

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Humulus lupulus*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	(+)-CATECHIN	Fruit				--
38	(-)-EPICATECHIN	Fruit				--
0	1,2-EPI-THIOHUMULENE	Essential Oil				--
0	12AROMADENDRINE-EPOXIDE	Fruit		20.0		--
0	2',6'-DIMETHOXY-4,4'-DIHYDROXY-CHALCONE	Fruit		75.0		--
0	2,2-DIMETHYL-5-OXO-2,5-DIHYDRO-FURAN	Flower				--
0	2,3,4-TRITHIAPENTANE	Essential Oil				--
0	2,3,4-TRITHIAPENTANE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	2,3,5-TRITHIAHEXANE	Essential Oil				--
0	2-DECANONE	Plant				--
0	2-DODECANONE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYL-5-PENTENYLFURAN	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYL-5-THIA-HEX-2-ENE	Essential Oil				--
0	2-METHYL-BUT-3-EN-2-OL	Fruit		1500.0		--
0	2-METHYL-BUT-3-EN-2-OL	Inflorescence				--
0	2-METHYL-BUT-B-EN-2-OL	Fruit		1000.0		--
0	2-METHYL-BUTYL-2-METHYL-BUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYL-BUTYL-ISOVALERATE	Essential Oil				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
0	2-METHYL-PROPAN-1-OL	Flower				--
0	2-METHYL-PROPANIC-ACID	Flower				--
0	2-METHYL-THIA-5-HEX-2-ENE	Essential Oil				--
0	2-METHYLBUTYLHEPTANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYLBUTYLHEXANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYLBUTYLISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYLBUTYLPROPIONATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYLPROPYL-2-METHYL-BUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYLPROPYL-ISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-METHYLPROPYLPENTENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-NONANON	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-PENTADECANONE	Essential Oil				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
0	2-TETRADECANON	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
0	2-UNDECANON	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	3'(ISOPRENYL)-2',4'-DIHYDROXY-4,6'-DIMETHOXY-CHALCONE	Fruit		28.0		--
0	3-(4-METHYL-PENT-3-ENYL)-3-THIOPHENE	Fruit				--
0	3-(4-METHYL-PENT-3-ENYL)-3-THIOPHENE	Essential Oil				--
0	3-METHYL-BUT-2-EN-1-AL	Flower				--
0	3-METHYL-BUTAN-1-OL	Flower				--
0	3-METHYL-BUTAN-2-ONE	Flower				--
0	3-METHYL-BUTANOIC-ACID	Flower				--
0	3-METHYLBUTYLISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	4,5-EPITHIOCARYOPHYLLENE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	4,5-EPITHIOCARYOPHYLLENE	Essential Oil				--
0	4-(4-METHYL-PENT-3-ENYL)1,2-DITHIACYCLOHEX-4-ENE	Essential Oil				--
0	4-(4-METHYL-PENT-3-ENYL)3,6-DIHYDRO-1,2-DITHIINE	Fruit				--
0	4-DEOXYCOHUMULONE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	4-DEOXYHUMULONE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	4-DEOXYHUMULONE	Inflorescence				--
0	4-DEOXYHUMULONE	Plant				--
0	5-(4-METHYL-5-PENT-3-ENYL)1,2,3-TRITHIACYCLOHEPT-5-ENE	Essential Oil				--
0	5-(4-METHYL-PENT-3-ENYL)-1,2,3-TRITHIACYCLOHEPT-5-ENE	Essential Oil				--
0	5-ALPHA-ERGOSTAN-3-ONE	Stem				--
0	5-ALPHA-STIGMAST22-EN-3-ONE	Stem				--
0	5-ALPHA-STIGMASTAN-3-ONE	Stem				--
