

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	(+)-AFZELICHIN	Fruit				--
0	(+)-BETA-ELEMEN-7-ALPHA-OL	Fruit				--
30	(+)-CATECHIN	Leaf				--
30	(+)-CATECHIN	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.
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	(+)-JUNENOL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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.
38	(-)-EPICATECHIN	Fruit				--
0	(DL)-MALIC-ACID	Leaf				--
0	1,4-CINEOLE	Fruit		400.0	-0.44111885007210994	--
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	1,4-DIMETHYL-CYCLOHEX-3-ENYL-METHYL-KETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	1-4-CINEOL	Leaf Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-4-CINEOL	Fruit Essent. Oil				--
0	13,14-EPOXY-IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
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	15-HYDROXY-PENTADECANOIC	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	3-ALPHA-15-DIHYDROXY-LABDA-8(17)-TRANS-13-DIENE	Leaf		500.0		--
0	3-ALPHA-ACETOXY-ISOCUPRESSIC-ACID	Leaf		712.5		--
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-12-14-TRIEN-19-OIC-ACID	Leaf		75.0		--
0	3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-13-DIEN-15-OIC-ACID	Leaf		75.0		--
1	3-ALPHA-HYDROXYMANOOL	Leaf		2350.0		--
0	4-ACETYL-1,4-DIMETHYL-1-CYCLOHEXENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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	5-ALPHA-HYDROXYABIETINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	8-ETHOXY-P-CYMENE	Fruit	4.0	45.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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	AGATHADIOL	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	AGATHOLAL	Fruit				--
0	ALLO-BETULIN	Fruit				--
0	ALLO-BETULIN	Leaf				--
0	ALLO-BETULIN	Stem				--
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.
10	ALPHA-AMYRIN	Stem				--
3	ALPHA-CADINOL	Fruit				--
0	ALPHA-COPAENE	Fruit Essent. Oil				--
0	ALPHA-COPAENE	Fruit	3.0	33.0	-0.6445927707079909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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-HIMACHALINE	Plant				--
2	ALPHA-HUMULENE	Fruit	19.0	192.0	-0.5022919640544935	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-KETO-GLUTARIC-ACID	Leaf				--
0	ALPHA-MUUROLENE	Fruit Essent. Oil				--
0	ALPHA-MUUROLENE	Fruit	54.0	542.0	-0.13060058780802927	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Essential Oil				--
11	ALPHA-PHELLANDRENE	Fruit	26.0	300.0	-0.4254028775207352	--
28	ALPHA-PINENE	Leaf Essent. Oil				--
28	ALPHA-PINENE	Fruit	530.0	9200.0	1.683156636347073	--
28	ALPHA-PINENE	Essential Oil		336000.0	2.3965523753346103	--
28	ALPHA-PINENE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	ALPHA-TERPINENE	Fruit	16.0	640.0	3.1220141023253	--
23	ALPHA-TERPINEOL	Fruit	3.0	40.0	-0.37559632876532734	--
23	ALPHA-TERPINEOL	Essential Oil		2000.0	-0.6844703056368032	--
0	ALPHA-TERPINYL-ACETATE	Fruit				--
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.
