

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Humulus lupulus*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	ZINC	Flower				--
77	ZINC	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	XANTHOTHUMOL	Resin, Exudate, Sap		78750.0		--
4	XANTHOTHUMOL	Strobilus		300.0		--
4	XANTHOTHUMOL	Fruit		15.0		--
1	VIRIDIFLOROL	Fruit		16.0		--
3	VALINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
89	URSOLIC-ACID	Stem				--
8	TYROSINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
29	TRYPTOPHAN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	TRIMETHYLAMINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	TRANS-BETA-FARNESENE	Tissue Culture				--
4	TIN	Flower	4.0	22.0	0.9878291611472616	--
4	TIN	Fruit		22.0	-0.2908840013040884	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	THREONINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
31	THIAMIN	Fruit		3.4	-0.24739706588262703	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	SUCROSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	STIGMASTEROL	Stem				--
1	STACHYOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	SQUALENE	Plant				--
1	SODIUM	Fruit		47.0	-0.17949382924161622	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SODIUM	Flower	9.0	47.0	-0.5922029574106819	--
4	SILICON	Fruit		4.5	-0.5938225414098025	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	SILICON	Flower	0.8	4.5	-0.5633927701595145	--
1	SERINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	SELENIUM	Flower	0.3	1.7	-0.5395561278850259	--
60	SELENIUM	Fruit		1.7	0.03537263271054239	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
87	RUTIN	Leaf		2000.0	-0.8803806294985641	--
87	RUTIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	RIBOFLAVIN	Flower	2.0	10.1	0.9131195269275587	--
15	RIBOFLAVIN	Fruit		10.0	1.0688416055697534	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	RAFFINOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
44	QUERCITRIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	QUERCETIN-3-O-RHAMNOSIDE	Fruit				--
2	QUERCETIN-3'-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
176	QUERCETIN	Plant				--
1	PYRROLIDINE	Flower		1.0		--
1	PYRROLIDINE	Inflorescence		1.0		--
27	PROCYANIDINS	Fruit				--
4	PROCYANIDIN-B-4	Fruit				--
2	PROCYANIDIN-B-3	Fruit				--
1	PROCYANIDIN-B-2	Fruit				--
1	PROCYANIDIN-B-1	Fruit				--
14	POTASSIUM	Fruit		23500.0	0.49399185392198836	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	POTASSIUM	Flower	4371.0	23500.0	0.43388681236779714	--
10	PIPERIDINE	Flower		2.5		--
10	PIPERIDINE	Inflorescence		2.5		--
4	PHOSPHORUS	Fruit		4760.0	0.4689758575548939	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	PHOSPHORUS	Flower	885.0	4760.0	0.44165313354460856	--
7	PHENYLALANINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	PECTIN	Fruit	120000.0	140000.0	1.0319193042672525	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
16	P-CYMENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	P-COUMARIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
64	OLEANOLIC-ACID	Stem				--
39	NIACIN	Fruit		435.0	5.003766647644194	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
39	NIACIN	Flower	81.0	435.0	3.352263480595522	--
11	NEROLIDOL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
10	NEROL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
10	NEROL	Essential Oil				--
2	NEO-CHLOROGENIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
34	MYRICETIN	Plant				--
22	MYRCENE	Plant				--
22	MYRCENE	Strobilus				--
22	MYRCENE	Fruit				--
22	MYRCENE	Essential Oil				--
22	MYRCENE	Inflorescence				--
3	METHYL-NONYL-KETONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	METHYL-NONANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	METHYL-AMINE	Flower		3.7	-1.0	--
6	MASLINIC-ACID	Stem				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Fruit		8.1	-0.3501271465981358	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	MANGANESE	Flower	1.5	8.1	-0.36407539187837923	--
2	MALTOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
65	MAGNESIUM	Flower	443.0	2380.0	-0.3123747135433822	--
65	MAGNESIUM	Fruit		2380.0	0.11588638233919304	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	LYSINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	LUPULONE	Flower				--
9	LUPULONE	Strobilus		1300.0		--
9	LUPULONE	Fruit				--
9	LUPULONE	Inflorescence				--
9	LUPULONE	Plant				--
4	LUPULIN	Fruit				--
53	LINALOOL	Fruit				--
53	LINALOOL	Essential Oil				--
60	LIMONENE	Fruit				--
60	LIMONENE	Essential Oil				--
13	LIGNIN	Stem				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	LEUCODELPHINIDIN	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
2	LEUCODELPHINIDIN	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
1	LEUCOCYANIDIN	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	LEUCOCYANIDIN	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
2	LEUCINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	KAEMPFEROL-3-RHAMNOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
75	KAEMPFEROL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
6	ISOXANTHOTHUMOL	Resin, Exudate, Sap		42500.0		--
6	ISOXANTHOTHUMOL	Fruit		1838.0		--
5	ISOVALERIC-ACID	Essential Oil				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
22	ISOQUERCITRIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	ISOLEUCINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	ISOHUMULONE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	IRON	Flower				--
