

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Vigna radiata*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	ADENOSINE-TRIPHOSPHATE	Sprout Seedling				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	ALANINE	Sprout Seedling	990.0	10399.0	-0.8997564719824734	USDA's Ag Handbook 8 and sequelae)
3	ALANINE	Seed	10500.0	11545.0	0.2952261354048832	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Sprout Seedling	160.0	1681.0	-1.0	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Seed	270.0	297.0	-0.3250213852082402	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Sprout Seedling	1970.0	20693.0	-0.6182818649110114	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Seed	16720.0	18383.0	-0.26496099366924114	USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Seed		0.09	0.18945418956322616	--
112	ASCORBIC-ACID	Seed	48.0	53.0	-0.30663815817527246	--
112	ASCORBIC-ACID	Sprout Seedling	113.0	1506.0	0.12020083478511438	USDA's Ag Handbook 8 and sequelae)
2	ASPARAGINE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	ASPARTIC-ACID	Sprout Seedling	4790.0	50315.0	-0.4166806780264269	USDA's Ag Handbook 8 and sequelae)
3	ASPARTIC-ACID	Seed	27560.0	30302.0	0.6847278409748893	USDA's Ag Handbook 8 and sequelae)
1	BEHENIC-ACID	Seed	312.0	360.0	-0.6444484945139936	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
53	BETA-CAROTENE	Sprout Seedling	0.1	1.4	0.05117933954512095	USDA's Ag Handbook 8 and sequelae)
53	BETA-CAROTENE	Seed	0.9	1.2	-0.35429746382896243	USDA's Ag Handbook 8 and sequelae)
47	BETA-SITOSTEROL	Sprout Seedling	50.0	500.0	-0.22568905807670636	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Seed	130.0	150.0	-0.5734134054352104	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
32	BIOCHANIN-A	Plant				Stitt, Paul. Why George should eat broccoli.
3	CADMIUM	Seed		0.165	-0.26456970735778806	--
28	CALCIUM	Sprout Seedling	110.0	1571.0	-0.4814496185209816	USDA's Ag Handbook 8 and sequelae)
28	CALCIUM	Seed	1183.0	1602.0	-0.46730269971233074	USDA's Ag Handbook 8 and sequelae)
2	CAMPESTEROL	Sprout Seedling	10.0	100.0	-1.0	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	CAMPESTEROL	Seed	20.0	25.0	-0.5705099108545394	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
7	CHLORINE	Seed	120.0	278.0	-0.1686206873836137	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
20	CHOLINE	Seed	1670.0	1856.0	0.17283513534505482	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
12	COPPER	Sprout Seedling	1.0	23.0	1.366529661191855	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Seed	9.0	13.0	-0.1645816165812568	USDA's Ag Handbook 8 and sequelae)
13	COUMESTROL	Seed		0.0	-0.5230347066964424	H. Adlercreutz, pers. comm.
13	COUMESTROL	Sprout Seedling				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	CYSTINE	Sprout Seedling	170.0	1786.0	-1.1912060022841449	USDA's Ag Handbook 8 and sequelae)