5	ALUMINUM	Fruit	19.0	61.0	-0.20577518900264186	--
18	AMENTOFLAVONE	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.
0	AMENTOFLAVONE-DIMETHYL-ETHER	Leaf				--
0	AMENTOFLAVONE-TRIMETHYL-ETHER	Leaf				--
0	ANTICOPALOL	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.
3	AROMADENDRENE	Fruit Essent. Oil				--
3	AROMADENDRENE	Fruit		2.0		--
112	ASCORBIC-ACID	Leaf		600.0	-0.3882477425426218	--
112	ASCORBIC-ACID	Fruit				--
0	ASH	Fruit	9920.0	32000.0	-0.6386766393183354	--
20	BENZOIC-ACID	Leaf				--
9	BETA-AMYRIN	Stem				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
53	BETA-CAROTENE	Fruit	4.0	12.2	-0.1272182489407809	--
0	BETA-ELEMEN-7-ALPHA-OL	Fruit				--
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	BETA-FENCHENE	Fruit				--
2	BETA-MYRCENE	Essential Oil		110000.0	-0.2906195438526693	--
3	BETA-PHELLANDRENE	Fruit Essent. Oil				--
3	BETA-PHELLANDRENE	Essential Oil				--
3	BETA-PHELLANDRENE	Fruit	66.0	660.0	-0.3586028887711514	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Leaf Essent. Oil				--
13	BETA-PINENE	Essential Oil		25000.0	-0.1752769464817969	--
13	BETA-PINENE	Fruit	22.0	580.0	-0.2792614436195468	--
3	BETA-SELINENE	Fruit Essent. Oil				--
3	BETA-SELINENE	Fruit		32.0	-1.0	--
47	BETA-SITOSTEROL	Fruit				--
13	BETULIN	Stem				Jim Duke's personal files.
13	BETULIN	Leaf				Jim Duke's personal files.
13	BETULIN	Fruit				Jim Duke's personal files.
3	BILOBETIN	Leaf				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
35	BORNEOL	Essential Oil				--
0	BORNEOL-ACETATE	Fruit Essent. Oil				--
0	BORNEOL-ACETATE	Essential Oil		4000.0	-0.7241445887911021	--
12	BORNYL-ACETATE	Fruit	2.0	40.0	-0.7015317621173582	--
4	CADINENE	Fruit				--
4	CADINENE	Fruit Essent. Oil				--
102	CAFFEIC-ACID	Fruit				--
102	CAFFEIC-ACID	Leaf				--
0	CALAMENENE	Fruit		71.0	-0.5933257121003137	--
28	CALCIUM	Fruit	2632.0	8490.0	1.0692774780691343	--
2	CAMPESTEROL	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
9	CAMPHENE	Fruit	1.0	100.0	-0.3103363418182056	--
9	CAMPHENE	Essential Oil				--
9	CAMPHENE	Fruit Essent. Oil				--
0	CAMPHOLENE-ALDEHYDE	Essential Oil		2000.0		--
0	CAMPHOLENIC-ACETATE	Fruit				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.
41	CAMPHOR	Fruit	1.0	7.0	-0.8917009005689489	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
41	CAMPHOR	Essential Oil				--
0	CAR-3-ENE	Fruit Essent. Oil				--
0	CAR-3-ENE	Essential Oil				--
0	CARBOHYDRATES	Fruit	226300.0	730000.0	-0.2827855072710454	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	CARYOPHYLLENE	Fruit	12.0	120.0	-0.39246549266153086	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Fruit Essent. Oil				--
8	CARYOPHYLLENE-OXIDE	Fruit		15.0	-0.895044555279303	--
0	CATECHOL-TANNINS	Fruit	30000.0	50000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
1	CEDRENE	Leaf	12000.0	36000.0		--
3	CEDROL	Wood		200.0	-1.0	--
3	CEDROL	Leaf	450.0	2100.0		--
77	CHLOROGENIC-ACID	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.
24	CHROMIUM	Fruit	1.0	3.2	-0.0581672201980405	--
0	CINEOL	Essential Oil				--
18	CINNAMIC-ACID	Leaf				--
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	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	CIS-4-ETHOXY-THUJANE	Fruit	3.0	30.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	CIS-ACONITIC-ACID	Leaf				--
0	CIS-CALAMANENE	Fruit Essent. Oil				--
0	CIS-COMMUNAL	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	CIS-COMMUNOL	Fruit				--
23	CITRIC-ACID	Leaf				--
20	CITRONELLAL	Fruit		160.0	1.1325570680400574	--
20	CITRONELLAL	Fruit Essent. Oil				--
15	CITRONELLOL	Leaf				--
2	COBALT	Fruit	4.0	12.3	0.9539136726283711	--
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.
