

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Juniperus communis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	ALPHA-TERPINENE	Fruit	16.0	640.0	3.1220141023253	--
28	ALPHA-PINENE	Essential Oil		336000.0	2.3965523753346103	--
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.
0	GAMMA-CADINENE	Fruit	16.0	164.0	1.8269938624979614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	ALPHA-PINENE	Fruit	530.0	9200.0	1.683156636347073	--
0	FAT	Seed		539000.0	1.441214427871716	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	GAMMA-ELEMENE	Fruit		160.0	1.4137929367070103	--
9	TERPINOLENE	Fruit	18.0	320.0	1.3982869520915144	--
20	CITRONELLAL	Fruit		160.0	1.1325570680400574	--
28	CALCIUM	Fruit	2632.0	8490.0	1.0692774780691343	--
13	P-HYDROXY-BENZOIC-ACID	Plant		2500.0	1.0	--
13	FORMIC-ACID	Fruit	1550.0	5000.0	1.0	--
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	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	PROTEIN	Fruit	56420.0	182000.0	0.9719135979447259	--
2	COBALT	Fruit	4.0	12.3	0.9539136726283711	--
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	RESIN	Fruit	80000.0	100000.0	0.5011700816956098	--
5	SABINENE	Fruit	172.0	2700.0	0.3124331852362114	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EO	Fruit	6200.0	40000.0	-0.042481439666032995	--
5	SABINENE	Essential Oil		76000.0	-0.05757229883510122	--
24	CHROMIUM	Fruit	1.0	3.2	-0.0581672201980405	--
22	MYRCENE	Fruit	110.0	1800.0	-0.10348815985421497	--
53	BETA-CAROTENE	Fruit	4.0	12.2	-0.1272182489407809	--
4	TIN	Fruit	20.0	63.0	-0.1301348957872833	--
0	ALPHA-MUUROLENE	Fruit	54.0	542.0	-0.13060058780802927	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-PINENE	Essential Oil		25000.0	-0.1752769464817969	--
23	TERPINEN-4-OL	Fruit	13.0	1050.0	-0.19930126187699354	--
15	FIBER	Fruit		120000.0	-0.20454875292033714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	ALUMINUM	Fruit	19.0	61.0	-0.20577518900264186	--
0	FAT	Fruit	17360.0	56000.0	-0.21352859426457804	--
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	FIBER(CRUDE)	Fruit		120000.0	-0.26860285043394083	--
13	BETA-PINENE	Fruit	22.0	580.0	-0.2792614436195468	--
0	CARBOHYDRATES	Fruit	226300.0	730000.0	-0.2827855072710454	--
2	BETA-MYRCENE	Essential Oil		110000.0	-0.2906195438526693	--
9	CAMPHENE	Fruit	1.0	100.0	-0.3103363418182056	--
60	SELENIUM	Fruit	0.1	0.2	-0.3365919582076448	--
0	WATER	Fruit		690000.0	-0.35035084474250255	--
3	BETA-PHELLANDRENE	Fruit	66.0	660.0	-0.3586028887711514	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
14	MANGANESE	Fruit	2.0	6.3	-0.3619961117886394	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
23	ALPHA-TERPINEOL	Fruit	3.0	40.0	-0.37559632876532734	--
0	KILOCALORIES	Fruit		3410.0	-0.3805452107665679	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
112	ASCORBIC-ACID	Leaf		600.0	-0.3882477425426218	--
31	CARYOPHYLLENE	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	Essential Oil		21000.0	-0.4130918835519973	--
11	ALPHA-PHELLANDRENE	Fruit	26.0	300.0	-0.4254028775207352	--
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.
