

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Apium graveolens*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-LIMONENE	Seed Essent. Oil	--	988000	1.4139579998472263	
0	(+)-LIMONENE	Essential Oil	--	--		
0	(+)-LIMONENE	Seed	--	--		
0	(+)-LIMONENE	Shoot	--	--		
0	(+)-SELINENE	Essential Oil	--	--		
0	(-)-MARMESIN	Seed	--	12		
0	(E)-8(9)-P-MENTHEN-1,2-DIOL?	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	(E)-ALPHA-BERGAMOTENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	(E)-BETA-OCIMENE	Seed	7	10		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	(Z)-BETA-OCIMENE	Seed	6	9		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	1(7),8(10)-P-MENTHADIEN-2-OL?	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,4-DIMETHYL-7-(1-METHYLETHENYL)-OCTAHYDRO-AZULENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	1-P-MENTHENE-9-AL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	3,7,11-TRIMETHYL-1,2,6,10-DODECATRIENOL?	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	3-BUTYLHEXAHYDROPHthalide	Root	--	--		
0	3-BUTYLPHthalide	Seed	40	120		
0	3-ISOBUTLIDENE-3-(A)-4-DIHYDROPHthalide	Shoot	--	0.7		
0	3-ISOBUTLIDENE-3-(A)-4-DIHYDROPHthalide	Seed Essent. Oil	727	10000		
0	3-ISOBUTYLIDENE-3-A,4-DIHYDROPHthalide	Seed	133	1500		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-ISOBUTYLIDENE-PHthalide	Plant	--	0.001		
0	3-ISOBUTYLIDENE-PHthalide	Shoot	--	0.001		
0	3-ISOBUTYLIDENE-PHthalide	Seed Essent. Oil	--	--		
0	3-ISOVALERIDENE-3A,4-DIHYDROPHthalide	Leaf	--	--		
0	3-ISOVALERIDENE-PHthalide	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Essential Oil	--	255		
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Leaf	--	0.003		
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Shoot	--	0.003		
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Seed Essent. Oil	--	255		
0	3-ISOVALIDENE-PHthalIDE	Plant	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-ISOVALIDENE-PHthalIDE	Shoot	--	0.001		
0	3-ISOVALIDENE-PHthalIDE	Seed Essent. Oil	--	--		
0	3-METHYL-4-ETHYL-HEXANE	Root Essent. Oil	--	124000		
0	3-N-BUTYL-4,5-DIHYDROPHthalIDE	Seed	--	--		
10	3-N-BUTYL-PHthalIDE	Fruit Essent. Oil	--	108000		
10	3-N-BUTYL-PHthalIDE	Leaf Essent. Oil	--	40000		
10	3-N-BUTYL-PHthalIDE	Seed	--	--		
10	3-N-BUTYL-PHthalIDE	Seed Essent. Oil	--	108000		
0	3-N-BUTYLHEXAHYDROPHthalIDE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	4-DIHYDROPHthalide	Seed	57	1500		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	5,6,7-TRIMETHYLPSORALEN	Pt	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	5-ALPHA-ANDROST-16-EN-3-ONE	Plant	--	0.009		
0	5-ALPHA-ANDROST-16-EN-3-ONE	Shoot	--	0.009		
0	5-METHOXY-8-O-BETA-D-GLUCOSYL-OXYPsorALEN	Seed	--	2.9		
10	5-METHOXY-PSORALEN	Fruit	--	7	-0.18569533817705186	
10	5-METHOXY-PSORALEN	Leaf Wax	2	2		
10	5-METHOXY-PSORALEN	Seed	--	7	1	
0	6,10,14-TRIMETHYL-2-PENTADECANONE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	7-[3-(3,4-DIHYDROXY-4-HYDROXYMETHYL-TETRAHYDRO-FURAN-2-YLOXY)-4,5-DIHYDROXY-6-HYDROXYMETHYL-TETRAHYDRO-PYRAN-2-YLOXY]...	Seed	--	--		
0	8-HYDROXY-5-METHOXY-PSORALEN	Seed	--	375		
0	8-HYDROXYFALCARINONE	Root	--	8.3		
21	8-METHOXY-PSORALEN	Leaf	--	1		
6	ACETALDEHYDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	ACETALDEHYDE	Shoot	--	--		
16	ACETIC-ACID	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	ADENINE	Plant	--	--		
28	ADENOSINE	Plant	--	--		
3	ALANINE	Pt	220	4665		USDA's Ag Handbook 8 and sequelae)
0	ALLOOCIMENE-I	Leaf Essent. Oil	--	1000		
0	ALLOOCIMENE-II	Leaf Essent. Oil	--	1000		
3	ALPHA-CEDRENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ALPHA-EUDESOL	Seed	76	225		
2	ALPHA-HUMULENE	Leaf	266	2500	3.7785413446723948	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ALPHA-HUMULENE	Seed	20	33		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
5	ALPHA-IONONE	Plant	--	--		
5	ALPHA-IONONE	Seed Essent. Oil	--	500		
15	ALPHA-LINOLENIC-ACID	Seed	1600	2554	-0.2805131186501865	USDA's Ag Handbook 8 and sequelae)
0	ALPHA-P-DIMETHYL-STYRENE	Seed	170	270	1.392044546138226	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Fruit	--	2000	0.431635886715178	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	ALPHA-PHELLANDRENE	Seed Essent. Oil	--	2000	-0.8573553114168811	
28	ALPHA-PINENE	Fruit Essent. Oil	--	10000	-0.7166152772658864	
28	ALPHA-PINENE	Leaf Essent. Oil	--	2000	-0.7421534872468563	
28	ALPHA-PINENE	Root Essent. Oil	--	179000	0.7700366703490429	
28	ALPHA-PINENE	Et	12000	14000	-1	
28	ALPHA-PINENE	Seed	38	60	-0.47140904876924467	
28	ALPHA-PINENE	Seed Essent. Oil	10000	10500	-0.6694735069151678	
28	ALPHA-PINENE	Stem Essent. Oil	--	14000	-1	
2	ALPHA-SANTALOL	Seed	--	--		
3	ALPHA-SELINENE	Seed	95	250		
3	ALPHA-SELINENE	Seed Essent. Oil	--	20500		
13	ALPHA-TERPINENE	Fruit Essent. Oil	--	1000	-0.8348120728111189	
