

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Mentha arvensis* var. *piperascens*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
19	CARVONE	Leaf	8100.0	26000.0	5.048754540985525	--
7	PIPERITONE	Leaf	240.0	7700.0	3.6970310693516097	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
30	MENTHONE	Plant	71.0	24000.0	3.4108177532842308	--
60	LIMONENE	Leaf	20.0	3520.0	3.2552582140948236	--
30	MENTHONE	Leaf	250.0	25680.0	2.6118994892791703	--
0	OCTAN-3-OL	Leaf	0.0	10200.0	2.4424856936312707	--
63	MENTHOL	Leaf	1000.0	24385.0	2.2215192266445816	--
28	PULEGONE	Plant	100.0	24960.0	2.11770459496291	--
0	EO	Plant	10000.0	32100.0	1.699414490711653	--
5	MENTHOFURAN	Plant	4200.0	12600.0	1.6912182092538641	--
4	(+)-PULEGONE	Leaf	1100.0	8400.0	1.6412173114963589	--
11	GAMMA-TERPINENE	Leaf		900.0	1.36337998309933	--
0	(+)-ISOMENTHONE	Leaf	240.0	7062.0	1.2644952641479401	--
13	BETA-PINENE	Plant	10.0	1445.0	1.124729385882718	--
1	(-)-PIPERITONE	Leaf	240.0	7700.0	1.0	--
0	MENTHOL-ACETATE	Leaf	60.0	2215.0	1.0	--
5	ISOVALERIC-ACID	Plant	30.0	90.0	1.0	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
4	(+)-PULEGONE	Plant		25455.0	1.0	--
14	POTASSIUM	Plant		35100.0	0.9277235520248976	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
0	(+)-NEOMENTHOL	Leaf	1100.0	2200.0	0.9156775285682353	--
2	PIPERITENONE-OXIDE	Leaf	260.0	7320.0	0.8759003813049827	--
0	(-)-CARVONE	Leaf		7300.0	0.8387456988737643	--
13	BETA-PINENE	Leaf		800.0	0.7508636062406463	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(-)-LINALOOL	Leaf	3900.0	4000.0	0.737154384403507	--
22	MYRCENE	Leaf	10.0	2485.0	0.7240430590989703	--
0	(-)-LIMONENE	Leaf		1600.0	0.6735227011412723	--
12	COPPER	Plant		20.0	0.6626022066114992	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
0	PIPERITONE-OXIDE	Leaf	320.0	5135.0	0.5008838193806822	--
7	PIPERITONE	Leaf	13.0	1285.0	0.3195633749094698	--
0	P-CYMOL	Leaf	562.0	1800.0	0.1584093813492088	--
0	BETA-CARYOPHYLLENE	Leaf		700.0	0.007903496850210601	--
28	CALCIUM	Plant		13500.0	-0.009562051564718019	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
57	ROSMARINIC-ACID	Plant		28000.0	-0.022447952153288788	Fitoterapia No.62: 166.
4	(-)-MENTHOL	Leaf	1500.0	9600.0	-0.13664468500079888	--
2	GERMACRENE-D	Leaf	300.0	400.0	-0.20129073177947823	--
77	ZINC	Plant		28.0	-0.23812799612849617	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
1	SODIUM	Plant		860.0	-0.25647164723432153	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
6	IRON	Plant		400.0	-0.2672486162776693	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
28	ALPHA-PINENE	Plant	10.0	300.0	-0.26916907964228254	--
0	SABINENE-HYDRATE	Leaf	30.0	160.0	-0.3730620025303552	--
16	P-CYMENE	Leaf	9.0	29.0	-0.3760203807398916	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Plant		44.0	-0.3795487464259209	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
65	MAGNESIUM	Plant		2830.0	-0.38378745316107926	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
2	(-)-MENTHONE	Leaf	500.0	4400.0	-0.41193606418331424	--
3	ISOMENTHONE	Leaf	300.0	600.0	-0.4825959961896006	--
6	FURFURAL	Plant	2.0	5.0	-0.4983416206388216	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	CINEOLE	Leaf	40.0	1785.0	-0.6151264776039638	--
0	3(5',5'-DIMETHYL-TETRAHYDROFURAN-2'-YL)-BUT-CIS-2-EN-1-OL	Essential Oil		1.4	-0.7074110008631054	Jim Duke's personal files.
0	(+)-MENTHOFURAN	Leaf		32.0	-0.7587175787128734	--
57	ROSMARINIC-ACID	Leaf	71.0	228.0	-0.9802701242157968	--
0	(-)-LINALYL-ACETATE	Leaf		0.0	-1.0	--
1	(+)-PIPERITENONE-OXIDE	Leaf		2900.0	-1.0692702191867607	--
4	ISOPULEGONE	Leaf	240.0	770.0	-1.4142135623730947	--
0	LINALOL-ACETATE	Leaf	690.0	2215.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	BETA-PHELLANDRENE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	GERMACRENE-D	Essential Oil				Jim Duke's personal files.
