

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Juniperus communis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	CUPARENE	Wood		300.0	-1.0	--
28	ALPHA-PINENE	Fruit Essent. Oil				--
112	ASCORBIC-ACID	Fruit				--
0	LIMONENE-PEROXIDE	Fruit Essent. Oil				--
1	L-ASCORBIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	SELINAN-4(14)-7(11)-DIENE	Fruit Essent. Oil				--
0	ALLO-BETULIN	Leaf				--
9	OXALIC-ACID	Leaf				--
0	HYPOLAETIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
0	1,4-DIMETHYL-CYCLOHEX-1-YL-METHYL-KETONE	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	HUMULENE	Fruit		102.0	-0.6157187427092596	--
9	CAMPHENE	Fruit Essent. Oil				--
0	CIS-COMMUNOL	Fruit				--
0	AGATHADIOL	Fruit				--
35	TANNIN	Fruit		50000.0	-0.42929897796396493	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OPLOPANONE	Fruit				--
2	GALLO-TANNIN	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
18	TERPINEOL	Fruit Essent. Oil				--
0	CAR-3-ENE	Fruit Essent. Oil				--
22	ISOQUERCITRIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PROANTHOCYANINS	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
13	BETULIN	Fruit				Jim Duke's personal files.
0	ALPHA-MUUROLENE	Fruit Essent. Oil				--
0	15-HYDROXY-PENTADECANOIC	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	GAMMA-ELEMENE	Fruit Essent. Oil				--
0	METHYL-CITRONELLOL	Plant				--
0	TRANS-COMMUNIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	COMMUNIC-ACID	Fruit				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	ISOPIMAROL	Fruit				--
3	AROMADENDRENE	Fruit		2.0		--
0	3-ALPHA-15-DIHYDROXY-LABDA-8(17)-TRANS-13-DIENE	Leaf		500.0		--
0	KILOCALORIES	Fruit		3410.0	-0.3805452107665679	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	SCUTELLAREIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
0	ALLO-BETULIN	Stem				--
0	ALPHA-HIMACHALINE	Plant				--
0	HUMULENE-OXIDE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
101	APIGENIN	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	GLYCOLIC-ACID	Fruit				--
35	BORNEOL	Essential Oil				--
0	CIS-COMMUNAL	Fruit				--
2	TRANS-ACONITIC-ACID	Leaf				--
1	SUGIOL	Wood				--
18	OLEIC-ACID	Plant				--
10	NEROL	Fruit Essent. Oil				--
8	FRUCTOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
11	GAMMA-TERPINENE	Leaf Essent. Oil				--
0	CAR-3-ENE	Essential Oil				--
0	QUERCETIN-3-O-ALPHA-L-ARABINOSYL-GLUCOSIDE	Fruit				--
13	PALMITIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	BETA-SELINENE	Fruit		32.0	-1.0	--
0	P-MENTHANE-1-2-4-TRIOL	Fruit Essent. Oil				--
0	14,15-DIHYDROXY-LABDA-8(17),13(16)-DIEN-19-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	(+)-BETA-ELEMEN-7-ALPHA-OL	Fruit				--
0	ISOPIMARAL	Fruit				--
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-13-DIEN-15-OIC-ACID	Leaf		75.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	OLEIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	JUNIPEROL	Wood				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	FIBER(DIETARY)	Fruit		320000.0	-0.9715942860730087	--
3	SCIADOPITYSIN	Leaf				--
20	BENZOIC-ACID	Leaf				--
7	HINOKIFLAVONE	Leaf				--
18	AMENTOFLAVONE	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	GLUCURONIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
5	VERBENONE	Essential Oil		2000.0	-1.0	--
