

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Centella asiatica*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
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	--
0	CARBOHYDRATES	Leaf	70192.0	656000.0	0.35111060724486526	--
0	FIBER(DIETARY)	Leaf		302000.0	-0.8718975702234967	--
0	FIBER(CRUDE)	Leaf		187000.0	1.5553583414475418	--
15	FIBER	Leaf	20000.0	187000.0	0.3149049121779396	--
2	GERMACRENE-D	Essential Oil		160000.0	1.0	Jim Duke's personal files.
0	ASH	Leaf	16050.0	150000.0	0.5487949419882225	--
0	PROTEIN	Leaf	16050.0	150000.0	-0.6169641238666383	--
0	BETA-CARYOPHYLLENE	Essential Oil		125000.0	0.1933351753509813	Jim Duke's personal files.
0	SUGARS	Leaf	9630.0	90000.0	0.3611228146781439	--
0	SAPONIN	Plant	11000.0	80000.0	1.6640036208230826	--
24	PECTIN	Leaf	6420.0	60000.0	0.848030969096559	--
0	FAT	Leaf	5992.0	56000.0	-0.00920837567589425	--
5	BETA-ELEMENE	Essential Oil		30000.0	-0.48593246550536906	Jim Duke's personal files.
28	CALCIUM	Leaf	1700.0	15890.0	-0.17404285585996676	--
0	BICYCLOELEMENE	Essential Oil		13000.0		Jim Duke's personal files.
1	SODIUM	Leaf	1113.0	10400.0	1.1998266498363401	--
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	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
0	EO	Plant	3000.0	6000.0	-0.2841392284469577	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	EO	Leaf	321.0	6000.0	-0.4868602567711417	--
22	MYRCENE	Essential Oil		6000.0	-0.3653970753458515	Jim Duke's personal files.
0	INDOCENTELLOSIDE	Plant		4000.0		Jim Duke's personal files.
11	GAMMA-TERPINENE	Essential Oil		4000.0	-0.767502970243684	Jim Duke's personal files.
14	POTASSIUM	Leaf	414.0	3870.0	-1.169036049980163	--
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
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
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	--
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.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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
19	ASIATICOSIDE	Leaf	700.0	1200.0		Jim Duke's personal files.
22	BETULINIC-ACID	Plant		1100.0	-0.49265454919484347	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
0	BRAHMIC-ACID	Plant		970.0		--
112	ASCORBIC-ACID	Leaf	40.0	374.0	-0.40921766271262444	--
53	BETA-CAROTENE	Leaf	40.0	369.0	0.46903611401255635	--
112	ASCORBIC-ACID	Plant		138.0	-0.5612889938563121	--
39	NIACIN	Leaf	12.0	112.0	0.17636268788895457	--
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
6	IRON	Leaf	3.0	29.0	-0.8470707525252408	--
14	MANGANESE	Leaf	3.0	27.7	-0.41383578503505414	--
0	HYDROCOTYLIN	Plant		16.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MESO-INOSITOL	Plant		15.0		Jim Duke's personal files.
4	SILICON	Leaf	1.5	14.0	-0.37155124751733193	--
0	THIAMINE	Leaf	1.5	14.0	2.1449383339093373	--
31	THIAMIN	Leaf	1.5	14.0	1.1869303740705777	--
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	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	--
60	SELENIUM	Leaf	0.1	1.2	-0.29034536355768803	--
24	CHROMIUM	Leaf	0.1	1.0	-0.5613457205769528	--
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
23	ALPHA-TERPINEOL	Shoot				Jim Duke's personal files.
19	ASIATICOSIDE	Shoot				Jim Duke's personal files.
0	POPULNIN	Leaf				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.
5	BETA-ELEMENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	GERMACRENE-D	Shoot				Jim Duke's personal files.
0	7-GLUCOSYLKAEMPFEROL	Plant				--
28	ALPHA-PINENE	Shoot				Jim Duke's personal files.
13	PALMITIC-ACID	Plant				--
2	ALPHA-HUMULENE	Shoot				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.
4	PHELLANDRENE	Plant				Jim Duke's personal files.
0	THANKUNIC-ACID	Plant				--
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-CARYOPHYLLENE	Plant				--
0	3-GLUCOSYLQUERCETIN	Plant				--
0	BETA-CHAMIGRENE	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				--
9	DELTA-CADINENE	Shoot				Jim Duke's personal files.
0	ALPHA-CHAMIGRENE	Shoot				Jim Duke's personal files.
2	MADECASSOSIDE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PETAN-1-AL	Shoot				Jim Duke's personal files.
0	INDOCENTOIC-ACID	Plant				--

