Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for ZINC

Plant	Part	Low PPM	High PPM	StdDev	Reference
Valerianella radicata	Plant	572.0	701.0	6.399620547261733	--
Lactuca sativa	Leaf	2.7	974.0	5.450686769584958	--
Cucurbita pepo	Seed	75.0	200.0	4.396731781476845	--
Aloe vera	Leaf	11.0	770.0	4.198735238139277	--
Lagenaria siceraria	Fruit	7.0	157.0	3.8118341064131345	--
Cucumis sativus	Fruit	2.0	157.0	3.8118341064131345	--
Phaseolus vulgaris	Fruit	2.0	150.0	3.6012329645407544	--
Linum usitatissimum	Seed	85.0	155.0	3.1191728559254055	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
Brassica oleracea var. botrytis l.	Flower	3.0	97.0	3.0606347490514247	--
Prunus domestica	Fruit	0.66	131.0	3.029601293744294	--
Vigna unguiculata	Seed	10.0	144.0	2.8068806741239425	--
Coptis chinensis	Rhizome	90.0	600.0	2.701069713221419	--
Coptis japonica	Rhizome	90.0	600.0	2.701069713221419	--
Coptis spp	Rhizome	90.0	600.0	2.701069713221419	--
Lycopersicon esculentum	Fruit	1.0	120.0	2.6986566422305542	--
Cinnamomum sieboldii	Bark		40.0	2.6135276198805846	--
Papaver somniferum	Seed	24.0	130.0	2.4094178972857168	--
Daucus carota	Root	2.0	79.0	2.40107178994795	--
Carya glabra	Shoot	4.0	1100.0	2.317153616071562	--
Raphanus sativus	Root	2.0	72.0	2.094487921197827	--
Pastinaca sativa	Root	5.0	70.0	2.0068925301263634	--
Apium graveolens	Root	2.8	70.0	2.0068925301263634	ACTA AGRIC SCAND SUPPL 22: 1980
Beta vulgaris	Root	3.0	70.0	2.0068925301263634	--
Cypripedium pubescens	Root		67.0	1.8754994435191676	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Helianthus tuberosus	Tuber	16.0	64.0	1.8672816597577366	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
Liquidambar styraciflua	Stem	4.0	240.0	1.8367755211916963	--
Colocasia esculenta	Root	5.0	66.0	1.8317017479834359	--
Phyllanthus emblica	Fruit	18.0	89.0	1.7659944425100138	--
Lycium chinense	Root Bark		23.0	1.6415653633362461	--
Sesamum indicum	Seed	24.0	102.0	1.6144923436092655	--
Phaseolus lunatus	Seed	7.0	100.0	1.5577119469180905	--
Asiasarum heterotropoides	Root	38.0	59.0	1.5251178792333129	--
Asiasarum sieboldii	Root	38.0	59.0	1.5251178792333129	--
Prunus serotina	Stem	0.5	216.0	1.4802558196473519	--
Allium cepa	Bulb	2.0	53.0	1.4104984605249231	--
Dioscorea sp.	Root		56.0	1.3937247926261174	--
Rhus glabra	Stem	3.0	208.0	1.3614159191325703	--
Lablab purpureus	Seed	75.0	93.0	1.3589805584989778	--
Spinacia oleracea	Plant	4.0	185.0	1.3103512331616465	--
Glycine max	Seed	22.0	90.0	1.273809963462215	--
Oenothera biennis	Seed	70.0	90.0	1.273809963462215	--
Phellodendron amurense	Bark		26.0	1.2669150712565191	--
Apium graveolens	Seed	0.2	89.0	1.2454197651166274	--
Physalis ixocarpa	Fruit	35.0	71.0	1.2244486491238937	--
Achyranthes bidentata	Root	16.0	51.0	1.1747363149474581	--
Alocasia macrorrhiza	Root	15.0	51.0	1.1747363149474581	--
Cyrtosperma chamissonis	Root	10.0	50.0	1.1309386194117264	--
Amorphophallus campanulatus	Root	10.0	50.0	1.1309386194117264	--
Anethum graveolens	Fruit	43.0	66.0	1.0740192620721936	--
Tetrapanax papyrifera	Pith		42.0	1.0	--
Quercus alba	Stem	2.0	182.0	0.9751862424595303	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Anethum graveolens	Plant	11.0	150.0	0.9651488572052452	--
Carum carvi	Fruit	47.0	61.0	0.9235898750204936	--
Lens culinaris	Sprout Seedling	14.0	54.0	0.8998425413316947	USDA's Ag Handbook 8 and sequelae)
Abelmoschus esculentus	Fruit	6.0	60.0	0.8935039976101535	USDA's Ag Handbook 8 and sequelae)
Taraxacum officinale	Leaf	21.0	230.0	0.8847458901948265	--
Senna obtusifolia	Seed	10.0	76.0	0.8763471866239895	--
Pimpinella anisum	Fruit		59.0	0.8634181201998136	--
Cuminum cyminum	Fruit	41.0	58.0	0.8333322427894736	--
Solanum tuberosum	Tuber	1.9	44.1	0.8200602873994755	--
Cinnamomum sieboldii	Root Bark		20.0	0.7181848464596076	--
Isatis tinctoria	Root		40.0	0.6929616640544078	--
Cinnamomum verum	Bark	11.4	20.0	0.6897954075604908	--
Diospyros virginiana	Stem	9.0	162.0	0.6780864911725766	--
Coriandrum sativum	Fruit	34.0	52.0	0.6528169783274335	--
Prunus serotina	Leaf	3.0	192.0	0.6515392323765133	--
Rubia cordifolia	Root		39.0	0.6491639685186761	--
Panax quinquefolius	Plant	10.0	114.0	0.6100835562215182	--
Lepidium meyenii	Root		38.0	0.6053662729829442	Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp.