5	BETA-ELEMENE	Fruit	10.0	100.0	-0.4297005513117395	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	1,4-CINEOLE	Fruit		400.0	-0.44111885007210994	--
3	ALPHA-SELINENE	Fruit	21.0	210.0	-0.45885866517954543	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	IRON	Fruit	5.0	15.0	-0.4679872255679544	--
2	ALPHA-HUMULENE	Fruit	19.0	192.0	-0.5022919640544935	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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	TRANS-SABINENE-HYDRATE	Fruit	1.0	6.0	-0.5171765141826495	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	THIAMIN	Fruit		1.2	-0.5290087074554676	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	GAMMA-TERPINENE	Fruit	19.0	600.0	-0.540911166794079	--
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	SUGARS	Fruit	24800.0	80000.0	-0.5539776886973504	--
60	LIMONENE	Essential Oil		31000.0	-0.5586333216571333	--
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	CALAMENENE	Fruit		71.0	-0.5933257121003137	--
4	SILICON	Fruit	1.4	4.5	-0.5938225414098025	--
7	FUMARIC-ACID	Fruit	1550.0	5000.0	-0.6004154140938881	--
2	HUMULENE	Fruit		102.0	-0.6157187427092596	--
0	ALPHA-CUBEBENE	Fruit	4.0	45.0	-0.6188885832567323	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.
0	ASH	Fruit	9920.0	32000.0	-0.6386766393183354	--
0	ALPHA-COPAENE	Fruit	3.0	33.0	-0.6445927707079909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Fruit	4.0	12.0	-0.6510092608917062	--
23	ALPHA-TERPINEOL	Essential Oil		2000.0	-0.6844703056368032	--
1	ETHYL-PALMITATE	Fruit	1.0	10.0	-0.6891827096735466	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
12	BORNYL-ACETATE	Fruit	2.0	40.0	-0.7015317621173582	--
4	PHOSPHORUS	Fruit	279.0	900.0	-0.7034597256399827	--
0	BORNEOL-ACETATE	Essential Oil		4000.0	-0.7241445887911021	--
14	POTASSIUM	Fruit	2967.0	9570.0	-0.7384457440468485	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
41	CAMPHOR	Fruit	1.0	7.0	-0.8917009005689489	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Fruit		15.0	-0.895044555279303	--
15	RIBOFLAVIN	Fruit	0.2	0.6	-0.9443248460470646	--
0	P-CYMOL	Plant		240.0	-0.9534537245333127	--
0	FIBER(DIETARY)	Fruit		320000.0	-0.9715942860730087	--
65	MAGNESIUM	Fruit	9.0	30.0	-0.9723001521392451	--
1	DELTA-CADINOL	Fruit		1.0	-1.0	--
0	GAMMA-MUUROLENE	Fruit		128.0	-1.0	--
2	THUJOPSENE	Wood		3700.0	-1.0	--
3	CEDROL	Wood		200.0	-1.0	--
1	CUPARENE	Wood		300.0	-1.0	--
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.
3	BETA-SELINENE	Fruit		32.0	-1.0	--
5	VERBENONE	Essential Oil		2000.0	-1.0	--
1	ETHYL-MYRISTATE	Fruit	1.0	6.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	WIDDROL	Wood		100.0	-1.0	--
0	THIAMINE	Fruit	0.4	1.2	-1.081392271586632	--
11	ALPHA-PHELLANDRENE	Essential Oil				--
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	JUNIPERAPRENOL-17	Leaf				--
0	MYRTENAL-ACETATE	Fruit				--
0	DESOXYPICROPODOPHYL LOTOXIN	Fruit				--
63	MENTHOL	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CUPRESSUFLAVONE	Leaf				--
10	ALPHA-AMYRIN	Stem				--
3	GINNOL	Fruit				--
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.