0	6-(4-METHYL-PENT-3-ENYL)-1,2,3,4-TETRATHIACYCLOOCT-6-ENE	Essential Oil				--
0	6-(4-METHYL-PENT-3-ENYL)1,2,3,4-TETRATHIACYCLOCT-6-ENE	Essential Oil				--
0	6-ISO-PENTENYL-NARINGENIN	Resin, Exudate, Sap		2375.0		--
0	8,9-EPI-THIOHUMULENE	Essential Oil				--
3	ACETONE	Fruit				--
3	ACETONE	Inflorescence				--
3	ACETONE	Flower				--
0	ACYLPHLOROGLUCIDES	Fruit				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	ADHULUPONE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
2	ADHUMULONE	Inflorescence				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ADHUMULONE	Plant				--
2	ADHUMULONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	ADHUMULONE	Strobilus				--
2	ADLUPULONE	Inflorescence				--
2	ADLUPULONE	Plant				--
2	ADLUPULONE	Fruit				--
2	ADLUPULONE	Strobilus				--
0	ALLO-AROMADENDRENE	Fruit		77.0	-0.679784818689129	--
2	ALLO-CYMENE	Essential Oil				--
0	ALLOAROMADENDRENE-EPOXIDE	Fruit		12.0		--
0	ALPHA-ALANINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ALPHA-AMINO-ADIPIC-ACID	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ALPHA-CADINENE	Fruit		10.0		--
3	ALPHA-CADINOL	Fruit		15.0		--
0	ALPHA-CARYOPHYLLENE	Essential Oil				Chemical Constituents of Oriental Herbs (3 diff. books)
0	ALPHA-COPAENE	Fruit		15.0	-0.6690795871823009	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ALPHA-CORACALENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ALPHA-CUBEBENE	Plant		15.0	-0.508000508000762	--
0	ALPHA-EUDESOL	Fruit		65.0		--
0	ALPHA-GUAIENE	Fruit		16.0		--
2	ALPHA-HUMULENE	Fruit				--
2	ALPHA-HUMULENE	Essential Oil		400000.0	3.136732670792344	--
0	ALPHA-MUUROLENE	Fruit		35.0	-0.6984779293060631	--
28	ALPHA-PINENE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	ALPHA-SELINENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
23	ALPHA-TERPINEOL	Essential Oil				--
32	ALPHA-TOCOPHEROL	Strobilus				--
0	ALPHA-YLANGENE	Fruit		5.0	-0.6962565325467188	--
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.
0	AMMONIA	Flower		10660.0		--
0	AMMONIA	Inflorescence				--
0	AMMONIA(NH3)	Flower		10660.0	-0.02903630467319503	--
14	ARGININE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	AROMADENDRINE	Fruit		98.0		--
112	ASCORBIC-ACID	Flower	332.0	1782.0	-0.2861764494395231	--
112	ASCORBIC-ACID	Fruit		1782.0	-0.17368960442994769	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ASH	Fruit	70000.0	100000.0	1.1222069856554242	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ASH	Flower	15996.0	86000.0	0.3979087975090442	--
2	ASPARAGINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASPARAGINIC-ACID	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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	BETA-ALANINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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	--
0	BETA-CARYOPHYLLENE	Fruit		520.0	-0.4871544215252672	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	BETA-CARYOPHYLLENE	Essential Oil				--
0	BETA-CUBEBENE	Fruit		5.0	-0.7073479088132132	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	BETA-EUDESOL	Fruit		60.0		--