Carum carvi	Seed	47.0	66.0	0.592445203168114	--
Anethum graveolens	Seed	43.0	66.0	0.592445203168114	USDA's Ag Handbook 8 and sequelae)
Vigna radiata	Sprout Seedling	3.5	48.0	0.4949133977324324	USDA's Ag Handbook 8 and sequelae)
Sinapis alba	Seed	27.0	61.0	0.4504942114401762	--
Brassica oleracea var. viridis l.	Leaf	10.0	157.0	0.43674362649122483	--
Brassica oleracea var. gemmifera	Leaf	10.0	157.0	0.43674362649122483	USDA's Ag Handbook 8 and sequelae)
Pisum sativum	Seed	11.0	60.0	0.42210401309458867	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Acanthopanax gracilistylis	Root Bark		19.0	0.4103913408340613	--
Viburnum opulus	Bark		17.0	0.40123557571247687	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Fraxinus rhynchophylla	Bark		17.0	0.40123557571247687	--
Pimpinella anisum	Seed		59.0	0.39371381474900113	--
Brassica napus var. napobrassica	Root	1.7	33.0	0.38637779530428495	USDA's Ag Handbook 8 and sequelae)
Trachyspermum ammi	Fruit		43.0	0.38204408163437337	--
Artemisia vulgaris	Plant	50.0	90.0	0.3733733555657003	Chem. & Pharm. Bull. 38: 2205.
Cichorium endivia	Leaf	8.0	146.0	0.3692364360701342	--
Vigna angularis	Seed	50.0	58.0	0.3653236164034136	--
Cuminum cyminum	Seed	41.0	58.0	0.3653236164034136	--
Anacardium occidentale	Seed	48.0	57.0	0.336933418057826	--
Cucurbita spp	Fruit	2.0	41.0	0.3218723268136934	--
Quercus rubra	Stem	4.0	138.0	0.32156678962823204	--
Carya illinoensis	Seed		56.0	0.30854321971223847	--
Sassafras albidum	Leaf	10.0	136.0	0.30786626296005176	--
Cynanchum atratum	Root		31.0	0.29878240423282126	--
Aristolochia debilis	Fruit		40.0	0.29178644940335335	--
Rubus chamaemorus	Fruit	5.3	40.0	0.29178644940335335	--
Pueraria pseudohirsuta	Root	21.0	30.0	0.2549847086970894	--
Helianthus annuus	Seed	46.0	54.0	0.2517628230210634	--
Celosia cristata	Flower		39.0	0.2510160873322747	--
Nyssa sylvatica	Stem	6.0	132.0	0.2324368642421459	--
Asimina triloba	Fruit	9.0	38.0	0.23161469458267334	--
Bertholletia excelsa	Seed	41.0	53.0	0.22337262467547583	--
Lupinus albus	Seed	47.0	53.0	0.22337262467547583	--
Prunus persica	Fruit	0.45	37.5	0.21657175587750332	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Thymus vulgaris	Plant	55.0	74.0	0.2155665551284883	USDA's Ag Handbook 8 and sequelae)
Angelica dahurica	Root		29.0	0.21118701316135757	--
Rubus idaeus	Fruit	4.0	37.0	0.2015288171723333	Revised USDA data received 1993.
Brassica oleracea var. italica	Leaf	4.0	118.0	0.19739995136190341	--
Brassica oleracea var. botrytis l.	Leaf	4.0	118.0	0.19739995136190341	--
Rhus copallina	Stem	7.0	128.0	0.17301691398475513	--
Psophocarpus tetragonolobus	Seed	43.0	51.0	0.16659222798430076	--
Piper nigrum	Fruit	11.2	35.7	0.16241717653889182	--
Malus domestica	Fruit	0.0	35.0	0.1413570623516533	--
Pinus edulis	Seed	40.0	50.0	0.1382020296387132	--
Phaseolus vulgaris	Seed	19.0	50.0	0.1382020296387132	--
Cicer arietinum	Seed	33.0	50.0	0.1382020296387132	USDA's Ag Handbook 8 and sequelae)
Abelmoschus manihot	Leaf	12.5	108.0	0.136029778251821	--
Amaranthus sp.	Leaf	9.0	108.0	0.136029778251821	--
Carya ovata	Shoot	7.0	342.0	0.1329615594228307	--
Valerianella locusta	Plant	62.0	64.5	0.12186876736889367	--
Eucommia ulmoides	Bark		14.0	0.11267574386446289	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Cynara cardunculus	Flower	4.0	36.0	0.1056909841399049	USDA's Ag Handbook 8 and sequelae)
Hyoscyamus niger	Seed		48.0	0.08142163294753811	--
Amomum xanthioides	Seed		48.0	0.08142163294753811	--
Foeniculum vulgare	Fruit	7.1	33.0	0.08118530753097328	--
Glehnia littoralis	Root		26.0	0.07979392655416202	--
Polystichum polyblepharum	Plant	34.0	60.0	0.0774856047459278	--
Petasites japonicus	Plant	21.0	60.0	0.0774856047459278	Chem. & Pharm. Bull. 38: 2205.