23	TERPINEN-4-OL	Leaf Essent. Oil				--
17	FARNESOL	Leaf				--
0	TORULOSOL	Fruit				--
0	1-4-CINEOL	Fruit Essent. Oil				--
63	MENTHOL	Fruit		22.0		--
5	MYRTENAL	Fruit Essent. Oil				--
8	STEARIC-ACID	Plant				--
4	CADINENE	Fruit Essent. Oil				--
14	DEOXYPODOPHYLLOTOXIN	Fruit				--
0	(DL)-MALIC-ACID	Leaf				--
0	BETA-ELEMEN-7-ALPHA-OL	Fruit				--
0	P-MENTHA-1,2,4-TRIOL	Plant				--
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	ISOCRYPTOMERIN	Leaf				--
4	PELLANDRENE	Fruit Essent. Oil				--

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	JUNIPERAPRENOL-16	Leaf				--
5	MYRTENAL	Fruit				--
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	3-ALPHA-ACETOXY-ISOCUPRESSIC-ACID	Leaf		712.5		--
5	SABINENE	Fruit Essent. Oil				--
0	AMENTOFLAVONE-TRIMETHYL-ETHER	Leaf				--
0	8-ETHOXY-P-CYMENE	Fruit	4.0	45.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	L-MALEIC-ACID	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
4	PHOSPHORIC-ACID	Leaf				--
0	ETHYL-PALMITOLEATE	Fruit	1.0	2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TORULOSAL	Fruit				--
0	CINEOL	Essential Oil				--
62	GALLIC-ACID	Leaf				--
47	BETA-SITOSTEROL	Fruit				--
22	UMBELLIFERONE	Leaf				--
9	DELTA-CADINENE	Fruit				--
21	LUPEOL	Stem				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
0	IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	CIS-CALAMANENE	Fruit Essent. Oil				--
0	N-PENTATRIACONTANE	Fruit				--
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.
0	JUNIPERAPRENOL-15	Leaf				--
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	CATECHOL-TANNINS	Fruit	30000.0	50000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
60	LIMONENE	Fruit Essent. Oil				--
0	ISOCUPRESSIC-ACID	Leaf		2637.5		--
87	RUTIN	Fruit				--
0	AMENTOFLAVONE-DIMETHYL-ETHER	Leaf				--
0	5-ALPHA-HYDROXYABIETINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
2	L-LIMONENE	Bark				Chemical Constituents of Oriental Herbs (3 diff. books)
13	PALMITIC-ACID	Plant				--
9	TERPINOLENE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	CHLOROGENIC-ACID	Leaf				--
40	EPICATECHIN	Fruit				--
22	MYRCENE	Fruit Essent. Oil				--
7	FUMARIC-ACID	Leaf				--
87	RUTIN	Leaf				--
3	BILOBETIN	Leaf				--
0	TRICYCLEN	Fruit				--
28	ALPHA-PINENE	Leaf Essent. Oil				--
0	DELTA-3-VARENE	Leaf				--
0	LINOLENIC-ACID	Plant				--
30	(+)-CATECHIN	Fruit				--
0	HUMULENE-OXIDE	Fruit		9.0		--
4	CADINENE	Fruit				--
14	SHIKIMIC-ACID	Leaf				--
2	PALMITOLEIC-ACID	Plant				--
0	JUNIONONE	Fruit Essent. Oil				--
2	CAMPESTEROL	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
41	CAMPHOR	Essential Oil				--
4	COSMOSIIN	Fruit				--
1	RHODOXANTHIN	Leaf				--
18	AMENTOFLAVONE	Leaf				--
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	P-CYMOL	Essential Oil				--
9	TERPINOLENE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	(+)-CATECHIN	Leaf				--
0	EPIAFZELICHIN	Fruit				--
1	QUINIC-ACID	Leaf				--
0	MYRCECOMMUNAL	Fruit				--
13	BETULIN	Stem				Jim Duke's personal files.
61	FERULIC-ACID	Leaf				--
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.
0	ALLO-BETULIN	Fruit				--
0	TRANS-VERBENOL	Fruit	1.0	12.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
27	LINOLEIC-ACID	Plant				--
0	(+)-AFZELICHIN	Fruit				--
0	BORNEOL-ACETATE	Fruit Essent. Oil				--
3	BETA-SELINENE	Fruit Essent. Oil				--
2	PALMITOLEIC-ACID	Seed Oil				--
0	JUNICEDRAL	Fruit				--
0	METHYL-CITRONELLOL	Plant				--
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.