6	IRON	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
16	HUMULONE	Plant				--
16	HUMULONE	Inflorescence				--
16	HUMULONE	Fruit				--
16	HUMULONE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	HUMULONE	Strobilus		5000.0		--
2	HUMULENE	Flower				--
2	HUMULENE	Essential Oil				--
2	HUMULENE	Plant				--
2	HUMULENE	Fruit		1200.0	1.4104326443879445	--
7	HISTIDINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	HEPTYLISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	HEDERAGENIN	Stem				--
7	GLUCOSE	Fruit	15000.0	20000.0	-0.6828399338718176	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	GERMACRENE-D	Fruit		15.0	-1.0	--
2	GERANYL-PROPIONATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	GERANYL-ACETATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
35	GERANIOL	Essential Oil				--
35	GERANIOL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	GENTISIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	GAMMA-LINOLENIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
22	GAMMA-AMINOBTYRIC-ACID	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	FRUCTOSE	Fruit	15000.0	20000.0	-0.617530686348938	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	FRIEDELIN	Stem				--
12	FORMALDEHYDE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	FIBER	Fruit		72000.0	-0.6574998263757718	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
61	FERULIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
17	FARNESOL	Fruit		17.0	-0.6852064014620585	--
17	FARNESOL	Essential Oil				--
2	FARNESENE	Essential Oil				--
76	EUGENOL	Essential Oil				--
8	ESTRONE	Fruit				--
3	ESTRADIOL	Fruit				--
40	EPICATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	DIPENTENE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	DIMETHYLVINYL-CARBINOL	Flower				--
2	DIMETHYL-AMINE	Inflorescence		1.4		--
2	DIMETHYL-AMINE	Flower		1.4	-0.9999999999999997	--
2	DIETHYL-AMINE	Inflorescence		3.1		--
2	DIETHYL-AMINE	Flower		3.1		--
1	DELTA-CADINOL	Fruit		36.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	DELTA-CADINENE	Fruit		60.0	-0.4584564235430147	--
9	DELPHINIDIN	Plant				--
1	DECAN-1-AL	Essential Oil				--
7	CYANIDIN	Plant				--
3	COLUPULONE	Fruit				--
3	COLUPULONE	Strobilus				--
3	COLUPULONE	Inflorescence				--
3	COLUPULONE	Plant				--
2	COHUMULONE	Plant				--
2	COHUMULONE	Strobilus				--
2	COHUMULONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	COHUMULONE	Inflorescence				--
2	COBALT	Flower	0.5	2.4	-0.41850902895210695	--
2	COBALT	Fruit		2.4	-0.24457299524657042	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
53	CITRAL	Essential Oil				--
53	CITRAL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
24	CHROMIUM	Flower	0.1	0.7	-1.0719973021906593	--
24	CHROMIUM	Fruit		0.7	-0.4093125277624259	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
20	CHOLINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
77	CHLOROGENIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	CELLULOSE	Stem				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
43	CATECHIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	CARYOPHYLLENE-OXIDE	Essential Oil				--
6	CARYOPHYLLENE-EPOXIDE	Fruit		24.0		--
31	CARYOPHYLLENE	Plant				--
8	CANNABIDIOL	Leaf				--
2	CAMPESTEROL	Stem				--
28	CALCIUM	Flower	1157.0	6220.0	0.12434337429806096	--
28	CALCIUM	Fruit		6222.0	0.545912951542125	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
102	CAFFEIC-ACID	Plant				--
47	BETA-SITOSTEROL	Plant				--
3	BETA-SELINENE	Fruit		150.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	BETA-PINENE	Plant				--
13	BETA-PINENE	Essential Oil				--
13	BETA-PINENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	BETA-MYRCENE	Essential Oil	420000.0	580000.0	1.706327614199298	--
13	BETA-EUDESOL	Fruit		60.0		--
53	BETA-CAROTENE	Fruit		2.4	-0.1461614723719775	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
53	BETA-CAROTENE	Flower	0.5	2.4	-0.5854376351911411	--
2	BETA-ALANINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	ASTRAGALIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	ASPARAGINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Fruit		1782.0	-0.17368960442994769	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
112	ASCORBIC-ACID	Flower	332.0	1782.0	-0.2861764494395231	--
14	ARGININE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
5	ALUMINUM	Flower	0.9	4.7	-1.6412298738578974	--
5	ALUMINUM	Fruit		4.7	-0.22215407810898732	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
32	ALPHA-TOCOPHEROL	Strobilus				--
23	ALPHA-TERPINEOL	Essential Oil				--
3	ALPHA-SELINENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	ALPHA-PINENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	ALPHA-PINENE	Essential Oil				--
2	ALPHA-HUMULENE	Fruit				--
2	ALPHA-HUMULENE	Essential Oil		400000.0	3.136732670792344	--
3	ALPHA-CADINOL	Fruit		15.0		--
2	ALLO-CYMENE	Essential Oil				--
2	ADLUPULONE	Strobilus				--
2	ADLUPULONE	Fruit				--
2	ADLUPULONE	Inflorescence				--
2	ADLUPULONE	Plant				--
2	ADHUMULONE	Strobilus				--
2	ADHUMULONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	ADHUMULONE	Inflorescence				--
2	ADHUMULONE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ACETONE	Inflorescence				--
3	ACETONE	Flower				--
3	ACETONE	Fruit				--
3	2-TRIDECANONE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
38	(-)-EPICATECHIN	Fruit				--
30	(+)-CATECHIN	Fruit				--