Liquidambar styraciflua	Leaf	12.0	98.0	0.07465960514173857	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rhus copallina	Leaf	5.0	96.0	0.062385570519722086	--
Juniperus virginiana	Shoot	7.0	317.0	0.060923562831513706	--
Mentha pulegium	Plant		56.0	0.03803390463662481	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Houttuynia cordata	Plant		56.0	0.03803390463662481	Suziki, A., Morimoto, I., and Okitzu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
Ipomoea aquatica	Leaf	12.3	92.0	0.037837501275688946	--
Carya ovata	Seed		46.0	0.024641236256363018	--
Juglans nigra	Seed		46.0	0.024641236256363018	--
Pinus pinea	Seed	42.0	46.0	0.024641236256363018	USDA's Ag Handbook 8 and sequelae)
Cucumis melo	Fruit	1.5	31.0	0.021013552710293256	--
Glechoma hederacea	Plant	46.0	53.0	0.00844512955464756	Chem. & Pharm. Bull. 38: 2205.
Viscum album	Leaf		86.0	0.0010153974096394941	--
Secale cereale	Seed	35.0	45.0	-0.00374896208922453	USDA's Ag Handbook 8 and sequelae)
Sophora angustifolia	Root	10.0	24.0	-0.007801464517301675	--
Paeonia lactiflora	Root	15.0	24.0	-0.007801464517301675	--
Pulsatilla chinensis	Root		24.0	-0.007801464517301675	--
Syzygium aromaticum	Fruit	10.0	30.0	-0.009072324700046541	--
Agathosma betulina	Leaf		84.0	-0.01125863721237699	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Barosma betulina	Leaf		84.0	-0.01125863721237699	--
Perilla frutescens	Plant		50.0	-0.021143645527329686	Suziki, A., Morimoto, I., and Okitzu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
Origanum vulgare	Plant	39.0	49.0	-0.031006570554655437	USDA's Ag Handbook 8 and sequelae)
Fallopia japonica	Plant	42.0	49.0	-0.031006570554655437	Chem. & Pharm. Bull. 38: 2205.
Brassica pekinensis	Leaf	66.5	80.0	-0.03580670645640996	--
Brassica rapa	Root	2.0	23.0	-0.05159916005303352	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Mentha spicata	Leaf	11.0	75.0	-0.06649179301145117	USDA's Ag Handbook 8 and sequelae)
Rubus chingii	Fruit		28.0	-0.06924407952072656	--
Elettaria cardamomum	Fruit	23.0	28.0	-0.06924407952072656	--
Sechium edule	Leaf	0.5	73.0	-0.07876582763346765	--
Sassafras albidum	Stem	4.0	111.0	-0.07951787460915558	--
Chondrus crispus	Plant		44.0	-0.08032119569128418	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Lens culinaris	Seed	37.0	42.0	-0.08891955712598718	USDA's Ag Handbook 8 and sequelae)
Origanum majorana	Plant	32.0	43.0	-0.09018412071860993	--
Boehmeria nivea	Plant	32.0	43.0	-0.09018412071860993	--
Vitis vinifera	Fruit	0.4	27.0	-0.09932995693106657	--
Peucedanum decursivum	Plant	23.0	42.0	-0.10004704574593568	--
Pyrus communis	Fruit	0.15	26.6	-0.11136430789520253	--
Senna occidentalis	Seed		41.0	-0.11730975547157471	--
Jussiaea repens	Plant		40.0	-0.11977289580058717	--
Brassica juncea	Leaf	6.0	65.0	-0.12786196612153358	--
Alisma plantago-aquatica	Rhizome	54.0	68.0	-0.12850079606062845	--
Rhodymenia palmata	Plant		39.0	-0.12963582082791292	--
Rosmarinus officinalis	Plant	30.0	38.0	-0.13949874585523866	USDA's Ag Handbook 8 and sequelae)
Solanum melongena	Fruit	18.0	25.6	-0.14145018530554254	--
Corylus avellana	Seed	20.0	39.0	-0.1740901521627498	--
Taraxacum mongolicum	Plant		34.0	-0.17895044596454168	--
Syzygium aromaticum	Flower	10.0	30.0	-0.18495922224483477	--
Zingiber officinale	Rhizome		57.0	-0.18700695320743768	--
Nyssa sylvatica	Leaf	2.0	55.0	-0.189232139231616	--
Ligustrum japonicum	Fruit		24.0	-0.1895875891620866	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ligustrum lucidum	Fruit		24.0	-0.1895875891620866	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Capsicum frutescens	Fruit	3.0	24.0	-0.1895875891620866	USDA's Ag Handbook 8 and sequelae)
Cucurbita maxima	Leaf	7.6	54.0	-0.19536915654262424	--
Prunus armeniaca	Seed	2.0	38.0	-0.20248035050833735	--
Vigna unguiculata	Seed	35.0	38.0	-0.20248035050833735	USDA's Ag Handbook 8 and sequelae)
Plantago asiatica	Plant		31.0	-0.20853922104651892	--