2	GALLO-TANNIN	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
9	CAMPHENE	Essential Oil				--
0	ALPHA-COPAENE	Fruit Essent. Oil				--
0	AGATHOLAL	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	P-COUMARIC-ACID	Leaf				--
8	CARYOPHYLENE-OXIDE	Fruit Essent. Oil				--
22	ISOQUERCITRIN	Fruit				--
0	GAMMA-MUUROLENE	Fruit Essent. Oil				--
13	BETULIN	Leaf				Jim Duke's personal files.
0	EO	Leaf				--
0	4-ACETYL-1,4-DIMETHYL-1-CYCLOHEXENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ALLO-BETULIN	Leaf				--
28	ALPHA-PINENE	Fruit Essent. Oil				--
0	LIMONENE-PEROXIDE	Fruit Essent. Oil				--
112	ASCORBIC-ACID	Fruit				--
4	GLYCOLIC-ACID	Fruit				--
0	SELINAN-4(14)-7(11)-DIENE	Fruit Essent. Oil				--
9	OXALIC-ACID	Leaf				--
3	CEDROL	Leaf	450.0	2100.0		--
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.
8	FRUCTOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
9	CAMPHENE	Fruit Essent. Oil				--
0	CIS-COMMUNOL	Fruit				--
0	AGATHADIOL	Fruit				--
0	JUNIPEROL	Wood				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	OPLOPANONE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	TERPINEOL	Fruit Essent. Oil				--
0	CAR-3-ENE	Fruit Essent. Oil				--
22	ISOQUERCITRIN	Leaf				--
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	ALPHA-MUUROLENE	Fruit Essent. Oil				--
13	BETULIN	Fruit				Jim Duke's personal files.
0	GAMMA-ELEMENE	Fruit Essent. Oil				--
0	15-HYDROXY-PENTADECANOIC	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
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	ISOPIMAROL	Fruit				--
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	3-ALPHA-15-DIHYDROXY-LABDA-8(17)-TRANS-13-DIENE	Leaf		500.0		--
3	AROMADENDRENE	Fruit		2.0		--
4	GLUCURONIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	SCUTELLAREIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
0	ALLO-BETULIN	Stem				--
18	OLEIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	CEDRENE	Leaf	12000.0	36000.0		--
0	HUMULENE-OXIDE	Fruit Essent. Oil				--
1	SODIUM	Fruit				--
0	ALPHA-HIMACHALINE	Plant				--
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	Essential Oil				--
0	CIS-COMMUNAL	Fruit				--
2	TRANS-ACONITIC-ACID	Leaf				--
1	SUGIOL	Wood				--
10	NEROL	Fruit Essent. Oil				--
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.
0	P-MENTHANE-1-2-4-TRIOL	Fruit Essent. Oil				--
0	(+)-BETA-ELEMEN-7-ALPHA-OL	Fruit				--
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	JUNIONONE	Fruit				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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOPIMARAL	Fruit				--
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-13-DIEN-15-OIC-ACID	Leaf		75.0		--
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.
7	GLUCOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
3	SCIADOPITYSIN	Leaf				--
20	BENZOIC-ACID	Leaf				--
7	HINOKIFLAVONE	Leaf				--
0	LONGIFOLENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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.
20	CITRONELLAL	Fruit Essent. Oil				--
1	CIS-ACONITIC-ACID	Leaf				--
0	NONACOSAN-5-10-DIOL	Fruit				--
1	N-NONACOSANE	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				--
0	P-MENTHANE	Fruit Essent. Oil				--
0	P-CYMOL	Leaf Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	13,14-EPOXY-IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	JUNICEDROL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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.
