

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Syzygium aromaticum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
112	ASCORBIC-ACID	Bark		810.0	1.9840107880269489	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
77	ZINC	Fruit	10.0	30.0	-0.009072324700046541	--
77	ZINC	Flower	10.0	30.0	-0.18495922224483477	--
76	EUGENOL	Stem	36000.0	57000.0	1.0	--
76	EUGENOL	Leaf Essent. Oil				--
76	EUGENOL	Leaf	7920.0	26400.0	2.285513566975547	--
76	EUGENOL	Bark				--
76	EUGENOL	Flower	108655.0	180000.0	2.6457158873560447	--
76	EUGENOL	Bulb				--
76	EUGENOL	Fruit				--
76	EUGENOL	Essential Oil	61000.0	627000.0	1.0627703935425195	--
75	KAEMPFEROL	Flower				--
75	KAEMPFEROL	Fruit		29.0	-0.5731869083869251	--
65	MAGNESIUM	Fruit	2640.0	3020.0	0.4122435661971507	--
65	MAGNESIUM	Flower	2640.0	3020.0	0.15016470805298793	--
64	OLEANOLIC-ACID	Flower		20000.0	1.4118875102795632	--
64	OLEANOLIC-ACID	Seed		7.0	-1.0	--
64	OLEANOLIC-ACID	Essential Oil		10000.0		--
64	OLEANOLIC-ACID	Fruit	35.0	20000.0	-1.0	--
62	GALLIC-ACID	Flower				--
62	GALLIC-ACID	Fruit	285.0	12600.0	-0.44183433468392297	--
60	CINNAMALDEHYDE	Fruit		1.0		--
60	CINNAMALDEHYDE	Flower		1.0	-1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
53	LINALOOL	Fruit		1.0	-0.5854958813390855	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	BETA-CAROTENE	Bark	2.0	3.0	-0.6464926691482484	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
51	ELLAGIC-ACID	Plant				--
51	ELLAGIC-ACID	Fruit		21.0	-0.6877437439073045	--
51	ELLAGIC-ACID	Bark				Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813
47	BETA-SITOSTEROL	Essential Oil		1000.0	-1.0	--
47	BETA-SITOSTEROL	Fruit		2420.0	2.385350854149113	--
47	BETA-SITOSTEROL	Plant				--
35	TANNIN	Plant				--
34	MYRICETIN	Fruit		20.0	1.79780110304311	--
34	MYRICETIN	Leaf				--
31	THIAMIN	Fruit		1.0	-0.5546097657802712	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
31	CARYOPHYLLENE	Flower	74400.0	8160.0	1.4134608729490745	--
31	CARYOPHYLLENE	Essential Oil		16000.0	-0.468033109451461	--
31	CARYOPHYLLENE	Fruit	7440.0	8160.0	-0.15290356778862352	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	THIAMIN	Flower		1.0	-1.2611424689255089	--
30	HYPEROSIDE	Fruit				--
28	CALCIUM	Fruit	6460.0	9540.0	1.3115758699797868	--
28	CALCIUM	Flower	6460.0	9540.0	1.0428267398370916	--
28	VANILLIN	Fruit				--
28	VANILLIN	Flower				--
24	CHROMIUM	Fruit	3.0	5.0	0.19465740124831715	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	BENZALDEHYDE	Flower				--
