

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Mentha spicata*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-DIHYDROCARVONE	Leaf	550.0	13750.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	(+)-ISOMENTHONE	Leaf	23.0	575.0	-1.1806897850952103	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	(+)-LINALOOL	Essential Oil		863000.0		--
0	(+)-MENTHOFURAN	Leaf	4.0	100.0	-0.6542082025768665	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	(+)-NEOMENTHOL	Leaf	1.0	25.0	-1.3911934652185358	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	(+)-PIPERITENONE-OXIDE	Leaf	5700.0	14250.0	1.5322768307102888	--
4	(+)-PULEGONE	Essential Oil	0.0	30000.0	-1.0	--
4	(+)-PULEGONE	Leaf	0.0	8300.0	1.6080152922980508	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	(-)-CARVONE	Essential Oil				--
0	(-)-CARVONE	Leaf	6200.0	6900.0	0.5667200668065975	--
0	(-)-DIHYDROCARVONE	Leaf	900.0	2250.0		--
0	(-)-ISOMENTHONE	Essential Oil				--
0	(-)-LIMONENE	Essential Oil				--
0	(-)-LIMONENE	Leaf	700.0	2000.0	1.2705511342858904	--
0	(-)-LIMONENE	Plant				--
4	(-)-MENTHOL	Essential Oil				--
4	(-)-MENTHOL	Leaf	8.0	200.0	-1.1506920842172557	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	(-)-MENTHONE	Leaf	438.0	10950.0	1.1365180077826589	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	(-)-PIPERITONE	Leaf	24.0	600.0	-1.0	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	1,8-CINEOL	Shoot				--
0	1,8-CINEOL	Essential Oil		3000.0	-1.1812015201236299	--
67	1,8-CINEOLE	Plant	50.0	9375.0	2.069816196893691	--
0	1-HYDROXY-2-ACETOXY-P-MENTH-8(9)-ENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-AMINO-ADIPIC-ACID	Shoot		1.6		--
0	2-AMYL-FURAN	Essential Oil				--
0	2-AMYL-FURAN	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-CARBOXYARABINITOL	Leaf				--
0	2-ETHYL-FURAN	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-ETHYL-FURAN	Essential Oil				--
2	2-METHOXY-4-VINYL-PHENOL	Shoot				--
0	2-METHYL-2-METHYL-BUTYRATE	Leaf				--
0	2-METHYL-BUTAN-1-OL	Essential Oil				--
0	2-METHYL-BUTAN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-BUTYL-2-METHYL-BUTYRATE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-METHYL-BUTYL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-BUTYL-ISOVALERATE	Essential Oil				--
0	2-METHYL-BUTYL-ISOVALERATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-BUTYRALDEHYDE	Essential Oil				--
0	2-METHYL-BUTYRALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-ETHYL-BUTYRATE	Leaf				--
0	2-METHYL-PROPAN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-PROPAN-1-OL	Essential Oil				--
0	3(5',5'-DIMETHYL-TETRAHYDROFURAN-2'-YL)-BUT-CIS-2-EN-1-OL	Leaf	3.0	75.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	3(5',5'-DIMETHYL-TETRAHYDROFURAN-2'-YL)-BUT-CIS-2-EN-1-OL	Essential Oil		3000.0	1.4142135187385312	--
0	3-METHYL-BUTAN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	3-METHYL-BUTAN-1-OL	Essential Oil				--
0	3-METHYL-BUTYRALDEHYDE	Essential Oil				--
0	4-HYDROXY-PIPERITONE	Essential Oil				--
0	4-HYDROXY-PIPERITONE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5-HYDROXY-CARVONE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	5-HYDROXY-CARVONE	Essential Oil				--
0	5-METHYL-HEX-2-EN-1-AL	Essential Oil				--
0	5-METHYL-HEX-2-EN-1-AL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	8-HYDROXY-9-ACETOXY-MENTH-1-ENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	ACETALDEHYDE	Essential Oil				--
16	ACETIC-ACID	Essential Oil				--
16	ACETIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	ACETOIN	Essential Oil				--
0	ACETOIN	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	ACETONE	Essential Oil				--
3	ACETONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	ACETOPHENONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	ACETOPHENONE	Essential Oil				--