3	BETA-PHELLANDRENE	Fruit Essent. Oil				--
15	CITRONELLOL	Leaf				--
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-12-14-TRIEN-19-OIC-ACID	Leaf		75.0		--
11	NEROLIDOL	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.
0	SANDARACOPIMAROL	Fruit				--
3	AROMADENDRENE	Fruit Essent. Oil				--
0	N-HEPTACOSANE	Fruit				--
0	SELINA-4(14),7(11)-DIENE	Fruit		2.0		--
7	LINALYL-ACETATE	Plant				--
22	UMBELLIFERONE	Fruit				--
4	FERRUGINOL	Wood		10.0		--
24	VANILLIC-ACID	Leaf				--
23	CITRIC-ACID	Leaf				--
0	DEHYDROABIETOL	Fruit				--
0	NEPITRIN	Leaf				--
0	L-TARTARIC-ACID	Leaf				--
0	TRANS-CALAMANENE	Fruit Essent. Oil				--
77	ZINC	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Leaf				--
1	ETHYL-LAURATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	3-ALPHA-HYDROXYMANOOL	Leaf		2350.0		--
0	P-CYMENOL	Fruit Essent. Oil				--
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	JUNENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	MYRCENE	Leaf Essent. Oil				--
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.
3	BETA-PHELLANDRENE	Essential Oil				--
0	JUNIPERAPRENOL-20	Leaf				--
0	ALPHA-TERPINYL-ACETATE	Fruit				--
10	NEROL	Fruit				--
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.
5	GERANYL-ACETATE	Fruit				--
38	(-)-EPICATECHIN	Fruit				--
0	SANDARACOPIMARAL	Fruit				--
0	ANTICOPALOL	Fruit				--
3	N-HENTRIACONTANE	Fruit				--
3	ALPHA-CADINOL	Fruit				--
0	LINALOL	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	THUJAN-4-OL	Essential Oil		9000.0		--
22	UMBELLIFERONE	Shoot				--
18	CINNAMIC-ACID	Leaf				--
53	LINALOOL	Plant				--
4	NEPETIN	Leaf				--
0	CAMPHOLENIC-ALDEHYDE	Fruit	1.0	7.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	SYRINGIC-ACID	Leaf				--
102	CAFFEIC-ACID	Fruit				--
1	YLANGENE	Fruit				--
0	PHENYL-PYRUVIC-ACID	Leaf				--
2	MANOOL	Leaf		87.5		--
0	BETA-FENCHENE	Fruit				--
16	P-CYMENE	Fruit Essent. Oil				--
2	ISOPIMARIC-ACID	Fruit				--
0	JUNIPERAPRENOL-18	Leaf				--
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	BETA-PHELLANDRENE	Leaf Essent. Oil				--
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	JUNIPERAPRENOL-19	Leaf				--
2	MYRTENOL	Plant				--
8	DESOXYPODOPHYLLOTOXIN	Fruit				--
0	GEIJERONE	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	(-)-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	ALPHA-KETO-GLUTARIC-ACID	Leaf				--
0	SANTENE	Fruit				--
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	LIMONENE-PEROXIDE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	N-TRITRIACONTANE	Fruit				--
0	1-4-CINEOL	Leaf Essent. Oil				--
0	MYRTENOL-ACETATE	Fruit Essent. Oil				--
0	CAMPHOLENIC-ACETATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	SUCCINIC-ACID	Leaf				--
102	CAFFEIC-ACID	Leaf				--
43	PROTocatechuic-ACID	Leaf				--
0	DL-EPICUBENOL	Wood				--
1	MALONIC-ACID	Leaf				--
0	CYCLOPOLY(D-GALACTURONIC-ACID)	Fruit				--
0	P-MENTHANE	Fruit	2.0	20.0		--
0	(+)-JUNENOL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	ISOCUPRESSINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	JUNIPERAPRENOL-14	Leaf				--