

C ARSENIC

Chemid

ARSENIC

ubiquitous

Yes

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Acanthopanax gracilistylis	Root Bark	0.23	0.23	-0.07294207637240398	--
Achyranthes bidentata	Root	0.26	0.26	-0.19646078895659472	--
Aconitum carmichaelii	Tuber	0.77	0.77	0.1671723892563164	--
Acorus calamus	Rhizome	1.13	1.13	1.6025541922926834	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.
Albizia julibrissin	Bark	0.15	0.15	-0.7071067811865482	--
Alisma plantago-aquatica	Rhizome	0.05	0.05	-0.4841759474586404	--
Allium cepa	Bulb	0.002	0.076		--
Amomum xanthioides	Seed	0.09	0.09	0.18945418956322616	--
Anacardium occidentale	Seed	0.02	0.02	-0.6237689826185465	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Anemarrhena asphodeloides	Rhizome	0.14	0.14	-0.3102817691460301	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.
Anethum graveolens	Plant	0.01	0.06	-0.44843252644734777	ACTA AGRIC SCAND SUPPL 22: 1980
Angelica laxiflora	Root	0.21	0.21	-0.19857782332035118	--
Apium graveolens	Root	0.01	0.09	-0.2036587057933666	ACTA AGRIC SCAND SUPPL 22: 1980
Arisaema consanguineum	Rhizome	0.17	0.17	-0.2523170430418266	--
Aristolochia debilis	Fruit	0.21	0.21	-0.2678028524907751	--
Armoracia rusticana	Root	0.01	0.04	-0.20577574015712302	ACTA AGRIC SCAND SUPPL 22: 1980
Artemisia capillaris	Plant	0.16	0.16	-0.44305148987388165	--
Artemisia vulgaris	Plant	--	--		Chem. & Pharm. Bull. 38: 2205.
Asiasarum heterotropoides	Root	0.68	0.68	-0.17867770030104096	--
Asiasarum sieboldii	Root	0.68	0.68	-0.17867770030104096	--
Asparagus lucidus	Root	0.16	0.16	-0.2006948576841076	--
Asparagus officinalis	Shoot	0.005	0.006		--
Atractylodes ovata	Rhizome	0.01	0.01	-0.5614622489309118	--
Belamcanda chinensis	Rhizome	0.12	0.12	-0.3489249198821658	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.
Bertholletia excelsa	Seed	0.02	0.02	-0.6237689826185465	--
Beta vulgaris	Root	0.01	0.08	-0.20408211266611795	ACTA AGRIC SCAND SUPPL 22: 1980