3	ALANINE	Leaf	1710.0	11835.0	-0.1770443857416287	USDA's Ag Handbook 8 and sequelae)
0	ALPHA-FENCHENE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-FENCHENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	ALPHA-HUMULENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	ALPHA-HUMULENE	Essential Oil				--
0	ALPHA-LIMONENE-1,2-OXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	ALPHA-LIMONENE-1,2-OXIDE	Essential Oil				--
0	ALPHA-METHYL-P-METHYL-STYRENE	Essential Oil				--
0	ALPHA-METHYL-P-METHYL-STYRENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
28	ALPHA-PINENE	Shoot				--
28	ALPHA-PINENE	Leaf	5.0	375.0	-0.20019781806808187	--
28	ALPHA-PINENE	Essential Oil	2000.0	10000.0	-0.47207505752571344	--
23	ALPHA-TERPINEOL	Essential Oil				--
23	ALPHA-TERPINEOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	ALPHA-THUJENE	Essential Oil				--
0	ALPHA-THUJENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
101	APIGENIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	ARGININE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	ARGININE	Leaf	1510.0	10450.0	-0.6013081392776	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Leaf	135.0	9200.0	0.4097226710061515	USDA's Ag Handbook 8 and sequelae)
0	ASH	Plant	16000.0	140485.0	0.35178839232492654	--
3	ASPARTIC-ACID	Leaf	3880.0	26850.0	-0.011481891557127021	USDA's Ag Handbook 8 and sequelae)
24	BENZALDEHYDE	Essential Oil				--
24	BENZALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BENZYL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BENZYL-2-METHYL-BUTYRATE	Essential Oil				--
9	BENZYL-ALCOHOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	BENZYL-ALCOHOL	Essential Oil				--
1	BENZYL-ISOBUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	BENZYL-ISOBUTYRATE	Essential Oil				--
0	BETA-BOURBONENE	Leaf	2.0	50.0	-0.2572628070428749	--
0	BETA-BOURBONENE	Essential Oil				--
53	BETA-CAROTENE	Leaf	2.0	175.0	-0.37582350890658794	--
0	BETA-CARYOPHYLLENE	Essential Oil				--
0	BETA-CARYOPHYLLENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-CARYOPHYLLENE-OXIDE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-CARYOPHYLLENE-OXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	BETA-ELEMENE	Essential Oil				--
5	BETA-ELEMENE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-HUMULENE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-IONONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
13	BETA-IONONE	Essential Oil				--
0	BETA-LIMONENE-1,2-OXIDE	Essential Oil				--
0	BETA-LIMONENE-1,2-OXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	BETA-MYRCENE	Leaf	700.0	1750.0	1.9887942996764614	--
0	BETA-OCIMENE	Essential Oil		20000.0		--
0	BETA-PHENETHYL-2-METHYL-BUTYRATE	Essential Oil				--
0	BETA-PHENETHYL-ALCOHOL	Essential Oil				--
0	BETA-PHENETHYL-ALCOHOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-PHENETHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-PHENETHYL-BUTYRATE	Essential Oil				--
0	BETA-PHENETHYL-ISOBUTYRATE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-PHENETHYL-ISOBUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-PHENETHYL-ISOVALERATE	Essential Oil				--
0	BETA-PHENETHYL-ISOVALERATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-PHENETHYL-METHYL-BUTYRATE	Leaf				--
0	BETA-PHENETHYL-METHYL-ETHER	Essential Oil				--
0	BETA-PHENETHYL-METHYL-ETHER	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
13	BETA-PINENE	Essential Oil	3000.0	137000.0	2.3116107782282604	--
13	BETA-PINENE	Leaf	9.0	3425.0	4.622716517508347	--
13	BETA-PINENE	Shoot				--
47	BETA-SITOSTEROL	Shoot				--
47	BETA-SITOSTEROL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BICYCLOELEMENE	Essential Oil				--
0	BICYCLOELEMENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
35	BORNEOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
35	BORNEOL	Essential Oil				--
