

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Apium graveolens

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ALPHA-HUMULENE	Leaf	266.0	2500.0	3.7785413446723948	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EO	Fruit	42000.0	200000.0	3.067440392195637	--
28	CALCIUM	Seed	170.0	20776.0	3.054154794705198	--
14	POTASSIUM	Root	3900.0	56360.0	2.9714959220635757	ACTA AGRIC SCAND SUPPL 22: 1980
4	BORON	Root	4.0	103.0	2.919010239761024	--
1	SODIUM	Seed	445.0	2120.0	2.6496100162265814	--
0	WATER	Seed	60400.0	790000.0	2.1581361526774154	--
60	LIMONENE	Seed Essent. Oil	350000.0	721600.0	2.1440076891973874	--
60	LIMONENE	Leaf Essent. Oil		621000.0	2.0668254322619717	--
77	ZINC	Root	2.8	70.0	2.0068925301263634	ACTA AGRIC SCAND SUPPL 22: 1980
6	IRON	Seed	25.0	571.0	1.9524099785593705	--
53	BETA-CAROTENE	Seed	7.5	36.0	1.8210249021680307	--
0	ASH	Seed	6720.0	106294.0	1.7569512588202132	--
4	BORON	Seed	43.0	61.0	1.7498078343361594	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages.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).
5	BETA-ELEMENE	Fruit Essent. Oil		35000.0	1.6778472777341984	--
16	P-CYMENE	Root Essent. Oil		31000.0	1.4362919950712267	--
19	CARVONE	Fruit Essent. Oil		550000.0	1.414109513569833	--
0	(+)-LIMONENE	Seed Essent. Oil		988000.0	1.4139579998472263	--
1	SODIUM	Pt	774.0	17135.0	1.413860124765121	--
3	CIS-OCIMENE	Leaf	2000.0	2500.0	1.4135514162255571	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	BETA-ELEMENE	Seed	1.0	875.0	1.4124808434543825	--
53	BETA-CAROTENE	Pt	1.0	144.0	1.4105317625651812	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-P-DIMETHYL-STYRENE	Seed	170.0	270.0	1.392044546138226	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	PHOSPHORUS	Pt	201.0	6849.0	1.363371911682067	--
