

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Centella asiatica*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARBOHYDRATES	Leaf	70192.0	656000.0	0.35111060724486526	--
15	FIBER	Leaf	20000.0	187000.0	0.3149049121779396	--
0	ASH	Leaf	16050.0	150000.0	0.5487949419882225	--
0	PROTEIN	Leaf	16050.0	150000.0	-0.6169641238666383	--
0	SAPONIN	Plant	11000.0	80000.0	1.6640036208230826	--
0	SUGARS	Leaf	9630.0	90000.0	0.3611228146781439	--
24	PECTIN	Leaf	6420.0	60000.0	0.848030969096559	--
0	FAT	Leaf	5992.0	56000.0	-0.00920837567589425	--
0	EO	Plant	3000.0	6000.0	-0.2841392284469577	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	CALCIUM	Leaf	1700.0	15890.0	-0.17404285585996676	--
1	SODIUM	Leaf	1113.0	10400.0	1.1998266498363401	--
19	ASIATICOSIDE	Leaf	700.0	1200.0		Jim Duke's personal files.
14	POTASSIUM	Leaf	414.0	3870.0	-1.169036049980163	--
65	MAGNESIUM	Leaf	342.0	3200.0	-0.3574611579280929	--
0	KILOCALORIES	Leaf	340.0	3180.0	0.2609973458508899	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	EO	Leaf	321.0	6000.0	-0.4868602567711417	--
4	PHOSPHORUS	Leaf	300.0	2800.0	-0.39951935749949974	--
5	SAPONINS	Leaf	268.0	2500.0	-1.0907412926645894	--
5	ALUMINUM	Leaf	220.0	2060.0	1.430229610546625	--
53	BETA-CAROTENE	Leaf	40.0	369.0	0.46903611401255635	--
112	ASCORBIC-ACID	Leaf	40.0	374.0	-0.40921766271262444	--
39	NIACIN	Leaf	12.0	112.0	0.17636268788895457	--
14	MANGANESE	Leaf	3.0	27.7	-0.41383578503505414	--
6	IRON	Leaf	3.0	29.0	-0.8470707525252408	--
31	THIAMIN	Leaf	1.5	14.0	1.1869303740705777	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	THIAMINE	Leaf	1.5	14.0	2.1449383339093373	--
4	SILICON	Leaf	1.5	14.0	-0.37155124751733193	--
15	RIBOFLAVIN	Leaf	1.4	13.0	-0.11692421020247182	--
4	TIN	Leaf	1.3	12.0	-0.4331991239429111	--
2	COBALT	Leaf	0.8	7.3	-0.2554961829884984	--
77	ZINC	Leaf	0.4	3.4	-0.5059022324796413	--
24	CHROMIUM	Leaf	0.1	1.0	-0.5613457205769528	--
60	SELENIUM	Leaf	0.1	1.2	-0.29034536355768803	--
0	INDOCENTOIC-ACID	Plant				--
0	HEPTAN-1-AL	Shoot				Jim Duke's personal files.
2	OXYASIATICOSIDE	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
13	BETA-PINENE	Essential Oil		2000.0	-0.6859771042347549	Jim Duke's personal files.
0	BORNEOL-ACETATE	Essential Oil		2000.0	-0.745653834002719	Jim Duke's personal files.
0	3-GLUCOSYLKAEMPFEROL	Plant				--
0	PETAN-1-AL	Shoot				Jim Duke's personal files.
0	RHAMNOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
7	BRAHMOSIDE	Plant		3700.0		=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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASIATICENTOIC-ACID	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	MADECASSIC-ACID	Plant				--
75	KAEMPFEROL	Leaf				Jim Duke's personal files.
0	HYDROCOTYLIN	Plant		16.0		--
0	HEPT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
3	ASPARTIC-ACID	Plant				=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
53	LINALOOL	Shoot				Jim Duke's personal files.
18	OLEIC-ACID	Plant				--
23	ALPHA-TERPINEOL	Shoot				Jim Duke's personal files.
0	CINEOLE	Essential Oil				--
0	BICYCLOELEMENE	Essential Oil		13000.0		Jim Duke's personal files.
0	MADASIATIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	INDOCENTELLOSIDE	Plant		4000.0		Jim Duke's personal files.
8	BRAHMINOSIDE	Plant		1600.0		=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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	AMINOBTYRATE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
19	ASIATICOSIDE	Shoot				Jim Duke's personal files.
12	GLYCINE	Plant				=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
2	GERMACRENE-D	Shoot				Jim Duke's personal files.
19	ASIATICOSIDE	Plant				--
60	LIMONENE	Shoot				Jim Duke's personal files.
0	THANKUNISIDE	Plant				--
28	ALPHA-PINENE	Shoot				Jim Duke's personal files.
5	BETA-ELEMENE	Essential Oil		30000.0	-0.48593246550536906	Jim Duke's personal files.
27	LINOLEIC-ACID	Plant				--
2	ALPHA-HUMULENE	Shoot				Jim Duke's personal files.
0	BRAHMIC-ACID	Plant		970.0		--
28	ALPHA-PINENE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	ALPHA-COPAENE	Essential Oil		9000.0	-0.36082830563118673	Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	GLUTAMIC-ACID	Plant				=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