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	OCT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
35	GERANIOL	Shoot				Jim Duke's personal files.
53	LINALOOL	Shoot				Jim Duke's personal files.
0	3-GLUCOSYLKAEMPFEROL	Plant				--
11	NEROLIDOL	Shoot				Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	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.
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	MADECASSIC-ACID	Plant				--
8	STEARIC-ACID	Plant				--
0	AMINO BUTYRATE	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.
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

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0	NON-3-EN-2-ONE	Shoot				Jim Duke's personal files.
0	FURAN-2-CARBOXALDEHYDE	Shoot				Jim Duke's personal files.
60	LIMONENE	Shoot				Jim Duke's personal files.
10	NEROL	Shoot				Jim Duke's personal files.
18	OLEIC-ACID	Plant				--
0	CINEOLE	Essential Oil				--
1	2,3-DIHYDROBENZOFURAN	Shoot				Jim Duke's personal files.
41	CAMPHOR	Essential Oil				--
0	MADASIATIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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
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.
19	ASIATICOSIDE	Plant				--
22	ISOQUERCITRIN	Leaf				Jim Duke's personal files.
17	FARNESOL	Shoot				Jim Duke's personal files.
9	CAMPHENE	Shoot				Jim Duke's personal files.
22	MYRCENE	Shoot				Jim Duke's personal files.
6	BETA-BISABOLENE	Shoot				Jim Duke's personal files.
0	1-METHYL-4-(1,2,2-TRIMETHYL-CYCLO-PENTYL)-BENZENE	Shoot				Jim Duke's personal files.
27	LINOLEIC-ACID	Plant				--

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
1	ASIATIC-ACID	Plant				--
11	GAMMA-TERPINENE	Shoot				Jim Duke's personal files.
0	EPIGLOBULOL	Shoot				Jim Duke's personal files.
0	M-XYLENE	Shoot				Jim Duke's personal files.
0	BETA-ACORADIENE	Shoot				Jim Duke's personal files.
0	N-DODECANE	Essential Oil				--
0	CENTOIC-ACID	Plant				--
0	P-VINYL-GUAIACOL	Shoot				Jim Duke's personal files.
1	LIGNOCERIC-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.
0	BICYCLOELEMENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	RAFFINOSE	Plant				--
7	GLUCOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CENTELLA-ASIATICA-COMPOUND-BK	Plant				Jim Duke's personal files.
7	ASTRAGALIN	Leaf				Jim Duke's personal files.
0	MYO-INOSITOL	Plant				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	WIDDRENE	Shoot				Jim Duke's personal files.
0	HEXAN-1-AL	Shoot				Jim Duke's personal files.
0	VELLARINE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
2	GERMACRENE-D	Plant				--
8	CARYOPHYLLENE-OXIDE	Shoot				Jim Duke's personal files.
2	MADECASSOSIDE	Shoot				Jim Duke's personal files.
0	ASIATICOSIDE-B	Leaf				Jim Duke's personal files.
2	METHANOL	Plant				--
0	CENTELLOSE	Plant				--
1	TOLUENE	Shoot				Jim Duke's personal files.
0	HEX-3-EN-2-ONE	Shoot				Jim Duke's personal files.
2	TRANS-BETA-FARNESENE	Plant				--
75	KAEMPFEROL	Plant				--
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	GERMACRENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	BETA-SESQUIPHELLANDRENE	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINAMARASE	Leaf				Jim Duke's personal files.
0	ASIATICOSIDE-A	Leaf				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	HEPTAN-1-AL	Shoot				Jim Duke's personal files.
0	ISOTHANKUNISIDE	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.
47	BETA-SITOSTEROL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	RHAMNOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
75	KAEMPFEROL	Leaf				Jim Duke's personal files.
0	MEDICASSIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	CENTELLIC-ACID	Plant				--
3	PYRIDINE	Shoot				Jim Duke's personal files.
0	HEPT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOTHANKUNIC-ACID	Plant				--
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	BETA-FARNESENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.