13	BETA-PINENE	Root Essent. Oil		179000.0	1.3589513237802975	--
15	RIBOFLAVIN	Pt	0.0	34.0	1.3317125985137388	--
0	PROTEIN	Pt	6030.0	194000.0	1.322882538071928	--
6	IRON	Pt	3.0	347.0	1.289042144893524	--
31	THIAMIN	Pt	0.0	10.0	1.2611720796963626	--
77	ZINC	Seed	0.2	89.0	1.2454197651166274	--
16	P-CYMENE	Fruit Essent. Oil	2000.0	31000.0	1.1182650591230865	--
0	ASH	Pt	6000.0	219000.0	1.0411508948922918	--
12	COPPER	Pt	0.4	7.0	1.0000000000000007	USDA's Ag Handbook 8 and sequelae)
0	WATER	Pt	927000.0	947000.0	1.0	USDA's Ag Handbook 8 and sequelae)
1	TRANS-CARVEOL	Fruit Essent. Oil		1000.0	1.0	--
60	LIMONENE	Et		695000.0	1.0	--
23	ALPHA-TERPINEOL	Root Essent. Oil		69000.0	1.0	--
0	BENZOIC-ACID-4-O-BETA-D-GLUCOSIDE	Seed		56.0	1.0	--
3	BETA-SELINENE	Seed	100.0	9750.0	1.0	--
3	BETA-SELINENE	Leaf Essent. Oil		30000.0	1.0	--
15	ISOPIMPINELLIN	Shoot		122.0	1.0	--
16	P-CYMENE	Et		17000.0	1.0	--
3	BETA-SELINENE	Fruit Essent. Oil	55000.0	325000.0	1.0	--
2	DIHYDROCARVEOL	Fruit Essent. Oil		2000.0	1.0	--
10	5-METHOXY-PSORALEN	Seed	0.0	7.0	1.0	--
0	RESINIC-ACID	Seed	16800.0	19600.0	1.0	Wealth of India.
32	ALPHA-TOCOPHEROL	Pt	3.0	67.0	1.0	--
22	MYRCENE	Et		18000.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	MYRCENE	Stem Essent. Oil		18000.0	1.0	--
0	CIS-CARVEOL	Fruit Essent. Oil		1000.0	1.0	--
0	SENKYUNOLIDE	Root	30.0	240.0	1.0	--
11	PANTOTHENIC-ACID	Pt	1.0	36.0	0.9999999999999997	USDA's Ag Handbook 8 and sequelae)
28	CALCIUM	Fruit	1680.0	8000.0	0.9562048951774965	--
60	LIMONENE	Seed	530.0	24000.0	0.9558696966291022	--
0	ASH	Root	8300.0	100000.0	0.9263745562711385	ACTA AGRIC SCAND SUPPL 22: 1980
22	MYRCENE	Fruit Essent. Oil	2000.0	61000.0	0.9225422159382141	--
0	BETA-CARYOPHYLLENE	Seed	55.0	1290.0	0.859268747623255	--
0	PROTEIN	Fruit	35490.0	169000.0	0.7976429450050274	--
0	WATER	Root		890000.0	0.7903730976697912	ACTA AGRIC SCAND SUPPL 22: 1980
65	MAGNESIUM	Seed	155.0	4903.0	0.7731568198649487	--
28	ALPHA-PINENE	Root Essent. Oil		179000.0	0.7700366703490429	--
4	PHOSPHORUS	Root	470.0	7900.0	0.7700033948467552	USDA's Ag Handbook 8 and sequelae)
39	NIACIN	Pt	3.0	57.0	0.7071067811865468	--
112	ASCORBIC-ACID	Seed	171.0	1700.0	0.6821363243307782	--
60	LIMONENE	Fruit Essent. Oil	350000.0	706000.0	0.5704970731129614	--
14	POTASSIUM	Pt	2689.0	57800.0	0.5197113646473143	--
0	PETROSELINIC-ACID	Seed	2400.0	657000.0	0.49703736353975286	--
4	PHOSPHORUS	Fruit	979.0	4660.0	0.4386018787156484	--
11	ALPHA-PHELLANDRENE	Fruit		2000.0	0.431635886715178	--
0	FIBER(CRUDE)	Fruit		171000.0	0.39638478898989327	--
4	PHOSPHORUS	Seed	980.0	6843.0	0.3936525339343855	--
0	SUGARS	Seed	14700.0	70000.0	0.3785467314953305	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
18	OLEIC-ACID	Seed	73200.0	162560.0	0.3572384351765495	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Seed	1.3	76.0	0.28001116376454066	--
60	LIMONENE	Root Essent. Oil		117000.0	0.2687678089626183	--
14	POTASSIUM	Seed	1210.0	15330.0	0.24271923351356245	--
18	MANNITOL	Root		50000.0	0.23330584134440507	--
43	XANTHOTOXIN	Shoot		183.0	0.21179380895139957	--
7	SALICYLATES	Seed		100.0	0.19635197050159953	--
0	WATER	Fruit		790000.0	0.08445851562289378	--
0	FAT	Seed	13860.0	279483.0	0.0742455598506243	--
23	TERPINEN-4-OL	Seed	1.0	1400.0	0.06885583974834963	--
15	FIBER	Seed	106750.0	138586.0	0.03006212223460727	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Fruit	445.0	2120.0	0.01708643261806833	--
13	PALMITIC-ACID	Seed	9470.0	32760.0	-0.02365595254605948	--
22	MYRCENE	Seed	40.0	1830.0	-0.02492651845909201	--
6	IRON	Fruit	25.0	120.0	-0.051480525146559	--
22	MYRCENE	Seed Essent. Oil	2000.0	61000.0	-0.07142759971351088	--
12	COPPER	Seed		14.0	-0.07387673724713412	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Root	0.7	11.0	-0.07975431813856294	ACTA AGRIC SCAND SUPPL 22: 1980
53	BETA-CAROTENE	Fruit	8.0	36.0	-0.0812132777507324	--