13	ALPHA-TERPINENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Seed Essent. Oil	--	1000	-1.0089204175742374	
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	ALPHA-TERPINEOL	Fruit Essent. Oil	3000	14000	-0.30405553353793474	
23	ALPHA-TERPINEOL	Leaf Essent. Oil	--	1000	-0.8444420280137835	
23	ALPHA-TERPINEOL	Root Essent. Oil	--	69000	1	
23	ALPHA-TERPINEOL	Seed	1	420	-0.37493466702522626	
23	ALPHA-TERPINEOL	Essential Oil	--	--		
23	ALPHA-TERPINEOL	Seed Essent. Oil	5000	14000	-0.651073092591952	
0	ALPHA-TERPINYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-TERPINYL-PROPIONATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
32	ALPHA-TOCOPHEROL	Plant	--	64	-1	
32	ALPHA-TOCOPHEROL	Pt	3	67	1	
32	ALPHA-TOCOPHEROL	Shoot	--	64		
32	ALPHA-TOCOPHEROL	Leaf	136	266	-0.22853429341464526	
32	ALPHA-TOCOPHEROL	Seed	--	--		
5	ALUMINUM	Root	0.3	9	-0.3076511978543176	ACTA AGRIC SCAND SUPPL 22: 1980
0	AMMONIA	Stem	--	19600		
0	AMMONIA	Pt	--	15480		
1	ANGELIC-ACID	Plant	--	--		
17	ANGELICIN	Stem	--	--		
0	ANILINE	Pt	--	0.7		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
101	APIGENIN	Plant	--	--		
101	APIGENIN	Pt	--	1910		
101	APIGENIN	Seed	--	--		
0	APIGENIN-7-APIOSYLGUCOSIDE	Seed	--	--		
0	APIGENIN-7-BETA-APIOSYL-GLUCOSIDE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	APIGRAVIN	Seed	--	--		
4	APIIN	Plant	--	2000		
4	APIIN	Seed	--	--		
20	APIOLE	Essential Oil	--	--		
20	APIOLE	Seed	115	180	-1	
0	APIUMETIN	Seed	--	13		
0	APIUMETRIN	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	APIUMOSIDE	Seed	--	125		
0	ARABINOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
14	ARGININE	Pt	200	4105		USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Root	0.01	0.09	-0.2036587057933666	ACTA AGRIC SCAND SUPPL 22: 1980
0	ARSENIC-OXIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
112	ASCORBIC-ACID	Plant	17	129	-0.563401826162719	
112	ASCORBIC-ACID	Pt	58	2778	-0.2550992791713734	
112	ASCORBIC-ACID	Seed	171	182	0.6821363243307782	
112	ASCORBIC-ACID	Shoot	17	129	-0.3648933330728539	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Fruit	357	1700	-0.17878811783375667	
0	ASH	Pt	6000	219000	1.0411508948922918	
0	ASH	Root	8300	100000	0.9263745562711385	ACTA AGRIC SCAND SUPPL 22: 1980
0	ASH	Seed	6720	106294	1.7569512588202132	
0	ASH	Fruit	6720	32000	-0.6386766393183354	
2	ASPARAGINE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ASPARAGINE(FREE)	Seed	--	--		Wealth of India.
3	ASPARTIC-ACID	Pt	1130	23880		USDA's Ag Handbook 8 and sequelae)
3	ASPARTIC-ACID	Shoot	--	--		
0	BENTONITE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	BENZOIC-ACID-4-O-BETA-D-GLUCOSIDE	Root	--	3	-1	
0	BENZOIC-ACID-4-O-BETA-D-GLUCOSIDE	Seed	--	56	1	
0	BENZOYL-BENZOATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BENZYL-AMINE	Stem	--	3.4		
17	BENZYL-BENZOATE	Shoot	--	--		
26	BERGAPTEN	Plant	--	520	-1	
26	BERGAPTEN	Pt	0.04	0.35		
26	BERGAPTEN	Seed	--	1	-0.8858167353904262	
26	BERGAPTEN	Leaf	--	1.17	-0.5894785933481757	
26	BERGAPTEN	Root	--	--		
26	BERGAPTEN	Shoot	--	145	-1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
53	BETA-CAROTENE	Pt	1	144	1.4105317625651812	
53	BETA-CAROTENE	Fruit	8	36	-0.0812132777507324	
53	BETA-CAROTENE	Seed	7.5	36	1.8210249021680307	
0	BETA-CARYOPHYLLENE	Fruit Essent. Oil	5000	43000	-0.3340654939269333	
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil	--	5000	-0.3762214301968018	
0	BETA-CARYOPHYLLENE	Seed	55	1075	0.859268747623255	
0	BETA-CARYOPHYLLENE	Seed Essent. Oil	5000	43000	-1	
5	BETA-ELEMENE	Fruit Essent. Oil	--	35000	1.6778472777341984	
5	BETA-ELEMENE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	BETA-ELEMENE	Seed	1	875	1.4124808434543825	
5	BETA-ELEMENE	Leaf Essent. Oil	--	--		
5	BETA-ELEMENE	Seed Essent. Oil	--	35000		
13	BETA-EUDESOL	Seed	76	225		
0	BETA-HUMULENE	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Fruit	--	2000	-0.1272127645580522	
3	BETA-PHELLANDRENE	Seed Essent. Oil	200	2000	-1.027685692005648	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETA-PINENE	Fruit Essent. Oil	5	15000	-0.5950573182789025	
13	BETA-PINENE	Seed	57	210	-0.5053346825286588	
13	BETA-PINENE	Leaf Essent. Oil	--	2000	-0.9267593911993299	
13	BETA-PINENE	Seed Essent. Oil	5000	15000	-0.7438446821280019	
13	BETA-PINENE	Stem Essent. Oil	--	12000	-1	
13	BETA-PINENE	Root Essent. Oil	--	179000	1.3589513237802975	
3	BETA-SELINENE	Fruit Essent. Oil	55000	325000	1	
3	BETA-SELINENE	Leaf Essent. Oil	--	30000	1	
3	BETA-SELINENE	Stem Essent. Oil	--	10000		
3	BETA-SELINENE	Seed	100	8125	1	
3	BETA-SELINENE	Seed Essent. Oil	55000	325000		
47	BETA-SITOSTEROL	Pt	--	30		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Seed	--	210	-0.550389634708716	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	BIACETYL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