6	BUTYRIC-ACID	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
0	CADINOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	CALCIUM	Plant	1990.0	13770.0	0.019318935182891635	--
9	CAMPHENE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	CAMPHENE	Essential Oil				--
1	CAPROIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
5	CAPRYLIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	CAR-3-ENE	Essential Oil				--
0	CAR-3-ENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CARBOHYDRATE	Plant	80000.0	588300.0	0.15598903570269707	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CARBOHYDRATES	Plant	80000.0	588300.0	-0.541481373280153	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
37	CARVACROL	Essential Oil				--
37	CARVACROL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
19	CARVONE	Plant	495.0	20000.0	3.111093181560533	--
19	CARVONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
19	CARVONE	Shoot				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARVONE-10-ACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CARVONE-10-ACETATE	Essential Oil				--
0	CARVONE-8,9-OXIDE	Essential Oil				--
0	CARVONE-8,9-OXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CARVYL-6,7-OXIDE-ACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CARVYL-6,7-OXIDE-ACETATE	Essential Oil				--
31	CARYOPHYLLENE	Essential Oil		12000.0	-0.5431805211356492	--
31	CARYOPHYLLENE	Leaf	3.0	1950.0	0.42006860721265904	--
0	CHLOROFORM	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CHLOROFORM	Essential Oil				--
0	CHLOROPHYLL-A	Leaf		2755.0		--
0	CHLOROPHYLL-B	Leaf		1299.0		--
0	CINEOL	Essential Oil	10000.0	48000.0	-0.6663815998555231	--
0	CINEOLE	Leaf	10.0	1500.0	-0.6688040789870409	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-2,5-DIETHYL-TETRAHYDROFURAN	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-2,5-DIETHYL-TETRAHYDROFURAN	Essential Oil				--
0	CIS-BETA-COPAENE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-BETA-COPAENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-CARVEOL	Shoot				--
0	CIS-CARVEOL	Essential Oil				--
0	CIS-CARVEOL	Leaf	4.0	100.0	1.0	--
0	CIS-CARVEOL-ACETATE	Essential Oil				--
0	CIS-CARVONE-OXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-CARVONE-OXIDE	Essential Oil				--
0	CIS-CARVYL-ACETATE	Leaf	18.0	450.0		--
0	CIS-CARVYL-FORMATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-CARVYL-FORMATE	Essential Oil				--
0	CIS-DIHYDROCARVONE	Essential Oil				--
0	CIS-JASMONE	Essential Oil				--
0	CIS-JASMONE	Leaf	1.0	25.0	-0.3741484173923501	--
0	CIS-SABINENE-HYDRATE	Essential Oil				--
1	COPAENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	COPAENE	Essential Oil				--
12	COPPER	Plant	1.0	17.0	0.33037825900684764	--
2	CYSTINE	Leaf	360.0	2490.0	-0.3589486756977957	USDA's Ag Handbook 8 and sequelae)
0	DECAN-1-OL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DECAN-1-OL	Essential Oil				--
0	DECAN-3-OL	Essential Oil				--
0	DECAN-3-OL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	DEHYDROCARVACROL	Essential Oil				--
0	DEHYDROCARVACROL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	DELTA-CADINENE	Leaf	2.0	38.0	-0.2986545777457765	--
9	DELTA-CADINENE	Essential Oil				--
2	DIACETYL	Essential Oil				--
2	DIACETYL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	DIHYDRO-ISOCARVONE	Essential Oil		6500.0		--
2	DIHYDROCARVEOL	Leaf	13.0	325.0	0.47480379501964887	--
2	DIHYDROCARVEOL	Shoot				--
2	DIHYDROCARVEOL	Essential Oil		29000.0		--
0	DIHYDROCARVONE	Leaf	18.0	4475.0	1.0	--
0	DIHYDROCARVONE	Shoot				--
0	DIHYDROCARVONE	Essential Oil		6500.0	-0.49934378715306904	--
1	DIHYDROCARVYL-ACETATE	Leaf	16.0	400.0		--
1	DIHYDROCARVYL-ACETATE	Essential Oil				--
2	DIMETHYL-SULFIDE	Essential Oil				--