Plant	Part	Low PPM	High PPM	StdDev	Reference
Blechnum orientale	Rhizome	0.02	0.02	-0.5421406735628439	--
Bletilla striata	Tuber	1.35	1.35	1.4182689798197146	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.
Boehmeria nivea	Plant	--	--		--
Brassica napus var. napobrassica	Root	--	0.01	-0.20704596077537676	ACTA AGRIC SCAND SUPPL 22: 1980
Brassica oleracea var. botrytis l.	Leaf	--	--		--
Brassica oleracea var. botrytis l.	Flower	--	--		--
Brassica oleracea var. capitata l.	Leaf	0.004	0.007	-0.8279453340767596	--
Brassica oleracea var. italica	Leaf	--	0.01	-0.8114109228193096	ACTA AGRIC SCAND SUPPL 22: 1980
Brassica pekinensis	Leaf	0.038	0.07	-0.4807226976703079	--
Brassica rapa	Root	--	--		--
Broussonetia papyrifera	Fruit	0.62	0.62	0.25762385426922296	--
Bupleurum chinense	Root	0.68	0.68	-0.17867770030104096	--
Canavalia ensiformis	Seed	0.02	0.02	-0.6237689826185465	--
Capsicum annum	Fruit	0.004	0.015	-0.5177009203400424	--
Carthamus tinctorius	Flower	0.48	0.48	0.6445840747173526	--
Carya illinoensis	Seed	0.02	0.02	-0.6237689826185465	--
Carya ovata	Seed	0.02	0.02	-0.6237689826185465	--
Celosia cristata	Flower	0.12	0.12	-1.1404179783460853	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Chaenomeles lagenaria	Fruit	0.07	0.07	-0.4472168499210183	--
Chondrus crispus	Plant	10	10	0.08644250895517988	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Cichorium endivia	Leaf	0.04	0.048	-0.6019750468916086	--
Cinnamomum burmannii	Bark	--	--		--
Citrus medica	Fruit	1.64	1.64	1.5647829784038527	--
Citrus paradisi	Fruit	0.001	4.4	5.101801784885793	--
Citrus reticulata	Fruit	0.04	0.3	-0.15246528271419005	ACTA AGRIC SCAND SUPPL 22: 1980
Citrus sinensis	Fruit	0.001	0.154	-0.33956845146287234	--
Cocos nucifera	Seed	0.02	0.02	-0.6237689826185465	Furr, A.K., et al. 1979
Coptis chinensis	Rhizome	0.11	0.11	-0.3682464952502336	--
Coptis japonica	Rhizome	0.11	0.11	-0.3682464952502336	--
Coptis spp	Rhizome	0.11	0.11	-0.3682464952502336	--
Cornus officinalis	Fruit	0.65	0.65	0.29606971086141826	--
Corylus avellana	Seed	0.02	0.02	-0.6237689826185465	Furr, A.K., et al. 1979
Crataegus cuneata	Fruit	0.11	0.11	-0.39595570779809175	--
Cucumis melo	Fruit	0.004	0.006	-0.529234677317701	--
Cucumis sativus	Fruit	0.003	0.25	-0.21654171036784842	--
Cynanchum atratum	Root	4.85	4.85	-0.0021170343637562897	--
Cyperus rotundus	Rhizome	0.29	0.29	-0.02045813862501304	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Daucus carota	Root	0.003	1	-0.16512868037299994	--
Dendrobium nobile	Plant	--	--		--
Dioscorea bulbifera	Rhizome	0.37	0.37	0.13411446431952964	--
Drynaria fortunei	Rhizome	0.06	0.06	-0.4648543720905728	--
Equisetum hyemale	Plant	0.12	0.12	-0.445203904503268	--
Equisetum hyemale	Root	0.12	0.12	-0.2023884851751127	--
