

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	1-METHYL-4-(1,2,2-TRIMETHYL-CYCLOPENTYL)-BENZENE	Shoot				Jim Duke's personal files.
1	2,3-DIHYDROBENZOFURAN	Shoot				Jim Duke's personal files.
0	2-METHYL-BUTAN-2-OL	Shoot				Jim Duke's personal files.
0	3-GLUCOSYLKAEMPFEROL	Plant				--
0	3-GLUCOSYLQUERCETIN	Plant				--
0	7-GLUCOSYLKAEMPFEROL	Plant				--
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	ALPHA-CHAMIGRENE	Shoot				Jim Duke's personal files.
0	ALPHA-COPAENE	Essential Oil		9000.0	-0.36082830563118673	Jim Duke's personal files.
2	ALPHA-HUMULENE	Shoot				Jim Duke's personal files.
28	ALPHA-PINENE	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.
28	ALPHA-PINENE	Essential Oil		2000.0	-0.5424708227492797	Jim Duke's personal files.
23	ALPHA-TERPINEOL	Shoot				Jim Duke's personal files.
5	ALUMINUM	Leaf	220.0	2060.0	1.430229610546625	--
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.
112	ASCORBIC-ACID	Plant		138.0	-0.5612889938563121	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Leaf	40.0	374.0	-0.40921766271262444	--
0	ASH	Leaf	16050.0	150000.0	0.5487949419882225	--
1	ASIATIC-ACID	Plant				--
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.
19	ASIATICOSIDE	Leaf	700.0	1200.0		Jim Duke's personal files.
19	ASIATICOSIDE	Plant				--
19	ASIATICOSIDE	Shoot				Jim Duke's personal files.
0	ASIATICOSIDE-A	Leaf				Jim Duke's personal files.
0	ASIATICOSIDE-B	Leaf				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
7	ASTRAGALIN	Leaf				Jim Duke's personal files.
0	BETA-ACORADIENE	Shoot				Jim Duke's personal files.
6	BETA-BISABOLENE	Shoot				Jim Duke's personal files.
53	BETA-CAROTENE	Leaf	40.0	369.0	0.46903611401255635	--
0	BETA-CARYOPHYLLENE	Shoot				Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Essential Oil		125000.0	0.1933351753509813	Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Plant				--
0	BETA-CHAMIGRENE	Shoot				Jim Duke's personal files.
5	BETA-ELEMENE	Essential Oil		30000.0	-0.48593246550536906	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	BETA-FARNESENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
13	BETA-PINENE	Essential Oil		2000.0	-0.6859771042347549	Jim Duke's personal files.
5	BETA-SESQUIPHELLANDRENE	Shoot				Jim Duke's personal files.
47	BETA-SITOSTEROL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
47	BETA-SITOSTEROL	Essential Oil		2000.0	1.0	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
22	BETULINIC-ACID	Plant		1100.0	-0.49265454919484347	Jim Duke's personal files.
0	BICYCLOELEMENE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	BICYCLOELEMENE	Essential Oil		13000.0		Jim Duke's personal files.
0	BORNEOL-ACETATE	Essential Oil		2000.0	-0.745653834002719	Jim Duke's personal files.
0	BRAHMIC-ACID	Plant		970.0		--