2	CYSTINE	Seed	2100.0	2309.0	-0.5850415482256782	USDA's Ag Handbook 8 and sequelae)
32	DAIDZEIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
32	DAIDZEIN	Seed	0.3	15.0	-0.46277160848299365	--
32	DAIDZEIN	Sprout Seedling				--
15	FIBER	Sprout Seedling	7200.0	94500.0	-0.2729204592947363	USDA's Ag Handbook 8 and sequelae)
15	FIBER	Seed	44950.0	66495.0	-0.5391807263159561	USDA's Ag Handbook 8 and sequelae)
15	FOLACIN	Sprout Seedling	0.539	7.105	1.413645675036839	USDA's Ag Handbook 8 and sequelae)
15	FOLACIN	Seed	5.8	7.3	1.9441202613457478	USDA's Ag Handbook 8 and sequelae)
23	FOLIC-ACID	Seed	1.4	1.6	-0.3528814296236972	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
16	FORMONONETIN	Plant				--
1	GALACTOSE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
81	GENISTEIN	Seed	2.0	21.8	-0.30346224755400253	--
81	GENISTEIN	Plant				Stitt, Paul. Why George should eat broccoli.
7	GLUCOSE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	GLUTAMIC-ACID	Sprout Seedling	1610.0	16912.0	-1.3307273280388923	USDA's Ag Handbook 8 and sequelae)
8	GLUTAMIC-ACID	Seed	42640.0	46883.0	0.21811788021109724	USDA's Ag Handbook 8 and sequelae)
7	GLUTATHIONE	Sprout Seedling				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
12	GLYCINE	Sprout Seedling	930.0	6618.0	-1.1846966656046878	USDA's Ag Handbook 8 and sequelae)
12	GLYCINE	Seed	9540.0	10489.0	-0.06696897779649544	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Sprout Seedling	700.0	7353.0	-0.9556870143562779	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Seed	6950.0	7642.0	0.4035349168214894	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	INOSITOL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
12	IODINE	Seed	0.034	0.037	-0.27497982395204346	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	IRON	Sprout Seedling	5.6	132.0	0.1837537773991908	USDA's Ag Handbook 8 and sequelae)
6	IRON	Seed	58.0	84.0	-0.3103412217683818	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Sprout Seedling	1320.0	13866.0	-0.2746975758881879	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Seed	10080.0	11083.0	0.07546930506301065	USDA's Ag Handbook 8 and sequelae)
22	ISOQUERCITRIN	Sprout Seedling				--
75	KAEMPFEROL	Sprout Seedling				--
3	KIEVITONE	Leaf Diffusate		24.0	-1.0	--
2	LEUCINE	Sprout Seedling	1750.0	18382.0	-0.9050471491150544	USDA's Ag Handbook 8 and sequelae)
2	LEUCINE	Seed	18470.0	20308.0	0.30884152903706713	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Seed	3570.0	4890.0	-0.8759356101658239	--
27	LINOLEIC-ACID	Sprout Seedling	420.0	4412.0	-0.9574803669005961	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Seed	16640.0	18296.0	0.8394693725634716	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Sprout Seedling	1666.0	17437.0	-1.377095593970498	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Sprout Seedling	176.0	2560.0	1.2536866452701125	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Seed	1777.0	2203.0	-0.2935954770399224	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Sprout Seedling	1.4	25.0	0.5619514869490164	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Seed	9.6	12.2	-0.5147295792293065	USDA's Ag Handbook 8 and sequelae)
3	MANNOSE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	MERCURY	Seed		0.036	-0.5272654042485163	--
15	METHIONINE	Sprout Seedling	340.0	3571.0	-0.6432645750200348	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Seed	2860.0	3145.0	-0.30206417164664323	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Seed	1610.0	1770.0	-0.7788039114002252	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Sprout Seedling	220.0	2311.0	-1.305847565394658	USDA's Ag Handbook 8 and sequelae)