0	(+)-MENTHYL-ACETATE	Leaf	300.0	1900.0		--
0	4',5,7-TRIHYDROXY-FLAVONE-7-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
19	CARVONE	Essential Oil				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	LINALOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-CAR-3-ENE	Essential Oil				Jim Duke's personal files.
11	GAMMA-TERPINENE	Essential Oil				Jim Duke's personal files.
0	3-METHYLPENTANOL	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	CAMPHENE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	NEOISOPULEGONE	Essential Oil				Jim Duke's personal files.
3	CIS-OCIMENE	Essential Oil				Jim Duke's personal files.
2	L-MENTHYL-ACETATE	Plant	85.0	4815.0		--
7	ANISALDEHYDE	Shoot				Jim Duke's personal files.
0	3(5',5'-DIMETHYL-TETRAHYDROFURAN-2'-YL)-BUT-CIS-2-EN-1-OL	Plant		1.4		--
0	NEOISOMENTHOL	Essential Oil				Jim Duke's personal files.
0	CIS-ISOPULEGONE	Leaf				Jim Duke's personal files.
0	(-)-MENTHOL-ACETATE	Leaf	10.0	32.0		--
2	(+)-CARVONE	Essential Oil				Jim Duke's personal files.
0	RESIN	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	ALPHA-THUJENE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	L-MENTHOL	Plant	373.0	29515.0		--
13	FORMIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	3',5,7-TRIHYDROXY-4'-METHOXY-FLAVONE-O-BETA-D-GLUCOSIDE	Shoot				Jim Duke's personal files.
0	TRANS-OCIMENE	Essential Oil				Jim Duke's personal files.
0	(+)-8-ACETOXY-CARVONE	Essential Oil				Jim Duke's personal files.
1	RAFFINOSE	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	KETONES	Plant	336.0	1008.0		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
76	EUGENOL	Essential Oil				Jim Duke's personal files.
0	3',4',5,7-TETRAHYDROXY-FLAVONE-7-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE	Shoot				Jim Duke's personal files.
0	TRANS-ISOPULEGONE	Leaf				Jim Duke's personal files.
0	MENTHONONE	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)
0	CHLOROPHYLL-B	Tissue Culture				Jim Duke's personal files.
0	ALPHA,GAMMA-HEXENYL-PHENYL-ACETATE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	ETHYL-AMYL-CARBINOL	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	(+)-1,2-EPOXYNEOMENTHYL-ACETATE	Leaf		5000.0		--
0	1-P-MENTHEN-3-ONE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
35	TANNIN	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	MENTHOFUROLACTONE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CHLOROPHYLL-A	Tissue Culture				Jim Duke's personal files.
0	(-)-CARVONE	Essential Oil				Jim Duke's personal files.
0	PIPERITONE-OXIDE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA,BETA-HEXENIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
1	ISOVALERALDEHYDE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	EO	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
67	1,8-CINEOLE	Leaf				Jim Duke's personal files.
1	STACHYOSE	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	CARVOMENTHONE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ACETYLMENTHOL	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)
3	ISOPULEGOL	Essential Oil				Jim Duke's personal files.
3	PIPERITENONE	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	CAPROIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	LINALOOL-ACETATE	Leaf	690.0	2215.0		--
1	ISOMENTHOL	Essential Oil				Jim Duke's personal files.
16	ACETIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	P-MENTHAN-TRANS-2,5-DIOL	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DL-ISOMENTHONE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
3	(-)-BORNEOL	Leaf	500.0	600.0		--
0	(+)-PIPERITONE	Leaf		1400.0		--
0	SH	Plant				--
53	LINALOOL	Leaf				Jim Duke's personal files.
31	CARYOPHYLLENE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	(+)-PIPERITENONE	Leaf	400.0	700.0		--
0	ACACETIN-7-O-BETA-D-GLUCOSIDE	Shoot				Jim Duke's personal files.
0	DIOSMETIN-7-O-BETA-D-GLUCOSIDE	Shoot				Jim Duke's personal files.
0	(-)-PIPERITENONE-OXIDE	Leaf	3330.0	10595.0		--
0	(+)-OCTAN-3-ONE	Leaf	9000.0	27000.0		--
0	SANTENE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
78	LUTEOLIN	Shoot				Jim Duke's personal files.

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17	THUJONE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
31	HESPERIDIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	4',5,7-TRIHYDROXY-FLAVONE-O-BETA-D-GLUCOSIDE	Shoot				Jim Duke's personal files.
0	D-3-OCTANOL	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.