

# C NITROGEN

Chemid

NITROGEN

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
Abies spectabilis	Leaf	--	14400	-1.4680751053401264	Wealth of India.
Acacia farnesiana	Leaf	12800	68800	1.2507839376624452	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Acrocomia totai	Fruit	6700	6700	-0.5554937177119953	--
Acrocomia totai	Seed	20200	20200	-0.3210015285942189	--
Allium cepa	Bulb	1700	17690		ACTA AGRIC SCAND SUPPL 22: 1980
Amphicarpaea bracteata	Shoot	26500	26500	0.25001993223044827	--
Ananas comosus	Fruit	450	1150	-0.9446478386927912	--
Anethum graveolens	Plant	6800	55300	2.123792178566495	ACTA AGRIC SCAND SUPPL 22: 1980
Annona cherimola	Fruit	2270	2270	-0.8661158359002702	--

<b>Plant</b>	<b>Part</b>	<b>Low PPM</b>	<b>High PPM</b>	<b>StdDev</b>	<b>Reference</b>
Annona muricata	Fruit	2700	2700	-0.8359651562567131	--
Annona squamosa	Leaf	36000	36000	-0.3885281323832231	--
Apium graveolens	Root	2000	19090	-1.1232374468782391	ACTA AGRIC SCAND SUPPL 22: 1980
Arachis hypogaea	Seed	40000	40000	1.3202716195440727	--
Armoracia rusticana	Root	8600	38461	1.3020990395574676	ACTA AGRIC SCAND SUPPL 22: 1980
Averrhoa carambola	Fruit	10200	12800	-0.12777477393130068	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Beta vulgaris	Root	2600	35830	0.9726859841750741	ACTA AGRIC SCAND SUPPL 22: 1980
Bixa orellana	Seed	24000	25200	0.09346138760231938	--
Brassica napus var. napobrassica	Root	1500	25000	-0.38327881620171095	ACTA AGRIC SCAND SUPPL 22: 1980
Brassica oleracea var. botrytis l.	Leaf	7000	71800	1.400721017239793	--
Brassica oleracea var. botrytis l.	Flower	3100	47500	1	--
Brassica oleracea var. capitata l.	Leaf	2100	37500	-0.31355959259454924	ACTA AGRIC SCAND SUPPL 22: 1980
Brassica oleracea var. italica	Leaf	7000	71800	1.400721017239793	ACTA AGRIC SCAND SUPPL 22: 1980
Brassica rapa	Root	1800	18000	-1.2597103584581741	--
Bromelia pinguin	Shoot	1410	35800	1.0804432785672944	--
Capsicum annum	Fruit	1900	23330	0.6105662880376689	ACTA AGRIC SCAND SUPPL 22: 1980
Citrus paradisi	Fruit	990	16360	0.12184480637349815	ACTA AGRIC SCAND SUPPL 22: 1980
Citrus reticulata	Fruit	1600	13075	-0.10849236253135133	ACTA AGRIC SCAND SUPPL 22: 1980
Citrus sinensis	Fruit	500	13845	-0.054501610611493154	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Cocos nucifera	Hull Husk	1100	1100		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Coffea arabica	Seed	16000	23000	-0.08890229552415746	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Corylus avellana	Seed	23000	28000	0.3255606206723808	ACTA AGRIC SCAND SUPPL 22: 1980
Crocus sativus	Silk Stigma Style	22200	24300		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Cucumis sativus	Fruit	1400	80000	4.584145393619958	--
Cyphomandra betacea	Fruit	2230	4450	-0.713258901893399	--
Daucus carota	Root	1400	20000	-1.009301346384899	--
Eriobotrya japonica	Seed	26000	26000	0.1597754541937655	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Fragaria spp	Fruit	880	10000	-0.32410478091260314	ACTA AGRIC SCAND SUPPL 22: 1980
Genipa americana	Fruit	13900	13900	-0.05064512833150329	--
Genipa americana	Seed	11100	11100	-1.0753240360719185	--
Hibiscus rosa-sinensis	Flower	640	6275	-1	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Hibiscus sabdariffa	Seed	--	32900	0.7317342785449883	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Ilex paraguariensis	Leaf	30000	30000	-0.6884022915379184	--
Indigofera tinctoria	Leaf	51100	51100	0.366155168156094	--
Lactuca sativa	Leaf	2200	54000	0.5110943450808634	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Lantana camara	Shoot	8800	8800	-1.3304632107977425	--
Lycopersicon esculentum	Fruit	1300	23330	0.6105662880376689	--
