

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Morinda citrifolia***

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(E)-6-DODECENO-GAMMA-LACTONE	Fruit	--	0.04		
0	(Z)-6-DODECENO-GAMMA-LACTONE	Fruit	--	0.04		
0	(Z,Z)-2,5-UNDECADIEN-1-OL	Fruit	--	0.18		
0	(Z,Z,Z)-8,11,14-EICOSATRIENOIC-ACID	Fruit	--	0.03		
0	1-5-6-TRIHYDROXY-ANTHRAQUINONE	Tissue Culture	--	--		
0	1-BUTANOL	Fruit	--	0.03		
0	1-HEXANOL	Fruit	--	0.05		
0	2,6-DI-O-(BETA-D-GLUCOPYRANOSYL)-1-O-OCTANOYL-BETA-D-GLUCOPYRANOSE	Fruit	--	5000		
0	2-HEPTANONE	Fruit	--	0.15		
0	2-HYDROXY-1-METHOXY-7-METHYL-ANTHRAQUINONE	Root	--	--		
0	2-METHYL-3-METHYLTHIO-PROPANOATE	Fruit	--	0.01		
0	2-METHYL-BUTANOIC-ACID	Fruit	--	0.23		
0	2-METHYL-HEXANOATE	Fruit	--	0.16		
0	2-METHYL-PROPANOIC-ACID	Fruit	--	0.05		
0	3-5-6-TRIHYDROXY-2-METHYL-ANTHRAQUINONE	Tissue Culture	--	160		
0	3-HYDROXY-2-BUTANONE	Fruit	--	0.03		
0	3-HYDROXY-MORINDONE	Tissue Culture	--	309		
0	3-METHYL-2-BUTEN-1-OL	Fruit	--	0.13		
0	3-METHYL-3-BUTEN-1-OL	Fruit	--	1.78		
0	3-METHYL-THIOPROPANOIC-ACID	Fruit	--	0.18		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5,7-DIMETHYL-APIGENIN-4'-O-BETA-D(+)-GALACTOPYRANOSIDE	Flower	--	--		=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
0	5-6-DIHYDROXY-LUCIDIN	Tissue Culture	--	109		
0	6,8-DIMETHOXY-3-METHYLANTHRAQUINONE-1-O-BETA-RHAMNOSYL-GLUCOPYRANOSIDE	Flower	--	--		=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
0	7-HYDROXY-8-METHOXY-2-METHYL-ANTHRAQUINONE	Root	--	300		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ACACETIN-7-O-BETA-D(+)-GLUCOPYRANOSIDE	Flower	--	--		=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
0	ACACETIN-7-O-BETA-D-GLUCOPYRANOSIDE	Flower	--	--		
16	ACETIC-ACID	Plant	--	0.02	-0.7153735267894865	
11	ALIZARIN	Plant	--	--		
11	ALIZARIN	Tissue Culture	--	--		
11	ALIZARIN	Bark	--	--		
11	ALIZARIN	Wood	--	--		
0	ALIZARIN-ALPHA-METHYL-ETHER	Plant	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ALPH-METHOXY-ALIZARIN	Bark	--	--		
0	ALPH-METHOXY-ALIZARIN	Root Bark	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ANTHRAGALLOL-2,3-DIMETHYLETHER	Wood	--	--		=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
6	ANTHRAQUINONES	Root	4000	4000	-1.2032911231590375	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	ANTHRAQUINONES	Tissue Culture	--	2500		
112	ASCORBIC-ACID	Leaf	520	2320	-0.22865365983286717	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASH	Leaf	15000	67000	-0.9135631621816354	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	ASPERULOSIDE	Leaf	--	1580		
9	ASPERULOSIDE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	ASPERULOSIDE	Fruit	--	480		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ASPERULOSIDIC-ACID	Fruit	--	500		
20	BENZOIC-ACID	Fruit	--	8	-0.6617033802131775	
9	BENZYL-ALCOHOL	Fruit	--	0.02	-0.6964205015638791	
53	BETA-CAROTENE	Leaf	--	124	-0.5979257809111053	
53	BETA-CAROTENE	Bark	--	8.6	-0.28393884038413764	
53	BETA-CAROTENE	Fruit	--	5.2	-0.14074912282020693	
47	BETA-SITOSTEROL	Leaf	--	--		
47	BETA-SITOSTEROL	Tissue Culture	--	454.5	-0.6956812763733191	
32	BIOCHANIN-A	Wood	--	--		
0	BUTANOIC-ACID	Plant	--	0.31		
28	CALCIUM	Leaf	360	1600	-1.1504449084444381	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CAPROIC-ACID	Fruit	--	--		
5	CAPRYLIC-ACID	Fruit	--	--		
0	CARBOHYDRATES	Leaf	86000	384000	-1.8120006981572065	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	DAMNACANTHAL	Tissue Culture	--	--		Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
3	DAMNACANTHAL	Root	--	--		
3	DEACETYLASPERULOSIDIC-ACID	Fruit	--	33.3		
3	DECANOIC-ACID	Fruit	--	0.66	-0.7080135217999561	
2	ELAIDIC-ACID	Fruit	--	0.12		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ETHYL-DECANOATE	Fruit	--	0.08	-1.0000000000000002	
0	ETHYL-HEXANOATE	Fruit	--	0.05	-0.9999999999999999	
