

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Juniperus communis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARBOHYDRATES	Fruit	226300.0	730000.0	-0.2827855072710454	--
0	RESIN	Fruit	80000.0	100000.0	0.5011700816956098	--
0	PROTEIN	Fruit	56420.0	182000.0	0.9719135979447259	--
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	SUGARS	Fruit	24800.0	80000.0	-0.5539776886973504	--
0	FAT	Fruit	17360.0	56000.0	-0.21352859426457804	--
1	CEDRENE	Leaf	12000.0	36000.0		--
0	ASH	Fruit	9920.0	32000.0	-0.6386766393183354	--
0	EO	Fruit	6200.0	40000.0	-0.042481439666032995	--
14	POTASSIUM	Fruit	2967.0	9570.0	-0.7384457440468485	--
28	CALCIUM	Fruit	2632.0	8490.0	1.0692774780691343	--
7	FUMARIC-ACID	Fruit	1550.0	5000.0	-0.6004154140938881	--
13	FORMIC-ACID	Fruit	1550.0	5000.0	1.0	--
28	ALPHA-PINENE	Fruit	530.0	9200.0	1.683156636347073	--
3	CEDROL	Leaf	450.0	2100.0		--
4	PHOSPHORUS	Fruit	279.0	900.0	-0.7034597256399827	--
5	SABINENE	Fruit	172.0	2700.0	0.3124331852362114	--
22	MYRCENE	Fruit	110.0	1800.0	-0.10348815985421497	--
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.
3	BETA-PHELLANDRENE	Fruit	66.0	660.0	-0.3586028887711514	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-MUUROLENE	Fruit	54.0	542.0	-0.13060058780802927	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
11	ALPHA-PHELLANDRENE	Fruit	26.0	300.0	-0.4254028775207352	--
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.
13	BETA-PINENE	Fruit	22.0	580.0	-0.2792614436195468	--
3	ALPHA-SELINENE	Fruit	21.0	210.0	-0.45885866517954543	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	TIN	Fruit	20.0	63.0	-0.1301348957872833	--
2	ALPHA-HUMULENE	Fruit	19.0	192.0	-0.5022919640544935	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Fruit	19.0	600.0	-0.540911166794079	--
5	ALUMINUM	Fruit	19.0	61.0	-0.20577518900264186	--
9	TERPINOLENE	Fruit	18.0	320.0	1.3982869520915144	--
0	GAMMA-CADINENE	Fruit	16.0	164.0	1.8269938624979614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Fruit	16.0	640.0	3.1220141023253	--
23	TERPINEN-4-OL	Fruit	13.0	1050.0	-0.19930126187699354	--
31	CARYOPHYLLENE	Fruit	12.0	120.0	-0.39246549266153086	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	BETA-ELEMENE	Fruit	10.0	100.0	-0.4297005513117395	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
65	MAGNESIUM	Fruit	9.0	30.0	-0.9723001521392451	--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
5	NERYL-ACETATE	Fruit	6.0	60.0	-0.26098959388736837	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	IRON	Fruit	5.0	15.0	-0.4679872255679544	--
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.
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.
39	NIACIN	Fruit	4.0	12.0	-0.6510092608917062	--
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	--
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	GERMACRENE-D	Fruit	3.0	32.0	1.0	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.
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.
12	BORNYL-ACETATE	Fruit	2.0	40.0	-0.7015317621173582	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	P-MENTHANE	Fruit	2.0	20.0		--
14	MANGANESE	Fruit	2.0	6.3	-0.3619961117886394	--
4	SILICON	Fruit	1.4	4.5	-0.5938225414098025	--
24	CHROMIUM	Fruit	1.0	3.2	-0.0581672201980405	--
0	TRANS-VERBENOL	Fruit	1.0	12.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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.
9	CAMPHENE	Fruit	1.0	100.0	-0.3103363418182056	--
0	ETHYL-PALMITOLEATE	Fruit	1.0	2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ETHYL-MYRISTATE	Fruit	1.0	6.0	-1.0	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.