0	BETA-FARNESENE	Fruit		35.0	-1.0	Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp.
2	BETA-MYRCENE	Essential Oil	420000.0	580000.0	1.706327614199298	--
13	BETA-PINENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	BETA-PINENE	Plant				--
13	BETA-PINENE	Essential Oil				--
3	BETA-SELINENE	Fruit		150.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	BETA-SELINENE-EPOXIDE-I	Fruit		2.0		--
47	BETA-SITOSTEROL	Plant				--
0	BICYCLOGERMACRENE	Fruit		10.0		--
0	BUTYLATED-HYDROXY-TOLUENE	Strobilus				--
0	BUTYLISOBUTYRATE	Essential Oil				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
0	CADALENE	Fruit		2.0		--
102	CAFFEIC-ACID	Plant				--
0	CALAMENENE	Fruit		2.0	-0.6174844953736063	--
28	CALCIUM	Fruit		6222.0	0.545912951542125	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	CALCIUM	Flower	1157.0	6220.0	0.12434337429806096	--
2	CAMPESTEROL	Stem				--
8	CANNABIDIOL	Leaf				--
0	CARBOHYDRATES	Fruit		770000.0	-0.06888495104483651	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CARBOHYDRATES	Flower	143220.0	770000.0	0.5901036049686585	--
0	CARYOLAN-1-OL	Fruit		5.0		--
0	CARYOPHYLLA-3(12)-6-DIEN-4-OL	Essential Oil				--
0	CARYOPHYLLA-3(8)-13-DIEN-5-ALPHA-OL	Essential Oil				--
0	CARYOPHYLLA-3(8)-13-DIEN-5-OL	Essential Oil				--
0	CARYOPHYLLA-3-8(13)-DIEN-5-BETA-OL	Essential Oil				--
0	CARYOPHYLLA-4(12)-8(13)-DIEN-5-BETA-OL	Essential Oil				--
31	CARYOPHYLLENE	Plant				--
6	CARYOPHYLLENE-EPOXIDE	Fruit		24.0		--
8	CARYOPHYLLENE-OXIDE	Essential Oil				--
43	CATECHIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CELLULOSE	Stem				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CEROTIC-ACID	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
77	CHLOROGENIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	CHOLINE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
24	CHROMIUM	Fruit		0.7	-0.4093125277624259	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
24	CHROMIUM	Flower	0.1	0.7	-1.0719973021906593	--
53	CITRAL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
53	CITRAL	Essential Oil				--
2	COBALT	Fruit		2.4	-0.24457299524657042	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	COBALT	Flower	0.5	2.4	-0.41850902895210695	--
2	COHUMULONE	Inflorescence				--
2	COHUMULONE	Plant				--
2	COHUMULONE	Strobilus				--
2	COHUMULONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	COLUPDOX	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	COLUPOX	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
3	COLUPULONE	Plant				--
3	COLUPULONE	Fruit				--
3	COLUPULONE	Inflorescence				--
3	COLUPULONE	Strobilus				--
0	CUBENOL	Fruit		17.0	-1.0	--
7	CYANIDIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	DECAN-1-AL	Essential Oil				--
9	DELPHINIDIN	Plant				--
9	DELTA-CADINENE	Fruit		60.0	-0.4584564235430147	--
1	DELTA-CADINOL	Fruit		36.0	1.0	--
0	DELTA-GUAIENE	Fruit		20.0		--
0	DELTA-SELINENE	Fruit		55.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	DEMETHYL-XANTHOL	Strobilus				--
0	DEMETHYL-XANTHOL	Fruit				--
0	DEOXYCOHUMULONE	Plant				--
0	DEOXYHUMULONE	Plant				--
0	DEOXYHUMULONE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	DIETHYL-AMINE	Flower		3.1		--
2	DIETHYL-AMINE	Inflorescence		3.1		--
2	DIMETHYL-AMINE	Inflorescence		1.4		--
2	DIMETHYL-AMINE	Flower		1.4	-0.999999999999997	--
1	DIMETHYLVINYL-CARBINOL	Flower				--
7	DIPENTENE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	EO	Flower	2000.0	10000.0	-0.09040057685018825	--
0	EO	Seed	10000.0	30000.0	-0.17124289278893168	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	EO	Fruit	3000.0	10000.0	-0.625591783140096	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