16	P-CYMENE	Seed Essent. Oil	2000.0	31000.0	-0.0997830422638124	--
2	COBALT	Seed	0.4	2.0	-0.11920111863142302	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	BETA-PHELLANDRENE	Fruit		2000.0	-0.1272127645580522	--
0	FAT	Fruit	13860.0	66000.0	-0.1371493986322384	--
12	STIGMASTEROL	Seed		300.0	-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.)
0	EO	Seed	4200.0	30000.0	-0.17124289278893168	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Fruit	357.0	1700.0	-0.17878811783375667	--
10	5-METHOXY-PSORALEN	Fruit	0.0	7.0	-0.18569533817705186	--
0	LEAD	Root	0.01	2.0	-0.18815782621314692	ACTA AGRIC SCAND SUPPL 22: 1980
2	ARSENIC	Root	0.01	0.09	-0.2036587057933666	ACTA AGRIC SCAND SUPPL 22: 1980
32	ALPHA-TOCOPHEROL	Leaf	136.0	266.0	-0.22853429341464526	--
112	ASCORBIC-ACID	Pt	58.0	2778.0	-0.2550992791713734	--
77	ZINC	Leaf	1.0	44.0	-0.2567393296527067	USDA's Ag Handbook 8 and sequelae)
60	SELENIUM	Seed		0.2	-0.26179413521870387	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROTEIN	Seed	170250.0	203385.0	-0.27052219485106055	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Root	0.74	23.0	-0.27123195934439603	ACTA AGRIC SCAND SUPPL 22: 1980
15	ALPHA-LINOLENIC-ACID	Seed	1600.0	2554.0	-0.2805131186501865	USDA's Ag Handbook 8 and sequelae)
19	CARVONE	Leaf		1.0	-0.2826540108062902	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	FAT	Leaf	1300.0	42000.0	-0.28818340493506195	--
2	COBALT	Fruit	0.4	2.0	-0.29299669899909336	--
6	MYRISTIC-ACID	Seed	125.0	213.0	-0.2932148633872675	--
23	ALPHA-TERPINEOL	Fruit Essent. Oil	3000.0	14000.0	-0.30405553353793474	--
5	ALUMINUM	Root	0.3	9.0	-0.3076511978543176	ACTA AGRIC SCAND SUPPL 22: 1980
22	MYRCENE	Leaf Essent. Oil		14000.0	-0.31228842453179745	--
0	CARBOHYDRATES	Seed	413500.0	439964.0	-0.33160060847415757	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Root		2.0	-0.33371737669722845	ACTA AGRIC SCAND SUPPL 22: 1980
0	BETA-CARYOPHYLLENE	Fruit Essent. Oil	5000.0	43000.0	-0.3340654939269333	--
60	SELENIUM	Fruit		0.2	-0.3365919582076448	--
14	MANGANESE	Fruit	1.3	6.3	-0.3619961117886394	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	SELENIUM	Root		0.002	-0.3623106990048751	ACTA AGRIC SCAND SUPPL 22: 1980
112	ASCORBIC-ACID	Shoot	17.0	129.0	-0.3648933330728539	--
6	IRON	Root	3.6	47.0	-0.3733720521591977	ACTA AGRIC SCAND SUPPL 22: 1980
23	ALPHA-TERPINEOL	Seed	1.0	420.0	-0.37493466702522626	--
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil		5000.0	-0.3762214301968018	--
0	CARBOHYDRATES	Pt	36300.0	684980.0	-0.4019274925269096	--
28	CALCIUM	Root	340.0	3635.0	-0.4126425625417656	ACTA AGRIC SCAND SUPPL 22: 1980
1	MERCURY	Root	0.0	0.027	-0.41503552911844144	ACTA AGRIC SCAND SUPPL 22: 1980
22	MYRCENE	Root Essent. Oil		18000.0	-0.41513379237755443	--
15	FIBER	Pt	6900.0	158000.0	-0.42530368144617087	--
19	CARVONE	Seed Essent. Oil	900.0	550000.0	-0.4461789646766616	--
8	STEARIC-ACID	Seed	3100.0	5000.0	-0.456907018776356	USDA's Ag Handbook 8 and sequelae)
8	TRANS-ANETHOLE	Plant		1.0	-0.45718340800114365	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	SABINENE	Seed Essent. Oil		7600.0	-0.46016340929144367	--
2	MOLYBDENUM	Root		0.1	-0.46089530570591497	ACTA AGRIC SCAND SUPPL 22: 1980
28	ALPHA-PINENE	Seed		300.0	-0.47140904876924467	--
53	LINALOOL	Seed	1.0	90.0	-0.4729972748643267	--
2	PHYTOSTEROLS	Seed		600.0	-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.)
16	P-CYMENE	Seed	20.0	930.0	-0.49278287384619057	--
65	MAGNESIUM	Root	140.0	1635.0	-0.4930193973019779	ACTA AGRIC SCAND SUPPL 22: 1980
3	CADMIUM	Root	0.001	0.364	-0.49785433960777487	ACTA AGRIC SCAND SUPPL 22: 1980
53	LINALOOL	Seed Essent. Oil		14800.0	-0.5026656132656973	--
13	BETA-PINENE	Seed	57.0	1530.0	-0.5053346825286588	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	SULFUR	Root	100.0	1000.0	-0.5087729499120315	ACTA AGRIC SCAND SUPPL 22: 1980