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	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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	THIAMINE	Fruit	0.4	1.2	-1.081392271586632	--
15	RIBOFLAVIN	Fruit	0.2	0.6	-0.9443248460470646	--
60	SELENIUM	Fruit	0.1	0.2	-0.3365919582076448	--
0	JUNICEDROL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ISOCUPRESSIC-ACID	Leaf		2637.5		--
0	AMENTOFLAVONE-DIMETHYL-ETHER	Leaf				--
2	BETA-MYRCENE	Essential Oil		110000.0	-0.2906195438526693	--
0	ISOCRYPTOMERIN	Leaf				--
31	THIAMIN	Fruit		1.2	-0.5290087074554676	--
62	GALLIC-ACID	Leaf				--
8	STEARIC-ACID	Plant				--
77	CHLOROGENIC-ACID	Leaf				--
13	BETA-PINENE	Essential Oil		25000.0	-0.1752769464817969	--
1	CHOLESTEROL	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
40	EPICATECHIN	Fruit				--
21	LUPEOL	Stem				--
60	LIMONENE	Essential Oil		31000.0	-0.5586333216571333	--
5	SABINENE	Fruit Essent. Oil				--
0	5-ALPHA-HYDROXYABIETINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
11	NEROLIDOL	Leaf				--
4	PHOSPHORIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRICYCLENE	Fruit				--
0	JUNIPERAPRENOL-15	Leaf				--
0	TORULOSAL	Fruit				--
0	DELTA-3-VARENE	Leaf				--
0	SELINA-4(14),7(11)-DIENE	Fruit		2.0		--
30	(+)-CATECHIN	Fruit				--
7	LINALYL-ACETATE	Plant				--
4	FERRUGINOL	Wood		10.0		--
3	BILOBETIN	Leaf				--
0	N-PENTATRIACONTANE	Fruit				--
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.
0	JUNENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	COSMOSIIN	Fruit				--
18	AMENTOFLAVONE	Leaf				--
22	MYRCENE	Fruit Essent. Oil				--
0	CIS-CALAMANENE	Fruit Essent. Oil				--
7	FUMARIC-ACID	Leaf				--
47	BETA-SITOSTEROL	Fruit				--
30	(+)-CATECHIN	Leaf				--
28	ALPHA-PINENE	Leaf Essent. Oil				--
0	EPIAFZELICHIN	Fruit				--
0	LINOLENIC-ACID	Plant				--
60	LIMONENE	Fruit Essent. Oil				--
87	RUTIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETULIN	Stem				Jim Duke's personal files.
10	NEROL	Fruit				--
5	GERANYL-ACETATE	Fruit				--
0	JUNIONONE	Fruit Essent. Oil				--
9	TERPINOLENE	Essential Oil				--
112	ASCORBIC-ACID	Leaf		600.0	-0.3882477425426218	--
0	(+)-AFZELICHIN	Fruit				--
0	LINALOL	Plant				--
0	FAT	Seed		539000.0	1.441214427871716	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ALLO-BETULIN	Fruit				--
2	PALMITOLEIC-ACID	Plant				--
13	PALMITIC-ACID	Plant				--
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.
2	ISOPIMARIC-ACID	Fruit				--
0	ALPHA-COPAENE	Fruit Essent. Oil				--
1	QUINIC-ACID	Leaf				--
0	AGATHOLAL	Fruit				--
0	MYRCECOMMUNAL	Fruit				--
4	CADINENE	Fruit				--
61	FERULIC-ACID	Leaf				--
14	SHIKIMIC-ACID	Leaf				--
3	CEDROL	Wood		200.0	-1.0	--
8	CARYOPHYLENE-OXIDE	Fruit Essent. Oil				--
28	ALPHA-PINENE	Essential Oil		336000.0	2.3965523753346103	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CAMPESTEROL	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