Broussonetia papyrifera	Fruit		23.0	-0.21967346657242662	--
Xanthosoma sagittifolium	Root	5.0	19.0	-0.2267899421959609	--
Manihot esculenta	Root	4.0	19.0	-0.2267899421959609	--
Urtica dioica	Root		19.0	-0.2267899421959609	--
Juglans cinerea	Seed	26.0	37.0	-0.2308705488539249	--
Prunus dulcis	Seed	26.0	37.0	-0.2308705488539249	--
Mentha arvensis var. piperascens	Plant		28.0	-0.23812799612849617	Suziki, A., Morimoto, I., and Okitzu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
Geranium thunbergii	Plant		28.0	-0.23812799612849617	--
Lycopodium clavatum	Plant		28.0	-0.23812799612849617	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Schizonepeta tenuifolia	Plant		28.0	-0.23812799612849617	--
Quisqualis indica	Fruit		22.0	-0.24975934398276664	--
Citrus paradisi	Fruit	0.0	22.0	-0.24975934398276664	--
Apium graveolens	Leaf	1.0	44.0	-0.2567393296527067	USDA's Ag Handbook 8 and sequelae)
Tephrosia candida	Plant		26.0	-0.2578538461831478	--
Stevia rebaudiana	Plant		26.0	-0.2578538461831478	Kinghorn, A. D. (Ed.) 2002. Medicinal and Aromatic Plants - Industrial Profiles. Stevia. The genus Stevia. Taylor & Francis. New York, NY. 211 pp.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rhizophora mangle	Leaf		43.0	-0.2628763469637149	--
Lophatherum gracile	Plant		25.0	-0.26771677121047355	--
Scutellaria baicalensis	Root	17.0	18.0	-0.27058763773169275	--
Gentiana scabra	Root		18.0	-0.27058763773169275	--
Platycodon grandiflorum	Root	13.0	18.0	-0.27058763773169275	--
Cinnamomum aromaticum	Bark	4.0	10.0	-0.27207069859955574	--
Cinnamomum burmannii	Bark		10.0	-0.27207069859955574	--
Polygonum multiflorum	Plant		24.5	-0.27264823372413644	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Brassica oleracea var. capitata l.	Leaf	2.0	41.0	-0.2751503815857314	--
Ribes nigrum	Fruit	2.0	21.0	-0.27984522139310664	--
Catalpa ovata	Fruit		21.0	-0.27984522139310664	--
Chaenomeles lagenaria	Fruit		21.0	-0.27984522139310664	--
Zizyphus jujuba	Fruit		21.0	-0.27984522139310664	--
Brassica nigra	Leaf	2.0	40.0	-0.28128739889673965	USDA's Ag Handbook 8 and sequelae)
Arachis hypogaea	Seed	31.0	35.0	-0.2876509455451	--
Rosmarinus officinalis	Leaf	9.0	38.0	-0.29356143351875613	USDA's Ag Handbook 8 and sequelae)
Artemisia capillaris	Plant		22.0	-0.2973055462924508	--
Chamissoa altissima	Leaf	4.0	36.0	-0.3058354681407726	Tramil
Artemisia herba-alba	Plant	10.0	21.0	-0.30716847131977654	--
Lycium chinense	Fruit		20.0	-0.30993109880344666	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Psidium guajava	Fruit	2.0	20.0	-0.30993109880344666	USDA's Ag Handbook 8 and sequelae)
Pimenta dioica	Fruit	11.0	20.0	-0.30993109880344666	--
Elaeagnus umbellatus	Fruit	3.0	20.0	-0.30993109880344666	--
Dioscorea alata	Root	2.0	17.0	-0.3143853332674246	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Atractylodes lancea	Rhizome		33.0	-0.3146567506186579	--
Cyperus rotundus	Rhizome		33.0	-0.3146567506186579	--
Allium cepa	Seed		34.0	-0.31604114389068755	--
Phaseolus acutifolius	Seed	25.0	34.0	-0.31604114389068755	--
Cajanus cajan	Seed	25.0	34.0	-0.31604114389068755	--
Cinnamomum verum	Leaf		34.0	-0.3181095027627891	--
Atractylodes ovata	Rhizome	26.0	32.0	-0.3199754921774587	--
Erythroxylum novogranatense	Leaf	16.0	33.0	-0.32424652007379734	--
Camellia sinensis	Leaf		30.0	-0.34265757200682206	--
Anemarrhena asphodeloides	Rhizome	19.0	27.0	-0.3465691999714629	--
Siegesbeckia orientalis	Plant		17.0	-0.3466201714290795	--
Quercus velutina	Stem	5.0	93.0	-0.346907650767414	--
Erythroxylum coca	Leaf	18.0	29.0	-0.3487945893178303	--
Eriobotrya japonica	Leaf		28.0	-0.35493160662883855	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Brassica oleracea var. sabellica l.	Leaf	4.0	28.0	-0.35493160662883855	--
Quercus phellos	Stem	2.0	92.0	-0.3617626383317617	--
Symphoricarpos orbiculatus	Stem	2.0	92.0	-0.3617626383317617	--
Magnolia officinalis	Bark		9.0	-0.36825730921556044	--