20	CITRONELLAL	Fruit Essent. Oil				--
1	CIS-ACONITIC-ACID	Leaf				--
0	SUGAR	Fruit		300000.0	0.7577686224738679	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	CARYOPHYLLENE-OXIDE	Fruit		15.0	-0.895044555279303	--
0	NONACOSAN-5-10-DIOL	Fruit				--
23	TERPINEN-4-OL	Fruit Essent. Oil				--
0	CAMPHOLENE-ALDEHYDE	Essential Oil		2000.0		--
35	BORNEOL	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	ISOQUERCETIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	P-MENTHANE	Fruit Essent. Oil				--
1	SODIUM	Fruit				--
0	13,14-EPOXY- IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	P-CYMOL	Leaf Essent. Oil				--
1	N-NONACOSANE	Fruit				--
15	CITRONELLOL	Leaf				--
3	BETA-PHELLANDRENE	Fruit Essent. Oil				--
0	3-ALPHA-HYDROXY- LABDA-8(17)-TRANS-12-14- TRIEN-19-OIC-ACID	Leaf		75.0		--
27	LINOLEIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	JUNIONONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	FIBER(CRUDE)	Fruit		120000.0	-0.26860285043394083	--
0	SANDARACOPIMAROL	Fruit				--
3	AROMADENDRENE	Fruit Essent. Oil				--
0	N-HEPTACOSANE	Fruit				--
22	UMBELLIFERONE	Fruit				--
7	GLUCOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
24	VANILLIC-ACID	Leaf				--
23	CITRIC-ACID	Leaf				--
0	DEHYDROABIETOL	Fruit				--
0	NEPITRIN	Leaf				--
0	L-TARTARIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-CALAMANENE	Fruit Essent. Oil				--
77	ZINC	Fruit				--
1	ETHYL-LAURATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
176	QUERCETIN	Leaf				--
1	3-ALPHA-HYDROXYMANOOL	Leaf		2350.0		--
0	1,4-DIMETHYL-CYCLOHEX-3-ENYL-METHYL-KETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-CYMENOL	Fruit Essent. Oil				--
0	LONGIFOLENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
22	MYRCENE	Leaf Essent. Oil				--
15	FIBER	Fruit		120000.0	-0.20454875292033714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
20	CITRONELLAL	Fruit		160.0	1.1325570680400574	--
3	BETA-PHELLANDRENE	Essential Oil				--
0	ALPHA-TERPINYL-ACETATE	Fruit				--
0	JUNIPERAPRENOL-20	Leaf				--
7	LAURIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	JUNICEDROL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
38	(-)-EPICATECHIN	Fruit				--
0	SANDARACOPIMARAL	Fruit				--
0	ANTICOPALOL	Fruit				--
3	ALPHA-CADINOL	Fruit				--
3	N-HENTRIACONTANE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	NEROLIDOL	Leaf				--
0	THUJAN-4-OL	Essential Oil		9000.0		--
22	UMBELLIFERONE	Shoot				--
18	CINNAMIC-ACID	Leaf				--
53	LINALOOL	Plant				--
4	NEPETIN	Leaf				--
6	SYRINGIC-ACID	Leaf				--
102	CAFFEIC-ACID	Fruit				--
1	YLANGENE	Fruit				--
0	PHENYL-PYRUVIC-ACID	Leaf				--
0	BETA-FENCHENE	Fruit				--
2	MANOOL	Leaf		87.5		--
0	SELINA-4(14),7(11)-DIENE	Fruit		2.0		--
0	1,4-CINEOLE	Fruit		400.0	-0.44111885007210994	--
16	P-CYMENE	Fruit Essent. Oil				--
7	LINALYL-ACETATE	Plant				--
0	JUNIPERAPRENOL-18	Leaf				--
4	FERRUGINOL	Wood		10.0		--
2	CIS-COMMUNIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
3	BETA-PHELLANDRENE	Leaf Essent. Oil				--
0	JUNIPERAPRENOL-19	Leaf				--
0	PENTOSAN	Fruit		60000.0	1.0	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	DESOXYPODOPHYLLOTOXIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	JUNENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	(-)-EPIAFZELICHIN	Fruit				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.