0	DIHYDROCARVONE	Essential Oil	0.0	5000.0	-0.5088490622892315	--
7	LAURIC-ACID	Seed	200.0	213.0	-0.5104209587903109	USDA's Ag Handbook 8 and sequelae)
2	CAMPESTEROL	Seed		50.0	-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.)
27	LINOLEIC-ACID	Seed	178000.0	46560.0	-0.5189029132357875	--
23	TERPINEN-4-OL	Leaf Essent. Oil		1000.0	-0.5406868834711872	--
0	LINOLENIC-ACID	Seed		2000.0	-0.5449471099877773	--
2	COBALT	Root		0.005	-0.5451001113256595	ACTA AGRIC SCAND SUPPL 22: 1980
0	RUBIDIUM	Root	0.24	9.0	-0.5466190454002584	ACTA AGRIC SCAND SUPPL 22: 1980
47	BETA-SITOSTEROL	Seed		210.0	-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.)
24	CHROMIUM	Root	0.002	0.045	-0.5509691200246839	ACTA AGRIC SCAND SUPPL 22: 1980
87	RUTIN	Shoot		170.0	-0.5604271785023887	--
112	ASCORBIC-ACID	Plant	17.0	129.0	-0.563401826162719	--
65	MAGNESIUM	Leaf	99.0	2650.0	-0.5698349070295108	USDA's Ag Handbook 8 and sequelae)
78	LUTEOLIN	Leaf		80.0	-0.5838472995588694	--
26	BERGAPTEN	Leaf		1.17	-0.5894785933481757	--
4	SILICON	Fruit	1.0	4.5	-0.5938225414098025	--
9	TERPINOLENE	Leaf Essent. Oil		2000.0	-0.5940205732207128	--
13	BETA-PINENE	Fruit Essent. Oil	5.0	15000.0	-0.5950573182789025	--
0	SUGARS	Fruit	14700.0	70000.0	-0.5952549612598248	--
9	TERPINOLENE	Seed Essent. Oil		2000.0	-0.6238102957663303	--
0	ASH	Fruit	6720.0	32000.0	-0.6386766393183354	--
65	MAGNESIUM	Fruit	153.0	730.0	-0.648159482294604	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
39	NIACIN	Fruit	3.0	12.0	-0.6510092608917062	--
23	ALPHA-TERPINEOL	Seed Essent. Oil	5000.0	14000.0	-0.651073092591952	--
3	NICKEL	Root	0.04	0.9	-0.6636456003542591	ACTA AGRIC SCAND SUPPL 22: 1980
28	ALPHA-PINENE	Seed Essent. Oil	10000.0	10500.0	-0.6694735069151678	--
87	RUTIN	Plant		170.0	-0.6792061954574901	--
71	THYMOL	Seed Essent. Oil		1700.0	-0.683300111818577	--
9	TERPINOLENE	Root Essent. Oil		33000.0	-0.6841134180353257	--
9	TERPINOLENE	Fruit Essent. Oil		2000.0	-0.6853536216871218	--
0	CIS-DIHYDROCARVONE	Seed		1.0	-0.711177031842887	--
31	PSORALEN	Leaf		0.0	-0.7114864882774733	--
0	LINALOL	Seed		1.0	-0.7142013588154137	--
28	ALPHA-PINENE	Fruit Essent. Oil		10000.0	-0.7166152772658864	--
16	P-CYMENE	Leaf Essent. Oil		4000.0	-0.7192886194278051	--
28	ALPHA-PINENE	Leaf Essent. Oil		2000.0	-0.7421534872468563	--
13	BETA-PINENE	Seed Essent. Oil	5000.0	15000.0	-0.7438446821280019	--
75	KAEMPFEROL	Leaf		0.0	-0.755027215594713	--
11	GAMMA-TERPINENE	Seed	7.0	10.0	-0.8268964662241418	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
13	ALPHA-TERPINENE	Fruit Essent. Oil		1000.0	-0.8348120728111189	--
19	CARVONE	Essential Oil	2000.0	5000.0	-0.840408219433312	--
9	CAMPHENE	Leaf Essent. Oil		1000.0	-0.8415153554301138	--
23	ALPHA-TERPINEOL	Leaf Essent. Oil		1000.0	-0.8444420280137835	--
11	ALPHA-PHELLANDRENE	Seed Essent. Oil		2000.0	-0.8573553114168811	--
77	ZINC	Fruit	0.3	1.2	-0.8755455941178387	--
26	BERGAPTEN	Seed		1.0	-0.8858167353904262	--
0	VIT-B-6	Leaf	0.0	6.0	-0.8911253731457488	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	PERILLALDEHYDE	Seed		1.0	-0.8994543025293285	--
39	NIACIN	Seed	2.5	12.0	-0.9245464566376991	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	BETA-PINENE	Leaf Essent. Oil		2000.0	-0.9267593911993299	--
15	RIBOFLAVIN	Fruit	0.1	0.6	-0.9443248460470646	--
0	FLAVONOIDS	Leaf		420.0	-0.9474235611430815	--
0	FIBER(DIETARY)	Fruit		320000.0	-0.9715942860730087	--
31	MYRISTICIN	Seed	230.0	360.0	-0.9910907272077998	--
28	ALPHA-PINENE	Stem Essent. Oil		14000.0	-1.0	--
3	FALCARINONE	Root		1.7	-1.0	--
14	MANGANESE	Pt	1.0	33.0	-1.0	USDA's Ag Handbook 8 and sequelae)
0	BENZOIC-ACID-4-O-BETA-D-GLUCOSIDE	Root		3.0	-1.0	--
20	APIOLE	Seed	115.0	180.0	-1.0	--
0	PENTOSANE	Root		1600.0	-1.0	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CAROTENES	Leaf	80.0	145.0	-1.0	--
16	P-CYMENE	Stem Essent. Oil		17000.0	-1.0	--
1	URANIUM	Root		0.09	-1.0	--
7	LIGUSTILIDE	Essential Oil	2000.0	5000.0	-1.0	--
26	BERGAPTEN	Shoot		145.0	-1.0	--
0	BETA-CARYOPHYLLENE	Seed Essent. Oil	5000.0	43000.0	-1.0	--
32	ALPHA-TOCOPHEROL	Plant	0.0	64.0	-1.0	--
28	ALPHA-PINENE	Et	12000.0	14000.0	-1.0	--