4	BORON	Root	4	103	2.919010239761024	
4	BORON	Seed	43	61	1.7498078343361594	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).
0	BROMINE	Root	--	1	-1.1020868276694642	ACTA AGRIC SCAND SUPPL 22: 1980
0	BUTYLIDENE-NAPHTHALIDE	Essential Oil	--	--		
10	BUTYLIDENE-PHTHALIDE	Fruit Essent. Oil	--	4000		
10	BUTYLIDENE-PHTHALIDE	Leaf Essent. Oil	--	15000		
10	BUTYLIDENE-PHTHALIDE	Et	--	12000		
10	BUTYLIDENE-PHTHALIDE	Seed Essent. Oil	--	4000		
10	BUTYLIDENE-PHTHALIDE	Stem Essent. Oil	--	12000		
0	BUTYLPHENYL-KETONE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BUTYLPHENYL-KETONE	Seed	38	60		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	C-PRENYL-COUMARINS	Seed	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	CADMIUM	Root	0.001	0.364	-0.49785433960777487	ACTA AGRIC SCAND SUPPL 22: 1980
102	CAFFEIC-ACID	Leaf	--	--		
102	CAFFEIC-ACID	Seed	--	--		Wealth of India.
102	CAFFEIC-ACID	Root	--	--		
28	CALCIUM	Pt	313	11918	-1.4133911092017	
28	CALCIUM	Root	340	3635	-0.4126425625417656	ACTA AGRIC SCAND SUPPL 22: 1980
28	CALCIUM	Seed	170	20776	3.054154794705198	
28	CALCIUM	Fruit	1680	8000	0.9562048951774965	
2	CAMPESTEROL	Pt	--	--		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	CAMPESTEROL	Seed	--	50	-0.5188689275444304	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
9	CAMPHENE	Leaf Essent. Oil	--	1000	-0.8415153554301138	
9	CAMPHENE	Seed Essent. Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
3	CAPRIC-ACID	Leaf	200	213	-1	USDA's Ag Handbook 8 and sequelae)
0	CAR-3-ENE	Essential Oil	--	--		
0	CAR-3-ENE	Seed Essent. Oil	--	--		
0	CARBOHYDRATES	Pt	36300	684980	-0.4019274925269096	
0	CARBOHYDRATES	Seed	413500	439964	-0.33160060847415757	USDA's Ag Handbook 8 and sequelae)
0	CAROTENES	Leaf	80	145	-1	
1	CARVEOL	Plant	--	--		
0	CARVEOL-ACETATE	Plant	--	--		
0	CARVEOL-ACETATE	Shoot	--	--		
19	CARVONE	Fruit Essent. Oil	--	550000	1.414109513569833	
19	CARVONE	Essential Oil	2000	5000	-0.840408219433312	
19	CARVONE	Leaf	1	1	-0.2826540108062902	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
19	CARVONE	Seed	19	75	-1.2079718747791435	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
19	CARVONE	Shoot	--	--		
19	CARVONE	Seed Essent. Oil	900	550000	-0.4461789646766616	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARVYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Seed Essent. Oil	--	1700		
8	CARYOPHYLLENE-OXIDE	Seed	125	200	-1.3209276708861737	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	CELEREIOIN	Seed	--	13.3		
0	CELEREOSIDE	Seed	--	--		
0	CELERIN	Seed	--	--		
0	CELEROSIDE	Seed	--	--		
77	CHLOROGENIC-ACID	Leaf	--	--		
77	CHLOROGENIC-ACID	Seed	--	--		Wealth of India.
77	CHLOROGENIC-ACID	Root	--	--		
20	CHOLINE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CHOLINE-ASCORBATE	Leaf	--	--		
24	CHROMIUM	Root	0.002	0.045	-0.5509691200246839	ACTA AGRIC SCAND SUPPL 22: 1980
24	CHROMIUM	Fruit	--	--		
24	CHROMIUM	Seed	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CHRYSOERIOL-7-APIOSYL-GLUCOSIDE	Seed	--	--		
0	CHRYSOERIOL-GLUCOSIDE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	CINNAMALDEHYDE	Seed Essent. Oil	--	1500		
0	CIS-1(7),8-DIEN-2-OL	Plant	--	--		
0	CIS-3-HEXEN-1-YL-PYRUVATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	CIS-3-HEXENOL	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-3-HEXENOL-PYRUVATE	Plant	--	--		
0	CIS-3-HEXENYL-ACETATE	Plant	--	--		
0	CIS-BETA-OCIMENE	Seed Essent. Oil	--	--		
0	CIS-CARVEOL	Fruit Essent. Oil	--	1000	1	
0	CIS-CARVEOL	Essential Oil	--	--		
0	CIS-CARVEOL	Seed Essent. Oil	--	1000		
0	CIS-CARVYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-DIHYDRO-ISOCARVONE	Fruit Essent. Oil	--	15000		
0	CIS-DIHYDRO-ISOCARVONE	Seed Essent. Oil	1	15000		
0	CIS-DIHYDROCARVONE	Seed	15000	1	-0.711177031842887	
0	CIS-LIGUSTILIDE	Root	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-LIMONENE-OXIDE	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	CIS-OCIMENE	Leaf Essent. Oil	--	145000		
3	CIS-OCIMENE	Root Essent. Oil	--	68000		
3	CIS-OCIMENE	Et	--	78000		
3	CIS-OCIMENE	Leaf	2000	2500	1.4135514162255571	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	CIS-OCIMENE	Stem Essent. Oil	--	78000		
0	CIS-P-MENTHA-1(7),8-DIEN-2-YL-ACETATE	Plant	--	--		
0	CIS-P-MENTHA-2,8-DIEN-1-OL	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	CITRIC-ACID	Pt	--	--		
23	CITRIC-ACID	Root	--	--		
20	CITRONELLAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
20	CITRONELLAL	Shoot	--	--		
0	CITRONELLOL-ACETATE	Shoot	--	--		
2	CITRONELLYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	CNIDILIDE	Root	--	--		
2	COBALT	Root	--	0.005	-0.5451001113256595	ACTA AGRIC SCAND SUPPL 22: 1980
2	COBALT	Fruit	0.4	2	-0.29299669899909336	
2	COBALT	Seed	0.4	2	-0.11920111863142302	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	COLUMBIANETIN	Stem	--	--		
12	COPPER	Pt	0.4	7	1.0000000000000007	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Root	0.7	11	-0.07975431813856294	ACTA AGRIC SCAND SUPPL 22: 1980
12	COPPER	Seed	14	14	-0.07387673724713412	USDA's Ag Handbook 8 and sequelae)
57	COUMARIN	Plant	--	--		
0	COUMARIN-GLYCOSIDES	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	COUMARINS	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	CYSTINE	Pt	40	755		USDA's Ag Handbook 8 and sequelae)
0	D-SELINENE	Seed	1900	3000		
1	DECYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DECYL-ACETATE	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DEHYDROASCORBIC-ACID	Plant	--	--		
