

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	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	N-DODECANE	Essential Oil				--
0	CENTOIC-ACID	Plant				--
0	HEPTAN-1-AL	Shoot				Jim Duke's personal files.
0	RHAMNOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	LIGNOCERIC-ACID	Plant				--
0	BICYCLOELEMENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	RAFFINOSE	Plant				--
3	PYRIDINE	Shoot				Jim Duke's personal files.
7	GLUCOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
75	KAEMPFEROL	Leaf				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.
0	MYO-INOSITOL	Plant				--
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.
0	HEPT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
23	ALPHA-TERPINEOL	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	POPULNIN	Leaf				Jim Duke's personal files.
2	GERMACRENE-D	Plant				--
19	ASIATICOSIDE	Shoot				Jim Duke's personal files.
2	METHANOL	Plant				--
0	CENTELLOSE	Plant				--
2	GERMACRENE-D	Shoot				Jim Duke's personal files.
0	THANKUNISIDE	Plant				--
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.
28	ALPHA-PINENE	Shoot				Jim Duke's personal files.
75	KAEMPFEROL	Plant				--
4	PHELLANDRENE	Plant				Jim Duke's personal files.
0	GERMACRENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	ALPHA-HUMULENE	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
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.
0	THANKUNIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	BETA-CHAMIGRENE	Shoot				Jim Duke's personal files.
0	ISOTHANKUNISIDE	Plant				--
47	BETA-SITOSTEROL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PETAN-1-AL	Shoot				Jim Duke's personal files.
9	DELTA-CADINENE	Shoot				Jim Duke's personal files.
0	ALPHA-CHAMIGRENE	Shoot				Jim Duke's personal files.
0	CENTELIC-ACID	Plant				--
0	OCT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
35	GERANIOL	Shoot				Jim Duke's personal files.
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	MEDICASSIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
11	NEROLIDOL	Shoot				Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Shoot				Jim Duke's personal files.
53	LINALOOL	Shoot				Jim Duke's personal files.
0	ISOTHANKUNIC-ACID	Plant				--
0	BETA-FARNESENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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
0	2-METHYL-BUTAN-2-OL	Shoot				Jim Duke's personal files.
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.
0	FURAN-2-CARBOXALDEHYDE	Shoot				Jim Duke's personal files.
8	STEARIC-ACID	Plant				--
0	AMINOBUTYRATE	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.
10	NEROL	Shoot				Jim Duke's personal files.
60	LIMONENE	Shoot				Jim Duke's personal files.
5	BETA-ELEMENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	PALMITIC-ACID	Plant				--
0	7-GLUCOSYLKAEMPFEROL	Plant				--
1	2,3-DIHYDROBENZOFURAN	Shoot				Jim Duke's personal files.
41	CAMPHOR	Essential Oil				--
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.
22	ISOQUERCITRIN	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
17	FARNESOL	Shoot				Jim Duke's personal files.
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.
6	BETA-BISABOLENE	Shoot				Jim Duke's personal files.
9	CAMPHENE	Shoot				Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Plant				--
22	MYRCENE	Shoot				Jim Duke's personal files.
0	P-CYMOL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	ELAIDIC-ACID	Plant				--
0	3-GLUCOSYLQUERCETIN	Plant				--
0	1-METHYL-4-(1,2,2-TRIMETHYL-CYCLO-PENTYL)-BENZENE	Shoot				Jim Duke's personal files.
11	GAMMA-TERPINENE	Shoot				Jim Duke's personal files.
0	EPIGLOBULOL	Shoot				Jim Duke's personal files.
2	MADECASSOSIDE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	BETA-ACORADIENE	Shoot				Jim Duke's personal files.
0	M-XYLENE	Shoot				Jim Duke's personal files.
0	INDOCENTOIC-ACID	Plant				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
0	3-GLUCOSYLKAEMPFEROL	Plant				--
0	P-VINYL-GUAIACOL	Shoot				Jim Duke's personal files.
0	CENTELLA-ASIATICA-COMPOUND-BK	Plant				Jim Duke's personal files.
0	MADECASSIC-ACID	Plant				--
7	ASTRAGALIN	Leaf				Jim Duke's personal files.
0	WIDDRENE	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
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.
18	OLEIC-ACID	Plant				--
0	CINEOLE	Essential Oil				--
0	HEXAN-1-AL	Shoot				Jim Duke's personal files.
0	VELLARINE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
8	CARYOPHYLLENE-OXIDE	Shoot				Jim Duke's personal files.
0	MADASIATIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASIATICOSIDE-B	Leaf				Jim Duke's personal files.
1	TOLUENE	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
19	ASIATICOSIDE	Plant				--
2	MADECASSOSIDE	Shoot				Jim Duke's personal files.
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.