13	BETA-PINENE	Stem Essent. Oil		12000.0	-1.0	--
26	BERGAPTEN	Plant		520.0	-1.0	--
3	CAPRIC-ACID	Leaf	200.0	213.0	-1.0	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	LIGUSTILIDE	Root Essent. Oil		5000.0	-1.0	--
0	FURANOCOUMARINS	Leaf	1.4	2.3	-1.0000000000000002	--
13	ALPHA-TERPINENE	Seed Essent. Oil		1000.0	-1.0089204175742374	--
3	BETA-PHELLANDRENE	Seed Essent. Oil	200.0	2000.0	-1.027685692005648	--
13	FALCARINDIOL	Root		3.3	-1.0293857207627424	--
0	GERANIOL-ACETATE	Seed Essent. Oil		400.0	-1.0530439054012875	--
14	POTASSIUM	Fruit	1210.0	5760.0	-1.0755302557669684	--
0	THIAMINE	Fruit	0.3	1.2	-1.081392271586632	--
0	BROMINE	Root		1.0	-1.1020868276694642	ACTA AGRIC SCAND SUPPL 22: 1980
15	RIBOFLAVIN	Seed	0.1	0.6	-1.1207183689683347	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	NITROGEN	Root	2000.0	19090.0	-1.1232374468782391	ACTA AGRIC SCAND SUPPL 22: 1980
0	PROLINE	Leaf	170.0	3208.0	-1.1640243366273353	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Leaf	60.0	1132.0	-1.1912413119904384	USDA's Ag Handbook 8 and sequelae)
19	CARVONE	Seed	19.0	75.0	-1.2079718747791435	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DIHYDROCARVONE	Seed	0.0	150.0	-1.2270843709635864	--
8	CARYOPHYLLENE-OXIDE	Seed	125.0	200.0	-1.3209276708861737	Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
28	CALCIUM	Pt	313.0	11918.0	-1.4133911092017	--
24	PECTIN	Leaf		3000.0	-1.5086314748174974	Pakistan Encyclopedia Planta Medica. 1986.
7	PHENYLALANINE	Leaf	190.0	4105.0	-1.592673637880879	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Leaf	7000.0	29000.0	-1.824056037172258	--
0	D-SELINENE	Seed	1900.0	4500.0		--
1	N-BUTYLPHTHALIDE	Root		30.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	LIGUSTILIDE	Stem Essent. Oil		2000.0		--
4	APIIN	Plant		2000.0		--
28	ADENOSINE	Plant				--
0	CIS-3-HEXENYL-ACETATE	Plant				--
24	CHROMIUM	Fruit				--
1	PYRROLIDINE	Stem		0.4		--
0	N-METHYL-BETA-PHENETHYLAMINE	Stem		0.5		--
0	DIHYDROCARVONE	Seed Essent. Oil		5000.0		--
0	OSTHENOL	Seed				--
0	GAMMA-SELINENE	Plant				--
0	XANTHOTOXIN	Leaf	0.4	1.0		--
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	KETO-ALCOHOL	Seed	2140.0	3390.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	4-DIHYDROPHthalide	Seed	57.0	1500.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
14	SUCROSE	Shoot				--
0	CELERIN	Seed				--
2	SANTALOL	Seed	874.0	1150.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	BETA-ELEMENE	Leaf Essent. Oil				--
0	PEROXIDASE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	CIS-OCIMENE	Stem Essent. Oil		78000.0		--
0	HYPOXANTHINE	Plant				--
0	CIS-CARVEOL	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	METHYL-BUTYLBENZENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
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.
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	VITAMIN-K-1	Seed				--
18	MANNITOL	Plant				--
8	STEARIC-ACID	Pt	30.0	560.0		USDA's Ag Handbook 8 and sequelae)
2	HUMULENE	Leaf Essent. Oil				--
102	CAFFEIC-ACID	Seed				Wealth of India.
0	NEOCNIDILIDE	Root		17.0		--
0	P-MENTHA-8(9)-EN-1,2-DIOL	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
12	GLYCINE	Pt	210.0	4290.0		USDA's Ag Handbook 8 and sequelae)
3	ASPARTIC-ACID	Shoot				--
24	CHROMIUM	Seed				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	DIHYDRONEOCARVEOL	Fruit Essent. Oil		1000.0		--
0	TRANS-BETA-OCIMENE	Seed Essent. Oil				--
2	NEOCNIDOLIDE	Root		17.0		--
0	(+)-LIMONENE	Shoot				--
8	GLUTAMIC-ACID	Shoot				--
0	CIS-P-MENTHA-1(7),8-DIEN-2-YL-ACETATE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ISOBUTYRIC-ACID	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-ISOBUTYLIDENE-PHTHALIDE	Plant		0.001		--
0	SEDANOIC-ACID	Essential Oil				--
0	GAMMA-SELINENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	PYRROLIDINE	Pt		2.6		--
0	3-ISOVALIDENE-PHTHALIDE	Shoot		0.001		--
0	BENZOYL-BENZOATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	METHYL-AMINE	Stem		6.4		--
1	N-BUTYLPHTHALIDE	Fruit Essent. Oil	50000.0	72000.0		--
7	LIGUSTILIDE	Seed Essent. Oil		24100.0		--
0	APIGRAVIN	Seed				--
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.)