40	EPICATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EPICUBENOL	Fruit		13.0	-1.0	--
0	EPIGLOBULOL	Fruit		5.0		--
3	ESTRADIOL	Fruit				--
8	ESTRONE	Fruit				--
0	ETHYL-AMINE	Flower		5.2		--
0	ETHYL-AMINE	Inflorescence		5.2		--
0	ETHYL-HEPTANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ETHYL-METHYL-AMINE	Inflorescence		3.7		--
0	ETHYL-METHYL-AMINE	Flower		3.7		--
76	EUGENOL	Essential Oil				--
2	FARNESENE	Essential Oil				--
17	FARNESOL	Fruit		17.0	-0.6852064014620585	--
17	FARNESOL	Essential Oil				--
0	FAT	Flower	5394.0	29000.0	-0.45281178898821745	--
0	FAT	Fruit		29000.0	-0.4197524224718951	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.
15	FIBER	Fruit		72000.0	-0.6574998263757718	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Flower		72000.0	-0.03302065882072333	--
0	FIBER(DIETARY)	Flower		342000.0	0.3333778507865993	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	FORMALDEHYDE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	FRIEDELIN	Stem				--
8	FRUCTOSE	Fruit	15000.0	20000.0	-0.617530686348938	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	GALLOCATECHIN	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.
22	GAMMA-AMINOBUTYRIC-ACID	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	GAMMA-CADINENE	Fruit		60.0	0.07091843089178781	--
0	GAMMA-CALOCORENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	GAMMA-ELEMENE	Fruit		16.0	-0.7367653332135127	--
0	GAMMA-EUDESOL	Fruit		18.0		--
0	GAMMA-IONONE	Essential Oil				--
20	GAMMA-LINOLENIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	GAMMA-MUUROLENE	Fruit		170.0	1.0	--
8	GENTISIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GERANIC-ACID-METHYL-ESTER	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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
0	GERANYL-ISOBUTYRATE	Essential Oil				--
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.
0	GERMACRATRIENE	Essential Oil				--
0	GERMACRENE-B	Fruit		105.0	-1.0	--
2	GERMACRENE-D	Fruit		15.0	-1.0	--
0	GLOBULOL	Fruit		27.0	-1.0	--
7	GLUCOSE	Fruit	15000.0	20000.0	-0.6828399338718176	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	HEDERAGENIN	Stem				--
0	HELUPONE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
1	HEPTYLISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HEPTYLPROPIONATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HEXYL-ISOBUTYRATE	Plant				--
0	HEXYLPROPIONATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	HISTIDINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HULUPINIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HULUPONE	Fruit	21000.0	39000.0		--
2	HUMULENE	Flower				--
2	HUMULENE	Fruit		1200.0	1.4104326443879445	--
2	HUMULENE	Essential Oil				--
2	HUMULENE	Plant				--
0	HUMULENE-DIEPOXIDE-A	Essential Oil				--
0	HUMULENE-DIEPOXIDE-A	Fruit				--
0	HUMULENE-EPOXIDE	Essential Oil				--
0	HUMULENE-EPOXIDE-I	Fruit		7.0		--
0	HUMULENE-EPOXIDE-II	Essential Oil				--
0	HUMULENE-EPOXIDE-II	Fruit		71.0		--
0	HUMULENE-MONOEPOXIDE-I	Essential Oil				--
0	HUMULENE-MONOEPOXIDE-I	Fruit				--
0	HUMULENOL-II	Essential Oil				--
0	HUMULENOL-II	Fruit		15.0		--
0	HUMULINONE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	HUMULOL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
16	HUMULONE	Strobilus		5000.0		--
16	HUMULONE	Plant				--
16	HUMULONE	Flower				--
16	HUMULONE	Inflorescence				--
16	HUMULONE	Fruit				--
6	IRON	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	IRON	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ISOADHUMULONE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOCOHUMULONE	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.
3	ISOLEUCINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOMALTOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOPARAFFIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOPENTENYL-NARANGENIN	Resin, Exudate, Sap		2375.0		--
0	ISOPENTYL-AMINE	Inflorescence		0.4		--
0	ISOPENTYL-AMINE	Flower		0.4		--
0	ISOPREHUMULONE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOPRENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	ISOQUERCITRIN	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
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.