24	BENZALDEHYDE	Fruit				--
24	CHROMIUM	Flower	3.0	5.0	0.9873869417794828	--
23	ALPHA-TERPINEOL	Essential Oil				--
23	TERPINEN-4-OL	Essential Oil				--
22	ISOQUERCITRIN	Fruit				--
21	METHYL-SALICYLATE	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.
21	METHYL-SALICYLATE	Flower				--
20	METHYL-EUGENOL	Flower	310.0	340.0	1.0	--
20	METHYL-EUGENOL	Fruit		1890.0	1.0	--
20	METHYL-EUGENOL	Leaf	18.0	29.0	-0.807121771184076	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
19	CARVONE	Plant				--
18	RHAMNETIN	Plant				--
18	RHAMNETIN	Fruit				--
16	ISOEUGENOL	Plant				--
15	RIBOFLAVIN	Flower	1.0	2.0	-0.9879472837456319	--
15	RIBOFLAVIN	Fruit	1.0	2.0	-0.6444915447424321	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Fruit	95000.0	100000.0	-0.39327836686010154	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Flower	95000.0	100000.0	-0.38632916081034846	--
14	MANGANESE	Fruit	100.0	1200.0	7.509105970380378	--
14	POTASSIUM	Fruit	11020.0	16200.0	-0.15186560947876587	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Flower	100.0	1200.0	3.8497155611333613	--
14	POTASSIUM	Flower	11020.0	16200.0	-0.3149478902442045	--
13	GERANIAL	Fruit				--
13	BETA-PINENE	Fruit				--
13	BETA-PINENE	Plant				--
12	COPPER	Flower	3.0	9.0	-0.8371161987468383	--
12	STIGMASTEROL	Plant				--
12	STIGMASTEROL	Fruit		140.0	0.7694026293001529	--
12	COPPER	Fruit	3.0	9.0	-0.2972270275515491	--
11	PROCYANIDIN	Leaf				--
10	CUMINALDEHYDE	Fruit				--
9	BENZYL-ALCOHOL	Plant				--
9	BENZYL-ACETATE	Plant				--
9	DELTA-CADINENE	Leaf	25.0	160.0	0.23246458505780895	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
9	PEDUNCULAGIN	Leaf				--
9	DELTA-CADINENE	Fruit				--
8	TRANS-ANETHOLE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLENE-OXIDE	Essential Oil				--
8	RUGOSIN-D	Leaf		1925.0		--
8	CARYOPHYLENE-OXIDE	Leaf	75.0	712.0	2.643842620312473	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
8	ELLAGITANNIN	Fruit		3200.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	CARYOPHYLLENE-OXIDE	Fruit		2455.0	1.3957687820089826	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
8	TRANS-ANETHOLE	Flower				--
8	CARYOPHYLLENE-OXIDE	Plant				--
7	BIFLORIN	Fruit	70.0	1022.0		--
7	TELLIMAGRANIN-I	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
7	SALICYLATES	Fruit	6.0	60.0	-0.16469419114376535	--
7	RHAMNOCITRIN	Fruit		50.0		--
7	ASTRAGALIN	Fruit				--
7	TELLIMAGRANIN-I	Leaf				--
6	IRON	Fruit	45.0	150.0	0.06752138925955396	--
6	IRON	Flower	45.0	150.0	-0.11737283974721074	--
6	EUGENYL-ACETATE	Fruit		56700.0		--
6	METHYL-CHAVICOL	Plant				--
6	MASLINIC-ACID	Flower				--
6	ACETOPHENONE	Fruit				--
6	FURFURAL	Plant				--
6	5,7-DIHYDROXY-2-METHYLCHROMONE-8-C-BETA-GLUCOPYRANOSIDE	Fruit		145.0		--
6	FENCHONE	Fruit				--
6	MASLINIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	MASLINIC-ACID	Essential Oil		1500.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	ALUMINUM	Fruit	80.0	160.0	-0.17697394528100432	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	DAUCOSTEROL	Fruit				--
5	KAEMPFERIDE	Fruit				--
5	EUGENIIN	Leaf		8950.0		--
5	EUGENIIN	Fruit		1640.0		--
5	ALUMINUM	Flower	80.0	160.0	1.0835425694391705	--
5	CASUARICTIN	Leaf				--
5	ACETYL-EUGENOL	Flower				--
5	ACETYL-EUGENOL	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	CASUARICTIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
4	PHOSPHORUS	Flower	1000.0	1337.0	-0.9975269050748918	--
4	CALCIUM-OXALATE	Plant				--
4	METHYL-BENZOATE	Plant				--
4	2-UNDECANONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	BORON	Flower	10.0	40.0	-0.011499571648933803	--
4	PHOSPHORUS	Fruit	1000.0	1337.0	-0.5707254381124798	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	BORON	Fruit	10.0	40.0	0.0014459720019340586	--
4	2-UNDECANONE	Flower				--
3	GAMMA-DECALACTONE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	3,3',4-TRI-O-METHYL-ELLAGIC-ACID	Fruit				--
3	XYLOSE	Essential Oil				--
3	BETA-SELINENE	Fruit				--
3	NICKEL	Flower		2.4	-0.9999999999999997	--
3	MUCILAGE	Plant				--
3	BETA-TERPINEOL	Essential Oil				--
3	ALPHA-CADINOL	Leaf	5.0	8.0	-0.5496266023491511	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
3	CHAVICOL	Fruit	465.0	510.0	-0.44569781898926136	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	CHAVICOL	Flower	465.0	510.0		--
3	FLUORIDE	Fruit		2.4	0.5081285807389628	--
3	3,3',4-TRI-O-METHYL-ELLAGIC-ACID	Bark				Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813
3	NICKEL	Fruit		2.4	-0.04957166517347313	--
3	3,4-DIHYDROXYBENZOIC-ACID	Leaf				--
2	COBALT	Fruit		0.7	-0.4503737361947928	--
2	CAMPESTEROL	Plant				--
2	2-NONANONE	Flower		1.0		--
2	ALPHA-HUMULENE	Flower	775.0	850.0	1.881400128799953	--
2	ALPHA-HUMULENE	Fruit	250.0	850.0	-0.1719773217114379	--
2	RUGOSIN-E	Leaf		975.0		--
2	1,2,3,6-TETRA-O-GALLYOL-BETA-D-GLUCOSE	Leaf		49.7		--
2	CAMPESTEROL	Fruit				--
2	1,2,3,4,6-PENTA-O-GALLOYL-BETA-D-GLUCOSE	Leaf		33.7		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ALPHA-HUMULENE	Leaf	290.0	1740.0	2.4875695628615198	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	PHYTOSTEROLS	Fruit		2560.0	2.080091889988275	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	COBALT	Flower		0.7	-0.5111703686956748	--
2	ALPHA-HUMULENE	Essential Oil		30000.0	-0.20980400443514668	--
2	ETHYL-CINNAMATE	Plant				--
2	CRATEGOLIC-ACID	Seed		20.0		--
2	METHYL-N-AMYLKETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	2-NONANONE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	METHYL-N-AMYLKETONE	Flower				--
1	NAPHTHALENE	Essential Oil		1000.0	-1.0	--
1	STRICTININ	Leaf		100.0	0.09053574604251853	--
1	EUGENOL-ACETATE	Fruit				--
1	GEMIN-D	Leaf	1125.0	1175.0		--
1	ALPHA-ZINGIBERENE	Leaf	11.0	18.0	1.0000000000000002	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	EUGENOL-ACETATE	Bark				--
1	SODIUM	Fruit	200.0	3250.0	0.12424306354013467	--
1	3,4-DIHYDROXYPHENYLETHANOL	Leaf				--
1	ALPHA-HUMULENE-EPOXIDE	Essential Oil		26000.0		--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	DELTA-CADINOL	Leaf	8.0	13.0	-0.10787259719937864	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	NAPHTHALENE	Flower				--
1	SODIUM	Flower	200.0	3250.0	1.2911423278705607	--
1	PRODELPHINIDIN	Leaf				--
1	NAPHTHALENE	Stem				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	FURFURYL-ALCOHOL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	RUGOSIN-A	Leaf		16.2		--
1	FURFURYL-ALCOHOL	Flower				--
1	DELTA-CADINOL	Fruit				--
1	NAPHTHALENE	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	NAPHTHALENE	Fruit		0.0		--
1	ETHYL-BENZOATE	Plant				--
1	TELLIMAGRANIN-II	Leaf				--
0	PHENYLETHYL-ACETATE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-MUUROLENE	Fruit				--
0	METHYL-FURFURYL-ALCOHOL	Plant				--
0	HUMULENE-1,2-OXIDE	Leaf	18.0	90.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	EUGENOL-4-O-BETA-D(6'-O-GALLOYL)-GLUCOSIDE	Leaf		215.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BENZOIC-ACID-METHYL-ESTER	Fruit				--
0	BETA-CARYOPHYLLENE	Flower				--
0	2-3-HEXAHYDROXY-DIPHENOYL-GLUCOSE	Leaf				--
0	ISOEUGENITENE	Plant				--
0	CADALENE	Leaf	5.0	8.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ISOBIFLORIN	Fruit		510.0		--
0	ALPHA-MUUROLENE	Plant				--
0	CALAMENENE	Fruit		1265.0	-0.17527372328420673	--
0	CARYOPHYLLA-4(12)-8(13)-DIEN-5-BETA-OL	Essential Oil				--
0	CAMPESTEROL-GLUCOSIDE	Plant				--
0	ZONARENE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-NONYL-ACETATE	Flower		1.0		--
0	SYZYGININ-B	Leaf		131.0		--
0	BETA-MUUROLENE	Fruit				--
0	HUMULENE-1,2-OXIDE	Fruit		95.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	TRANS-ISOEUGENOL	Fruit				--
0	BENZOIC-ACID-ETHYL-ESTER	Fruit				--
0	BETA-CARYOPHYLLENE	Leaf	2295.0	14520.0	6.774430907684983	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	DIMETHYL-FURFURAL	Plant				--
0	ALPHA-METHYL-FURFURYL	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HUMULENE-EPOXIDE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	STIGMASTEROL-3-O-BETA-D-GLUCOSIDE	Fruit				--
0	STYRALYL-ACETATE	Flower		1.0		--
0	HUMULENE-EPOXIDE	Flower				--
0	CARYOPHYLLA-3-8(13)-DIEN-5-BETA-OL	Essential Oil				--
0	PHENYLETHYL-ACETATE	Flower		1.0	-1.1565845346367642	--
0	SYZYGININ-A	Leaf		98.0		--
0	ALPHA-AMORPHENE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LINOLEIC-ACID-METHYL-ESTER	Fruit				--
0	GAMMA-MUUROLENE	Leaf	11.0	18.0	-0.6643448015717212	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	BENZOIC ACID BENZYL ESTER	Fruit				--
0	BENZYL-TIGLATE	Plant				--
0	BETA-BOURBONENE	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CRATAEGOLIC-ACID	Flower		6.0		--
0	2-HEPTYL-BENZOATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	WATER	Fruit	69000.0	252000.0	-2.2548158431429384	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	STEARIC ACID METHYL ESTER	Fruit				--
0	STRONTIUM	Flower	30.0	60.0		--
0	HUMULEN-7-OL	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARYOPHYLLA-3(8)-13-DIEN-5-ALPHA-OL	Essential Oil				--
0	ALPHA-TERPINYL-ACETATE	Fruit	155.0	170.0	-0.7035975831753031	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-NONANOL	Plant				--
0	BETA-CARYOPHYLLENE	Essential Oil		495000.0	2.8069272425728666	--
0	PHTHALIC ACID DIBUTYL DIESTER	Essential Oil				--
0	2-3-DI-O-GALLOYL-GLUCOSE	Leaf		214.5		--
0	VALONEIC ACID BISLACTONE	Leaf		180.0		--
0	GAMMA-CADINENE	Leaf	25.0	160.0	1.3103193505890738	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	1-DEGALLOYL-EUGENIIN	Leaf		12175.0	1.0	--
0	EUGENITINE	Flower				--
0	3-METHOXYBENZALDEHYDE	Fruit				--
0	CUBENENE	Fruit				--
0	CORNUS-TANNIN-2	Plant				--
0	GALLOTANNIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-CUBEBENE	Flower				--
0	HUMULEN-7-OL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	STIGMASTEROL-GLUCOSIDE	Plant				--
0	GAMMA-CARYOPHYLLENE	Plant				--
0	CARYOPHYLLA-3(12)-7(13)-DIEN-6-ALPHA-OL	Essential Oil				--
0	TANNINS	Fruit		100000.0	0.1858330724301565	--
0	2-HEPTYL-BENZOATE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-YLANGENE	Fruit	245.0	395.0	1.414158345897999	--
0	ALPHA-CARYOPHYLLENE	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	ORSELLINIC-ACID-2-O-BETA-D-GLUCOSIDE	Seed		27.0		--
0	BETA-CARYOPHYLLENE	Fruit	2230.0	69365.0	1.9999529994158691	--
0	ALPHA-MUUROLENE	Fruit				--
0	4,4-DIMETHYLTRICYCLO[6,3,2,0]TRIDECA-8-ENE-1-OL	Essential Oil				--
0	METHYL-ALCOHOL	Plant				--
0	EUGENINE	Flower				--
0	ALPHA-MUUROLENE	Leaf	3.3	5.5	-0.5120674670233037	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CRATAEGOLIC ACID METHYL ESTER	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EUGENINE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-COPAENE	Flower				--
0	2-HEPTYL-ACETATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SALICYLIC ACID BENZYL ESTER	Fruit				--
0	GALLOTANNIC-ACID	Plant				--
0	CARYOPHYLLA-3(12)-6-DIEN-4-OL	Essential Oil				--
0	CALAMENENE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	STRONTIUM	Fruit	30.0	60.0	-0.10634151712424286	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-HEPTYL-ACETATE	Flower				--
0	1-BETA-O-GALLOLPELUNCULAGIN	Leaf		114.5		--
0	BENZOIC-ACID-PROPYL-ESTER	Fruit				--
0	METHYL-N-HEPTYL-KETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-THUJENE	Fruit				--
0	ZONARENE	Flower		1.0		--
0	ETHYL-OCTANOATE	Plant				--
0	ARABINOSE	Essential Oil				--
0	ALPHA-CUBEBENE	Leaf	25.0	305.0	1.722385843588116	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	EO	Stem	40000.0	60000.0	2.6026342788799575	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	CONIFERALDEHYDE	Stem				--
0	EPOXYDIHYDROCARYOPHYLLENE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ALPHA-CARYOPHYLLENE	Flower				--
0	2-HEPTANOL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CAMPESTEROL-3-O-BETA-D-GLUCOSIDE	Fruit				--
0	CALACORENE	Flower				--
0	2-HEPTANONE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CALAMENENE	Leaf		210.0	3.8695166003766976	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	GALLIC ACID 3-O-BETA-D-(6'-O-GALLOYL)-GLUCOSIDE	Leaf		2.5		--
0	METHYL-FURFURYL-ALCOHOL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CUBENOL	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	EO	Leaf	20000.0	32000.0	1.8000947732230574	--
0	ETHYL-HEXANOATE	Plant				--
0	BARIUM	Flower	20.0	30.0		--
0	ALPHA-CUBEBENE	Fruit		37800.0	2.0783973463880634	--
0	ALPHA-COPAENE	Leaf		1135.0	6.3964083212247616	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CONIFERALDEHYDE	Leaf				--
0	ALPHA-CADINENE	Flower				--
0	2-HEPTANOL	Flower				--
0	CALACORENE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PALMITIC-ACID-METHYL-ESTER	Fruit				--
0	PALUSTROL	Fruit				--
0	5-METHYLFURALDEHYDE	Fruit				--
0	WATER	Flower	69000.0	252000.0	-3.65016767114962	--
0	HEXAN-2-ONE	Fruit				--
0	ALPHA-COPAENE	Fruit		1890.0	1.8816304622249802	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-METHYL-FURFURYL	Fruit				Wealth of India.
0	CASUARIIN	Leaf		9.7		--
0	ALPHA-AMORPHENE	Flower		1.0		--
0	BETA-SITOSTEROL-GLUCOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	PROTEIN	Fruit	52000.0	70000.0	-0.5294951043049843	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	10-(ALPHA)-CADINOL	Flower				--
0	ALPHA-CADINENE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	METHYL-OCTANOATE	Plant				--
0	PALUSTROL	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	NONAN-2-ONE	Fruit				--
0	FURALDEHYDE	Fruit				--
0	GAMMA-CADINENE	Fruit				--
0	HEXAN-2-ONE	Essential Oil				--
0	LINALOL	Flower		1.0	-0.3900304526992942	--
0	3,3'-DI-O-METHYL-ELLAGIC-ACID	Bark				Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813
0	STYRALYL-ACETATE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CRATAEGOLIC-ACID	Fruit	6.0	1500.0		--
0	10-(ALPHA)-CADINOL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	FAT	Fruit	89000.0	201000.0	0.8939697424043467	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETIN-3,4'-DI-O-BETA-D-GLUCOSIDE	Fruit				--
0	RESIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALLO-AROMADENDRENE	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	OCTAN-2-ONE	Fruit				--
0	METHYL-N-HEPTYL-KETONE	Flower				--
0	HEXAN-1-AL	Fruit				--
0	CALAMENOL	Leaf	25.0	35.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	EPOXYDIHYDROCARYOPHYLLENE	Plant				--
0	ALPHA-YLANGENE	Plant				--
0	5,7-DIHYDROXY-2-METHYLCHROMONE-8-C-BETA-D-GLUCOSIDE	Leaf		66.0		--
0	METHYL-ALCOHOL	Fruit				Wealth of India.
0	CIS-ISOEUGENOL	Fruit				--
0	CARYOPHYLLINE	Fruit				--
0	2ALPHA-HYDROXYOLEANOLIC-ACID-METHYL-ESTER	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	EO	Fruit	150000.0	210000.0	3.261810506686991	--
0	PROTEIN	Flower	52000.0	70000.0	-0.8446468010457023	--
0	QUERCITRIN-3,4'-DI-O-GLYCOSIDE	Fruit				--
0	BARIUM	Fruit	20.0	30.0	0.23749286365790012	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	LEDOL	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	HEPTAN-2-ONE	Fruit				--
0	FAT	Flower	89000.0	201000.0	2.2590609005075395	--
0	6-METHYL-HEPT-5-EN-2-ONE	Fruit				--
0	CALACORENE	Leaf	13.0	21.0	0.19023374145231275	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	3'-O-METHYL-3-4-METHYLENEDIOXY-ELLAGIC ACID	Bark				Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813
0	EO	Flower	155000.0	210000.0	6.568033781616922	--
0	2-NONYL-ACETATE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-TERPINYL-ACETATE	Flower	155.0	170.0		--
0	5,7-DIHYDROXY-2-METHYLCHROMONE-8-C-BETA-D-GLUCOPYRANOSIDE	Fruit		143.0		--
0	BETA-CARYOPHYLLENE-OXIDE	Essential Oil		45000.0		--
0	CARBOHYDRATES	Bark	555000.0	612000.0	-1.3532281234725556	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	EUGENITINE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PTEROCARININ A	Leaf		21.5		--
0	MASLIC-ACID	Fruit		1500.0		--