5	SABINENE	Leaf Essent. Oil				--
9	BETA-AMYRIN	Stem				--
0	TORULOSIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	ALPHA-KETO-GLUTARIC-ACID	Leaf				--
10	NEROL	Fruit				--
23	TERPINEN-4-OL	Essential Oil		21000.0	-0.4130918835519973	--
5	GERANYL-ACETATE	Fruit				--
0	N-TRITRIACONTANE	Fruit				--
0	1-4-CINEOL	Leaf Essent. Oil				--
0	CAMPHOLENIC-ACETATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	MYRTENOL-ACETATE	Fruit Essent. Oil				--
7	SUCCINIC-ACID	Leaf				--
102	CAFFEIC-ACID	Leaf				--
2	WIDDROL	Wood		100.0	-1.0	--
0	DL-EPICUBENOL	Wood				--
43	PROTocatechuic-ACID	Leaf				--
1	MALONIC-ACID	Leaf				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-JUNENOL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	CYCLOPOLY(D-GALACTURONIC-ACID)	Fruit				--
0	LINALOL	Plant				--
0	JUNIPERAPRENOL-14	Leaf				--
0	FAT	Seed		539000.0	1.441214427871716	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
11	ALPHA-PHELLANDRENE	Essential Oil				--
0	JUNIPERAPRENOL-17	Leaf				--
24	PECTIN	Fruit		7000.0	-0.5471395023787067	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DESOXYPICROPODOPHYL LOTOXIN	Fruit				--
2	ISOPIMARIC-ACID	Fruit				--
63	MENTHOL	Fruit Essent. Oil				--
0	CUPRESSUFLAVONE	Leaf				--
5	SABINENE	Essential Oil		76000.0	-0.05757229883510122	--
10	ALPHA-AMYRIN	Stem				--
2	MYRTENOL	Plant				--
23	TERPINEN-4-OL	Leaf Essent. Oil				--
0	GEIJERONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TORULOSOL	Fruit				--
0	1-4-CINEOL	Fruit Essent. Oil				--
63	MENTHOL	Fruit		22.0		--
5	MYRTENAL	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ACETIC-ACID	Fruit		9000.0	1.951794238179258	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	GINNOL	Fruit				--
8	STEARIC-ACID	Plant				--
4	CADINENE	Fruit Essent. Oil				--
0	WATER	Fruit		690000.0	-0.35035084474250255	--
1	DELTA-CADINOL	Fruit		1.0	-1.0	--
14	DEOXYPODOPHYLLOTOXIN	Fruit				--
0	BETA-ELEMEN-7-ALPHA-OL	Fruit				--
0	(DL)-MALIC-ACID	Leaf				--
0	SANTENE	Fruit				--
7	(+)-GALLOCATECHIN	Fruit				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	LIMONENE-PEROXIDE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ISOCRYPTOMERIN	Leaf				--
4	PELLANDRENE	Fruit Essent. Oil				--
0	JUNIPERAPRENOL-16	Leaf				--
1	CHOLESTEROL	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ISOCUPRESSINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
60	LIMONENE	Essential Oil		31000.0	-0.5586333216571333	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-ALPHA-ACETOXY-ISOCUPRESSIC-ACID	Leaf		712.5		--
5	SABINENE	Fruit Essent. Oil				--
0	AMENTOFLAVONE-TRIMETHYL-ETHER	Leaf				--
2	THUJOPSENE	Wood		3700.0	-1.0	--
0	MYRTENAL-ACETATE	Fruit				--
4	PHOSPHORIC-ACID	Leaf				--
0	TORULOSAL	Fruit				--
0	CINEOL	Essential Oil				--
0	CALAMENENE	Fruit		71.0	-0.5933257121003137	--
2	BETA-MYRCENE	Essential Oil		110000.0	-0.2906195438526693	--
62	GALLIC-ACID	Leaf				--
0	BORNEOL-ACETATE	Essential Oil		4000.0	-0.7241445887911021	--
22	UMBELLIFERONE	Leaf				--
9	DELTA-CADINENE	Fruit				--
13	BETA-PINENE	Essential Oil		25000.0	-0.1752769464817969	--
21	LUPEOL	Stem				--
0	SANDAROPIMARIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	(+)-EPIGALLOCATECHIN	Fruit				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.
1	LEUCOANTHOCYANIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CIS-CALAMANENE	Fruit Essent. Oil				--
17	FARNESOL	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Fruit				--
0	N-PENTATRIACONTANE	Fruit				--
0	JUNIPERAPRENOL-15	Leaf				--
0	P-MENTHA-1,2,4-TRIOL	Plant				--
60	LIMONENE	Fruit Essent. Oil				--
0	ISOCUPRESSIC-ACID	Leaf		2637.5		--
87	RUTIN	Fruit				--
0	AMENTOFLAVONE-DIMETHYL-ETHER	Leaf				--
31	THIAMIN	Fruit		1.2	-0.5290087074554676	--
5	MYRTENAL	Fruit				--
13	PALMITIC-ACID	Plant				--
0	GAMMA-MUUROLENE	Fruit		128.0	-1.0	--
9	TERPINOLENE	Essential Oil				--
77	CHLOROGENIC-ACID	Leaf				--
40	EPICATECHIN	Fruit				--
22	MYRCENE	Fruit Essent. Oil				--
0	5-ALPHA-HYDROXYABIETINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
7	FUMARIC-ACID	Leaf				--
3	BILOBETIN	Leaf				--
0	TRICYCLENE	Fruit				--
0	DELTA-3-VARENE	Leaf				--
28	ALPHA-PINENE	Leaf Essent. Oil				--
0	LINOLENIC-ACID	Plant				--
30	(+)-CATECHIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	L-MALEIC-ACID	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