0	DEHYDROASCORBIC-ACID	Shoot	--	--		
0	DELTA-6,7-OCTADECANOIC-ACID	Seed	--	--		Wealth of India.
0	DELTA-7,8-OCTADECANOIC-ACID	Seed	--	--		Wealth of India.
0	DELTA-SELINENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	DI-N-PROPYL-AMINE	Pt	--	0.9		
2	DIACETYL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	DIACETYL	Shoot	--	--		
0	DIHYDRO-ISOCARVEOL	Seed Essent. Oil	--	2000		
2	DIHYDROCARVEOL	Fruit Essent. Oil	--	2000	1	
2	DIHYDROCARVEOL	Leaf	--	--		
2	DIHYDROCARVEOL	Essential Oil	--	--		
2	DIHYDROCARVEOL	Seed Essent. Oil	--	1000		
0	DIHYDROCARVONE	Essential Oil	--	5000	-0.5088490622892315	
0	DIHYDROCARVONE	Seed	19	75	-1.2270843709635864	
0	DIHYDROCARVONE	Seed Essent. Oil	--	5000		
1	DIHYDROCARVYL-ACETATE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DIHYDRONEOCARVEOL	Fruit Essent. Oil	--	1000		
0	DIHYDRONEOCARVEOL	Seed Essent. Oil	--	1000		
0	DIHYDRONEOISOCARVEOL	Fruit Essent. Oil	--	2000		
0	DIHYDRONEOISOCARVEOL	Seed Essent. Oil	--	2000		
2	DIMETHYL-AMINE	Pt	--	5.1		
2	DIMETHYL-AMINE	Stem	--	5.1		
0	DIPENTENE-OXIDE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
3	DIPHENYLAMINE	Plant	--	--		Karawva, M. S., Khayyal, S. E., Farrag, N. M., Ayad, M. M. 1986. Screening of Diphenylamine as an Antihyperglycemic in Certain Edible Plant Organs. Egypt J. Pharm. Sci., 25(1,2,3): 21-25.
0	DODECAN-1-AL	Shoot	--	--		
2	DODECANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	E-BUTYLIDENEPHTHALIDE	Plant	--	--		
0	E-LIGUSTILIDE	Plant	1	1		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ELEMOL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	EO	Seed	4200	30000	-0.17124289278893168	
0	EO	Fruit	42000	200000	3.067440392195637	
0	EPOXYCARYOPHYLLENE	Seed Essent. Oil	--	5500		
0	EUDESMOL	Fruit Essent. Oil	5000	10000		
0	EUDESMOL	Seed Essent. Oil	2900	10000		
76	EUGENOL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
76	EUGENOL	Seed Essent. Oil	--	--		
13	FALCARINDIOL	Root	--	3.3	-1.0293857207627424	
3	FALCARINONE	Root	--	1.7	-1	
0	FARCARINOL	Root	200	1400		
0	FAT	Leaf	1300	42000	-0.28818340493506195	
0	FAT	Seed	13860	279483	0.0742455598506243	
0	FAT	Fruit	13860	66000	-0.1371493986322384	
0	FENCHOL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
61	FERULIC-ACID	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	FIBER	Pt	6900	158000	-0.42530368144617087	
15	FIBER	Seed	106750	138586	0.03006212223460727	USDA's Ag Handbook 8 and sequelae)
0	FIBER(CRUDE)	Fruit	--	171000	0.39638478898989327	
0	FIBER(DIETARY)	Fruit	--	320000	-0.9715942860730087	
0	FLAVONOIDS	Leaf	--	420	-0.9474235611430815	
0	FOLIACIN	Pt	0.3	5.6		USDA's Ag Handbook 8 and sequelae)
12	FORMALDEHYDE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	FORMALDEHYDE	Shoot	--	--		
8	FRUCTOSE	Plant	--	--		
8	FRUCTOSE	Shoot	--	--		
7	FUMARIC-ACID	Pt	--	--		
7	FUMARIC-ACID	Root	--	--		
0	FURANOCOUMARINS	Leaf	1.4	2.3	-1.0000000000000002	
0	FURANOCOUMARINS	Pt	0.86	2.86		
1	GALACTOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	GALACTURONIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	GAMMA-DECALACTONE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	GAMMA-SELINENE	Plant	--	--		
0	GAMMA-SELINENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	--		
11	GAMMA-TERPINENE	Seed	7	10	-0.8268964662241418	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	GAMMA-TERPINEOL	Fruit Essent. Oil	3000	5000		
0	GAMMA-TERPINEOL	Seed	57	125		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-TERPINEOL	Seed Essent. Oil	--	5000		
8	GENTISIC-ACID	Leaf	--	--		Griffiths, L. A. 1959. On the Distribution of Gentisic Acid in Green Plants. J. Exp. Biol. 10: 437.
0	GERANIOL-ACETATE	Seed Essent. Oil	--	400	-1.0530439054012875	
0	GERANIOL-ACETATE	Shoot	--	--		
0	GERANIOL-BUTYRATE	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	GERANYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	GERANYL-BUTYRATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	GLUCOSE	Plant	--	--		
7	GLUCOSE	Shoot	--	--		
0	GLUCOSIDASE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
8	GLUTAMIC-ACID	Pt	860	18285		USDA's Ag Handbook 8 and sequelae)
8	GLUTAMIC-ACID	Shoot	--	--		
0	GLUTAMIC-ACID(FREE)	Seed	--	--		Wealth of India.
5	GLUTAMINE	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	GLYCINE	Pt	210	4290		USDA's Ag Handbook 8 and sequelae)
4	GLYCOLIC-ACID	Root	--	--		
0	GRAVEOBIOSIDE-A	Seed	--	--		
0	GRAVEOBIOSIDE-B	Seed	--	--		
18	GUAIACOL	Leaf	--	--		
18	GUAIACOL	Seed	--	--		
18	GUAIACOL	Essential Oil	--	--		
18	GUAIACOL	Shoot	--	--		
0	HEPTAN-1-AL	Shoot	--	--		
0	HEPTAN-1-OL	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEPTANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HEPTANOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
12	HERNIARIN	Leaf	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	HEX-CIS-3-EN-1-OL	Essential Oil	--	--		
0	HEX-CIS-3-EN-1-OL-PYRUVATE	Shoot	--	--		
0	HEX-TRANS-3-EN-1-OL	Essential Oil	--	--		
0	HEXAN-1-AL	Shoot	--	--		
0	HEXAN-1-OL	Essential Oil	--	--		
0	HEXAN-1-OL	Shoot	--	--		
5	HEXANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	HEXANOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	HISTIDINE	Pt	110	2425		USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HUMULADIENONE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	HUMULENE	Leaf Essent. Oil	--	--		