Sorbus aucubaria	Fruit	1.0	18.0	-0.37010285362412665	--
Euodia rutaecarpa	Fruit		18.0	-0.37010285362412665	--
Nardostachys chinensis	Rhizome		22.0	-0.3731629077654671	--
Curcuma longa	Rhizome		22.0	-0.3731629077654671	--
Diospyros virginiana	Leaf	5.0	25.0	-0.37334265856186327	--
Panax japonicus	Rhizome		20.0	-0.3838003908830688	--
Cistanche salsa	Plant		13.0	-0.3860718715383825	--
Erythroxylum novogranatense	Leaf	19.0	22.0	-0.391753710494888	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cimicifuga dahurica	Rhizome		18.0	-0.3944378740006705	--
Actaea dahurica	Rhizome		18.0	-0.3944378740006705	Suziki, A., Morimoto, I., and Okitzu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
Eriocaulon sp	Leaf		21.0	-0.39789072780589624	--
Blechnum orientale	Rhizome		17.0	-0.39975661555947134	--
Belamcanda chinensis	Rhizome		17.0	-0.39975661555947134	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Drynaria fortunei	Rhizome		17.0	-0.39975661555947134	--
Forsythia suspensa	Fruit		17.0	-0.40018873103446667	--
Fragaria spp	Fruit	1.1	17.0	-0.40018873103446667	--
Gardenia jasminoides	Fruit	10.0	17.0	-0.40018873103446667	--
Sambucus nigra	Fruit	3.0	17.0	-0.40018873103446667	--
Cassia tora	Seed		31.0	-0.40121173892745016	--
Vigna radiata	Seed	26.0	31.0	-0.40121173892745016	USDA's Ag Handbook 8 and sequelae)
Prunus persica	Seed		31.0	-0.40121173892745016	--
Angelica laxiflora	Root		15.0	-0.4019807243388883	--
Morinda sp	Root		15.0	-0.4019807243388883	--
Rumex acetosa	Leaf	2.0	20.0	-0.4040277451169045	--
Cnidium officinale	Rhizome		16.0	-0.40507535711827214	--
Notopterygium incisum	Rhizome		16.0	-0.40507535711827214	--
Sinomenium acutum	Rhizome		15.0	-0.410394098677073	--
Equisetum hyemale	Plant		10.0	-0.4156606466203598	--
Arisaema consanguineum	Rhizome		14.0	-0.41571284023587385	--
Dioscorea bulbifera	Rhizome		12.0	-0.4263503233534755	--
Gastrodia elata	Rhizome		12.0	-0.4263503233534755	--
Magnolia denudata	Flower		25.0	-0.4271677275654511	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Magnolia fargesii	Flower		25.0	-0.4271677275654511	--
Prunella vulgaris	Flower		25.0	-0.4271677275654511	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Magnolia kobus	Flower		25.0	-0.4271677275654511	--
Tussilago farfara	Flower		25.0	-0.4271677275654511	--
Scutellaria lateriflora	Plant	1.2	8.6	-0.42946874165861587	--
Pistacia vera	Seed	3.0	30.0	-0.42960193727303775	--
Hordeum vulgare	Seed	20.0	30.0	-0.42960193727303775	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Juglans regia	Seed	25.0	30.0	-0.42960193727303775	USDA's Ag Handbook 8 and sequelae)
Persea americana	Fruit	4.0	16.0	-0.4302746084448067	--
Artocarpus heterophyllus	Fruit	4.0	16.0	-0.4302746084448067	--
Ribes rubrum	Fruit	2.0	16.0	-0.4302746084448067	--
Citrus aurantium	Fruit		16.0	-0.4302746084448067	--
Ribes uva-crispa	Fruit	1.0	16.0	-0.4302746084448067	--
Ephedra spp	Plant		8.0	-0.4353864966750113	--
Rheum palmatum	Rhizome	9.0	10.0	-0.4369878064710772	--
Rehmannia glutinosa	Root		14.0	-0.44577841987462014	--
Sophora subprostrata	Root		14.0	-0.44577841987462014	--
Polygonum multiflorum	Rhizome		8.0	-0.44762528958867887	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Phoenix dactylifera	Seed	0.6	29.0	-0.4579921356186253	Abstract (See species file)
Raphanus sativus	Seed		29.0	-0.4579921356186253	--
Rosa laevigata	Fruit		15.0	-0.4603604858551467	--
Annona cherimola	Fruit	3.0	15.0	-0.4603604858551467	--
Spirulina spp.	Plant		5.3	-0.4620163942487908	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Stellaria media	Plant	0.4	5.2	-0.46300268675152334	--
Albizia julibrissin	Bark	7.0	8.0	-0.4644439198315651	--
Anthriscus cerefolium	Leaf	9.0	10.0	-0.4653979182269869	--
Phytelephas aequatorialis	Flower	7.0	24.0	-0.4756094286295744	KOZIOL & PEDERSEN. 1993. PHYTELEPHAS AEQUATORIALIS(ARECACEAE) IN HUMAN AND ANIMAL NUTRITION. ECON. BOT. 47:401-307.