4	COSMOSIIN	Fruit				--
1	CUPARENE	Wood		300.0	-1.0	--
0	CUPRESSUFLAVONE	Leaf				--
0	CYCLOPOLY(D-GALACTURONIC-ACID)	Fruit				--
0	DEHYDROABIETOL	Fruit				--
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	DELTA-3-VARENE	Leaf				--
9	DELTA-CADINENE	Fruit				--
1	DELTA-CADINOL	Fruit		1.0	-1.0	--
14	DEOXYPODOPHYLLOTOXIN	Fruit				--
0	DESOXPICROPODOPHYLLOTOXIN	Fruit				--
8	DESOXYPODOPHYLLOTOXIN	Fruit				--
0	DL-EPICUBENOL	Wood				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EO	Fruit	6200.0	40000.0	-0.042481439666032995	--
0	EO	Leaf				--
0	EPIAFZELICHIN	Fruit				--
40	EPICATECHIN	Fruit				--
1	ETHYL-LAURATE	Fruit				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	ETHYL-PALMITOLEATE	Fruit	1.0	2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
17	FARNESOL	Leaf				--
0	FAT	Seed		539000.0	1.441214427871716	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Fruit	17360.0	56000.0	-0.21352859426457804	--
4	FERRUGINOL	Wood		10.0		--
61	FERULIC-ACID	Leaf				--
15	FIBER	Fruit		120000.0	-0.20454875292033714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Fruit		120000.0	-0.26860285043394083	--
0	FIBER(DIETARY)	Fruit		320000.0	-0.9715942860730087	--
13	FORMIC-ACID	Fruit	1550.0	5000.0	1.0	--
8	FRUCTOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
7	FUMARIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	FUMARIC-ACID	Fruit	1550.0	5000.0	-0.6004154140938881	--
62	GALLIC-ACID	Leaf				--
2	GALLO-TANNIN	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	GAMMA-CADINENE	Fruit	16.0	164.0	1.8269938624979614	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-ELEMENE	Fruit Essent. Oil				--
0	GAMMA-ELEMENE	Fruit		160.0	1.4137929367070103	--
0	GAMMA-MUUROLENE	Fruit Essent. Oil				--
0	GAMMA-MUUROLENE	Fruit		128.0	-1.0	--
11	GAMMA-TERPINENE	Fruit	19.0	600.0	-0.540911166794079	--
11	GAMMA-TERPINENE	Leaf Essent. Oil				--
0	GEIJERONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	GERANYL-ACETATE	Fruit				--
2	GERMACRENE-D	Fruit	3.0	32.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	GINNOL	Fruit				--
7	GLUCOSE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
4	GLUCURONIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
4	GLYCOLIC-ACID	Fruit				--
7	HINOKIFLAVONE	Leaf				--
2	HUMULENE	Fruit		102.0	-0.6157187427092596	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HUMULENE-OXIDE	Fruit Essent. Oil				--
0	HUMULENE-OXIDE	Fruit		9.0		--
0	HYPOLAETIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
0	IMBRICATOLIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
6	IRON	Fruit	5.0	15.0	-0.4679872255679544	--
0	ISOCRYPTOMERIN	Leaf				--
0	ISOCUPRESSIC-ACID	Leaf		2637.5		--
0	ISOCUPRESSINIC-ACID	Plant				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	ISOPIMARAL	Fruit				--
2	ISOPIMARIC-ACID	Fruit				--
0	ISOPIMAROL	Fruit				--
3	ISOQUERCETIN	Fruit				--
22	ISOQUERCITRIN	Fruit				--
22	ISOQUERCITRIN	Leaf				--
0	JUNENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	JUNICEDRAL	Fruit				--
0	JUNICEDROL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	JUNIONONE	Fruit Essent. Oil				--
0	JUNIONONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	JUNIPERAPRENOL-14	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	JUNIPERAPRENOL-15	Leaf				--