6	ISOXANTHOTHUMOL	Fruit		1838.0		--
6	ISOXANTHOTHUMOL	Resin, Exudate, Sap		42500.0		--
0	JUNIPER-CAMPHOR	Fruit		13.0		--
75	KAEMPFEROL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	KAEMPFEROL-3-O-RUTINOSIDE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	KAEMPFEROL-3-RHAMNODIGLUCOSIDE	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.
0	KILOCALORIES	Fruit		2880.0	-1.1855236651643823	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LEDOL	Fruit		8.0		--
2	LEUCINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	LEUCOCYANIDIN	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
1	LEUCOCYANIDIN	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
2	LEUCODELPHINIDIN	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
2	LEUCODELPHINIDIN	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
13	LIGNIN	Stem				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
60	LIMONENE	Essential Oil				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Fruit				--
0	LINALOL	Fruit				--
53	LINALOOL	Essential Oil				--
53	LINALOOL	Fruit				--
0	LINALYL-ISONONYLATE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LINALYL-PROPIONATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUPARENOL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LUPAROL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LUPARONE	Plant				J.S. Glasby Dict.Pl's Containing 2ndary Metabolite. 1991.
4	LUPULIN	Fruit				--
9	LUPULONE	Inflorescence				--
9	LUPULONE	Plant				--
9	LUPULONE	Flower				--
9	LUPULONE	Strobilus		1300.0		--
9	LUPULONE	Fruit				--
4	LYSINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	M-CAMPHORENE	Essential Oil				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
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.
2	MALTOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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	--
6	MASLINIC-ACID	Stem				--
0	METACAMPHORENE	Essential Oil				--
0	METHYL-2,5-DIMETHYLHEXENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-2-METHYLNONANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-4-METHYLHEX-2-ENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-5-METHYLHEXANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-6-METHYL-HEPTANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-8-METHYLNONANOATE	Essential Oil				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
0	METHYL-9-METHYLDECANOATE	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	--
0	METHYL-DECA-4,8-DIENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-DECA-4-ENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-DECANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-DODECANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-GERANATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-GLUTAMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-HEPTANOATE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-HEXANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	METHYL-NONYL-KETONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	METHYL-OCTANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-THIO-HUMULENE	Essential Oil				--
0	METHYL-THIO-HUMULONE	Essential Oil				--
0	METHYL-UNDECANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-UNDECENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLDECENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLDODEC-8-EN-OATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLDODECADIENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLGLUTAMINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLNONENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLTHIOHEPTANOATE	Essential Oil				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
0	METHYLTHIOHEXANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLTHIOISOHEPTANOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLTRIDECENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYLUNDECADIENOATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	MYRCENE	Inflorescence				--
22	MYRCENE	Plant				--
22	MYRCENE	Strobilus				--
22	MYRCENE	Essential Oil				--
22	MYRCENE	Fruit				--
0	MYRCENOL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
34	MYRICETIN	Plant				--
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.
10	NEROL	Essential Oil				--
10	NEROL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
11	NEROLIDOL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	NERYLISOBUTYRATE	Essential Oil				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
0	NERYLPROPIONATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	NH3	Inflorescence				--
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	--
0	NONANYL	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTYL-ACETATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTYLISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
64	OLEANOLIC-ACID	Stem				--
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.