Euphrasia officinalis	Plant	0.5	3.5	-0.47976965929797716	--
Silybum marianum	Plant		3.3	-0.4817422443034423	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Colocasia esculenta	Leaf		6.6	-0.486263777084415	--
Nelumbo nucifera	Seed		28.0	-0.48638233396421304	--
Glycyrrhiza uralensis	Root	11.0	13.0	-0.489576115410352	--
Scrophularia buergeriana	Root		13.0	-0.489576115410352	--
Ocimum basilicum	Leaf	5.0	6.0	-0.48994598747101986	USDA's Ag Handbook 8 and sequelae)
Genipa americana	Fruit	3.0	14.0	-0.49044636326548674	--
Citrus medica	Fruit		14.0	-0.49044636326548674	--
Vaccinium vitis-idaea	Fruit	1.7	14.0	-0.49044636326548674	--
Crataegus cuneata	Fruit		14.0	-0.49044636326548674	--
Salvia officinalis	Leaf	1.0	5.9	-0.4905596892021207	--
Ephedra sinica	Plant	0.4	2.1	-0.49357775433623324	--
Eupatorium perfoliatum	Plant	0.2	2.0	-0.49456404683896577	--
Asparagus officinalis	Shoot	12.0	124.0	-0.49520977085345347	--
Urtica dioica	Leaf	0.9	4.7	-0.49792410997533065	--
Curcuma longa	Plant	0.5	1.5	-0.49949550935262865	--
Turnera diffusa	Leaf	0.8	3.7	-0.5040611272863389	--
Centella asiatica	Leaf	0.4	3.4	-0.5059022324796413	--
Stachys officinalis	Plant	0.1	0.8	-0.5063995568717568	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Silybum marianum	Leaf	0.7	3.3	-0.506515934210742	--
Fucus vesiculosus	Plant	0.1	0.6	-0.5083721418772219	--
Ginkgo biloba	Leaf	0.6	2.3	-0.5126529515217503	--
Senna alexandrina	Leaf	0.4	1.9	-0.5151077584461536	--
Eriodictyon californicum	Leaf	0.4	1.7	-0.5163351619083554	--
Thymus vulgaris	Leaf	0.3	1.5	-0.517562565370557	--
Aloe spp.	Leaf		1.1	-0.5200173722949603	--
Citrus sinensis	Fruit	0.9	13.0	-0.5205322406758267	--
Verbascum thapsus	Leaf	0.2	0.4	-0.524313284412666	--
Lobelia inflata	Leaf	0.1	0.4	-0.524313284412666	--
Polygala tenuifolia	Root		12.0	-0.5333738109460838	--
Salvia miltiorrhiza	Root		12.0	-0.5333738109460838	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Averrhoa carambola	Fruit	1.0	12.0	-0.5506181180861668	USDA's Ag Handbook 8 and sequelae)
Cornus officinalis	Fruit		12.0	-0.5506181180861668	--
Pinellia ternata	Tuber	14.0	18.0	-0.5534310602663841	--
Mangifera indica	Fruit	0.4	11.4	-0.5686696445323708	--
Cocos nucifera	Seed	9.0	25.0	-0.5715529290009757	--
Firmiana simplex	Seed		25.0	-0.5715529290009757	--
Ipomoea batatas	Root	2.0	11.0	-0.5771715064818157	--
Pinus echinata	Shoot	6.0	88.0	-0.59894448594495	--
Castanea dentata	Seed	10.0	24.0	-0.5999431273465632	--
Chenopodium album	Seed		24.0	-0.5999431273465632	--
Vitis vinifera	Stem		75.0	-0.6142974269256724	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Allium sativum var. sativum	Bulb		15.3	-0.616532999263753	--
Lonicera japonica	Flower		21.0	-0.6209345318219442	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Santalum acuminatum	Fruit	2.0	9.0	-0.6408757503171868	--
Citrus aurantiifolia	Fruit	1.0	9.0	-0.6408757503171868	USDA's Ag Handbook 8 and sequelae)
Vaccinium myrtillus	Fruit	1.0	8.7	-0.6499015135402889	--
Ophiopogon japonicus	Tuber	7.0	16.0	-0.6586794393978675	--
Bletilla striata	Tuber		16.0	-0.6586794393978675	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Artocarpus altilis	Fruit	1.2	8.0	-0.6709616277275268	--
Citrullus lanatus	Fruit		8.0	-0.6709616277275268	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Citrus reticulata	Fruit	0.8	8.0	-0.6709616277275268	ACTA AGRIC SCAND SUPPL 22: 1980
Portulaca oleracea	Shoot	3.0	60.0	-0.679627042127225	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Capsicum annuum	Fruit	2.0	7.7	-0.6799873909506287	--
Vigna aconitifolia	Seed	19.0	21.0	-0.6851137223833258	--
Ficus carica	Fruit	1.0	7.0	-0.7010475051378668	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Vaccinium corymbosum	Fruit	1.0	7.0	-0.7010475051378668	--