0	JUNIPERAPRENOL-16	Leaf				--
0	JUNIPERAPRENOL-17	Leaf				--
0	JUNIPERAPRENOL-18	Leaf				--
0	JUNIPERAPRENOL-19	Leaf				--
0	JUNIPERAPRENOL-20	Leaf				--
0	JUNIPEROL	Wood				J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.
0	KILOCALORIES	Fruit		3410.0	-0.3805452107665679	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
2	L-LIMONENE	Bark				Chemical Constituents of Oriental Herbs (3 diff. books)
0	L-MALEIC-ACID	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948- 1952.
0	L-TARTARIC-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.
1	LEUCOANTHOCYANIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	LIMONENE	Essential Oil		31000.0	-0.5586333216571333	--
60	LIMONENE	Fruit Essent. Oil				--
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	LIMONENE-PEROXIDE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LIMONENE-PEROXIDE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LINALOL	Plant				--
53	LINALOOL	Plant				--
7	LINALYL-ACETATE	Plant				--
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.
27	LINOLEIC-ACID	Plant				--
0	LINOLENIC-ACID	Plant				--
0	LONGIFOLENE	Plant				J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.
21	LUPEOL	Stem				--
65	MAGNESIUM	Fruit	9.0	30.0	-0.9723001521392451	--
1	MALONIC-ACID	Leaf				--
14	MANGANESE	Fruit	2.0	6.3	-0.3619961117886394	--
2	MANOOL	Leaf		87.5		--
63	MENTHOL	Fruit Essent. Oil				--
63	MENTHOL	Fruit		22.0		--
0	METHYL-CITRONELLOL	Plant				--
0	MYRCECOMMUNAL	Fruit				--
22	MYRCENE	Fruit	110.0	1800.0	-0.10348815985421497	--
22	MYRCENE	Fruit Essent. Oil				--
22	MYRCENE	Leaf Essent. Oil				--
0	MYRCEOCOMMUNIC-ACID	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
5	MYRTENAL	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	MYRTENAL	Fruit				--
0	MYRTENAL-ACETATE	Fruit				--
2	MYRTENOL	Plant				--
0	MYRTENOL-ACETATE	Fruit Essent. Oil				--
3	N-HENTRIACONTANE	Fruit				--
0	N-HEPTACOSANE	Fruit				--
1	N-NONACOSANE	Fruit				--
0	N-PENTATRIACONTANE	Fruit				--
0	N-TRITRIACONTANE	Fruit				--
4	NEPETIN	Leaf				--
0	NEPITRIN	Leaf				--
10	NEROL	Fruit				--
10	NEROL	Fruit Essent. Oil				--
11	NEROLIDOL	Leaf				--
5	NERYL-ACETATE	Fruit	6.0	60.0	-0.26098959388736837	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Fruit	4.0	12.0	-0.6510092608917062	--
0	NONACOSAN-5-10-DIOL	Fruit				--
18	OLEIC-ACID	Plant				--
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	OPLOPANONE	Fruit				--
9	OXALIC-ACID	Leaf				--
25	P-COUMARIC-ACID	Leaf				--
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
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.
16	P-CYMENE	Fruit Essent. Oil				--
0	P-CYMENOL	Fruit Essent. Oil				--
0	P-CYMOL	Plant		240.0	-0.9534537245333127	--
0	P-CYMOL	Essential Oil				--
0	P-CYMOL	Leaf Essent. Oil				--
13	P-HYDROXY-BENZOIC-ACID	Plant		2500.0	1.0	--
0	P-MENTHA-1,2,4-TRIOL	Plant				--
0	P-MENTHANE	Fruit Essent. Oil				--
0	P-MENTHANE	Fruit	2.0	20.0		--
0	P-MENTHANE-1-2-4-TRIOL	Fruit Essent. Oil				--
13	PALMITIC-ACID	Plant				--
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.
2	PALMITOLEIC-ACID	Plant				--
2	PALMITOLEIC-ACID	Seed Oil				--
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	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.