11	ADENINE	Plant				--
0	CIS-3-HEXENOL-PYRUVATE	Plant				--
0	SELANOLIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
4	ISOPULEGONE	Seed Essent. Oil		1600.0		--
2	PHELLOPTERIN	Leaf				--
7	PIPERITONE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	GALACTURONIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VIT-U	Pt	41.0	96.0		--
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.
2	CYSTINE	Pt	40.0	755.0		USDA's Ag Handbook 8 and sequelae)
1	ISOVALERIC-ACID-ETHYL-ESTER	Plant				--
10	3-N-BUTYL-PHTHALIDE	Seed				--
7	SUCCINIC-ACID	Root				--
0	CELEREOSIDE	Seed				--
1	SENKYUNOLIDE-J	Seed				--
5	SABINENE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	BETA-ELEMENE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DODECAN-1-AL	Shoot				--
7	HISTIDINE	Pt	110.0	2425.0		USDA's Ag Handbook 8 and sequelae)
0	CARVEOL-ACETATE	Shoot				--
0	HUMULENE-OXIDE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
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	VITAMIN-A-PALMITATE	Seed				--
18	MANNITOL	Shoot				--
0	SPINOSTEROL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	HEXAN-1-OL	Shoot				--
0	P-MENTH-8(9)-ENE-1,2-DIOL	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	GLUTAMINE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DEHYDROASCORBIC-ACID	Shoot				--
0	ZEATIN-RIBOSIDE	Seed				--
1	DIHYDROCARVYL-ACETATE	Plant				--
0	CIS-BETA-OCIMENE	Seed Essent. Oil				--
0	GAMMA-TERPINEOL	Seed Essent. Oil		5000.0		--
0	NEOCNIDILIDE	Plant	70.0	260.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	(+)-LIMONENE	Seed				--
7	GLUCOSE	Shoot				--
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Et		21000.0		--
0	3-ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Seed	133.0	1500.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	SEDANENOLIDE	Seed Essent. Oil				--
0	SEDANOIC-ACID	Seed	100.0	150.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
4	PUFA	Pt	690.0	12875.0		USDA's Ag Handbook 8 and sequelae)
0	3-ISOBUTYLIDENE-PHTHALIDE	Seed Essent. Oil				--
0	CITRONELLOL-ACETATE	Shoot				--
0	S-METHYL-METHIONINE	Stem		96.0		--
0	TERPINEOLENE	Root Essent. Oil		33000.0		--
0	N-6-ISOPENT-2-ENYL-ADENOSINE	Seed				--
7	LIGUSTILIDE	Leaf Essent. Oil		2000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	C-PRENYL-COUMARINS	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
27	LINOLEIC-ACID	Pt	690.0	12875.0		USDA's Ag Handbook 8 and sequelae)
16	ACETIC-ACID	Plant				--
1	CIS-3-HEXENOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SEDANONIC-ANHYDRIDE	Leaf	570.0	15750.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRIMETHYL-PSORALEN	Plant				--
0	POLYACETYLENES	Root				--
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalide	Leaf Essent. Oil		40000.0		--
19	CARVONE	Shoot				--
18	OLEIC-ACID	Pt	230.0	4850.0		USDA's Ag Handbook 8 and sequelae)
0	PINOCARVEOL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	GALACTOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
12	STIGMASTEROL	Pt		30.0		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	PHthalIDES	Plant				--
57	COUMARIN	Plant				--
10	3-N-BUTYL-PHthalIDE	Leaf Essent. Oil		40000.0		--
3	SESELIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CELEREIN	Seed		13.3		--
0	MANNANOSE-6-PHOSPHATE-REDUCTASE	Leaf				--
0	S-METHYL-METHIONINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	DIPHENYLAMINE	Plant				Karawwa, 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	PENTYL-BENZENE	Leaf Essent. Oil		2000.0		--
3	HEXANOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HUMULADIENONE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	ISOVALERIANIC-ALDEHYDE	Plant				--
0	TRANS-OCIMENE	Leaf				--
3	VALINE	Shoot				--
18	MANNITOL	Leaf				--
13	MUFA	Pt	270.0	5035.0		USDA's Ag Handbook 8 and sequelae)
0	HEXAN-1-OL	Essential Oil				--
5	ISOVALERIC-ACID	Seed		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	P-HYDROXYCINNAMIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	(Z)-BETA-OCIMENE	Seed	6.0	9.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