27	LINOLEIC-ACID	Plant				--
41	CAMPHOR	Essential Oil				--
1	RHODOXANTHIN	Leaf				--
13	BETULIN	Leaf				Jim Duke's personal files.
0	4-ACETYL-1,4-DIMETHYL-1-CYCLOHEXENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
2	MYRTENOL	Plant				--
0	GEIJERONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	JUNICEDRAL	Fruit				--
9	TERPINOLENE	Fruit Essent. Oil				--
1	CUPARENE	Wood		300.0	-1.0	--
112	ASCORBIC-ACID	Fruit				--
0	SANTENE	Fruit				--
0	LIMONENE-PEROXIDE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALLO-BETULIN	Leaf				--
2	PALMITOLEIC-ACID	Seed Oil				--
0	P-CYMOL	Essential Oil				--
0	ISOCUPRESSINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	CIS-COMMUNOL	Fruit				--
22	ISOQUERCITRIN	Fruit				--
0	AGATHADIOL	Fruit				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GAMMA-MUUROLENE	Fruit Essent. Oil				--
0	BORNEOL-ACETATE	Fruit Essent. Oil				--
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	EO	Leaf				--
3	BETA-SELINENE	Fruit Essent. Oil				--
0	CAR-3-ENE	Fruit Essent. Oil				--
28	ALPHA-PINENE	Fruit Essent. Oil				--
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	LIMONENE-PEROXIDE	Fruit Essent. Oil				--
9	CAMPHENE	Essential Oil				--
13	BETULIN	Fruit				Jim Duke's personal files.
0	15-HYDROXY-PENTADECANOIC	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	MYRTENAL-ACETATE	Fruit				--
0	HYPOLAETIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
23	ALPHA-TERPINEOL	Essential Oil		2000.0	-0.6844703056368032	--
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.
3	AROMADENDRENE	Fruit		2.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SANDAROPIMARIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
1	LEUCOANTHOCYANIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
17	FARNESOL	Leaf				--
0	ALLO-BETULIN	Stem				--
9	OXALIC-ACID	Leaf				--
25	P-COUMARIC-ACID	Leaf				--
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	CIS-COMMUNAL	Fruit				--
22	ISOQUERCITRIN	Leaf				--
2	TRANS-ACONITIC-ACID	Leaf				--
0	ALPHA-MUUROLENE	Fruit Essent. Oil				--
1	SUGIOL	Wood				--
0	GAMMA-ELEMENE	Fruit Essent. Oil				--
0	SELINAN-4(14)-7(11)-DIENE	Fruit Essent. Oil				--
0	ALPHA-HIMACHALINE	Plant				--
0	P-MENTHA-1,2,4-TRIOL	Plant				--
0	CAR-3-ENE	Essential Oil				--
0	ISOPIMAROL	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.
0	3-ALPHA-15-DIHYDROXY-LABDA-8(17)-TRANS-13-DIENE	Leaf		500.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Fruit Essent. Oil				--
3	BETA-SELINENE	Fruit		32.0	-1.0	--
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.
5	MYRTENAL	Fruit				--
0	GAMMA-MUUROLENE	Fruit		128.0	-1.0	--
18	TERPINEOL	Fruit Essent. Oil				--
0	L-MALEIC-ACID	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
20	BENZOIC-ACID	Leaf				--
18	OLEIC-ACID	Plant				--
0	OPLOPANOONE	Fruit				--
0	HUMULENE-OXIDE	Fruit Essent. Oil				--
0	IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
20	CITRONELLAL	Fruit Essent. Oil				--
0	QUERCETIN-3-O-ALPHA-L-ARABINOSYL-GLUCOSIDE	Fruit				--
1	CIS-ACONITIC-ACID	Leaf				--
0	P-MENTHANE-1-2-4-TRIOL	Fruit Essent. Oil				--
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.