6	MYRISTIC-ACID	Sprout Seedling		0.0		USDA's Ag Handbook 8 and sequelae)
56	NARINGENIN	Plant				Stitt, Paul. Why George should eat broccoli.
39	NIACIN	Sprout Seedling	6.8	85.0	-0.2472280725306782	USDA's Ag Handbook 8 and sequelae)
39	NIACIN	Seed	21.0	27.0	-0.47553477897955926	USDA's Ag Handbook 8 and sequelae)
3	NICKEL	Seed		3.456	-0.24795004115301575	--
18	OLEIC-ACID	Sprout Seedling	220.0	2311.0	-1.305847565394658	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Seed	832.0	1770.0	-0.9645497721718662	USDA's Ag Handbook 8 and sequelae)
25	P-COUMARIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
13	PALMITIC-ACID	Sprout Seedling	320.0	3361.0	-0.29363830512965683	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Seed	2500.0	4215.0	-0.6126319230675944	--
11	PANTOTHENIC-ACID	Sprout Seedling	2.9	48.0	1.0	USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Seed	18.0	22.0	0.5505732860064096	USDA's Ag Handbook 8 and sequelae)
24	PECTIN	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	PHASEOLLIDIN	Leaf Diffusate		13.0	1.0	--
7	PHENYLALANINE	Sprout Seedling	1170.0	12290.0	-0.9617538723657231	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Seed	14430.0	15865.0	0.516430426534178	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Sprout Seedling	455.0	6560.0	0.11559491863278125	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Seed	3260.0	4500.0	-0.22550634368040845	--

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2	PHYTOSTEROLS	Sprout Seedling	150.0	1576.0	0.20000826367279287	USDA's Ag Handbook 8 and sequelae)
2	PHYTOSTEROLS	Seed	230.0	253.0	-0.5815625959422273	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Sprout Seedling	1256.0	18092.0	0.787634347459963	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Seed	12038.0	14170.0	0.14070477117081934	USDA's Ag Handbook 8 and sequelae)
4	PUFA	Sprout Seedling	580.0	6092.0	-0.7620713354824633	USDA's Ag Handbook 8 and sequelae)
4	PUFA	Seed	3840.0	4222.0	-0.7738443631639267	USDA's Ag Handbook 8 and sequelae)
43	PYRIDOXINE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
176	QUERCETIN	Sprout Seedling				--
1	QUINIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	RAFFINOSE	Seed		8000.0	0.39721461223664184	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	RIBOFLAVIN	Sprout Seedling	1.0	15.0	0.21733051397161018	USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Seed	2.1	2.8	-0.2775591494321886	USDA's Ag Handbook 8 and sequelae)
10	ROBININ	Plant				Stitt, Paul. Why George should eat broccoli.
10	ROBININ	Sprout Seedling				--
87	RUTIN	Sprout Seedling				--
7	SALICYLATES	Seed		0.0	-0.3401776874861938	--
5	SAPONINS	Seed	500.0	6000.0	-0.42041667504648683	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
3	SECOISOLARICRESINOL	Seed		8.0	1.4142135623730951	H. Adlercreutz, pers. comm.
1	SERINE	Sprout Seedling	330.0	3466.0	-1.2644569265786192	USDA's Ag Handbook 8 and sequelae)

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1	SERINE	Seed	11760.0	12930.0	0.45146965269624684	USDA's Ag Handbook 8 and sequelae)
14	SHIKIMIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	SODIUM	Sprout Seedling	45.0	782.0	-0.03780760366122745	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Seed	129.0	311.0	-0.22202937181087867	--
1	STACHYOSE	Seed		25000.0	0.2038749490758906	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	STEARIC-ACID	Sprout Seedling	80.0	840.0	0.5080005080007616	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Seed	710.0	1170.0	-0.5400050132406323	--
12	STIGMASTEROL	Sprout Seedling	90.0	900.0	0.8603471050947832	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
12	STIGMASTEROL	Seed	80.0	230.0	-0.23799593036853528	--
14	SUCROSE	Seed		18000.0	-0.44182122531441115	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	SULFUR	Seed	1880.0	2378.0	-0.08871295398445395	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
31	THIAMIN	Sprout Seedling	0.7	10.3	-0.45029259815110706	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Seed	5.4	7.7	0.26622392167809805	USDA's Ag Handbook 8 and sequelae)
4	THREONINE	Seed	7820.0	8598.0	0.10302216510907004	USDA's Ag Handbook 8 and sequelae)
4	THREONINE	Sprout Seedling	780.0	8192.0	-0.986620334205834	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Sprout Seedling	370.0	3886.0	-1.0	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Seed	2600.0	2859.0	-0.1589532693245532	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	TYROSINE	Sprout Seedling	520.0	5462.0	-1.0269704318619173	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Seed	7140.0	7850.0	0.02520639195119663	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Sprout Seedling	1300.0	13655.0	-0.6681497464396949	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Seed	12370.0	13600.0	0.19563498523837364	USDA's Ag Handbook 8 and sequelae)
1	VERBASCOSE	Seed		38000.0	0.8069899082183902	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	XYLOSE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
77	ZINC	Sprout Seedling	3.5	48.0	0.4949133977324324	USDA's Ag Handbook 8 and sequelae)
77	ZINC	Seed	26.0	31.0	-0.40121173892745016	USDA's Ag Handbook 8 and sequelae)