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
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
28	CALCIUM	Leaf	1700.0	15890.0	-0.17404285585996676	--
2	CAMPESTEROL	Essential Oil		2000.0		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.
9	CAMPHENE	Shoot				Jim Duke's personal files.
41	CAMPHOR	Essential Oil				--
0	CARBOHYDRATES	Leaf	70192.0	656000.0	0.35111060724486526	--
8	CARYOPHLENE-OXIDE	Shoot				Jim Duke's personal files.
0	CENTELLA-ASIATICA-COMPOUND-BK	Plant				Jim Duke's personal files.
0	CENTELLIC-ACID	Plant				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CENTELLOSE	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	CENTOIC-ACID	Plant				--
24	CHROMIUM	Leaf	0.1	1.0	-0.5613457205769528	--
0	CINEOLE	Essential Oil				--
2	COBALT	Leaf	0.8	7.3	-0.2554961829884984	--
9	DELTA-CADINENE	Shoot				Jim Duke's personal files.
2	ELAIDIC-ACID	Plant				--
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.
0	EPIGLOBULOL	Shoot				Jim Duke's personal files.
17	FARNESOL	Shoot				Jim Duke's personal files.
0	FAT	Leaf	5992.0	56000.0	-0.00920837567589425	--
15	FIBER	Leaf	20000.0	187000.0	0.3149049121779396	--
0	FIBER(CRUDE)	Leaf		187000.0	1.5553583414475418	--
0	FIBER(DIETARY)	Leaf		302000.0	-0.8718975702234967	--
0	FURAN-2-CARBOXALDEHYDE	Shoot				Jim Duke's personal files.
11	GAMMA-TERPINENE	Shoot				Jim Duke's personal files.
11	GAMMA-TERPINENE	Essential Oil		4000.0	-0.767502970243684	Jim Duke's personal files.
35	GERANIOL	Shoot				Jim Duke's personal files.
0	GERMACRENE	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	GERMACRENE-D	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	GERMACRENE-D	Essential Oil		160000.0	1.0	Jim Duke's personal files.
2	GERMACRENE-D	Plant				--
7	GLUCOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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
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
0	HEPT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
0	HEPTAN-1-AL	Shoot				Jim Duke's personal files.
0	HEX-3-EN-2-ONE	Shoot				Jim Duke's personal files.
0	HEXAN-1-AL	Shoot				Jim Duke's personal files.
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	HYDROCOTYLIN	Plant		16.0		--
0	INDOCENTELLOSIDE	Plant		4000.0		Jim Duke's personal files.
0	INDOCENTOIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	INOSITOL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	IRON	Leaf	3.0	29.0	-0.8470707525252408	--
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
22	ISOQUERCITRIN	Leaf				Jim Duke's personal files.
0	ISOTHANKUNIC-ACID	Plant				--
0	ISOTHANKUNISIDE	Plant				--
75	KAEMPFEROL	Plant				--
75	KAEMPFEROL	Leaf				Jim Duke's personal files.
0	KILOCALORIES	Leaf	340.0	3180.0	0.2609973458508899	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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.
1	LIGNOCERIC-ACID	Plant				--
60	LIMONENE	Shoot				Jim Duke's personal files.
53	LINALOOL	Shoot				Jim Duke's personal files.
0	LINAMARASE	Leaf				Jim Duke's personal files.
27	LINOLEIC-ACID	Plant				--
0	M-XYLENE	Shoot				Jim Duke's personal files.
0	MADASIATIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	MADECASSIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	MADECASSOSIDE	Shoot				Jim Duke's personal files.
2	MADECASSOSIDE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
65	MAGNESIUM	Leaf	342.0	3200.0	-0.3574611579280929	--
14	MANGANESE	Leaf	3.0	27.7	-0.41383578503505414	--
0	MEDICASSIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	MESO-INOSITOL	Plant		15.0		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
2	METHANOL	Plant				--
0	MYO-INOSITOL	Plant				--
22	MYRCENE	Shoot				Jim Duke's personal files.
22	MYRCENE	Essential Oil		6000.0	-0.3653970753458515	Jim Duke's personal files.
0	N-DODECANE	Essential Oil				--
10	NEROL	Shoot				Jim Duke's personal files.
11	NEROLIDOL	Shoot				Jim Duke's personal files.
39	NIACIN	Leaf	12.0	112.0	0.17636268788895457	--
0	NON-3-EN-2-ONE	Shoot				Jim Duke's personal files.
0	OCT-TRANS-2-EN-1-AL	Shoot				Jim Duke's personal files.
18	OLEIC-ACID	Plant				--

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	P-CYMOL	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	P-VINYL-GUAIACOL	Shoot				Jim Duke's personal files.
13	PALMITIC-ACID	Plant				--
24	PECTIN	Leaf	6420.0	60000.0	0.848030969096559	--
0	PETAN-1-AL	Shoot				Jim Duke's personal files.
4	PHELLANDRENE	Plant				Jim Duke's personal files.
4	PHOSPHORUS	Leaf	300.0	2800.0	-0.39951935749949974	--
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	POPULNIN	Leaf				Jim Duke's personal files.
14	POTASSIUM	Leaf	414.0	3870.0	-1.169036049980163	--
0	PROTEIN	Leaf	16050.0	150000.0	-0.6169641238666383	--
3	PYRIDINE	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.
1	RAFFINOSE	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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	RHAMNOSE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	RIBOFLAVIN	Leaf	1.4	13.0	-0.11692421020247182	--
0	SAPONIN	Plant	11000.0	80000.0	1.6640036208230826	--
5	SAPONINS	Leaf	268.0	2500.0	-1.0907412926645894	--
60	SELENIUM	Leaf	0.1	1.2	-0.29034536355768803	--
4	SILICON	Leaf	1.5	14.0	-0.37155124751733193	--
1	SODIUM	Leaf	1113.0	10400.0	1.1998266498363401	--
8	STEARIC-ACID	Plant				--
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
12	STIGMASTEROL	Essential Oil		2000.0		Jim Duke's personal files.
0	SUGARS	Leaf	9630.0	90000.0	0.3611228146781439	--
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	THANKUNIC-ACID	Plant				--
0	THANKUNISIDE	Plant				--
31	THIAMIN	Leaf	1.5	14.0	1.1869303740705777	--
0	THIAMINE	Leaf	1.5	14.0	2.1449383339093373	--
4	TIN	Leaf	1.3	12.0	-0.4331991239429111	--
1	TOLUENE	Shoot				Jim Duke's personal files.
2	TRANS-BETA-FARNESENE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VELLARINE	Plant				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	WATER	Leaf		893000.0	0.4258710730214559	--
0	WATER	Plant		893000.0	0.5225843122637761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	WIDDRENE	Shoot				Jim Duke's personal files.
77	ZINC	Leaf	0.4	3.4	-0.5059022324796413	--
77	ZINC	Bark		3.4	-0.9069023286651865	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.