0	(+)-BETA-ELEMEN-7-ALPHA-OL	Fruit				--
0	SCUTELLAREIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
8	CARYOPHYLLENE-OXIDE	Fruit		15.0	-0.895044555279303	--
13	P-HYDROXY-BENZOIC-ACID	Plant		2500.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CAMPHOLENE-ALDEHYDE	Essential Oil		2000.0		--
0	ISOPIMARAL	Fruit				--
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.
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.
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-13-DIEN-15-OIC-ACID	Leaf		75.0		--
35	BORNEOL	Essential Oil				--
0	PROANTHOCYANINS	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	13,14-EPOXY-IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
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	GAMMA-ELEMENE	Fruit		160.0	1.4137929367070103	--
11	GAMMA-TERPINENE	Leaf Essent. Oil				--
15	CITRONELLOL	Leaf				--
87	RUTIN	Leaf				--
2	L-LIMONENE	Bark				Chemical Constituents of Oriental Herbs (3 diff. books)
3	AROMADENDRENE	Fruit Essent. Oil				--
0	NONACOSAN-5-10-DIOL	Fruit				--
10	NEROL	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	HINOKIFLAVONE	Leaf				--
0	HUMULENE-OXIDE	Fruit		9.0		--
23	CITRIC-ACID	Leaf				--
3	ISOQUERCETIN	Fruit				--
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	DEHYDROABIETOL	Fruit				--
0	P-MENTHANE	Fruit Essent. Oil				--
0	FIBER(DIETARY)	Fruit		320000.0	-0.9715942860730087	--
0	P-CYMOL	Leaf Essent. Oil				--
3	SCIADOPITYSIN	Leaf				--
0	P-CYMOL	Plant		240.0	-0.9534537245333127	--
0	TRANS-CALAMANENE	Fruit Essent. Oil				--
3	BETA-PHELLANDRENE	Fruit Essent. Oil				--
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.
77	ZINC	Fruit				--
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-12-14-TRIEN-19-OIC-ACID	Leaf		75.0		--
5	VERBENONE	Essential Oil		2000.0	-1.0	--
1	ETHYL-LAURATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,4-DIMETHYL-CYCLOHEX-3-ENYL-METHYL-KETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
20	CITRONELLAL	Fruit		160.0	1.1325570680400574	--
0	ALPHA-TERPINYL-ACETATE	Fruit				--
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	ANTICOPALOL	Fruit				--
0	NEPITRIN	Leaf				--
1	N-NONACOSANE	Fruit				--
0	N-HEPTACOSANE	Fruit				--
23	TERPINEN-4-OL	Fruit Essent. Oil				--
2	HUMULENE	Fruit		102.0	-0.6157187427092596	--
18	CINNAMIC-ACID	Leaf				--
176	QUERCETIN	Leaf				--
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.
53	LINALOOL	Plant				--
1	3-ALPHA-HYDROXYMANOOL	Leaf		2350.0		--
0	FIBER(CRUDE)	Fruit		120000.0	-0.26860285043394083	--
0	P-CYMENOL	Fruit Essent. Oil				--
0	SANDARACOPIMAROL	Fruit				--
3	ALPHA-CADINOL	Fruit				--
102	CAFFEIC-ACID	Fruit				--
3	BETA-PHELLANDRENE	Essential Oil				--
22	UMBELLIFERONE	Fruit				--
1	YLANGENE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	JUNIPERAPRENOL-20	Leaf				--
24	VANILLIC-ACID	Leaf				--
0	BETA-FENCHENE	Fruit				--
0	1,4-CINEOLE	Fruit		400.0	-0.44111885007210994	--
0	METHYL-CITRONELLOL	Plant				--
2	GALLO-TANNIN	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
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.