Eriobotrya japonica	Leaf	0.28	0.28	0.6766860903511981	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.
Eriocaulon sp	Leaf	0.02	0.02	-0.7562962186278094	--
Eucommia ulmoides	Bark	0.24	0.24	1.4142135623730951	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.
Fallopia japonica	Plant	--	--		Chem. & Pharm. Bull. 38: 2205.
Firmiana simplex	Seed	0.3	0.3	2.6291237061085453	--
Fragaria spp	Fruit	--	0.01	-0.5241085631054083	ACTA AGRIC SCAND SUPPL 22: 1980
Fraxinus rhynchophylla	Bark	0.15	0.15	-0.7071067811865482	--
Fucus vesiculosus	Plant	68	68	3.207443721565502	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Gardenia jasminoides	Fruit	0.05	0.05	-0.4728474209824816	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Gastrodia elata	Rhizome	0.07	0.07	-0.44553279672250495	--
Gentiana scabra	Root	1.06	1.06	-0.16258823913649229	--
Glechoma hederacea	Plant	--	--		Chem. & Pharm. Bull. 38: 2205.
Glycyrrhiza uralensis	Root	0.29	0.3	-0.19476716146558964	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	Sprout Seedling	0.01	0.01		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.
Hyoscyamus niger	Seed	0.29	0.29	2.5129489672254346	--
Isatis tinctoria	Root	132	132	5.381501352668795	--
Juglans cinerea	Seed	0.02	0.02	-0.6237689826185465	--
Juglans nigra	Seed	0.03	0.03	-0.5075942437354362	Furr, A.K., et al. 1979
Juncus effusus	Pith	0.33	0.33		--
Jussiaea repens	Plant	1	1	-0.39785078265676665	--
Lablab purpureus	Seed	0.02	0.02	-0.6237689826185465	--
Lactuca sativa	Leaf	0.001	0.58	2.330127216096206	--
Ligustrum japonicum	Fruit	0.6	0.6	0.23199328320775964	--
Ligustrum lucidum	Fruit	0.6	0.6	0.23199328320775964	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.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Linum usitatissimum	Seed	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Lonicera japonica	Flower	0.09	0.09	-1.2891681494347051	--
Lophatherum gracile	Plant	0.12	0.12	-0.445203904503268	--
Lycium chinense	Fruit	0.44	0.44	0.02694871471605311	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.
Lycium chinense	Root Bark	0.73	0.73	1.9532267117499267	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.
Lycopersicon esculentum	Fruit	0.003	0.043	-0.4818181208539938	--
Lycopodium clavatum	Plant	0.49	0.49	-0.4252940691814437	--
Lygodium japonicum	Pollen Or Spore	1.17	1.17		--
Magnolia denudata	Flower	0.55	0.55	0.9916678072574657	--
Magnolia fargesii	Flower	0.55	0.55	0.9916678072574657	--
Magnolia kobus	Flower	0.55	0.55	0.9916678072574657	--
Malus domestica	Fruit	0.001	0.43	0.014133429185321438	--
Morinda sp	Root	0.26	0.26	-0.19646078895659472	--
Morus alba	Root Bark	0.1	0.1	-0.59974596128421	--
Musa x paradisiaca	Fruit	0.04	0.35	-0.08838885506053196	ACTA AGRIC SCAND SUPPL 22: 1980

