum	Plant	70000.0	100000.0	0.23890746627510662	--
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.
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.
Quercus alba	Bark	78500.0	200000.0	0.5153685862529519	--
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.
Symphytum officinale	Plant	80000.0	90000.0	0.09291261850435828	--
Quercus robur	Bark	80000.0	200000.0	0.5153685862529519	--
Rumex acetosella	Root	80000.0	140000.0	1.9797402259493415	--
Thymus vulgaris	Plant	80000.0	100000.0	0.23890746627510662	--
Phyllanthus emblica	Bark	80000.0	166400.0	0.22144501897378338	--
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.
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.
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.
Anogeissus latifolia	Bark	100000.0	150000.0	0.07798232542085588	--
Tsuga canadensis	Bark	100000.0	150500.0	0.08235618802917684	--
Coriaria myrtifolia	Leaf	100000.0	200000.0	1.0922402514317946	--
Punica granatum	Stem Bark	100000.0	250000.0	1.3814745788840543	--
Punica granatum	Pericarp	104000.0	336000.0	1.0	--
Psidium guajava	Bark	110000.0	300000.0	1.3901411079171442	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Jatropha curcas</i>	Resin, Exudate, Sap	116000.0	187000.0	-0.7543266834114022	--
<i>Areca catechu</i>	Seed	150000.0	250000.0	2.1109169422359373	--
<i>Acacia nilotica</i>	Resin, Exudate, Sap	170000.0	200000.0	-0.6588112916807376	--
<i>Fallopia japonica</i>	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.
<i>Terminalia bellirica</i>	Fruit	170000.0	214000.0	1.152911794404943	--
<i>Byrsonima crassifolia</i>	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.
<i>Melia azedarach</i>	Bark	180000.0	260000.0	1.0402320992514673	--
<i>Rumex hymenosepalus</i>	Plant	180000.0	350000.0	3.8887786605438155	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
<i>Simarouba amara</i>	Bark	200000.0	270000.0	1.1277093514178864	--
<i>Rhus coriaria</i>	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.
<i>Anogeissus latifolia</i>	Leaf	322000.0	329000.0	2.6670661946712415	--