Lycopersicon esculentum	Leaf	26000	26000	-0.8883183976410487	--
Maclura pomifera	Fruit	--	25600	0.7697338294117962	Smith, J. L. and Perino, J. V. 1981. Osage Orange (Maclura pomifera): History and Economic Uses. Economic Botany 35(1): 24-41
Malus domestica	Fruit	280	4000	-0.7448119387296798	ACTA AGRIC SCAND SUPPL 22: 1980
Malva neglecta	Plant	4100	4200	-0.9110450788369697	--
Malva parviflora	Plant	9400	9400	-0.6022162385532511	--
Malva sylvestris	Leaf	3300	3300	-2.022842299776313	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Melilotus alba	Plant	8300	8300	-0.6675454163055763	--
Melilotus indica	Plant	33600	33600	0.8350256719979006	--
Momordica charantia	Fruit	33800	33800	1.3447002784284676	=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
Musa x paradisiaca	Fruit	1600	15000	0.0264845172682941	ACTA AGRIC SCAND SUPPL 22: 1980
Nicotiana tabacum	Leaf	20000	40000	-0.18861202628009283	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Panax quinquefolius	Plant	15000	20000	0.027319474332790486	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Passiflora edulis	Plant	960	1920	-1.0464546472690617	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pastinaca sativa	Root	3000	33160	0.6383899530572518	--
Persea schiedeana	Fruit	1910	8680	-0.41666035563236	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Petroselinum crispum	Leaf	4900	40700	-0.15362670771204504	ACTA AGRIC SCAND SUPPL 22: 1980
Phaseolus vulgaris	Fruit	3600	41000	1.8495488678089596	ACTA AGRIC SCAND SUPPL 22: 1980
Phyllanthus emblica	Fruit	1100	5445	-0.6434916315554005	--
Pisum sativum	Seed	11000	50000	2.149197451937149	--
Prunus domestica	Fruit	960	10000	-0.32410478091260314	ACTA AGRIC SCAND SUPPL 22: 1980
Prunus dulcis	Seed	3700	4315	-1.637750213350621	ACTA AGRIC SCAND SUPPL 22: 1980
Prunus persica	Fruit	1400	13075	-0.10849236253135133	--
Pterocarpus marsupium	Leaf	--	25000	-0.9382974241668313	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Pyrus communis	Fruit	480	3000	-0.8149297983658592	--
Raphanus sativus	Root	2000	38570	1.315746330715461	--
Rauvolfia serpentina	Seed	5500	16000	-0.669150378199311	--
Rheum rhabarbarum	Pt	1100	22000		--
Ribes nigrum	Fruit	1800	12775	-0.12952772042220517	ACTA AGRIC SCAND SUPPL 22: 1980
Ribes rubrum	Fruit	1600	20000	0.37707381544919133	--
Ribes uva-crispa	Fruit	1100	15000	0.0264845172682941	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Rosa canina	Fruit	3600	9000	-0.39422264054878253	ACTA AGRIC SCAND SUPPL 22: 1980
Rubus chamaemorus	Fruit	2400	18125	0.24560282863135485	--
Senna obtusifolia	Seed	22200	31300	0.599106145362096	--
Solanum melongena	Fruit	5400	10250	-0.30657531600355825	--
Solanum tuberosum	Tuber	2200	17000		ACTA AGRIC SCAND SUPPL 22: 1980
Sorbus aucubaria	Fruit	2100	11900	-0.19088084760386217	--
Spinacia oleracea	Leaf	3200	45700	0.09626842491686814	ACTA AGRIC SCAND SUPPL 22: 1980
Spondias dulcis	Fruit	16900	17900	0.22982631021321448	--
Spondias dulcis	Seed	6200	6200	-1.4814976939445261	--
Spondias tuberosa	Fruit	1100	1100	-0.9481537316746002	--
Tephrosia candida	Plant	23600	23600	0.24112405606767257	--
Tephrosia purpurea	Leaf	72500	72500	1.4357063358078408	--
Theobroma cacao	Seed	22800	22800	-0.10548081217201899	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Urtica dioica	Leaf	10000	55555	0.5888117313284553	--
Vaccinium macrocarpon	Fruit	650	5000	-0.6746940790935003	ACTA AGRIC SCAND SUPPL 22: 1980
Vitis vinifera	Fruit	1100	7220	-0.519032430701182	ACTA AGRIC SCAND SUPPL 22: 1980
Zingiber officinale	Rhizome	16000	24440		--
Zingiber officinale	Root	16000	24440	-0.453393339582228	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.