2	HUMULENE	Seed Essent. Oil	--	--		
0	HUMULENE-OXIDE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	HYPOXANTHINE	Plant	--	--		
0	HYPOXANTHINE	Shoot	--	--		
25	IMPERATORIN	Seed	--	--		Wealth of India.
25	IMPERATORIN	Root	--	--		
25	IMPERATORIN	Leaf	--	--		
0	INDOSTEROL	Pt	--	300		
0	INDOSTEROL	Stem	--	300		
8	INOSINE	Plant	--	--		
8	INOSINE	Shoot	--	--		
8	INOSITOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	IRON	Pt	3	347	1.289042144893524	
6	IRON	Root	3.6	47	-0.3733720521591977	ACTA AGRIC SCAND SUPPL 22: 1980
6	IRON	Seed	25	571	1.9524099785593705	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	IRON	Fruit	25	120	-0.051480525146559	
3	ISOAMYL-ALCOHOL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ISOAMYL-ALCOHOL	Shoot	--	--		
0	ISOBUTYLIDENE	Leaf	32	32		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Fruit Essent. Oil	--	17000		
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Leaf Essent. Oil	--	40000		
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Et	--	21000		
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Seed Essent. Oil	--	17000		
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Stem Essent. Oil	--	21000		
2	ISOBUTYRIC-ACID	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ISOBUTYRIC-ACID	Plant	--	--		
2	ISOBUTYRIC-ACID	Shoot	--	--		
4	ISOCHLOROGENIC-ACID	Leaf	--	--		
0	ISOCITRIC-ACID	Root	--	--		
8	ISOIMPERATORIN	Seed	--	--		
3	ISOLEUCINE	Pt	200	4290		USDA's Ag Handbook 8 and sequelae)
15	ISOPIMPINELLIN	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	ISOPIMPINELLIN	Pt	0.05	0.41		
15	ISOPIMPINELLIN	Root	--	--		
15	ISOPIMPINELLIN	Shoot	--	122	1	
15	ISOPIMPINELLIN	Seed	--	--		
15	ISOPIMPINELLIN	Petiole	0.05	0.41		
4	ISOPULEGONE	Seed Essent. Oil	--	1600		
22	ISOQUERCITRIN	Seed	--	--		
0	ISOVALERIANIC-ALDEHYDE	Plant	--	--		
5	ISOVALERIC-ACID	Seed	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ISOVALERIC-ACID-ETHYL-ESTER	Plant	--	--		
1	ISOVALERIC-ACID-ETHYL-ESTER	Shoot	--	--		
75	KAEMPFEROL	Leaf	--	--	-0.755027215594713	
0	KETO-ALCOHOL	Seed	2140	3390		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	L-TRYPTOPHAN	Seed	--	--		
7	LAURIC-ACID	Seed	200	213	-0.5104209587903109	USDA's Ag Handbook 8 and sequelae)
0	LEAD	Root	0.01	2	-0.18815782621314692	ACTA AGRIC SCAND SUPPL 22: 1980
2	LEUCINE	Pt	310	6530		USDA's Ag Handbook 8 and sequelae)
7	LIGUSTILIDE	Essential Oil	2000	5000	-1	
7	LIGUSTILIDE	Leaf Essent. Oil	--	2000		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	LIGUSTILIDE	Seed Essent. Oil	--	24100		
7	LIGUSTILIDE	Stem Essent. Oil	--	2000		
7	LIGUSTILIDE	Root Essent. Oil	--	5000	-1	
60	LIMONENE	Fruit Essent. Oil	350000	706000	0.5704970731129614	
60	LIMONENE	Root Essent. Oil	--	117000	0.2687678089626183	
60	LIMONENE	Et	--	695000	1	
60	LIMONENE	Seed	530	24000	0.9558696966291022	
60	LIMONENE	Essential Oil	--	--		
60	LIMONENE	Seed Essent. Oil	350000	721600	2.1440076891973874	
60	LIMONENE	Leaf Essent. Oil	--	621000	2.0668254322619717	
60	LIMONENE	Stem Essent. Oil	--	695000		
0	LINALOL	Seed	--	1	-0.7142013588154137	
53	LINALOOL	Seed	1	90	-0.4729972748643267	
53	LINALOOL	Seed Essent. Oil	--	14800	-0.5026656132656973	
0	LINALOOL-ACETATE	Shoot	--	--		
7	LINALYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINASE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
27	LINOLEIC-ACID	Leaf	60	1132	-1.1912413119904384	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Pt	690	12875		USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Seed	178000	41592	-0.5189029132357875	
0	LINOLENIC-ACID	Seed	--	2000	-0.5449471099877773	
78	LUTEOLIN	Leaf	--	80	-0.5838472995588694	
78	LUTEOLIN	Pt	--	400		
78	LUTEOLIN	Seed	--	--		
0	LUTEOLIN-7-APIOSYL-GLUCOSIDE	Fruit	--	--		
0	LUTEOLIN-7-APIOSYL-GLUCOSIDE	Seed	--	--		
0	LUTEOLIN-7-O-APIOSYL-GLUCOSIDE	Plant	--	--		
5	LUTEOLIN-7-O-BETA-GLUCOSIDE	Plant	--	--		
0	LUTEOLIN-GLUCOSIDE	Seed	--	--		
0	LUTEOLIN-GLYCOSIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
4	LYSINE	Pt	260	5410		USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	99	2650	-0.5698349070295108	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Root	140	1635	-0.4930193973019779	ACTA AGRIC SCAND SUPPL 22: 1980
65	MAGNESIUM	Seed	155	4903	0.7731568198649487	
65	MAGNESIUM	Fruit	153	730	-0.648159482294604	
15	MALIC-ACID	Pt	--	--		
15	MALIC-ACID	Root	--	--		
15	MALIC-ACID	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	MALONIC-ACID	Root	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
14	MANGANESE	Pt	1	33	-1	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Root	0.74	23	-0.27123195934439603	ACTA AGRIC SCAND SUPPL 22: 1980
14	MANGANESE	Seed	1.3	76	0.28001116376454066	
14	MANGANESE	Fruit	1.3	6.3	-0.3619961117886394	
18	MANNITOL	Root	--	50000	0.23330584134440507	
18	MANNITOL	Stem	--	20000		
18	MANNITOL	Leaf	--	--		
18	MANNITOL	Shoot	--	--		
18	MANNITOL	Plant	--	--		
0	MANNOSE-6-PHOSPHATE-REDUCTASE	Leaf	--	--		
30	MENTHONE	Essential Oil	--	--		
30	MENTHONE	Seed Essent. Oil	--	--		