8	GLUTAMIC-ACID	Pt	860.0	18285.0		USDA's Ag Handbook 8 and sequelae)
4	APIIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ZEATIN	Seed				--
9	CAMPHERE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	NH3	Pt		15480.0		--
0	TRANS-3-HEXENOL	Essential Oil				--
0	N-PROPYL-AMINE	Pt		2.7		--
0	(+)-LIMONENE	Essential Oil				--
0	ARSENIC-OXIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
15	MALIC-ACID	Pt				--
0	GERANIOL-BUTYRATE	Shoot				--
3	CIS-OCIMENE	Et		78000.0		--
0	3-BUTYLPHTHALIDE	Seed	40.0	120.0		--
44	SCOPOLETIN	Leaf				--
102	CAFFEIC-ACID	Leaf				--
2	QUERCETIN-3-O-GALACTOSIDE	Plant				Jim Duke's personal files.
31	PSORALEN	Pt	0.0	0.15		--
0	3-ISOBUTYLIDENE-PHTHALIDE	Shoot		0.001		--
20	CITRONELLAL	Shoot				--
0	N-6-BENZYL-ADENINE-RIBOSIDE	Seed				--
3	ISOAMYL-ALCOHOL	Shoot				--
101	APIGENIN	Plant				--
6	ACETALDEHYDE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CIS-3-HEXEN-1-YL-PYRUVATE	Leaf				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	SEDANOLINE	Plant				--
31	PSORALEN	Seed				--
3	BETA-SELINENE	Stem Essent. Oil		10000.0		--
10	PIPERIDINE	Pt		1.0		--
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalIDE	Fruit Essent. Oil		17000.0		--
1	TRANS-CARVEOL	Seed Essent. Oil		1000.0		--
0	OCTANAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PENTYL-BENZENE	Seed	170.0	270.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
7	FUMARIC-ACID	Pt				--
0	SEDANONIC-ANHYDRIDE	Seed	95.0	150.0		Wealth of India.
0	VELLEIN	Seed				--
0	LUTEOLIN-7-O-APIOSYL-GLUCOSIDE	Plant				--
30	MENTHONE	Seed Essent. Oil				--
1	SERINE	Shoot				--
0	CARVYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
15	ISOPIMPINELLIN	Seed				--
2	DIACETYL	Shoot				--
0	PENTYL-BENZENE	Fruit Essent. Oil		9000.0		--
5	HEXANAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CAR-3-ENE	Seed Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	INOSITOL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
76	EUGENOL	Plant				Stitt, Paul. Why George should eat broccoli.
25	IMPERATORIN	Seed				Wealth of India.
0	TRANS-OCIMENE	Et		67000.0		--
0	N-VALERIC-ACID	Shoot				--
15	MALIC-ACID	Shoot				--
3	MUCILAGE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	HEXAN-1-AL	Shoot				--
22	ISOQUERCITRIN	Seed				--
10	3-N-BUTYL-PHTHALIDE	Fruit Essent. Oil		108000.0		--
0	(E)-BETA-OCIMENE	Seed	7.0	10.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	GLUCOSIDASE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	APIGENIN-7-APIOSYLGLUCOSIDE	Seed				--
2	Z-LIGUSTILIDE	Plant	1.0	5.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NH3	Stem		19600.0		--
1	TRANS-2-HEXENOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Essential Oil				--
0	N-PENTYL-CYCLOHEXADIENE	Leaf Essent. Oil		17000.0		--
0	GERANIOL-ACETATE	Shoot				--
3	CIS-OCIMENE	Root Essent. Oil		68000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-BUTYLHEXAHYDROPHTHALIDE	Root				--
22	SCOPARONE	Leaf				--
0	PINOCARVYL-ACETATE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
31	PSORALEN	Plant				--
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHTHALIDE	Stem Essent. Oil		21000.0		--
0	BENTONITE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
23	CITRIC-ACID	Root				--
0	N-6-BENZYL-ADENINE	Seed				--
5	ALPHA-IONONE	Seed Essent. Oil		500.0		--
0	ANILINE	Pt		0.7		--
47	BETA-SITOSTEROL	Pt		30.0		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	LINASE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
21	8-METHOXY-PSORALEN	Leaf	0.0	1.0		--
0	TERPINEOL-PROPIONATE	Shoot				--
0	CIS-1(7),8-DIEN-2-OL	Plant				--
3	SEDANOLIDE	Seed	435.0	900.0		--
31	PSORALEN	Stem				--
0	PINOCARVYL-ACETATE	Plant				--
0	PETROSELINIC-ACID	Seed Oil				--
0	ISOBUTYLIDENE	Leaf		32.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	TRANS-CARVEOL	Essential Oil				--
1	NODAKENIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTENYLBENZENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
8	FRUCTOSE	Plant				--
3	VALINE	Pt	260.0	5600.0		USDA's Ag Handbook 8 and sequelae)
15	ISOPIMPINELLIN	Petiole	0.05	0.41		--
0	P-MENTHA-TRANS-2-8-DIEN-1-OL	Essential Oil				--
0	CARVEOL-ACETATE	Plant				--
0	BIACETYL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	RUTARETIN	Seed		10.0		--
1	DECYL-ACETATE	Shoot				--
0	HEPTANOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	CAMPHENE	Seed Essent. Oil				--
3	GAMMA-DECALACTONE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	EUDESMOL	Fruit Essent. Oil	5000.0	10000.0		--
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	TRANS-OCIMENE	Root Essent. Oil		201000.0		--
1	ISOVALERIC-ACID-ETHYL-ESTER	Shoot				--
15	MALIC-ACID	Root				--
9	SINAPIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEX-TRANS-3-EN-1-OL	Essential Oil				--
13	ALPHA-TERPINENE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
15	ISOPIMPINELLIN	Pt	0.05	0.41		--
0	3-N-BUTYL-4,5-DIHYDROPHthalIDE	Seed				--
3	ALPHA-SELINENE	Seed Essent. Oil		20500.0		--
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.
