

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Moringa oleifera*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ALANINE	Shoot	5320.0	24930.0	1.0	USDA's Ag Handbook 8 and sequelae)
32	ALPHA-TOCOPHEROL	Seed				--
14	ARGININE	Shoot	5320.0	24930.0	1.0	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Fruit		1200.0	-0.2098766141984456	=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
112	ASCORBIC-ACID	Shoot	517.0	2425.0	-0.25371279504053523	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Leaf	2200.0	8800.0	0.37260776805039464	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	ASPARTIC-ACID	Shoot	9200.0	43110.0	0.6418932393390641	USDA's Ag Handbook 8 and sequelae)
1	BEHENIC-ACID	Seed	17200.0	43000.0	3.348182643310443	--
20	BENZYL-ISOTHIOCYANATE	Root				--
53	BETA-CAROTENE	Shoot	45.0	215.0	0.25672153528088315	USDA's Ag Handbook 8 and sequelae)
53	BETA-CAROTENE	Seed		100.0	5.8216177591739955	--
53	BETA-CAROTENE	Leaf	18.0	72.0	-0.8243829994255151	--
47	BETA-SITOSTEROL	Stem				=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
47	BETA-SITOSTEROL	Seed				--

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102	CAFFEIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
28	CALCIUM	Leaf	4400.0	17600.0	-0.05720258224768924	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
28	CALCIUM	Fruit	300.0	2545.0	-0.30259294089165506	USDA's Ag Handbook 8 and sequelae)
2	CAMPESTEROL	Seed				--
1	CHOLESTEROL	Seed				--
20	CHOLINE	Leaf		4230.0	-0.22919225965734855	--
20	CHOLINE	Fruit		4230.0	0.27421908226876107	--
12	COPPER	Leaf	1.0	4.0	-0.6510387463181428	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	CYSTINE	Shoot	1400.0	6560.0	1.0	USDA's Ag Handbook 8 and sequelae)
1	DELTA-5-AVENASTEROL	Seed				--
1	DELTA-7-AVENASTEROL	Seed				--
4	DELTA-TOCOPHEROL	Seed				--
15	FIBER	Shoot	15000.0	70290.0	-1.2000644927201543	USDA's Ag Handbook 8 and sequelae)
15	FIBER	Seed	35000.0	36450.0	-0.7764211777551326	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	FIBER	Leaf	9000.0	36000.0	-1.5523832439995344	USDA's Ag Handbook 8 and sequelae)
15	FIBER	Fruit	13000.0	110170.0	-0.2973093581717314	USDA's Ag Handbook 8 and sequelae)
14	GAMMA-TOCOPHEROL	Seed				--
8	GLUTAMIC-ACID	Shoot	10350.0	48500.0	0.39220423591385656	USDA's Ag Handbook 8 and sequelae)
12	GLYCINE	Shoot	5170.0	24225.0	1.0	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	HISTIDINE	Shoot	1960.0	9185.0	1.0	USDA's Ag Handbook 8 and sequelae)
1	INDOLE-ACETIC-ACID	Fruit				--
12	IODINE	Leaf	0.05	0.7	-0.1409355592404101	--
6	IRON	Shoot	40.0	185.0	-0.4205794716292474	USDA's Ag Handbook 8 and sequelae)
6	IRON	Leaf	70.0	280.0	-0.21085163399012055	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	IRON	Fruit	3.0	30.0	-0.40848626836489793	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Shoot	4510.0	21135.0	1.2767041989957935	USDA's Ag Handbook 8 and sequelae)
75	KAEMPFEROL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
75	KAEMPFEROL	Flower				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	LEUCINE	Shoot	7910.0	37065.0	1.5509660952798279	USDA's Ag Handbook 8 and sequelae)
1	LIGNOCERIC-ACID	Seed				--
4	LYSINE	Shoot	5370.0	25165.0	1.0391828214272667	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Shoot	1470.0	6890.0	-0.08383731719594234	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Fruit	450.0	3815.0	0.7803747555207075	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Shoot	1230.0	5765.0	1.0	USDA's Ag Handbook 8 and sequelae)
6	MORINGININE	Root Bark				--
6	MORINGININE	Bark				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	MYRISTIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

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6	MYRISTIC-ACID	Shoot				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
39	NIACIN	Shoot	8.0	105.0	-0.03554155028579542	USDA's Ag Handbook 8 and sequelae)
39	NIACIN	Fruit	2.0	52.0	-0.1162786785242452	--
18	OLEIC-ACID	Seed	120000.0	380000.0	2.1447229043962737	--
9	OXALIC-ACID	Leaf		1010.0	-0.4465321906788087	--
9	OXALIC-ACID	Fruit		1010.0	-0.25065522800719753	--
13	PALMITIC-ACID	Seed	6000.0	60000.0	0.538393633616372	--
7	PHENYLALANINE	Shoot	4870.0	22820.0	1.0	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Leaf	700.0	2800.0	-0.39951935749949974	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Fruit	500.0	4235.0	0.309512468648855	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Shoot	1120.0	5250.0	0.8439806405575019	USDA's Ag Handbook 8 and sequelae)
2	PHYTOSTEROLS	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	POTASSIUM	Shoot	3370.0	15790.0	-0.5662125913142811	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Fruit	4610.0	39065.0	1.8710838289675698	USDA's Ag Handbook 8 and sequelae)
4	PTERYGOSPERMIN	Root				--
176	QUERCETIN	Flower				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
176	QUERCETIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	RIBOFLAVIN	Fruit	0.7	6.3	0.27642502355036735	--

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15	RIBOFLAVIN	Leaf	0.6	6.0	-0.1497366095229266	=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
15	RIBOFLAVIN	Shoot	6.0	30.0	1.1234399209254322	USDA's Ag Handbook 8 and sequelae)
1	SERINE	Shoot	4140.0	19400.0	1.0	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Shoot	90.0	420.0	0.03209133983378128	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Fruit	420.0	3560.0	0.15364001538601127	USDA's Ag Handbook 8 and sequelae)
9	SPIROCHIN	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	STEARIC-ACID	Seed	6000.0	60000.0	0.7364062176558109	--
12	STIGMASTEROL	Seed				--
14	SULFUR	Leaf		1370.0	-0.8143977090530928	--
14	SULFUR	Fruit		1370.0	-0.031020916059269096	--
31	THIAMIN	Shoot	2.0	12.0	-0.11133380761319199	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Fruit	0.5	4.5	-0.10659124509620688	USDA's Ag Handbook 8 and sequelae)
4	THREONINE	Shoot	4110.0	19260.0	1.2868384427185613	USDA's Ag Handbook 8 and sequelae)
93	TOCOPHEROL	Leaf	74.0	296.0	-0.42871944832620335	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
29	TRYPTOPHAN	Shoot	1440.0	6745.0	1.41273485856346	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Shoot	3470.0	16260.0	1.0	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Shoot	6110.0	28630.0	1.4529988914891638	USDA's Ag Handbook 8 and sequelae)

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28	VANILLIN	Stem				=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