4	PELLANDRENE	Fruit Essent. Oil				--
0	PHENYL-PYRUVIC-ACID	Leaf				--
4	PHOSPHORIC-ACID	Leaf				--
4	PHOSPHORUS	Fruit	279.0	900.0	-0.7034597256399827	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	POTASSIUM	Fruit	2967.0	9570.0	-0.7384457440468485	--
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	PROTEIN	Fruit	56420.0	182000.0	0.9719135979447259	--
43	PROTocatechuic-acid	Leaf				--
176	QUERCETIN	Leaf				--
0	QUERCETIN-3-O-ALPHA-L-ARABINOSYL-GLUCOSIDE	Fruit				--
1	QUINIC-ACID	Leaf				--
0	RESIN	Fruit	80000.0	100000.0	0.5011700816956098	--
1	RHODOXANTHIN	Leaf				--
15	RIBOFLAVIN	Fruit	0.2	0.6	-0.9443248460470646	--
87	RUTIN	Leaf				--
87	RUTIN	Fruit				--
5	SABINENE	Fruit Essent. Oil				--
5	SABINENE	Leaf Essent. Oil				--
5	SABINENE	Fruit	172.0	2700.0	0.3124331852362114	--
5	SABINENE	Essential Oil		76000.0	-0.05757229883510122	--
0	SANDARACOPIMARAL	Fruit				--
0	SANDARACOPIMAROL	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.
0	SANTENE	Fruit				--
3	SCIADOPITYSIN	Leaf				--
0	SCUTELLAREIN-7-O-BETA-D-GLUCOSIDE	Fruit				--
60	SELENIUM	Fruit	0.1	0.2	-0.3365919582076448	--
0	SELINA-4(14),7(11)-DIENE	Fruit		2.0		--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SELINAN-4(14)-7(11)-DIENE	Fruit Essent. Oil				--
14	SHIKIMIC-ACID	Leaf				--
4	SILICON	Fruit	1.4	4.5	-0.5938225414098025	--
1	SODIUM	Fruit				--
8	STEARIC-ACID	Plant				--
7	SUCCINIC-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.
0	SUGARS	Fruit	24800.0	80000.0	-0.5539776886973504	--
1	SUGIOL	Wood				--
6	SYRINGIC-ACID	Leaf				--
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.
23	TERPINEN-4-OL	Fruit	13.0	1050.0	-0.19930126187699354	--
23	TERPINEN-4-OL	Essential Oil		21000.0	-0.4130918835519973	--
23	TERPINEN-4-OL	Leaf Essent. Oil				--
23	TERPINEN-4-OL	Fruit Essent. Oil				--
18	TERPINEOL	Fruit Essent. Oil				--
9	TERPINOLENE	Essential Oil				--
9	TERPINOLENE	Fruit Essent. Oil				--
9	TERPINOLENE	Fruit	18.0	320.0	1.3982869520915144	--
31	THIAMIN	Fruit		1.2	-0.5290087074554676	--
0	THIAMINE	Fruit	0.4	1.2	-1.081392271586632	--
0	THUJAN-4-OL	Essential Oil		9000.0		--
2	THUJOPSENE	Wood		3700.0	-1.0	--
4	TIN	Fruit	20.0	63.0	-0.1301348957872833	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TORULOSAL	Fruit				--
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	TORULOSOL	Fruit				--
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	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	TRANS-4-ETHOXY-THUJANE	Fruit	3.0	30.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	TRANS-ACONITIC-ACID	Leaf				--
0	TRANS-CALAMANENE	Fruit Essent. Oil				--
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	TRANS-SABINENE-HYDRATE	Fruit	1.0	6.0	-0.5171765141826495	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-VERBENOL	Fruit	1.0	12.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRICYCLEN	Fruit				--
22	UMBELLIFERONE	Fruit				--
22	UMBELLIFERONE	Leaf				--
22	UMBELLIFERONE	Shoot				--
24	VANILLIC-ACID	Leaf				--
5	VERBENONE	Essential Oil		2000.0	-1.0	--
0	WATER	Fruit		690000.0	-0.35035084474250255	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
2	WIDDROL	Wood		100.0	-1.0	--
1	YLANGENE	Fruit				--
77	ZINC	Fruit				--