2	GERMACRENE-D	Essential Oil		160000.0	1.0	Jim Duke's personal files.
1	ASIATIC-ACID	Plant				--
9	CAMPHENE	Shoot				Jim Duke's personal files.
0	THANKUNIC-ACID	Plant				--
0	N-DODECANE	Essential Oil				--
28	ALPHA-PINENE	Essential Oil		2000.0	-0.5424708227492797	Jim Duke's personal files.
0	CENTOIC-ACID	Plant				--
0	BETA-CHAMIGRENE	Shoot				Jim Duke's personal files.
1	LIGNOCERIC-ACID	Plant				--
9	DELTA-CADINENE	Shoot				Jim Duke's personal files.
0	BICYCLOELEMENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ALPHA-CHAMIGRENE	Shoot				Jim Duke's personal files.
1	RAFFINOSE	Plant				--
0	OCT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
7	GLUCOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
35	GERANIOL	Shoot				Jim Duke's personal files.
0	M-XYLENE	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	STIGMASTEROL	Plant		40.0	-0.8073781309648732	=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	MYO-INOSITOL	Plant				--
11	NEROLIDOL	Shoot				Jim Duke's personal files.
0	CENTELLOSIDE	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
35	TANNIN	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	BETA-CARYOPHYLLENE	Shoot				Jim Duke's personal files.
0	2-METHYL-BUTAN-2-OL	Shoot				Jim Duke's personal files.
22	BETULINIC-ACID	Plant		1100.0	-0.49265454919484347	Jim Duke's personal files.
0	WATER	Leaf		893000.0	0.4258710730214559	--
8	INOSITOL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	NON-3-EN-2-ONE	Shoot				Jim Duke's personal files.
2	GERMACRENE-D	Plant				--
0	FURAN-2-CARBOXALDEHYDE	Shoot				Jim Duke's personal files.
112	ASCORBIC-ACID	Plant		138.0	-0.5612889938563121	--
0	WIDDRENE	Shoot				Jim Duke's personal files.
8	STEARIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	METHANOL	Plant				--
10	NEROL	Shoot				Jim Duke's personal files.
0	CENTELLOSE	Plant				--
0	RESIN	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	BETA-CARYOPHYLLENE	Essential Oil		125000.0	0.1933351753509813	Jim Duke's personal files.
75	KAEMPFEROL	Plant				--
1	2,3-DIHYDROBENZOFURAN	Shoot				Jim Duke's personal files.
0	BETULIC-ACID	Plant		1100.0		=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
41	CAMPHOR	Essential Oil				--
22	ISOQUERCITRIN	Leaf				Jim Duke's personal files.
0	GERMACRENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
17	FARNESOL	Shoot				Jim Duke's personal files.
1	TOLUENE	Shoot				Jim Duke's personal files.
0	MESOINOSITAL	Plant				=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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	MYRCENE	Shoot				Jim Duke's personal files.
0	CENTELLINIC-ACID	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
176	QUERCETIN	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
6	BETA-BISABOLENE	Shoot				Jim Duke's personal files.
0	ISOTHANKUNISIDE	Plant				--
0	1-METHYL-4-(1,2,2-TRIMETHYL-CYCLO-PENTYL)-BENZENE	Shoot				Jim Duke's personal files.
47	BETA-SITOSTEROL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
77	ZINC	Bark		3.4	-0.9069023286651865	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	GAMMA-TERPINENE	Shoot				Jim Duke's personal files.
0	EPIGLOBULOL	Shoot				Jim Duke's personal files.
12	STIGMASTEROL	Essential Oil		2000.0		Jim Duke's personal files.
0	CENTELIC-ACID	Plant				--
0	POLYACETYLENES	Root				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	BETA-ACORADIENE	Shoot				Jim Duke's personal files.
0	MEDICASSIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
22	MYRCENE	Essential Oil		6000.0	-0.3653970753458515	Jim Duke's personal files.
0	ISOTHANKUNIC-ACID	Plant				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	P-VINYL-GUAIACOL	Shoot				Jim Duke's personal files.
0	BETA-FARNESENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	WATER	Plant		893000.0	0.5225843122637761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
11	GAMMA-TERPINENE	Essential Oil		4000.0	-0.767502970243684	Jim Duke's personal files.
0	CENTELLA-ASIATICA-COMPOUND-BK	Plant				Jim Duke's personal files.
0	ALPHA-ALANINE	Plant				=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
3	PYRIDINE	Shoot				Jim Duke's personal files.
0	LIGNOCENE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
7	ASTRAGALIN	Leaf				Jim Duke's personal files.
0	MESO-INOSITOL	Plant		15.0		Jim Duke's personal files.
0	ISOBRAHMIC-ACID	Plant		9000.0		=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	HEXAN-1-AL	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	BETA-ELEMENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(DIETARY)	Leaf		302000.0	-0.8718975702234967	--
0	VELLARINE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	PALMITIC-ACID	Plant				--
47	BETA-SITOSTEROL	Essential Oil		2000.0	1.0	Jim Duke's personal files.
8	CARYOPHYLLENE-OXIDE	Shoot				Jim Duke's personal files.
0	7-GLUCOSYLKAEMPFEROL	Plant				--
0	POPULNIN	Leaf				Jim Duke's personal files.
2	CAMPESTEROL	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	HYDROCOTYLEGENINS	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	ASIATICOSIDE-B	Leaf				Jim Duke's personal files.
2	MADECASSOSIDE	Shoot				Jim Duke's personal files.
0	HEX-3-EN-2-ONE	Shoot				Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Plant				--
0	FIBER(CRUDE)	Leaf		187000.0	1.5553583414475418	--
2	TRANS-BETA-FARNESENE	Plant				--
0	P-CYMOL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	BETA-SESQUIPHELLANDRENE	Shoot				Jim Duke's personal files.
2	ELAIDIC-ACID	Plant				--
2	CAMPESTEROL	Essential Oil		2000.0		Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-GLUCOSYLQUERCETIN	Plant				--
4	PHELLANDRENE	Plant				Jim Duke's personal files.
13	BETA-PINENE	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	ASIATICOSIDE-A	Leaf				Jim Duke's personal files.
2	MADECASSOSIDE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LINAMARASE	Leaf				Jim Duke's personal files.