16	P-CYMENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PALUSTROL	Fruit		7.0		--
24	PECTIN	Fruit	120000.0	140000.0	1.0319193042672525	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PENTADECA-6,9-DIEN-2-ON	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PENTENYLISOBUTYRATE	Essential Oil				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
0	PENTOSAN	Stem				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PENTYLISOBUTYRATE	Essential Oil				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	PHENYLALANINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PHENYLETHANOL	Essential Oil				--
0	PHLOBAPHENE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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	--
10	PIPERIDINE	Inflorescence		2.5		--
10	PIPERIDINE	Flower		2.5		--
0	POSTHUMULONE	Inflorescence				--
0	POSTHUMULONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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	--
0	PREHUMULONE	Inflorescence				--
0	PREHUMULONE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PRELUPULONE	Inflorescence				--
0	PRELUPULONE	Fruit				--
1	PROCYANIDIN-B-1	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	PROCYANIDIN-B-2	Fruit				--
2	PROCYANIDIN-B-3	Fruit				--
4	PROCYANIDIN-B-4	Fruit				--
27	PROCYANIDINS	Fruit				--
0	PRODELPHINIDIN-B-3	Fruit				--
0	PROLINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PROTEIN	Flower	21390.0	115000.0	-0.322653241355452	--
0	PROTEIN	Fruit	115000.0	240000.0	1.7494288187526115	--
1	PYRROLIDINE	Flower		1.0		--
1	PYRROLIDINE	Inflorescence		1.0		--
176	QUERCETIN	Plant				--
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.
0	QUERCETIN-3-O-RUTINOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	QUERCETIN-3-O-RHAMNOSIDE	Fruit				--
0	QUERCETIN-3-RHAMNODIGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	QUERCETIN-3-RHAMNOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
44	QUERCITRIN	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
1	RAFFINOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	RESINS	Fruit	30000.0	300000.0	1.0	--
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.
87	RUTIN	Leaf		2000.0	-0.8803806294985641	--
87	RUTIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	S-METHYLTHIO-2-METHYLBUTANOATE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	S-METHYLTHIO-4-METHYLPENTANOATE	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
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.
0	SELIN-11-EN-OL	Fruit		29.0		--
0	SELINA-3,7(11)-DIENE	Fruit				--
0	SELINA-3,7-DIENE	Fruit		195.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	SELINA-4(14),7(11)-DIENE	Fruit				--
1	SERINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	SILICON	Fruit		4.5	-0.5938225414098025	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	SILICON	Flower	0.8	4.5	-0.5633927701595145	--
1	SODIUM	Flower	9.0	47.0	-0.5922029574106819	--
1	SODIUM	Fruit		47.0	-0.17949382924161622	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	SPATHULENOL	Fruit		10.0	-1.0	--
10	SQUALENE	Plant				--
1	STACHYOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	STIGMASTEROL	Stem				--
14	SUCROSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	SUGARS	Flower	22320.0	120000.0	0.816496580927726	--
0	T-CADINOL	Fruit		9.0		--
0	TANNINS	Fruit	20000.0	40000.0	-0.45457956903500574	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	TETRADEC-9-EN-2-ON	Plant				--
31	THIAMIN	Fruit		3.4	-0.24739706588262703	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Flower	0.6	3.4	0.4403764280895233	--
4	THREONINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
2	TRANS-BETA-FARNESENE	Tissue Culture				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-ISOHUMULONE	Flower				--
0	TRICYCLO-DEHYDRO-HUMULONE	Fruit		3000.0		--
0	TRICYCLODEHYDROISOHUMULONE	Fruit				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	TRICYCLOISOHUMULONE	Inflorescence				--
1	TRIMETHYLAMINE	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.
8	TYROSINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	UNDECAN-2-AL	Essential Oil				--
89	URSOLIC-ACID	Stem				--
3	VALINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	VIRIDIFLORENE	Fruit		60.0		--
1	VIRIDIFLOROL	Fruit		16.0		--
0	WATER	Fruit	60000.0	120000.0	-2.8287641988252616	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	WATER	Flower		814000.0	0.012271942343700371	--
4	XANTHOTHUMOL	Resin, Exudate, Sap		78750.0		--
4	XANTHOTHUMOL	Fruit		15.0		--
4	XANTHOTHUMOL	Strobilus		300.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
77	ZINC	Flower				--
77	ZINC	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.