4	CADINENE	Fruit				--
14	SHIKIMIC-ACID	Leaf				--
2	PALMITOLEIC-ACID	Plant				--
0	JUNIONONE	Fruit Essent. Oil				--
13	P-HYDROXY-BENZOIC-ACID	Plant		2500.0	1.0	--
2	CAMPESTEROL	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
41	CAMPHOR	Essential Oil				--
4	COSMOSIN	Fruit				--
1	RHODOXANTHIN	Leaf				--
18	AMENTOFLAVONE	Leaf				--
0	P-CYMOL	Essential Oil				--
0	GAMMA-ELEMENE	Fruit		160.0	1.4137929367070103	--
9	TERPINOLENE	Fruit Essent. Oil				--
30	(+)-CATECHIN	Leaf				--
0	EPIAFZELICHIN	Fruit				--
1	QUINIC-ACID	Leaf				--
13	BETULIN	Stem				Jim Duke's personal files.
0	MYRCECOMMUNAL	Fruit				--
61	FERULIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MYRCEOCOMMUNIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	ALLO-BETULIN	Fruit				--
28	ALPHA-PINENE	Essential Oil		336000.0	2.3965523753346103	--
112	ASCORBIC-ACID	Leaf		600.0	-0.3882477425426218	--
27	LINOLEIC-ACID	Plant				--
87	RUTIN	Leaf				--
0	(+)-AFZELICHIN	Fruit				--
2	L-LIMONENE	Bark				Chemical Constituents of Oriental Herbs (3 diff. books)
0	BORNEOL-ACETATE	Fruit Essent. Oil				--
3	BETA-SELINENE	Fruit Essent. Oil				--
3	CEDROL	Wood		200.0	-1.0	--
2	PALMITOLEIC-ACID	Seed Oil				--
0	JUNICEDRAL	Fruit				--
0	P-CYMOL	Plant		240.0	-0.9534537245333127	--
0	BETA-CADINENE	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	HUMULENE-OXIDE	Fruit		9.0		--
9	CAMPHENE	Essential Oil				--
0	ALPHA-COPAENE	Fruit Essent. Oil				--
0	AGATHOLAL	Fruit				--
25	P-COUMARIC-ACID	Leaf				--
23	ALPHA-TERPINEOL	Essential Oil		2000.0	-0.6844703056368032	--
8	CARYOPHYLENE-OXIDE	Fruit Essent. Oil				--
22	ISOQUERCITRIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETULIN	Leaf				Jim Duke's personal files.
0	GAMMA-MUUROLENE	Fruit Essent. Oil				--
0	4-ACETYL-1,4-DIMETHYL-1-CYCLOHEXENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	EO	Leaf				--
60	SELENIUM	Fruit	0.1	0.2	-0.3365919582076448	--
15	RIBOFLAVIN	Fruit	0.2	0.6	-0.9443248460470646	--
0	THIAMINE	Fruit	0.4	1.2	-1.081392271586632	--
0	TRANS-SABINENE-HYDRATE	Fruit	1.0	6.0	-0.5171765141826495	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
41	CAMPHOR	Fruit	1.0	7.0	-0.8917009005689489	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-CYMEN-8-OL	Fruit	1.0	4.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	CAMPHENE	Fruit	1.0	100.0	-0.3103363418182056	--
1	ETHYL-MYRISTATE	Fruit	1.0	6.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-3-ETHOXY-P-MENTH-1-ENE	Fruit	1.0	10.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CAMPHOLENIC-ALDEHYDE	Fruit	1.0	7.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-3-ETHOXY-P-MENTH-1-ENE	Fruit	1.0	3.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ETHYL-PALMITOLEATE	Fruit	1.0	2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
24	CHROMIUM	Fruit	1.0	3.2	-0.0581672201980405	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-VERBENOL	Fruit	1.0	12.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ETHYL-PALMITATE	Fruit	1.0	10.0	-0.6891827096735466	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	SILICON	Fruit	1.4	4.5	-0.5938225414098025	--
14	MANGANESE	Fruit	2.0	6.3	-0.3619961117886394	--
0	P-MENTHANE	Fruit	2.0	20.0		--
12	BORNYL-ACETATE	Fruit	2.0	40.0	-0.7015317621173582	--
8	DELTA-3-CARENE	Fruit	2.0	20.0	-0.5797379943407993	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-4-ETHOXY-THUJANE	Fruit	3.0	30.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-COPAENE	Fruit	3.0	33.0	-0.6445927707079909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	GERMACRENE-D	Fruit	3.0	32.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Fruit	3.0	40.0	-0.37559632876532734	--