2	DIMETHYL-SULFIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	DIMETHYL-SULFOXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	DIMETHYL-SULFOXIDE	Essential Oil				--
13	DIOSMETIN	Plant				--
0	DIOSMETIN-7-GLUCOSIDE	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	DIOSMETIN-7-O-BETA-D-GLUCURONIDE	Leaf				--
34	DIOSMIN	Shoot				--
34	DIOSMIN	Leaf				--
2	ELEMOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EO	Leaf	1000.0	25000.0	1.1843761113015423	--
0	EPIBULGARENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	EPIBULGARENE	Essential Oil				--
0	EPIMUROLENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	EPIMUROLENE	Essential Oil				--
24	ETHANOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
24	ETHANOL	Essential Oil				--
0	ETHYL-2-METHYL-BUTYRATE	Essential Oil				--
2	ETHYL-ISOBUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ETHYL-ISOBUTYRATE	Essential Oil				--
0	ETHYL-N-VALERATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	ETHYL-N-VALERATE	Essential Oil				--
76	EUGENOL	Essential Oil				--
76	EUGENOL	Shoot				--
76	EUGENOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	FARNESENE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	FARNESENE	Essential Oil				--
17	FARNESOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	FAT	Plant	6000.0	50519.0	-0.01792101144299427	--
15	FIBER	Plant	20000.0	118000.0	-0.7748720151690661	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FOLATE	Leaf	1.0	7.0	0.1690308509457033	--
6	FURFURAL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	FURFURAL	Essential Oil				--
0	GAMMA-CADINENE	Leaf	2.0	33.0	-0.11733883554584716	--
11	GAMMA-TERPINENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
11	GAMMA-TERPINENE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
35	GERANIOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	GERANYL-ACETONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	GERANYL-ACETONE	Essential Oil				--
8	GLUTAMIC-ACID	Leaf	3580.0	24775.0	-0.7109553135717208	USDA's Ag Handbook 8 and sequelae)
12	GLYCINE	Leaf	1580.0	10935.0	0.13782403206680577	USDA's Ag Handbook 8 and sequelae)
0	HEPT-CIS-4-EN-1-AL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEPT-CIS-4-EN-1-AL	Essential Oil				--
0	HEPT-TRANS-2-EN-1-AL	Essential Oil				--
0	HEPT-TRANS-2-EN-1-AL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEPTAN-1-AL	Essential Oil				--
0	HEPTAN-1-AL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEPTAN-1-YL-2-METHYL-BUTYRATE	Essential Oil				--
0	HEPTAN-1-YL-2-METHYL-BUTYRATE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEPTAN-1-YL-ISOVALERATE	Essential Oil				--
0	HEPTAN-1-YL-ISOVALERATE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEPTAN-3-OL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEPTAN-3-OL	Essential Oil				--
0	HEPTAN-3-ONE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEPTAN-3-ONE	Essential Oil				--
31	HESPERIDIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HEX-CIS-3-EN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-CIS-3-EN-1-OL	Essential Oil				--
0	HEX-CIS-3-EN-1-OL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-CIS-3-EN-1-OL-2-METHYL-BUTYRATE	Essential Oil				--
0	HEX-CIS-3-EN-1-OL-ACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-CIS-3-EN-1-OL-ACETATE	Essential Oil				--
0	HEX-CIS-3-EN-1-OL-ISOBUTYRATE	Essential Oil				--
0	HEX-CIS-3-EN-1-OL-ISOBUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-CIS-3-EN-1-OL-ISOVALERATE	Essential Oil				--
0	HEX-CIS-3-EN-1-OL-ISOVALERATE	Leaf	2.0	50.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEX-CIS-3-EN-1-OL-PHENYLACETATE	Essential Oil				--
0	HEX-CIS-3-EN-1-OL-PHENYLACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-TRANS-2-EN-1-AL	Essential Oil				--
0	HEX-TRANS-2-EN-1-OL	Essential Oil				--
0	HEX-TRANS-2-EN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-TRANS-2-EN-1-OL-ACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-TRANS-2-EN-1-OL-ACETATE	Essential Oil				--