Murraya sp	Fruit	1.0	7.0	-0.7010475051378668	--
Prunus cerasus	Fruit	1.0	7.0	-0.7010475051378668	--
Asparagus lucidus	Root	7.0	8.0	-0.7085645930890114	--
Myristica fragrans	Seed	13.0	20.0	-0.7135039207289134	--
Zea mays	Seed	4.0	20.0	-0.7135039207289134	--
Coix lacryma-jobi	Seed		20.0	-0.7135039207289134	Suziki, A., Morimoto, I., and Okitzu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
Canavalia ensiformis	Seed		20.0	-0.7135039207289134	--
Musa x paradisiaca	Fruit	1.0	6.5	-0.7160904438430368	USDA's Ag Handbook 8 and sequelae)

Plant	Part	Low PPM	High PPM	StdDev	Reference
Ananas comosus	Fruit	0.7	6.0	-0.7311333825482068	USDA's Ag Handbook 8 and sequelae)
Amphicarpaea bracteata	Shoot		40.0	-0.7372574394002785	--
Urtica dioica	Seed		19.0	-0.741894119074501	--
Triticum aestivum	Seed	12.0	19.0	-0.741894119074501	--
Serenoa repens	Fruit	0.7	5.2	-0.7552020844764787	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Macadamia spp	Seed	17.0	18.0	-0.7702843174200885	USDA's Ag Handbook 8 and sequelae)
Annona muricata	Fruit		4.0	-0.7913051373688869	--
Phoenix dactylifera	Fruit	3.0	4.0	-0.7913051373688869	USDA's Ag Handbook 8 and sequelae)
Fritillaria thunbergii	Bulb		12.0	-0.7939654612611702	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Quercus rubra	Seed		17.0	-0.798674515765676	--
Castanea mollisima	Seed	8.0	17.0	-0.798674515765676	--
Dioscorea villosa	Root	1.3	5.6	-0.813679062374768	--
Aconitum carmichaelii	Tuber		13.0	-0.8165520080950929	--
Paeonia moutan	Root Bark	10.0	15.0	-0.8207826816681236	--
Paeonia suffruticosa	Root Bark	10.0	15.0	-0.8207826816681236	--
Genipa americana	Seed		16.0	-0.8270647141112636	--
Areca catechu	Seed		16.0	-0.8270647141112636	--
Simmondsia chinensis	Seed		16.0	-0.8270647141112636	--
Echinacea purpurea	Root	1.3	5.1	-0.8355779101426338	--
Echinacea spp	Root		5.1	-0.8355779101426338	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Astragalus membranaceus	Root	0.8	5.0	-0.8399576796962069	--
Spondias dulcis	Fruit		1.9	-0.8544854799306009	--
Brassica rapa	Seed		15.0	-0.8554549124568511	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Opuntia ficus-indica	Seed		15.0	-0.8554549124568511	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
Spondias tuberosa	Fruit		1.33	-0.8716344300544947	--
Eleutherococcus senticosus	Root	0.9	4.2	-0.8749958361247925	--
Apium graveolens	Fruit	0.3	1.2	-0.8755455941178387	--
Inula helenium	Root	1.0	3.9	-0.888135144785512	--
Parthenium integrifolium	Root	0.6	3.7	-0.8968946838926584	--
Centella asiatica	Bark		3.4	-0.9069023286651865	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Gentiana lutea	Root	0.6	2.9	-0.9319328403212439	--
Armoracia rusticana	Root	0.5	2.9	-0.9319328403212439	--
Symphytum officinale	Root		2.8	-0.9363126098748169	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Smilax officinalis	Root	0.5	2.6	-0.9450721489819633	--
Smilax spp	Root	0.5	2.6	-0.9450721489819633	--
Quercus stellata	Stem	4.0	52.0	-0.9559621409056692	--
Asparagus officinalis	Root	0.2	2.3	-0.9582114576426829	--
Arctium lappa	Root	0.5	2.2	-0.9625912271962561	--
Ruscus aculeatus	Root	0.6	2.1	-0.9669709967498292	--
Tragopogon porrifolius	Root		2.0	-0.9713507663034024	--
Harpagophytum procumbens	Root	0.3	1.8	-0.9801103054105488	--
Hydrastis canadensis	Root	0.4	1.6	-0.9888698445176951	--
Castanea sativa	Seed	4.0	10.0	-0.9974059041847889	--
Yucca baccata	Root	0.3	1.4	-0.9976293836248417	--
Juncus effusus	Pith		38.0	-1.0	--
Taraxacum officinale	Root	0.2	1.3	-1.0020091531784148	--
Quercus alba	Bark	0.6	2.4	-1.003088939281191	--
Salix alba	Bark	0.4	2.1	-1.0319449224659927	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Glycyrrhiza glabra	Root	0.1	0.3	-1.0458068487141465	--