0	CIS-4-ETHOXY-THUJANE	Fruit	3.0	30.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-1-ETHOXY-P-MENTH-2-ENE	Fruit	3.0	30.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	COBALT	Fruit	4.0	12.3	0.9539136726283711	--
0	ALPHA-CUBEBENE	Fruit	4.0	45.0	-0.6188885832567323	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Fruit	4.0	12.0	-0.6510092608917062	--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA,BETA-DIMETHYLSTEROL	Fruit	4.0	40.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	8-ETHOXY-P-CYMENE	Fruit	4.0	45.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	BETA-CAROTENE	Fruit	4.0	12.2	-0.1272182489407809	--
6	IRON	Fruit	5.0	15.0	-0.4679872255679544	--
5	NERYL-ACETATE	Fruit	6.0	60.0	-0.26098959388736837	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-4-ETHOXY-PIN-2-ENE	Fruit	7.0	66.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	4-ETHOXY-P-MENTHEN-1-ENE	Flower	8.0	78.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
65	MAGNESIUM	Fruit	9.0	30.0	-0.9723001521392451	--
5	BETA-ELEMENE	Fruit	10.0	100.0	-0.4297005513117395	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLENE	Fruit	12.0	120.0	-0.39246549266153086	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	TERPINEN-4-OL	Fruit	13.0	1050.0	-0.19930126187699354	--
13	ALPHA-TERPINENE	Fruit	16.0	640.0	3.1220141023253	--
0	GAMMA-CADINENE	Fruit	16.0	164.0	1.8269938624979614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	TERPINOLENE	Fruit	18.0	320.0	1.3982869520915144	--
2	ALPHA-HUMULENE	Fruit	19.0	192.0	-0.5022919640544935	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	ALUMINUM	Fruit	19.0	61.0	-0.20577518900264186	--
11	GAMMA-TERPINENE	Fruit	19.0	600.0	-0.540911166794079	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	TIN	Fruit	20.0	63.0	-0.1301348957872833	--
3	ALPHA-SELINENE	Fruit	21.0	210.0	-0.45885866517954543	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-PINENE	Fruit	22.0	580.0	-0.2792614436195468	--
0	ALPHA-THUJENE	Fruit	24.0	240.0	-0.37432106883112565	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	ALPHA-PHELLANDRENE	Fruit	26.0	300.0	-0.4254028775207352	--
16	P-CYMENE	Fruit	48.0	480.0	-0.516224768738665	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-MUUROLENE	Fruit	54.0	542.0	-0.13060058780802927	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Fruit	66.0	660.0	-0.3586028887711514	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
60	LIMONENE	Fruit	76.0	910.0	-0.6196944860922323	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	MYRCENE	Fruit	110.0	1800.0	-0.10348815985421497	--
5	SABINENE	Fruit	172.0	2700.0	0.3124331852362114	--
4	PHOSPHORUS	Fruit	279.0	900.0	-0.7034597256399827	--
3	CEDROL	Leaf	450.0	2100.0		--
28	ALPHA-PINENE	Fruit	530.0	9200.0	1.683156636347073	--
7	FUMARIC-ACID	Fruit	1550.0	5000.0	-0.6004154140938881	--
13	FORMIC-ACID	Fruit	1550.0	5000.0	1.0	--
28	CALCIUM	Fruit	2632.0	8490.0	1.0692774780691343	--
14	POTASSIUM	Fruit	2967.0	9570.0	-0.7384457440468485	--
0	EO	Fruit	6200.0	40000.0	-0.042481439666032995	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	ASH	Fruit	9920.0	32000.0	-0.6386766393183354	--
1	CEDRENE	Leaf	12000.0	36000.0		--
0	FAT	Fruit	17360.0	56000.0	-0.21352859426457804	--
0	SUGARS	Fruit	24800.0	80000.0	-0.5539776886973504	--
0	CATECHOL-TANNINS	Fruit	30000.0	50000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	PROTEIN	Fruit	56420.0	182000.0	0.9719135979447259	--
0	RESIN	Fruit	80000.0	100000.0	0.5011700816956098	--
0	CARBOHYDRATES	Fruit	226300.0	730000.0	-0.2827855072710454	--