Plant	Part	Low PPM	High PPM	StdDev	Reference
Myristica fragrans	Seed	0.01	0.01	-0.7399437215016571	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.
Nardostachys chinensis	Rhizome	2.11	2.11	3.496068578363329	--
Nelumbo nucifera	Seed	0.11	0.11	0.4218036673294472	--
Notopterygium incisum	Rhizome	0.13	0.13	-0.32960334451409795	--
Ophiopogon japonicus	Tuber	0.05	0.05	-1.3859130335120398	--
Oryza sativa	Seed	0.211	0.211	1.5951685300488623	--
Paeonia lactiflora	Root	0.12	0.12	-0.2023884851751127	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.
Paeonia moutan	Root Bark	0.09	0.09	-0.6402693370466567	--
Paeonia suffruticosa	Root Bark	0.09	0.09	-0.6402693370466567	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.
Panax ginseng	Root	--	--		--
Panax quinquefolius	Plant	0.25	0.44	-0.4279845874681766	--
Pastinaca sativa	Root	0.01	0.01	-0.20704596077537676	--
Petasites japonicus	Plant	--	--		Chem. & Pharm. Bull. 38: 2205.
Petroselinum crispum	Plant	0.01	0.21	-0.44036097158714854	--
Peucedanum decursivum	Plant	--	--		--
Phaseolus vulgaris	Fruit	0.003	0.01	-0.5241085631054083	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Phaseolus vulgaris	Seed	0.002	0.002	-0.8212660387198343	--
Pistacia vera	Seed	0.02	0.02	-0.6237689826185465	--
Pisum sativum	Seed	0.01	0.04	-0.39141950485232585	--
Plantago asiatica	Plant	1.71	1.71	-0.35964542298515745	--
Platycodon grandiflorum	Root	0.29	0.29	-0.19519056833834098	--
Polygala tenuifolia	Root	0.12	0.12	-0.2023884851751127	--
Polygonum multiflorum	Rhizome	0.11	0.11	-0.3682464952502336	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.
Polystichum polyblepharum	Plant	--	--		--
Prunella vulgaris	Flower	0.37	0.37	0.09916678072574664	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.
Prunus domestica	Fruit	0.001	0.51	0.11665571343117484	--
Prunus dulcis	Seed	0.02	0.02	-0.6237689826185465	Furr, A.K., et al. 1979
Prunus persica	Fruit	0.001	0.053	-0.46900283532326215	--
Pueraria pseudohirsuta	Root	0.26	0.26	-0.19646078895659472	--
Pulsatilla chinensis	Root	1.14	1.14	-0.15920098415448194	--
Pyrus communis	Fruit	0.001	0.06	-0.46003213545175	--
Quercus rubra	Seed	0.02	0.02	-0.6237689826185465	--
Quisqualis indica	Fruit	0.01	0.01	-0.5241085631054083	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Raphanus sativus	Root	--	--		--
Rheum rhabarbarum	Pt	0.01	0.01		--
Rhodymenia palmata	Plant	33	33	1.3240809208523767	--
Ribes nigrum	Fruit	0.01	0.06	-0.46003213545175	ACTA AGRIC SCAND SUPPL 22: 1980
Ribes rubrum	Fruit	0.01	0.18	-0.30624870908297014	--
Ribes uva-crispa	Fruit	--	--		--
Rosa laevigata	Fruit	0.17	0.17	-0.31906399461370166	--
Rubia cordifolia	Root	1.1	1.1	-0.16089461164548705	--
Rubus chamaemorus	Fruit	--	--		--
Rubus chingii	Fruit	0.14	0.14	-0.3575098512058967	--
Salvia miltiorrhiza	Root	0.34	0.34	-0.19307353397458454	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.
Schisandra chinensis	Fruit	0.18	0.18	-0.30624870908297014	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.
Scrophularia buergeriana	Root	0.13	0.13	-0.2019650783023615	--
Scutellaria baicalensis	Root	0.18	0.18	-0.19984804393860506	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.
Siegesbeckia orientalis	Plant	0.25	0.25	-0.4382085569577622	--
Sinapis alba	Seed	0.05	0.05	-0.2752447659692153	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Solanum melongena	Fruit	0.004	0.004	-0.5317977344238474	--
Solanum tuberosum	Tuber	0.001	0.6	-0.1995283355639898	--
Sophora angustifolia	Root	0.49	0.49	-0.18672243088331536	--
Sophora subprostrata	Root	0.23	0.23	-0.19773100957484863	--
Sorbus aucubaria	Fruit	0.01	0.04	-0.4856627065132133	--
Spinacia oleracea	Leaf	0.02	0.29	0.7318007945426982	ACTA AGRIC SCAND SUPPL 22: 1980
Taraxacum mongolicum	Plant	1.95	1.95	-0.34673093520883896	--
Taraxacum officinale	Leaf	--	--		Chem. & Pharm. Bull. 38: 2205.
Tragopogon porrifolius	Root	0.11	0.11	-0.20281189204786404	--
Triticum aestivum	Seed	0.079	0.079	0.06166197679180489	--
Tussilago farfara	Flower	0.09	0.09	-1.2891681494347051	--
Urtica dioica	Leaf	0.02	0.11	-0.26026388090430685	ACTA AGRIC SCAND SUPPL 22: 1980
Vaccinium myrtillus	Fruit	0.01	0.01	-0.5241085631054083	ACTA AGRIC SCAND SUPPL 22: 1980
Vaccinium vitis-idaea	Fruit	--	--		--
Vicia faba	Fruit	0.2	1.4	1.2572161256662924	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Vigna mungo	Seed	0.162	0.162	1.0259123095216214	--
Vigna radiata	Seed	0.09	0.09	0.18945418956322616	--
Vitis vinifera	Fruit	0.001	0.889	0.6023550350459049	--

Plant	Part	Low	High	StdDev	Reference
		PPM	PPM		
Zea mays	Seed	0.001	0.211	1.5951685300488623	--