1	MERCURY	Root	--	0.027	-0.41503552911844144	ACTA AGRIC SCAND SUPPL 22: 1980
15	METHIONINE	Pt	50	1120		USDA's Ag Handbook 8 and sequelae)
1	METHYL-AMINE	Pt	--	6.4		
1	METHYL-AMINE	Stem	--	6.4		
0	METHYL-BUTYLBENZENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	METHYL-PHENYLKETONE	Seed	55	90		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	METHYL-PHTHALIDES	Seed	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
2	MOLYBDENUM	Root	--	0.1	-0.46089530570591497	ACTA AGRIC SCAND SUPPL 22: 1980
3	MUCILAGE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
13	MUFA	Pt	270	5035		USDA's Ag Handbook 8 and sequelae)
22	MYRCENE	Fruit Essent. Oil	2000	61000	0.9225422159382141	
22	MYRCENE	Leaf Essent. Oil	--	14000	-0.31228842453179745	
22	MYRCENE	Root Essent. Oil	--	18000	-0.41513379237755443	
22	MYRCENE	Et	--	18000	1	
22	MYRCENE	Seed	40	300	-0.02492651845909201	
22	MYRCENE	Seed Essent. Oil	2000	61000	-0.07142759971351088	
22	MYRCENE	Stem Essent. Oil	--	18000	1	
22	MYRCENE	Shoot	--	--		
6	MYRISTIC-ACID	Pt	10	190		USDA's Ag Handbook 8 and sequelae)
6	MYRISTIC-ACID	Seed	125	213	-0.2932148633872675	
31	MYRISTICIN	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	MYRISTICIN	Seed	230	360	-0.9910907272077998	
5	MYRTENAL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	MYRTENOL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	N-6-BENZYL-ADENINE	Seed	--	--		
0	N-6-BENZYL-ADENINE-RIBOSIDE	Seed	--	--		
0	N-6-ISOPENT-2-ENYL-ADENOSINE	Seed	--	--		
1	N-BUTYLPHTHALIDE	Fruit Essent. Oil	50000	72000		
1	N-BUTYLPHTHALIDE	Root	--	30		
1	N-BUTYLPHTHALIDE	Seed	190	1800		
1	N-BUTYLPHTHALIDE	Seed Essent. Oil	25600	72000		
0	N-HEXYLCYCLOHEXADIENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	N-METHYL-ANILINE	Pt	--	7		
0	N-METHYL-ANILINE	Stem	--	0.5		
0	N-METHYL-BETA-PHENETHYLAMINE	Stem	--	0.5		
0	N-METHYL-PHENETHYLAMINE	Pt	--	0.5		
0	N-METHYL-PHENETHYLAMINE	Stem	--	0.5		
0	N-PENTYL-AMINE	Pt	--	0.8		
0	N-PENTYL-AMINE	Stem	--	0.8		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	N-PENTYL-BENZENE	Seed	190	300		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	N-PENTYL-CYCLOHEXADIENE	Fruit Essent. Oil	--	3000		
0	N-PENTYL-CYCLOHEXADIENE	Leaf Essent. Oil	--	17000		
0	N-PENTYL-CYCLOHEXADIENE	Seed Essent. Oil	--	3000		
0	N-PENTYL-CYCLOHEXADIENE	Seed	55	510		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	N-PROPYL-AMINE	Pt	--	2.7		
0	N-VALERIC-ACID	Shoot	--	--		
0	NEOCNIDILIDE	Plant	70	260		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NEOCNIDILIDE	Root	--	17		
2	NEOCNIDOLIDE	Root	--	17		
4	NERAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	NERAL	Shoot	--	--		
0	NEROL-ACETATE	Shoot	--	--		
5	NERYL-ACETATE	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NH3	Stem	--	19600		
0	NH3	Pt	--	15480		
39	NIACIN	Pt	3	57	0.7071067811865468	
39	NIACIN	Fruit	3	12	-0.6510092608917062	
39	NIACIN	Seed	2.5	12	-0.9245464566376991	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	NICKEL	Root	0.04	0.9	-0.6636456003542591	ACTA AGRIC SCAND SUPPL 22: 1980
21	NICOTINE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	NITROGEN	Root	2000	19090	-1.1232374468782391	ACTA AGRIC SCAND SUPPL 22: 1980
0	NODAKENETIC	Seed	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
1	NODAKENIN	Seed	--	--		
0	OCTAN-1-AL	Shoot	--	--		
0	OCTANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
18	OLEIC-ACID	Pt	230	4850		USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Seed	73200	162560	0.3572384351765495	
18	OLEIC-ACID	Seed Oil	--	--		
0	OSTHENOL	Seed	--	--		
15	OSTHOL	Leaf	--	--		
9	OXALIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	P-COUMARIC-ACID	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	P-COUMAROYL-QUINIC-ACID	Leaf	--	--		
16	P-CYMENE	Fruit Essent. Oil	2000	31000	1.1182650591230865	
16	P-CYMENE	Root Essent. Oil	--	31000	1.4362919950712267	
16	P-CYMENE	Et	--	17000	1	
16	P-CYMENE	Seed	20	775	-0.49278287384619057	
16	P-CYMENE	Seed Essent. Oil	2000	31000	-0.0997830422638124	
16	P-CYMENE	Leaf Essent. Oil	--	4000	-0.7192886194278051	
16	P-CYMENE	Stem Essent. Oil	--	17000	-1	
0	P-CYMOL	Leaf Essent. Oil	--	--		
1	P-HYDROXYCINNAMIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	P-MENTH-8(9)-ENE-1,2-DIOL	Essential Oil	--	--		
0	P-MENTH-8(9)-ENE-1,2-DIOL	Seed Essent. Oil	--	--		
0	P-MENTHA-2,8-DIEN-1-OL	Seed Essent. Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	P-MENTHA-8(9)-EN-1,2-DIOL	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-MENTHA-CIS-1(7)-8-DIEN-2-OL	Essential Oil	--	--		
0	P-MENTHA-CIS-2-8-DIEN-1-OL	Essential Oil	--	--		
0	P-MENTHA-TRANS-1(7)-8-DIEN-2-OL	Essential Oil	--	--		
0	P-MENTHA-TRANS-2-8-DIEN-1-OL	Essential Oil	--	--		
5	P-METHOXY-CINNAMIC-ACID	Seed	--	7.5		
13	PALMITIC-ACID	Pt	280	5970		USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Seed	9470	17375	-0.02365595254605948	
13	PALMITIC-ACID	Essential Oil	--	--		
2	PALMITOLEIC-ACID	Pt	10	190		USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Pt	1	36	0.9999999999999997	USDA's Ag Handbook 8 and sequelae)