0	KILOCALORIES	Fruit		3410.0	-0.3805452107665679	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
9	BETA-AMYRIN	Stem				--
4	NEPETIN	Leaf				--
22	MYRCENE	Leaf Essent. Oil				--
0	TORULOSIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
3	N-HENTRIACONTANE	Fruit				--
0	L-TARTARIC-ACID	Leaf				--
4	GLYCOLIC-ACID	Fruit				--
0	1-4-CINEOL	Leaf Essent. Oil				--
0	PHENYL-PYRUVIC-ACID	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.
2	MANOOL	Leaf		87.5		--
38	(-)-EPICATECHIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	P-CYMENE	Fruit Essent. Oil				--
0	SANDARACOPIMARAL	Fruit				--
0	CAMPHOLENIC-ACETATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Leaf Essent. Oil				--
0	THUJAN-4-OL	Essential Oil		9000.0		--
2	WIDDROL	Wood		100.0	-1.0	--
0	JUNIPERAPRENOL-19	Leaf				--
22	UMBELLIFERONE	Shoot				--
0	DL-EPICUBENOL	Wood				--
0	(+)-JUNENOL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
8	FRUCTOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
102	CAFFEIC-ACID	Leaf				--
0	JUNIPEROL	Wood				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	CUPRESSUFLAVONE	Leaf				--
10	ALPHA-AMYRIN	Stem				--
0	MYRTENOL-ACETATE	Fruit Essent. Oil				--
0	JUNIPERAPRENOL-18	Leaf				--
0	ALPHA-KETO-GLUTARIC-ACID	Leaf				--
6	SYRINGIC-ACID	Leaf				--
0	1-4-CINEOL	Fruit Essent. Oil				--
43	PROTocatechuic-acid	Leaf				--
8	DESOXYPODOPHYLLOTOXIN	Fruit				--
63	MENTHOL	Fruit		22.0		--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	MALONIC-ACID	Leaf				--
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.
0	CYCLOPOLY(D-GALACTURONIC-ACID)	Fruit				--
5	SABINENE	Leaf Essent. Oil				--
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.
4	GLUCURONIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
11	ALPHA-PHELLANDRENE	Essential Oil				--
23	TERPINEN-4-OL	Essential Oil		21000.0	-0.4130918835519973	--
0	WATER	Fruit		690000.0	-0.35035084474250255	--
0	JUNIPERAPRENOL-17	Leaf				--
0	N-TRITRIACONTANE	Fruit				--
1	DELTA-CADINOL	Fruit		1.0	-1.0	--
0	BETA-ELEMEN-7-ALPHA-OL	Fruit				--
1	SODIUM	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.
4	CADINENE	Fruit Essent. Oil				--
0	JUNIONONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-ALPHA-ACETOXY-ISOCUPRESSIC-ACID	Leaf		712.5		--
0	AMENTOFLAVONE-TRIMETHYL-ETHER	Leaf				--
5	MYRTENAL	Fruit Essent. Oil				--
0	JUNIPERAPRENOL-14	Leaf				--
2	THUJOPSENE	Wood		3700.0	-1.0	--
3	GINNOL	Fruit				--
7	SUCCINIC-ACID	Leaf				--
0	CINEOL	Essential Oil				--
14	DEOXYPODOPHYLLOTOXIN	Fruit				--
0	DESOXYPICROPODOPHYLLOTOXIN	Fruit				--
0	(DL)-MALIC-ACID	Leaf				--
63	MENTHOL	Fruit Essent. Oil				--
5	SABINENE	Essential Oil		76000.0	-0.05757229883510122	--
0	CALAMENENE	Fruit		71.0	-0.5933257121003137	--
7	GLUCOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
23	TERPINEN-4-OL	Leaf Essent. Oil				--
22	UMBELLIFERONE	Leaf				--
0	JUNIPERAPRENOL-16	Leaf				--
0	TORULOSOL	Fruit				--
9	DELTA-CADINENE	Fruit				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LONGIFOLENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
15	FIBER	Fruit		120000.0	-0.20454875292033714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	BORNEOL-ACETATE	Essential Oil		4000.0	-0.7241445887911021	--
4	PELLANDRENE	Fruit Essent. Oil				--