0	HEX-TRANS-3-EN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEX-TRANS-3-EN-1-OL	Essential Oil				--
0	HEXAHYDRO-FARNESYL-ACTONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEXAHYDROFARNESYL-ACTONE	Essential Oil				--
0	HEXAN-1-AL	Essential Oil				--
0	HEXAN-1-AL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEXAN-1-OL	Essential Oil				--
0	HEXAN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEXAN-1-YL-2-ISOVALERATE	Leaf				--
0	HEXAN-1-YL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	HEXAN-1-YL-2-METHYL-BUTYRATE	Essential Oil				--
0	HEXAN-1-YL-ISOVALERATE	Essential Oil				--
0	HEXAN-1-YL-PHENYLACETATE	Essential Oil				--
0	HEXAN-1-YL-PHENYLACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	HISTIDINE	Leaf	660.0	4565.0	-0.4071595786304595	USDA's Ag Handbook 8 and sequelae)
6	IRON	Plant	156.0	918.0	0.3427665650697393	--
0	ISOAMYL-2-METHYL-BUTYRATE	Essential Oil				--
0	ISOAMYL-2-METHYL-BUTYRATE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	ISOAMYL-ISOVALERATE	Essential Oil				--
0	ISOAMYL-ISOVALERATE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	ISOBORNYL-ACETATE	Leaf	11.0	275.0	1.0	--
0	ISOBUTYL-2-METHYL-BUTYRATE	Essential Oil				--
0	ISOBUTYL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	ISOBUTYRALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	ISOBUTYRALDEHYDE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	ISOCARYOPHYLLENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	ISOCARYOPHYLLENE	Essential Oil				--
0	ISODIHYDROCARVONE	Leaf	75.0	1875.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	ISOLEUCINE	Leaf	1350.0	9340.0	-0.7017350095262209	--
3	ISOMENTHONE	Essential Oil				--
3	ISOMENTHONE	Leaf	50.0	125.0	-0.6385368793120907	--
4	ISOPINOCAMPHONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
4	ISOPINOCAMPHONE	Essential Oil				--
8	JASMONE	Essential Oil				--
8	JASMONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	KILOCALORIES	Leaf	440.0	3045.0	0.043389152673180095	USDA's Ag Handbook 8 and sequelae)
0	L-PHELLANDRENE	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	L-PHELLANDRENE	Plant				--
0	LAVANDULYL-BUTYRATE	Essential Oil				--
0	LAVANDULYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	LEUCINE	Leaf	2470.0	17095.0	0.08951789523130926	--
0	LF	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Essential Oil	19000.0	363000.0	1.3523167562121183	--
60	LIMONENE	Shoot				--
60	LIMONENE	Plant	7.0	9075.0	5.091572982030111	--
0	LIMONENENE-8,9-OXIDE	Essential Oil				--
0	LIMONENENE-8,9-OXIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	LINALOL	Plant	11.0	9375.0	1.6872091848059536	--
53	LINALOOL	Essential Oil				--
53	LINALOOL	Plant	11.0	24500.0	2.6501691984113913	--
0	LINALOOL-ACETATE	Essential Oil		1000.0	-0.7426467381632698	--
27	LINOLEIC-ACID	Leaf	540.0	3735.0	-0.7513073604494908	USDA's Ag Handbook 8 and sequelae)
0	LINOLENIC-ACID	Leaf	3380.0	23390.0	-0.2348536372710458	USDA's Ag Handbook 8 and sequelae)
78	LUTEOLIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUTEOLIN-3'-O-BETA-D-GLUCURONIDE	Leaf				--
0	LUTEOLIN-7-O-BETA-D-GLUCURONIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
4	LYSINE	Leaf	1410.0	9760.0	-0.7075161040041896	--
65	MAGNESIUM	Leaf	630.0	4360.0	0.09045438563126122	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Leaf	11.0	77.0	-0.3318765828407499	USDA's Ag Handbook 8 and sequelae)
0	MENTH-1-OL-ACETATE	Essential Oil				--
5	MENTHOFURAN	Essential Oil				--
63	MENTHOL	Essential Oil	0.0	15000.0	-1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
63	MENTHOL	Leaf	8.0	200.0	-0.5846188722355842	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
63	MENTHOL	Leaf	0.0	375.0	-0.5643139655866684	--
0	MENTHOL-ACETATE	Essential Oil	0.0	15000.0		--