Ginkgo biloba	Seed	3.0	8.0	-1.054186300875964	USDA's Ag Handbook 8 and sequelae)
Morus alba	Root Bark	9.0	14.0	-1.12857618729367	--
Tabebuia heptaphylla	Bark	0.1	0.7	-1.166606177328399	--
Plantago major	Seed	0.8	2.5	-1.2103323917766955	--
Plantago psyllium	Seed	0.5	2.1	-1.2216884711149305	--
Phaseolus coccineus	Seed		2.0	-1.2245274909494892	--
Foeniculum vulgare	Seed	0.1	0.7	-1.261434748798753	--
Dendrobium nobile	Stem		26.0	-1.342191817578709	--
Hordeum vulgare	Sprout Seedling		20.0	-1.394755939064127	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Hordeum vulgare	Stem		21.0	-1.4164667554004475	--
Akebia quinata	Stem		10.0	-1.5798716186082722	--
Panax ginseng	Fruit				--
Panax ginseng	Petiole				--
Crataegus rhipidophylla	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Panax ginseng	Stem				--
Panax ginseng	Root				--
Humulus lupulus	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Juglans nigra	Pericarp				--
Allium sativum var. sativum	Root				--
Stevia rebaudiana	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Chamaemelum nobile	Flower				--
Carthamus tinctorius	Flower				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Elytrigia repens	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Rubus idaeus	Leaf				--
Allium ampeloprasum	Plant				--
Polygonum multiflorum	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Zingiber officinale	Root				--
Acorus calamus	Rhizome				Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
Mentha x piperita	Leaf				--
Berberis vulgaris	Bark				--
Artemisia cina	Plant				--
Phytelephas aequatorialis	Mesocarp	13.0	37.0		KOZIOL & PEDERSEN. 1993. PHYTELEPHAS AEQUATORIALIS(ARECACEAE) IN HUMAN AND ANIMAL NUTRITION. ECON. BOT. 47:401-307.
Myristica fragrans	Aril		20.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Trifolium pratense	Flower				--
Achillea millefolium	Plant				--
Nepeta cataria	Plant				--
Symphytum officinale	Leaf				--
Carica papaya	Fruit				--
Lygodium japonicum	Pollen Or Spore		23.0		--
Juglans nigra	Fruit				--
Cnicus benedictus	Plant				--
Passiflora incarnata	Flower				--
Rheum rhabarbarum	Pt	1.0	46.0		--
Chrysanthemum parthenium	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Althaea officinalis	Root				--
Avena sativa	Plant				--
Nasturtium officinale	Plant				--
Cichorium intybus	Root				--
Prunus persica	Bark				--
Petroselinum crispum	Plant				--
Angelica sinensis	Root				--
Juglans nigra	Hull Husk				--
Larrea tridentata	Plant				--
Frangula purshiana	Bark				--
Cimicifuga racemosa	Root				--
Hibiscus sabdariffa	Flower				--
Vaccinium macrocarpon	Fruit				--
Juniperus communis	Fruit				--
Rumex crispus	Root				--
Cymbopogon citratus	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Chrysanthemum parthenium	Leaf				--
Crataegus laevigata	Flower				--
Gymnema sylvestre	Leaf				--
Medicago sativa	Plant				--
Amorphophallus konjac	Root				--
Equisetum arvense	Plant				--
Inula helenium	Plant				--
Myrica cerifera	Bark				--
Hydrangea arborescens	Root				--
Rosa canina	Fruit				--
Trigonella foenum-graecum	Seed				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Bupleurum chinense	Root				--
Ruscus aculeatus	Bark				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Valeriana officinalis	Root				--
Humulus lupulus	Flower				--
Borago officinalis	Plant				Abstract (See species file)
Actaea racemosa	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Caulophyllum thalictroides	Root				--
Ulmus rubra	Bark				--
Arctostaphylos uva-ursi	Leaf				--
Schisandra chinensis	Fruit				--
Tanacetum parthenium	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Crataegus laevigata	Fruit				--
Artemisia dracunculus	Plant				--
Berberis vulgaris	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Panax ginseng	Leaf				--