

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Monarda fistulosa*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
67	1,8-CINEOLE	Plant	3.0	5006.0	0.8434767658890076	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	1-OCTEN-3-OL	Plant	1.0	2294.0	4.468950036665189	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3,4-EPOXY-GAMMA-TERPINENE	Plant	3.0	186.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	3-OCTANOL	Plant	46.0	1655.0	2.7784438508650324	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-OCTANONE	Plant	1.0	93.0	0.6400067405469931	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-OCTYL-ACETATE	Plant	21.0	211.0	-0.06557418266010397	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
16	ACETIC-ACID	Essential Oil				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
28	ALPHA-PINENE	Plant	3.0	1823.0	0.8086395395116448	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Plant	3.0	3193.0	4.310121652741106	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Plant	9.0	3314.0	2.0843647250881507	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-THUJENE	Plant	3.0	2480.0	0.9505060392285806	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-BOURBONENE	Plant	1.0	62.0	-0.06007394768219075	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

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13	BETA-PINENE	Plant	3.0	93.0	-0.335071324569294	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
12	BORNYL-ACETATE	Plant	1.0	1085.0	0.22479377653497012	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	BUTYRIC-ACID	Essential Oil				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
9	CAMPHENE	Plant	1.0	856.0	0.8584324791728094	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	CAPROIC-ACID	Essential Oil				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
37	CARVACROL	Plant	93.0	19902.0	1.8866648522763463	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CARVACRYL-METHYL-ETHER	Plant	6.0	6076.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	CIS-3-HEXENOL	Plant	1.0	31.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-SABINENE-HYDRATE	Plant	1.0	527.0	2.6281938059149086	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	COPAENE	Plant	1.0	124.0	1.6394240646538711	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
10	CUMINALDEHYDE	Plant	1.0	62.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	DELTA-3-CARENE	Plant	1.0	93.0	-0.3284051803425256	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DIHYDROCARVYL-ACETATE	Plant	3.0	301.0	-0.4884973086423854	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

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1	DIHYDROCUMINYL-ALCOHOL	Essential Oil				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	DIHYDROXYTHYMOQUINONE	Essential Oil				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	EO	Plant	3000.0	31000.0	1.6158164412451983	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
12	FORMALDEHYDE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	GAMMA-TERPINENE	Plant	3.0	11377.0	4.092942645664708	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	GERANIAL	Plant	15.0	837.0	-0.29592843937780516	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
35	GERANIOL	Plant	1.0	29450.0	4.611044353873137	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	GERMACRENE-D	Plant	9.0	1891.0	1.1720558093853688	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ISOMENTHONE	Plant	12.0	146.0	-0.6685746530395309	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ISOVALERALDEHYDE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	LIMONENE	Plant	3.0	589.0	-0.12381216311883146	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LINALOL	Plant	15.0	341.0	-0.3551244924165635	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

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22	MYRCENE	Plant	3.0	1860.0	1.567397861430607	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	N-BUTYRALDEHYDE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	NERAL	Plant	24.0	589.0	-0.22333948511387217	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
10	NEROL	Plant	15.0	310.0	-0.24197523739323681	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-CYMEN-8-OL	Plant	1.0	124.0	1.3313799984996793	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
16	P-CYMENE	Plant	3.0	15810.0	3.6952889617223352	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
14	PERILLYL-ALCOHOL	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
28	PULEGONE	Plant	12.0	257.0	-0.6107930881468573	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
57	ROSMARINIC-ACID	Shoot		20000.0	0.08332260166415618	Jim Duke's personal files.
5	SABINENE	Plant	1.0	93.0	-0.38661063052233563	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	THYMOHYDROQUINONE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
71	THYMOL	Plant	1.0	20850.0	2.0021758742622398	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

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16	THYMOQUINONE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TRANS-SABINENE-HYDRATE	Plant	1.0	217.0	0.048597800626973886	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	VALERIC-ACID	Essential Oil				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.