0	HEX-3-EN-2-ONE	Shoot				Jim Duke's personal files.
2	TRANS-BETA-FARNESENE	Plant				--
5	BETA-SESQUIPELLANDRENE	Shoot				Jim Duke's personal files.
27	LINOLEIC-ACID	Plant				--
0	ASIATICOSIDE-A	Leaf				Jim Duke's personal files.
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
1	ASIATIC-ACID	Plant				--
0	LINAMARASE	Leaf				Jim Duke's personal files.
24	CHROMIUM	Leaf	0.1	1.0	-0.5613457205769528	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	SELENIUM	Leaf	0.1	1.2	-0.29034536355768803	--
77	ZINC	Bark		3.4	-0.9069023286651865	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
77	ZINC	Leaf	0.4	3.4	-0.5059022324796413	--
2	COBALT	Leaf	0.8	7.3	-0.2554961829884984	--
4	TIN	Leaf	1.3	12.0	-0.4331991239429111	--
15	RIBOFLAVIN	Leaf	1.4	13.0	-0.11692421020247182	--
31	THIAMIN	Leaf	1.5	14.0	1.1869303740705777	--
4	SILICON	Leaf	1.5	14.0	-0.37155124751733193	--
0	THIAMINE	Leaf	1.5	14.0	2.1449383339093373	--
0	MESO-INOSITOL	Plant		15.0		Jim Duke's personal files.
0	HYDROCOTYLIN	Plant		16.0		--
14	MANGANESE	Leaf	3.0	27.7	-0.41383578503505414	--
6	IRON	Leaf	3.0	29.0	-0.8470707525252408	--
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
39	NIACIN	Leaf	12.0	112.0	0.17636268788895457	--
112	ASCORBIC-ACID	Plant		138.0	-0.5612889938563121	--
53	BETA-CAROTENE	Leaf	40.0	369.0	0.46903611401255635	--
112	ASCORBIC-ACID	Leaf	40.0	374.0	-0.40921766271262444	--
0	BRAHMIC-ACID	Plant		970.0		--
22	BETULINIC-ACID	Plant		1100.0	-0.49265454919484347	Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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
19	ASIATICOSIDE	Leaf	700.0	1200.0		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
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.
28	ALPHA-PINENE	Essential Oil		2000.0	-0.5424708227492797	Jim Duke's personal files.
47	BETA-SITOSTEROL	Essential Oil		2000.0	1.0	Jim Duke's personal files.
2	CAMPESTEROL	Essential Oil		2000.0		Jim Duke's personal files.
12	STIGMASTEROL	Essential Oil		2000.0		Jim Duke's personal files.
5	ALUMINUM	Leaf	220.0	2060.0	1.430229610546625	--
5	SAPONINS	Leaf	268.0	2500.0	-1.0907412926645894	--
4	PHOSPHORUS	Leaf	300.0	2800.0	-0.39951935749949974	--
0	KILOCALORIES	Leaf	340.0	3180.0	0.2609973458508899	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
65	MAGNESIUM	Leaf	342.0	3200.0	-0.3574611579280929	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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
14	POTASSIUM	Leaf	414.0	3870.0	-1.169036049980163	--
0	INDOCENTELLOSIDE	Plant		4000.0		Jim Duke's personal files.
11	GAMMA-TERPINENE	Essential Oil		4000.0	-0.767502970243684	Jim Duke's personal files.
0	EO	Leaf	321.0	6000.0	-0.4868602567711417	--
0	EO	Plant	3000.0	6000.0	-0.2841392284469577	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
22	MYRCENE	Essential Oil		6000.0	-0.3653970753458515	Jim Duke's personal files.
0	ALPHA-COPAENE	Essential Oil		9000.0	-0.36082830563118673	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
1	SODIUM	Leaf	1113.0	10400.0	1.1998266498363401	--
0	BICYCLOELEMENE	Essential Oil		13000.0		Jim Duke's personal files.
28	CALCIUM	Leaf	1700.0	15890.0	-0.17404285585996676	--
5	BETA-ELEMENE	Essential Oil		30000.0	-0.48593246550536906	Jim Duke's personal files.
0	FAT	Leaf	5992.0	56000.0	-0.00920837567589425	--
24	PECTIN	Leaf	6420.0	60000.0	0.848030969096559	--
0	SAPONIN	Plant	11000.0	80000.0	1.6640036208230826	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	SUGARS	Leaf	9630.0	90000.0	0.3611228146781439	--
0	BETA-CARYOPHYLLENE	Essential Oil		125000.0	0.1933351753509813	Jim Duke's personal files.
0	ASH	Leaf	16050.0	150000.0	0.5487949419882225	--
0	PROTEIN	Leaf	16050.0	150000.0	-0.6169641238666383	--
2	GERMACRENE-D	Essential Oil		160000.0	1.0	Jim Duke's personal files.
0	FIBER(CRUDE)	Leaf		187000.0	1.5553583414475418	--
15	FIBER	Leaf	20000.0	187000.0	0.3149049121779396	--
0	FIBER(DIETARY)	Leaf		302000.0	-0.8718975702234967	--
0	CARBOHYDRATES	Leaf	70192.0	656000.0	0.35111060724486526	--
0	WATER	Plant		893000.0	0.5225843122637761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	WATER	Leaf		893000.0	0.4258710730214559	--