0	ETHYL-OCTANOATE	Fruit	--	0.19	-1.0000000000000002	
1	ETHYL-PALMITATE	Fruit	--	0.02	-0.7248806618683252	
0	ETHYLTHIOMETHYL-BENZENE	Fruit	--	0.03		
76	EUGENOL	Fruit	--	0.01	-0.7071070758144754	
0	FAT	Leaf	78000	348200	5.81339902071902	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Leaf	40000	178570	0.21065829524697197	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	GENTISIC-ACID	Leaf	--	--		Griffiths, L. A. 1959. On the Distribution of Gentisic Acid in Green Plants. J. Exp. Biol. 10: 437.
7	GLUCOSE	Fruit	--	--		
0	HEPTANOIC-ACID	Fruit	--	0.04	-0.9999999999999999	
0	HEXANAMIDE	Fruit	--	0.01		
0	HEXANEDIOIC-ACID	Fruit	--	0.03		
2	HEXANOIC-ACID	Fruit	--	8	0.9999999999999999	
0	HEXOIC-ACID	Fruit	--	--		Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
6	IRON	Leaf	23	100	-0.6671043883180953	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	KILOCALORIES	Leaf	1070	4775	2.83199785043198	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	LAURIC-ACID	Fruit	--	0.07	-0.44552314765590934	
60	LIMONENE	Fruit	--	0.17	-0.7501794290640288	
27	LINOLEIC-ACID	Fruit	--	0.02	-0.3553995878716523	
4	LUCIDIN	Tissue Culture	--	600		
0	LUCIDIN-3-O-BETA-PRIMEVEROSIDE	Tissue Culture	--	749		
0	LUCIDIN-3-PRIMEVEROSIDE	Tissue Culture	--	--		
0	LUCIDIN-OMEGA-ETHYL-ETHER	Tissue Culture	--	--		
0	METHYL-DECANOATE	Fruit	--	0.25	1	
0	METHYL-ELAIDATE	Fruit	--	0.02		
0	METHYL-OCTANOATE	Fruit	--	0.37	-1	
0	METHYL-OLEATE	Fruit	--	0.01		
0	METHYL-PALMITATE	Fruit	--	0.02	-1	
0	MONO-ETHOXY-RUBIADIN	Bark	--	--		
0	MONO-METHOXY-RUBIADIN	Root Bark	--	--		
2	MONOTROPEIN	Leaf	--	1580		
0	MORINDADIOL	Plant	--	--		
0	MORINDIN	Root	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MORINDIN	Root Bark	--	--		
1	MORINDONE	Plant	--	--		
1	MORINDONE	Heart Wood	--	50		
1	MORINDONE	Tissue Culture	--	145.5		
0	MORINDONE-6BETA-PRIMEVEROSIDE	Tissue Culture	--	709		
6	MYRISTIC-ACID	Fruit	--	0.06	-0.2691408673141971	
39	NIACIN	Leaf	72	321	2.718552846487764	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	NONANOIC-ACID	Fruit	--	0.01	-0.741247510288	
1	NOR-DAMNACANTHAL	Tissue Culture	--	--		
1	NOR-DAMNACANTHAL	Root	17000	17000		
5	OCTANOIC-ACID	Fruit	--	25	1.7148561198407046	
0	OCTOIC-ACID	Fruit	--	--		Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
18	OLEIC-ACID	Fruit	--	0.03	-0.4807449301448029	
13	PALMITIC-ACID	Fruit	--	0.21	-0.3655323408481512	
4	PARAFFIN	Fruit	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Leaf	150	670	-0.7914116184981296	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
5	PHYSCION	Heart Wood	--	37.5		
0	PHYSCION-8-O-[(ALPHA-L-ARABINOPYRANOSYL(1-3))-[BETA-D-GALACTOPYRANOSYL(1-6)]-BETA-D-GALACTOPYRANOSIDE	Heart Wood	--	75		
0	PROTEIN	Leaf	45000	200890	-0.10928720264248172	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	RIBOFLAVIN	Leaf	0.9	4	-0.15911158075734227	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	RUBERYTHRIC-ACID	Bark	--	--		
1	RUBIADIN	Plant	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	RUBIADIN	Tissue Culture	--	127.3		
3	RUBIADIN-1-METHYL-ETHER	Root	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	RUBICHLORIC-ACID	Root	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

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87	RUTIN	Fruit	--	500	-0.5964904095908007	
44	SCOPOLETIN	Fruit	--	0.85	-0.8731393265552875	
0	SORANJIDOL	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
31	THIAMIN	Leaf	1.6	7	-0.2718958403939485	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	TRIHYDROXYMETHYLANTHRAQUINONE-MONOMETHYLETHER	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	UNDECANOIC-ACID	Fruit	--	0.02	-1	
89	URSOLIC-ACID	Leaf	--	--		
0	VOMIFOLIOL	Fruit	--	0.4		
0	WATER	Leaf	776000	776000	-0.15783981421204993	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses