

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Syzygium aromaticum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	1,2,3,4,6-PENTA-O-GALLOYL-BETA-D-GLUCOSE	Leaf		33.7		--
2	1,2,3,6-TETRA-O-GALLYOL-BETA-D-GLUCOSE	Leaf		49.7		--
0	1-BETA-O-GALLOYLPEDUNCULAGIN	Leaf		114.5		--
0	1-DEGALLOYL-EUGENIIN	Leaf		12175.0	1.0	--
0	10-(ALPHA)-CADINOL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	10-(ALPHA)-CADINOL	Flower				--
0	2-3-DI-O-GALLOYL-GLUCOSE	Leaf		214.5		--
0	2-3-HEXAHYDROXY-DIPHENOYL-GLUCOSE	Leaf				--
0	2-HEPTANOL	Flower				--
0	2-HEPTANOL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-HEPTANONE	Plant				--
0	2-HEPTYL-ACETATE	Flower				--
0	2-HEPTYL-ACETATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-HEPTYL-BENZOATE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-HEPTYL-BENZOATE	Flower				--
0	2-NONANOL	Plant				--
2	2-NONANONE	Flower		1.0		--
2	2-NONANONE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2-NONYL-ACETATE	Flower		1.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-NONYL-ACETATE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	2-UNDECANONE	Flower				--
4	2-UNDECANONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2ALPHA-HYDROXYOLEANOLIC-ACID-METHYL-ESTER	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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
3	3,3',4-TRI-O-METHYL-ELLAGIC-ACID	Fruit				--
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
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
3	3,4-DIHYDROXYBENZOIC-ACID	Leaf				--
1	3,4-DIHYDROXYPHENYLETHANOL	Leaf				--
0	3-METHOXYBENZALDEHYDE	Fruit				--
0	4,4-DIMETHYLTRICYCLO[6,3,2,0]TRIDECA-8-ENE-1-OL	Essential Oil				--
0	5,7-DIHYDROXY-2-METHYLCHROMONE-8-C-BETA-D-GLUCOPYRANOSIDE	Fruit		143.0		--
0	5,7-DIHYDROXY-2-METHYLCHROMONE-8-C-BETA-D-GLUCOSIDE	Leaf		66.0		--
6	5,7-DIHYDROXY-2-METHYLCHROMONE-8-C-BETA-GLUCOPYRANOSIDE	Fruit		145.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5-METHYLFURALDEHYDE	Fruit				--
0	6-METHYL-HEPT-5-EN-2-ONE	Fruit				--
6	ACETOPHENONE	Fruit				--
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.
0	ALLO-AROMADENDRENE	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ALPHA-AMORPHENE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-AMORPHENE	Flower		1.0		--
0	ALPHA-CADINENE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-CADINENE	Flower				--
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.
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	ALPHA-CARYOPHYLLENE	Flower				--
0	ALPHA-COPAENE	Leaf		1135.0	6.3964083212247616	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-COPAENE	Fruit		1890.0	1.8816304622249802	--
0	ALPHA-COPAENE	Flower				--
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	ALPHA-CUBEBENE	Fruit		37800.0	2.0783973463880634	--
0	ALPHA-CUBEBENE	Flower				--
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	ALPHA-HUMULENE	Essential Oil		30000.0	-0.20980400443514668	--
2	ALPHA-HUMULENE	Flower	775.0	850.0	1.881400128799953	--
2	ALPHA-HUMULENE	Fruit	250.0	850.0	-0.1719773217114379	--
1	ALPHA-HUMULENE-EPOXIDE	Essential Oil		26000.0		--
0	ALPHA-METHYL-FURFURYL	Fruit				Wealth of India.
0	ALPHA-METHYL-FURFURYL	Plant				--
0	ALPHA-MUUROLENE	Plant				--
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	ALPHA-MUUROLENE	Fruit				--
23	ALPHA-TERPINEOL	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	ALPHA-TERPINYL-ACETATE	Flower	155.0	170.0		--
0	ALPHA-THUJENE	Fruit				--
0	ALPHA-YLANGENE	Plant				--
0	ALPHA-YLANGENE	Fruit	245.0	395.0	1.414158345897999	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
5	ALUMINUM	Flower	80.0	160.0	1.0835425694391705	--
5	ALUMINUM	Fruit	80.0	160.0	-0.17697394528100432	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ARABINOSE	Essential Oil				--
112	ASCORBIC-ACID	Bark		810.0	1.9840107880269489	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	ASTRAGALIN	Fruit				--
0	BARIUM	Fruit	20.0	30.0	0.23749286365790012	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BARIUM	Flower	20.0	30.0		--
24	BENZALDEHYDE	Fruit				--
24	BENZALDEHYDE	Flower				--
0	BENZOIC ACID BENZYL ESTER	Fruit				--
0	BENZOIC-ACID-ETHYL-ESTER	Fruit				--
0	BENZOIC-ACID-METHYL-ESTER	Fruit				--
0	BENZOIC-ACID-PROPYL-ESTER	Fruit				--
9	BENZYL-ACETATE	Plant				--
9	BENZYL-ALCOHOL	Plant				--
0	BENZYL-TIGLATE	Plant				--
0	BETA-BOURBONENE	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
53	BETA-CAROTENE	Bark	2.0	3.0	-0.6464926691482484	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	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	BETA-CARYOPHYLLENE	Flower				--
0	BETA-CARYOPHYLLENE	Fruit	2230.0	69365.0	1.9999529994158691	--
0	BETA-CARYOPHYLLENE	Essential Oil		495000.0	2.8069272425728666	--
0	BETA-CARYOPHYLLENE-OXIDE	Essential Oil		45000.0		--
0	BETA-MUUROLENE	Fruit				--
13	BETA-PINENE	Fruit				--
13	BETA-PINENE	Plant				--
3	BETA-SELINENE	Fruit				--
47	BETA-SITOSTEROL	Essential Oil		1000.0	-1.0	--
47	BETA-SITOSTEROL	Plant				--
47	BETA-SITOSTEROL	Fruit		2420.0	2.385350854149113	--
0	BETA-SITOSTEROL-GLUCOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
3	BETA-TERPINEOL	Essential Oil				--
7	BIFLORIN	Fruit	70.0	1022.0		--
4	BORON	Fruit	10.0	40.0	0.0014459720019340586	--
4	BORON	Flower	10.0	40.0	-0.011499571648933803	--
0	CADALENE	Leaf	5.0	8.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CALACORENE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CALACORENE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	CALAMENENE	Flower				--
0	CALAMENENE	Leaf		210.0	3.8695166003766976	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CALAMENENE	Fruit		1265.0	-0.17527372328420673	--
0	CALAMENOL	Leaf	25.0	35.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
28	CALCIUM	Fruit	6460.0	9540.0	1.3115758699797868	--
28	CALCIUM	Flower	6460.0	9540.0	1.0428267398370916	--
4	CALCIUM-OXALATE	Plant				--
2	CAMPESTEROL	Plant				--
2	CAMPESTEROL	Fruit				--
0	CAMPESTEROL-3-O-BETA-D-GLUCOSIDE	Fruit				--
0	CAMPESTEROL-GLUCOSIDE	Plant				--
0	CARBOHYDRATES	Bark	555000.0	612000.0	-1.3532281234725556	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
19	CARVONE	Plant				--
0	CARYOPHYLLA-3(12)-6-DIEN-4-OL	Essential Oil				--
0	CARYOPHYLLA-3(12)-7(13)-DIEN-6-ALPHA-OL	Essential Oil				--
0	CARYOPHYLLA-3(8)-13-DIEN-5-ALPHA-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	Essential Oil		16000.0	-0.468033109451461	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	CARYOPHYLLENE	Fruit	7440.0	8160.0	-0.15290356778862352	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Flower	74400.0	8160.0	1.4134608729490745	--
8	CARYOPHYLLENE-OXIDE	Plant				--
8	CARYOPHYLLENE-OXIDE	Essential Oil				--
8	CARYOPHYLLENE-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	CARYOPHYLLENE-OXIDE	Fruit		2455.0	1.3957687820089826	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CARYOPHYLLINE	Fruit				--
5	CASUARICTIN	Leaf				--
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.
0	CASUARIIN	Leaf		9.7		--
3	CHAVICOL	Flower	465.0	510.0		--
3	CHAVICOL	Fruit	465.0	510.0	-0.44569781898926136	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
24	CHROMIUM	Fruit	3.0	5.0	0.19465740124831715	--
24	CHROMIUM	Flower	3.0	5.0	0.9873869417794828	--
60	CINNAMALDEHYDE	Fruit		1.0		--
60	CINNAMALDEHYDE	Flower		1.0	-1.0	--
0	CIS-ISOEUGENOL	Fruit				--
2	COBALT	Fruit		0.7	-0.4503737361947928	--
2	COBALT	Flower		0.7	-0.5111703686956748	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CONIFERALDEHYDE	Stem				--
0	CONIFERALDEHYDE	Leaf				--
12	COPPER	Fruit	3.0	9.0	-0.2972270275515491	--
12	COPPER	Flower	3.0	9.0	-0.8371161987468383	--
0	CORNUS-TANNIN-2	Plant				--
0	CRATAEGOLIC ACID METHYL ESTER	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CRATAEGOLIC-ACID	Flower		6.0		--
0	CRATAEGOLIC-ACID	Fruit	6.0	1500.0		--
2	CRATEGOLIC-ACID	Seed		20.0		--
0	CUBENENE	Fruit				--
0	CUBENOL	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
10	CUMINALDEHYDE	Fruit				--
5	DAUCOSTEROL	Fruit				--
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	DELTA-CADINENE	Fruit				--
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	DELTA-CADINOL	Fruit				--
0	DIMETHYL-FURFURAL	Plant				--
51	ELLAGIC-ACID	Plant				--
51	ELLAGIC-ACID	Bark				Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
51	ELLAGIC-ACID	Fruit		21.0	-0.6877437439073045	--
8	ELLAGITANNIN	Fruit		3200.0		--
0	EO	Fruit	150000.0	210000.0	3.261810506686991	--
0	EO	Flower	155000.0	210000.0	6.568033781616922	--
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	EO	Leaf	20000.0	32000.0	1.8000947732230574	--
0	EPOXYDIHYDROCARYOPHYLLENE	Plant				--
0	EPOXYDIHYDROCARYOPHYLLENE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	ETHYL-BENZOATE	Plant				--
2	ETHYL-CINNAMATE	Plant				--
0	ETHYL-HEXANOATE	Plant				--
0	ETHYL-OCTANOATE	Plant				--
5	EUGENIIN	Leaf		8950.0		--
5	EUGENIIN	Fruit		1640.0		--
0	EUGENINE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EUGENINE	Flower				--
0	EUGENITINE	Flower				--
0	EUGENITINE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
76	EUGENOL	Leaf Essent. Oil				--
76	EUGENOL	Bark				--
76	EUGENOL	Fruit				--
76	EUGENOL	Bulb				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
76	EUGENOL	Stem	36000.0	57000.0	1.0	--
76	EUGENOL	Leaf	7920.0	26400.0	2.285513566975547	--
76	EUGENOL	Flower	108655.0	180000.0	2.6457158873560447	--
76	EUGENOL	Essential Oil	61000.0	627000.0	1.0627703935425195	--
0	EUGENOL-4-O-BETA-D(6'-O-GALLOYL)-GLUCOSIDE	Leaf		215.0		--
1	EUGENOL-ACETATE	Fruit				--
1	EUGENOL-ACETATE	Bark				--
6	EUGENYL-ACETATE	Fruit		56700.0		--
0	FAT	Flower	89000.0	201000.0	2.2590609005075395	--
0	FAT	Fruit	89000.0	201000.0	0.8939697424043467	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	FENCHONE	Fruit				--
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	--
3	FLUORIDE	Fruit		2.4	0.5081285807389628	--
0	FURALDEHYDE	Fruit				--
6	FURFURAL	Plant				--
1	FURFURYL-ALCOHOL	Flower				--
1	FURFURYL-ALCOHOL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GALLIC ACID 3-O-BETA-D-(6'-O-GALLOYL)-GLUCOSIDE	Leaf		2.5		--
62	GALLIC-ACID	Fruit	285.0	12600.0	-0.44183433468392297	--
62	GALLIC-ACID	Flower				--
0	GALLOTANNIC-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
0	GALLOTANNIC-ACID	Plant				--
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	GAMMA-CADINENE	Fruit				--
0	GAMMA-CARYOPHYLLENE	Plant				--
3	GAMMA-DECALACTONE	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	GAMMA-MUUROLENE	Fruit				--
1	GEMIN-D	Leaf	1125.0	1175.0		--
13	GERANIAL	Fruit				--
0	HEPTAN-2-ONE	Fruit				--
0	HEXAN-1-AL	Fruit				--
0	HEXAN-2-ONE	Fruit				--
0	HEXAN-2-ONE	Essential Oil				--
0	HUMULEN-7-OL	Flower				--
0	HUMULEN-7-OL	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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	HUMULENE-1,2-OXIDE	Fruit		95.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	HUMULENE-EPOXIDE	Flower				--
0	HUMULENE-EPOXIDE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	HYPEROSIDE	Fruit				--
6	IRON	Flower	45.0	150.0	-0.11737283974721074	--
6	IRON	Fruit	45.0	150.0	0.06752138925955396	--
0	ISOBIFLORIN	Fruit		510.0		--
0	ISOEUGENITENE	Plant				--
16	ISOEUGENOL	Plant				--
22	ISOQUERCITRIN	Fruit				--
5	KAEMPFERIDE	Fruit				--
75	KAEMPFEROL	Flower				--
75	KAEMPFEROL	Fruit		29.0	-0.5731869083869251	--
0	LEDOL	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	LINALOL	Flower		1.0	-0.3900304526992942	--
53	LINALOOL	Fruit		1.0	-0.5854958813390855	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LINOLEIC-ACID-METHYL-ESTER	Fruit				--
65	MAGNESIUM	Fruit	2640.0	3020.0	0.4122435661971507	--
65	MAGNESIUM	Flower	2640.0	3020.0	0.15016470805298793	--
14	MANGANESE	Flower	100.0	1200.0	3.8497155611333613	--
14	MANGANESE	Fruit	100.0	1200.0	7.509105970380378	--
0	MASLIC-ACID	Fruit		1500.0		--
6	MASLINIC-ACID	Flower				--
6	MASLINIC-ACID	Essential Oil		1500.0		--
6	MASLINIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-ALCOHOL	Fruit				Wealth of India.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	METHYL-ALCOHOL	Plant				--
4	METHYL-BENZOATE	Plant				--
6	METHYL-CHAVICOL	Plant				--
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.
0	METHYL-FURFURYL-ALCOHOL	Plant				--
0	METHYL-FURFURYL-ALCOHOL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	METHYL-N-AMYLKETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	METHYL-N-AMYLKETONE	Flower				--
0	METHYL-N-HEPTYL-KETONE	Flower				--
0	METHYL-N-HEPTYL-KETONE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	METHYL-OCTANOATE	Plant				--
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				--
3	MUCILAGE	Plant				--
34	MYRICETIN	Leaf				--
34	MYRICETIN	Fruit		20.0	1.79780110304311	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	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	Flower				--
1	NAPHTHALENE	Fruit		0.0		--
1	NAPHTHALENE	Essential Oil		1000.0	-1.0	--
3	NICKEL	Flower		2.4	-0.999999999999997	--
3	NICKEL	Fruit		2.4	-0.04957166517347313	--
0	NONAN-2-ONE	Fruit				--
0	OCTAN-2-ONE	Fruit				--
64	OLEANOLIC-ACID	Seed		7.0	-1.0	--
64	OLEANOLIC-ACID	Flower		20000.0	1.4118875102795632	--
64	OLEANOLIC-ACID	Fruit	35.0	20000.0	-1.0	--
64	OLEANOLIC-ACID	Essential Oil		10000.0		--
0	ORSELLINIC-ACID-2-O-BETA-D-GLUCOSIDE	Seed		27.0		--
0	PALMITIC-ACID-METHYL-ESTER	Fruit				--
0	PALUSTROL	Fruit				--
0	PALUSTROL	Leaf				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
9	PEDUNCULAGIN	Leaf				--
0	PHENYLETHYL-ACETATE	Flower		1.0	-1.1565845346367642	--
0	PHENYLETHYL-ACETATE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	PHOSPHORUS	Flower	1000.0	1337.0	-0.9975269050748918	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Fruit	1000.0	1337.0	-0.5707254381124798	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PHTHALIC ACID DIBUTYL DIESTER	Essential Oil				--
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.)
14	POTASSIUM	Flower	11020.0	16200.0	-0.3149478902442045	--
14	POTASSIUM	Fruit	11020.0	16200.0	-0.15186560947876587	--
11	PROCYANIDIN	Leaf				--
1	PRODELPHINIDIN	Leaf				--
0	PROTEIN	Flower	52000.0	70000.0	-0.8446468010457023	--
0	PROTEIN	Fruit	52000.0	70000.0	-0.5294951043049843	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PTEROCARININ A	Leaf		21.5		--
176	QUERCETIN	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	QUERCETIN-3,4'-DI-O-BETA-D-GLUCOSIDE	Fruit				--
0	QUERCITRIN-3,4'-DI-O-GLYCOSIDE	Fruit				--
0	RESIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
18	RHAMNETIN	Fruit				--
18	RHAMNETIN	Plant				--
7	RHAMNOCITRIN	Fruit		50.0		--
15	RIBOFLAVIN	Fruit	1.0	2.0	-0.6444915447424321	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	RIBOFLAVIN	Flower	1.0	2.0	-0.9879472837456319	--
1	RUGOSIN-A	Leaf		16.2		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	RUGOSIN-D	Leaf		1925.0		--
2	RUGOSIN-E	Leaf		975.0		--
7	SALICYLATES	Fruit	6.0	60.0	-0.16469419114376535	--
0	SALICYLIC ACID BENZYL ESTER	Fruit				--
1	SODIUM	Fruit	200.0	3250.0	0.12424306354013467	--
1	SODIUM	Flower	200.0	3250.0	1.2911423278705607	--
0	STEARIC ACID METHYL ESTER	Fruit				--
12	STIGMASTEROL	Fruit		140.0	0.7694026293001529	--
12	STIGMASTEROL	Plant				--
0	STIGMASTEROL-3-O-BETA-D-GLUCOSIDE	Fruit				--
0	STIGMASTEROL-GLUCOSIDE	Plant				--
1	STRICTININ	Leaf		100.0	0.09053574604251853	--
0	STRONTIUM	Fruit	30.0	60.0	-0.10634151712424286	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	STRONTIUM	Flower	30.0	60.0		--
0	STYRALYL-ACETATE	Flower		1.0		--
0	STYRALYL-ACETATE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SYZYGININ-A	Leaf		98.0		--
0	SYZYGININ-B	Leaf		131.0		--
35	TANNIN	Plant				--
0	TANNINS	Fruit		100000.0	0.1858330724301565	--
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	TELLIMAGRANIN-I	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	TELLIMAGRANIN-II	Leaf				--
23	TERPINEN-4-OL	Essential Oil				--
31	THIAMIN	Flower		1.0	-1.2611424689255089	--
31	THIAMIN	Fruit		1.0	-0.5546097657802712	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	TRANS-ANETHOLE	Flower				--
8	TRANS-ANETHOLE	Fruit				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-ISOEUGENOL	Fruit				--
0	VALONEIC ACID BISLACTONE	Leaf		180.0		--
28	VANILLIN	Flower				--
28	VANILLIN	Fruit				--
0	WATER	Flower	69000.0	252000.0	-3.65016767114962	--
0	WATER	Fruit	69000.0	252000.0	-2.2548158431429384	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	XYLOSE	Essential Oil				--
77	ZINC	Fruit	10.0	30.0	-0.009072324700046541	--
77	ZINC	Flower	10.0	30.0	-0.18495922224483477	--
0	ZONARENE	Flower		1.0		--
0	ZONARENE	Fruit		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.