24	PECTIN	Leaf	3000	3000	-1.5086314748174974	Pakistan Encyclopedia Planta Medica. 1986.
0	PENTENYLBENZENE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	PENTOSANE	Root	1600	1600	-1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTYL-BENZENE	Fruit Essent. Oil	--	9000		
0	PENTYL-BENZENE	Leaf Essent. Oil	--	2000		
0	PENTYL-BENZENE	Seed Essent. Oil	200	9000		
0	PENTYL-BENZENE	Seed	170	270		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
11	PERILLALDEHYDE	Seed	1	1	-0.8994543025293285	
0	PEROXIDASE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	PETROSELINIC-ACID	Seed	2400	657000	0.49703736353975286	
0	PETROSELINIC-ACID	Seed Oil	--	--		
2	PHELLOPTERIN	Leaf	--	--		
7	PHENYLALANINE	Leaf	190	4105	-1.592673637880879	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Pt	201	6849	1.363371911682067	
4	PHOSPHORUS	Root	470	7900	0.7700033948467552	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Seed	980	6843	0.3936525339343855	
4	PHOSPHORUS	Fruit	979	4660	0.4386018787156484	
0	PHTHALIDES	Plant	--	--		
2	PHYTOSTEROLS	Pt	60	1120		
2	PHYTOSTEROLS	Seed	--	600	-0.4861647488503628	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PINOCARVEOL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	PINOCARVYL-ACETATE	Plant	--	--		
0	PINOCARVYL-ACETATE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
10	PIPERIDINE	Pt	--	1		
7	PIPERITONE	Fruit	--	--		
7	PIPERITONE	Seed Essent. Oil	--	--		
7	PIPERITONE	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	POLYACETYLENES	Root	--	--		
14	POTASSIUM	Pt	2689	57800	0.5197113646473143	
14	POTASSIUM	Root	3900	56360	2.9714959220635757	ACTA AGRIC SCAND SUPPL 22: 1980
14	POTASSIUM	Seed	1210	15330	0.24271923351356245	
14	POTASSIUM	Fruit	1210	5760	-1.0755302557669684	
0	PROLINE	Leaf	170	3208	-1.1640243366273353	USDA's Ag Handbook 8 and sequelae)
2	PROPIONALDEHYDE	Leaf	3	1050		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	PROPIONALDEHYDE	Shoot	--	--		
0	PROPIONIC-ALDEHYDE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PROTEIN	Pt	6030	194000	1.322882538071928	
0	PROTEIN	Seed	170250	203385	-0.27052219485106055	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Fruit	35490	169000	0.7976429450050274	
0	PROTEIN	Leaf	7000	29000	-1.824056037172258	
43	PROTocatechuic-acid	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
31	PSORALEN	Plant	--	--		
31	PSORALEN	Pt	0.03	0.15		
31	PSORALEN	Leaf	--	--	-0.7114864882774733	
31	PSORALEN	Stem	--	--		
31	PSORALEN	Seed	--	--		
4	PUFA	Pt	690	12875		USDA's Ag Handbook 8 and sequelae)
1	PYRROLIDINE	Pt	--	2.6		
1	PYRROLIDINE	Stem	--	0.4		
1	PYRUVIC-ACID	Plant	--	--		
1	PYRUVIC-ACID	Shoot	--	--		
176	QUERCETIN	Pt	--	--		
0	QUERCETIN-3-O-GALACTOSIDE	Plant	--	--		
0	QUERCETIN-3-O-BETA-GLUCOSIDE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
2	QUERCETIN-3-O-GALACTOSIDE	Plant	--	--		Jim Duke's personal files.
1	QUINIC-ACID	Pt	--	--		
1	QUINIC-ACID	Root	--	--		
0	RESINIC-ACID	Seed	16800	19600	1	Wealth of India.
15	RIBOFLAVIN	Pt	--	34	1.3317125985137388	
15	RIBOFLAVIN	Fruit	0.1	0.6	-0.9443248460470646	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	RIBOFLAVIN	Seed	0.1	0.6	-1.1207183689683347	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	RUBIDIUM	Root	0.24	9	-0.5466190454002584	ACTA AGRIC SCAND SUPPL 22: 1980
0	RUTARETIN	Seed	--	10		
87	RUTIN	Plant	--	170	-0.6792061954574901	
87	RUTIN	Shoot	--	170	-0.5604271785023887	
0	S-METHYL-METHIONINE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	S-METHYL-METHIONINE	Stem	--	96		
5	SABINENE	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	SABINENE	Seed Essent. Oil	--	7600	-0.46016340929144367	
5	SABINENE	Leaf Essent. Oil	--	--		
7	SALICYLATES	Pt	--	--		
7	SALICYLATES	Seed	--	100	0.19635197050159953	
2	SANTALOL	Seed	874	1150		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
22	SCOPARONE	Leaf	--	--		
44	SCOPOLETIN	Plant	--	--		
44	SCOPOLETIN	Leaf	--	--		
3	SCOPOLIN	Leaf	--	--		
1	SEDANENOLIDE	Seed	90	900		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SEDANENOLIDE	Seed Essent. Oil	--	--		
0	SEDANOIC-ACID	Plant	--	--		
0	SEDANOIC-ACID	Seed	100	150		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	SEDANOIC-ACID	Essential Oil	--	--		
0	SEDANOIC-ALDEHYDE	Plant	--	--		
0	SEDANOIC-ANHYDRIDE	Essential Oil	30000	80000		
0	SEDANOIC-ANHYDRIDE	Seed Essent. Oil	79000	80000		
0	SEDANOLIC-ACID	Essential Oil	--	--		
3	SEDANOLIDE	Seed	435	900		
3	SEDANOLIDE	Essential Oil	--	--		
3	SEDANOLIDE	Seed Essent. Oil	--	--		
0	SEDANOLINE	Plant	--	--		
0	SEDANONIC-ALDEHYDE	Shoot	--	--		
0	SEDANONIC-ANHYDRIDE	Leaf	570	15750		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SEDANONIC-ANHYDRIDE	Seed	95	150		Wealth of India.