0	MENTHOL-ACETATE	Leaf	0.0	375.0	-1.0	--
30	MENTHONE	Leaf	4.0	1300.0	-0.4760604980459572	--
30	MENTHONE	Essential Oil				--
30	MENTHONE	Leaf	438.0	10950.0	0.7462042221217	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	METHANOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	METHANOL	Essential Oil				--
15	METHIONINE	Leaf	460.0	3180.0	0.07735883691925587	--
2	METHYL-2-METHYL-BUTYRATE	Essential Oil				--
0	METHYL-HEPTENONE	Essential Oil				--
0	METHYL-HEPTENONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
13	MUFA	Leaf	250.0	1730.0	-0.5597108284870816	USDA's Ag Handbook 8 and sequelae)
22	MYRCENE	Essential Oil				--
22	MYRCENE	Shoot				--
22	MYRCENE	Plant	21.0	1350.0	1.007083201682519	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	MYRISTIC-ACID	Leaf	40.0	275.0	-0.5522849047688323	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	MYRTENAL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	MYRTENAL	Essential Oil				--
2	MYRTENOL	Essential Oil				--
2	MYRTENOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	MYRTENYL-ACETATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	MYRTENYL-ACETATE	Essential Oil				--
1	N-BUTYRALDEHYDE	Essential Oil				--
1	N-BUTYRALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	N-VALERALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	N-VALERALDEHYDE	Essential Oil				--
0	NEO-ISOPULEGOL	Essential Oil				--
0	NEO-ISOPULEGOL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	NEODIHYDROCARVEOL	Essential Oil				--
0	NEODIHYDROCARVEOL	Leaf	3.0	75.0	1.0	--
0	NEODIHYDROCARVYL-ACETATE	Essential Oil				--
2	NEOMENTHOL	Essential Oil				--
5	NERYL-ACETATE	Leaf	27.0	675.0	0.6307295317468979	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
39	NIACIN	Plant	4.0	65.0	-0.16418216541690328	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	NONAN-1-AL	Essential Oil				--
0	NONAN-1-AL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	NONAN-3-OL	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	NONAN-3-OL	Essential Oil				--
0	OCT-1-EN-3-OL	Essential Oil				--
0	OCT-1-EN-3-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	OCTAN-1-AL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	OCTAN-1-AL	Essential Oil				--
0	OCTAN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	OCTAN-1-OL	Essential Oil				--
0	OCTAN-1-OL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	OCTAN-1-OL-2-METHYL-BUTYRATE	Essential Oil				--
0	OCTAN-1-OL-FORMATE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OCTAN-1-OL-FORMATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	OCTAN-3-OL	Essential Oil	0.0	5000.0	-1.0	--
0	OCTAN-3-OL	Leaf	4.0	100.0	-0.4336112824306008	--
0	OCTAN-3-OL-ACETATE	Essential Oil				--
0	OCTAN-3-OL-ACETATE	Leaf	2.0	25.0		--
0	OCTAN-3-ONE	Essential Oil				--
0	OCTAN-3-ONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
64	OLEANOLIC-ACID	Shoot				--
64	OLEANOLIC-ACID	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
18	OLEIC-ACID	Leaf	220.0	1520.0	-0.4583001506895111	USDA's Ag Handbook 8 and sequelae)
9	OXALIC-ACID	Leaf		38.0	-0.4750154161977811	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
0	P-CYMEN-8-OL	Leaf				--
16	P-CYMENE	Essential Oil		2000.0	-0.6168805810969309	--
16	P-CYMENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	P-CYMENE-8-OL	Essential Oil				--
0	P-CYMOL	Essential Oil		3000.0		--
0	P-CYMOL	Leaf	3.0	75.0	-0.5148723081234048	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	P-MENTH-1(7)-EN-8-OL	Essential Oil				--
0	P-MENTH-1(7)-EN-8-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	P-MENTH-1,8-DIEN-4-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	P-MENTH-1-EN-9-YL-ACETATE	Essential Oil				--
0	P-MENTH-CIS-1(7),8-DIEN-2-OL	Leaf				--
0	P-MENTH-CIS-2-EN-1-OL	Essential Oil				--
0	P-MENTH-CIS-2-EN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	P-MENTH-TRANS-1(7),8-DIEN-2-OL	Leaf				--
0	P-MENTH-TRANS-1(7),8-DIEN-2-YL-ACETATE	Leaf				--
0	P-MENTH-TRANS-2,8-DIEN-1-OL	Leaf				--
0	P-MENTHA-1,8-DIEN-4-OL	Essential Oil				--
0	P-MENTHA-CIS-1(7)-8-DIEN-2-OL	Essential Oil				--
0	P-MENTHA-CIS-2-8-DIEN-1-OL	Essential Oil				--
0	P-MENTHA-TRANS-1(7)-8-DIEN-2-OL	Essential Oil				--
0	P-MENTHA-TRANS-1(7)-8-DIEN-2-YL-ACETATE	Essential Oil				--
0	P-MENTHA-TRANS-2-8-DIEN-1-OL	Essential Oil				--
13	PALMITIC-ACID	Leaf	1370.0	9480.0	-0.20652718082803365	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Leaf	20.0	140.0	-0.49196167844647537	USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Leaf	2.5	17.0	-0.5115750290946652	USDA's Ag Handbook 8 and sequelae)
0	PENT-1-EN-3-OL	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENT-1-EN-3-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	PENT-CIS-1-EN-3-OL	Leaf				--
0	PENT-CIS-2-EN-1-OL	Essential Oil				--
0	PENTAN-1-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	PENTAN-1-OL	Essential Oil				--
0	PERILLA-ALDEHYDE	Essential Oil				--
11	PERILLALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
14	PERILLYL-ALCOHOL	Leaf	1.0	25.0	1.0	--
14	PERILLYL-ALCOHOL	Essential Oil				--
6	PHENETHYL-ALCOHOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	PHENETHYL-ALCOHOL	Essential Oil				--
0	PHENLYALANINE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	PHENYL-ACETALDEHYDE	Essential Oil				--
2	PHENYL-ACETALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	PHENYLALANINE	Leaf	1680.0	11625.0	0.3481392714633915	--
4	PHOSPHORUS	Plant	600.0	4706.0	0.5369248860408372	--
2	PHYTOSTEROLS	Leaf	100.0	690.0	-0.5982404044893082	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PIN-TRANS-3-EN-2-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	PIN-TRANS-3-EN-2-OL	Essential Oil				--
12	PINENE	Essential Oil				--
4	PINOCAMPHONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
4	PINOCAMPHONE	Essential Oil				--
0	PINOCARVEOL	Essential Oil				--
0	PINOCARVEOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	PINOCARVONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	PINOCARVONE	Essential Oil				--
3	PIPERITENONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	PIPERITENONE	Shoot				--
3	PIPERITENONE	Essential Oil				--
2	PIPERITENONE-OXIDE	Essential Oil				--
2	PIPERITENONE-OXIDE	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)
7	PIPERITONE	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)
7	PIPERITONE	Leaf	24.0	600.0	-0.04108594242379066	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	PIPERITONE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PIPERITONE-OXIDE	Essential Oil				--
0	PIPERITONE-OXIDE	Leaf	35.0	875.0	-1.3957962433408342	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	POMOLIC-ACID	Shoot				--
2	POMOLIC-ACID	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
14	POTASSIUM	Leaf	4580.0	32000.0	0.07312186100168522	USDA's Ag Handbook 8 and sequelae)
0	PROLINE	Leaf	1350.0	9345.0	-0.27514619222062164	USDA's Ag Handbook 8 and sequelae)
0	PROPAN-1-YL-2-METHYL-BUTYRATE	Essential Oil				--
0	PROPAN-1-YL-2-METHYL-BUTYRATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	PROPIONALDEHYDE	Essential Oil				--
2	PROPIONALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	PROTEIN	Plant	32900.0	282240.0	0.8914067568935523	--
0	PSI-LIMONENE	Essential Oil				--
0	PSI-LIMONENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
4	PUFA	Leaf	3940.0	27265.0	1.0561663737218558	USDA's Ag Handbook 8 and sequelae)
28	PULEGONE	Leaf	1.0	475.0	-0.6220305328114489	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
28	PULEGONE	Essential Oil	1000.0	19000.0	-1.0797832656873603	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	RIBOFLAVIN	Plant	1.0	12.0	0.04099174223160336	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