0	SEDANONIC-ANHYDRIDE	Seed Essent. Oil	30000	80000		
0	SELANOLIDE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	SELENIUM	Root	--	0.002	-0.3623106990048751	ACTA AGRIC SCAND SUPPL 22: 1980
60	SELENIUM	Fruit	--	0.2	-0.3365919582076448	
60	SELENIUM	Seed	--	0.2	-0.26179413521870387	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	SENKYUNOLIDE	Root	30	240	1	
1	SENKYUNOLIDE-J	Seed	--	--		
1	SENKYUNOLIDE-N	Seed	--	--		
1	SERINE	Pt	200	4105		USDA's Ag Handbook 8 and sequelae)
1	SERINE	Shoot	--	--		
0	SESALIN	Seed	--	--		
3	SESELIN	Seed	--	--		
0	SFA	Pt	370	6900		USDA's Ag Handbook 8 and sequelae)
14	SHIKIMIC-ACID	Root	--	--		
4	SILICON	Root	2	2	-0.33371737669722845	ACTA AGRIC SCAND SUPPL 22: 1980
4	SILICON	Fruit	1	4.5	-0.5938225414098025	
9	SINAPIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
1	SODIUM	Pt	774	17135	1.413860124765121	
1	SODIUM	Seed	445	1900	2.6496100162265814	
1	SODIUM	Fruit	445	2120	0.01708643261806833	
0	SPINOSTEROL	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
8	STEARIC-ACID	Pt	30	560		USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Seed	3100	5000	-0.456907018776356	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	STIGMASTEROL	Pt	--	30		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
12	STIGMASTEROL	Seed	--	300	-0.1490513045808515	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
7	SUCCINIC-ACID	Pt	--	--		
7	SUCCINIC-ACID	Root	--	--		
0	SUCCINIC-ACID-DEHYDROGENASE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
14	SUCROSE	Plant	--	--		
14	SUCROSE	Shoot	--	--		
0	SUGARS	Fruit	14700	70000	-0.5952549612598248	
0	SUGARS	Seed	14700	70000	0.3785467314953305	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	SULFUR	Root	100	1000	-0.5087729499120315	ACTA AGRIC SCAND SUPPL 22: 1980
6	TARTARIC-ACID	Pt	--	--		
6	TARTARIC-ACID	Root	--	--		
23	TERPINEN-4-OL	Leaf Essent. Oil	--	1000	-0.5406868834711872	
23	TERPINEN-4-OL	Seed	1	1400	0.06885583974834963	
0	TERPINENE	Seed Essent. Oil	--	--		
2	TERPINEOL-ACETATE	Shoot	--	--		
0	TERPINEOL-PROPIONATE	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TERPINEOLENE	Root Essent. Oil	--	33000		
9	TERPINOLENE	Fruit Essent. Oil	--	2000	-0.6853536216871218	
9	TERPINOLENE	Leaf Essent. Oil	--	2000	-0.5940205732207128	
9	TERPINOLENE	Seed Essent. Oil	--	2000	-0.6238102957663303	
9	TERPINOLENE	Root Essent. Oil	--	33000	-0.6841134180353257	
0	TETRAHYDROPHthalide	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
31	THIAMIN	Pt	--	10	1.2611720796963626	
0	THIAMINE	Fruit	0.3	1.2	-1.081392271586632	
4	THREONINE	Pt	190	4105		USDA's Ag Handbook 8 and sequelae)
71	THYMOL	Plant	--	--		
71	THYMOL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
71	THYMOL	Seed Essent. Oil	--	1700	-0.683300111818577	
1	TIGLIC-ACID	Plant	--	--		
0	TOLUIDINE	Pt	--	1.1		
0	TOLUIDINE	Stem	--	1.1		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-1,2-EPOXYLIMONENE	Seed	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	TRANS-2-HEXENOL	Essential Oil	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-3-HEXENOL	Essential Oil	--	--		
8	TRANS-ANETHOLE	Plant	1	1	-0.45718340800114365	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-BETA-OCIMENE	Seed Essent. Oil	--	--		
1	TRANS-CARVEOL	Fruit Essent. Oil	--	1000	1	
1	TRANS-CARVEOL	Essential Oil	--	--		
1	TRANS-CARVEOL	Seed Essent. Oil	--	1000		
0	TRANS-CARVYL-ACETATE	Plant	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-DIHYDROCARVONE	Seed Essent. Oil	--	14000		
0	TRANS-DIHYDROCARVONE	Fruit Essent. Oil	--	14000		
0	TRANS-FARNESENE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-LIMONENE-OXIDE	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-OCIMENE	Fruit Essent. Oil	--	3000		
0	TRANS-OCIMENE	Leaf Essent. Oil	--	20000		
0	TRANS-OCIMENE	Root Essent. Oil	--	201000		
0	TRANS-OCIMENE	Et	--	67000		
0	TRANS-OCIMENE	Leaf	--	--		
0	TRANS-OCIMENE	Seed Essent. Oil	--	3000		
0	TRANS-OCIMENE	Stem Essent. Oil	--	67000		
0	TRANS-P-MENTHA-1(7),8-DIEN-2-OL	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-P-MENTHA-2,8-DIEN-1-OL	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRIMETHYL-PSORALEN	Plant	--	--		
29	TRYPTOPHAN	Pt	90	1865		USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Pt	90	1865		USDA's Ag Handbook 8 and sequelae)
22	UMBELLIFERONE	Seed	--	--		
0	UNDECAN-1-AL	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	UNDECANAL	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	URANIUM	Root	--	0.09	-1	
0	URONIC-ACID	Root	--	--		
9	VALERIC-ACID	Flower	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	VALINE	Pt	260	5600		USDA's Ag Handbook 8 and sequelae)
3	VALINE	Shoot	--	--		
0	VELLEIN	Seed	--	--		
0	VERBENOL	Seed	--	--		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	VIT-B-6	Leaf	--	6	-0.8911253731457488	USDA's Ag Handbook 8 and sequelae)
0	VIT-U	Pt	41	96		
0	VITAMIN-A-PALMITATE	Seed	--	--		
0	VITAMIN-K-1	Seed	--	--		
0	WATER	Pt	927000	947000	1	USDA's Ag Handbook 8 and sequelae)
0	WATER	Root	890000	890000	0.7903730976697912	ACTA AGRIC SCAND SUPPL 22: 1980
0	WATER	Seed	60400	790000	2.1581361526774154	
0	WATER	Fruit	--	790000	0.08445851562289378	
43	XANTHOTOXIN	Plant	6	183		
43	XANTHOTOXIN	Pt	0.04	0.61		
43	XANTHOTOXIN	Shoot	--	183	0.21179380895139957	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
43	XANTHOTOXIN	Stem	--	--		
43	XANTHOTOXIN	Root	--	--		
43	XANTHOTOXIN	Seed	--	--		
0	XANTHOXOTIN	Leaf	0.4	1		
3	XYLOSE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	Z-BUTYLIDENEPHTHALIDE	Plant	--	--		
2	Z-LIGUSTILIDE	Plant	1	5		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ZEATIN	Seed	--	--		
0	ZEATIN-RIBOSIDE	Seed	--	--		
77	ZINC	Leaf	1	44	-0.2567393296527067	USDA's Ag Handbook 8 and sequelae)
77	ZINC	Root	2.8	70	2.0068925301263634	ACTA AGRIC SCAND SUPPL 22: 1980
77	ZINC	Seed	0.2	89	1.2454197651166274	
77	ZINC	Fruit	0.3	1.2	-0.8755455941178387	