57	ROSMARINIC-ACID	Shoot		5900.0	-0.5785639805694225	--
57	ROSMARINIC-ACID	Plant		43000.0	0.8895001040740586	Fitoterapia No.62: 166.
57	ROSMARINIC-ACID	Leaf		6300.0	-0.16904224493663075	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
57	ROSMARINIC-ACID	Inflorescence		43000.0	0.3023882331879371	--
0	ROTUNDIFOLINE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	SABINENE	Essential Oil				--
5	SABINENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	SABINENE-HYDRATE	Essential Oil	4000.0	12000.0		--
0	SABINENE-HYDRATE	Leaf	4.0	300.0	1.367894009277969	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	SACCHAROPINE	Shoot		1.6	-0.7071067811865464	--
0	SALICYLIC-ACID-METHYL-ESTER	Essential Oil				--
0	SALICYLIC-ACID-METHYL-ESTER	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	SERINE	Leaf	1280.0	8860.0	-0.42939704308828536	USDA's Ag Handbook 8 and sequelae)
0	SFA	Leaf	1910.0	13220.0	-0.04932916069434147	USDA's Ag Handbook 8 and sequelae)
0	SITOSTEROL-GLYCOSIDE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Leaf	300.0	2075.0	-0.2787506258109787	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Leaf	200.0	1385.0	0.28059560458984517	USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Shoot				--
12	STIGMASTEROL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TANNINS	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
23	TERPINEN-4-OL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
23	TERPINEN-4-OL	Essential Oil				--
9	TERPINOLENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	TERPINOLENE	Essential Oil				--
31	THIAMIN	Plant	1.0	3.0	-0.3909910138264638	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
31	THIAMIN	Leaf	0.8	5.0	-0.688703330240956	--
4	THREONINE	Leaf	1350.0	9340.0	-0.15065942518421008	--
71	THYMOL	Essential Oil				--
71	THYMOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TIGLALDEHYDE	Essential Oil				--
0	TIGLALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	TOLUENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	TOLUENE	Essential Oil				--
0	TRANS-BETA-COPAENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRANS-BETA-COPAENE	Essential Oil				--
0	TRANS-BETA-OCIMENE	Essential Oil				--
0	TRANS-BETA-OCIMENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	TRANS-CARVEOL	Leaf	2.0	50.0		--
1	TRANS-CARVEOL	Shoot				--
1	TRANS-CARVEOL	Essential Oil				--
0	TRANS-CARVEOL-ACETATE	Essential Oil				--
0	TRANS-CARVONE-OXIDE	Essential Oil				--
0	TRANS-CARVYL-ACETATE	Leaf	3.0	75.0	1.0	--
0	TRANS-CARVYL-FORMATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRANS-CARVYL-FORMATE	Essential Oil				--
0	TRANS-DIHYDROCARVONE	Essential Oil				--
0	TRANS-JASMONE	Essential Oil				--
0	TRANS-JASMONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRANS-SABINENE-HYDRATE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-VERBENOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRANS-VERBENOL	Essential Oil				--
29	TRYPTOPHAN	Leaf	500.0	3460.0	0.4632240516049009	--
8	TYROSINE	Leaf	990.0	6850.0	-0.32144859638053946	USDA's Ag Handbook 8 and sequelae)
89	URSOLIC-ACID	Shoot				--
89	URSOLIC-ACID	Plant				--
89	URSOLIC-ACID	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	VALERIC-ACID	Plant				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
3	VALINE	Leaf	1640.0	11350.0	-0.3764818769201724	--
28	VANILLIN	Essential Oil				--
28	VANILLIN	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	VERBENONE	Essential Oil				--
5	VERBENONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	VIRIDIFLOROL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	VIRIDIFLOROL	Essential Oil				--
0	VIT-B-6	Leaf	1.5	10.0	-0.5119230867007493	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	WATER	Plant	0.0	830000.0	0.2528779846519487	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	WATER	Leaf	0.0	855000.0	0.23628975921912068	--
77	ZINC	Leaf	11.0	75.0	-0.06649179301145117	USDA's Ag Handbook 8 and sequelae)