7	GLUCOSE	Plant				--
0	N-METHYL-ANILINE	Stem		0.5		--
0	Z-BUTYLIDENEPHTHALIDE	Plant				--
2	ALPHA-HUMULENE	Seed	20.0	33.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	DIHYDROCARVEOL	Leaf				--
0	AMMONIA	Pt		15480.0		--
0	TRANS-1,2-EPOXYLIMONENE	Seed		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	N-PENTYL-CYCLOHEXADIENE	Fruit Essent. Oil		3000.0		--
60	LIMONENE	Stem Essent. Oil		695000.0		--
14	ARGININE	Pt	200.0	4105.0		USDA's Ag Handbook 8 and sequelae)
0	FURANOCOUMARINS	Pt	0.86	2.86		--
5	ALPHA-IONONE	Plant				--
3	CIS-OCIMENE	Leaf Essent. Oil		145000.0		--
2	ALPHA-SANTALOL	Seed				--
0	BUTYLPHENYL-KETONE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
43	PROTocatechuic-acid	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ISOBUTYLIDENE-3-A,4-DIHYDROPHthalide	Seed Essent. Oil		17000.0		--
3	ASPARTIC-ACID	Pt	1130.0	23880.0		USDA's Ag Handbook 8 and sequelae)
60	CINNAMALDEHYDE	Seed Essent. Oil		1500.0		--
31	MYRISTICIN	Plant				--
8	INOSINE	Shoot				--
1	ANGELIC-ACID	Plant				--
7	LINALYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	8-HYDROXYFALCARINONE	Root		8.3		--
2	TERPINEOL-ACETATE	Shoot				--
0	CHRYSOERIOL-7-APIOSYL-GLUCOSIDE	Seed				--
0	SEDANOIC-ANHYDRIDE	Essential Oil	30000.0	80000.0		--
2	PHYTOSTEROLS	Pt	60.0	1120.0		--
13	PALMITIC-ACID	Essential Oil				--
3	ISOAMYL-ALCOHOL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DIHYDRONEOCARVEOL	Seed Essent. Oil		1000.0		--
0	NODAKENETIC	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
12	FORMALDEHYDE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	SALICYLATES	Pt		0.0		--
9	VALERIC-ACID	Flower				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CHRYSOERIOL-GLUCOSIDE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	P-MENTHA-TRANS-1(7)-8-DIEN-2-OL	Essential Oil				--
6	TARTARIC-ACID	Pt				--
15	ISOPIMPINELLIN	Root				--
0	P-CYMOL	Leaf Essent. Oil				--
0	HEPTANAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
102	CAFFEIC-ACID	Root				--
0	FENCHOL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	TRANS-OCIMENE	Leaf Essent. Oil		20000.0		--
0	UNDECAN-1-AL	Shoot				--
0	LUTEOLIN-7-APIOSYL-GLUCOSIDE	Seed				--
1	METHYL-AMINE	Pt		6.4		--
0	HEX-CIS-3-EN-1-OL-PYRUVATE	Shoot				--
15	ISOPIMPINELLIN	Plant				--
0	3-METHYL-4-ETHYL-HEXANE	Root Essent. Oil		124000.0		--
0	(+)-SELINENE	Essential Oil				--
2	7-[3-(3,4-DIHYDROXY-4-HYDROXYMETHYL-TETRAHYDRO-FURAN-2-YLOXY)-4,5-DIHYDROXY-6-HYDROXYMETHYL-TETRAHYDRO-PYRAN-2-YLOXY]...	Seed				--
3	GERANYL-BUTYRATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
17	ANGELICIN	Stem				--
3	XYLOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ALPHA-CEDRENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	AMMONIA	Stem		19600.0		--
0	TOLUIDINE	Pt		1.1		--
0	N-PENTYL-BENZENE	Seed	190.0	300.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ARABINOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	FUMARIC-ACID	Root				--
0	CIS-LIMONENE-OXIDE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	SABINENE	Leaf Essent. Oil				--
10	BUTYLIDENE-PHTHALIDE	Et		12000.0		--
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Seed Essent. Oil		255.0		--
2	ASPARAGINE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
77	CHLOROGENIC-ACID	Root				--
0	VERBENOL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	INDOSTEROL	Stem		300.0		--
101	APIGENIN	Seed				--
0	8-HYDROXY-5-METHOXY-PSORALEN	Seed		375.0		--
11	GAMMA-TERPINENE	Leaf Essent. Oil				--
71	THYMOL	Seed				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	SEDANOIC-ALDEHYDE	Plant				--
2	PROPIONALDEHYDE	Shoot				--
15	OSTHOL	Leaf				--
0	DIHYDRONEOISOCARVEOL	Seed Essent. Oil		2000.0		--
0	N-PENTYL-CYCLOHEXADIENE	Seed	55.0	510.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	FOLIACIN	Pt	0.3	5.6		USDA's Ag Handbook 8 and sequelae)
0	URONIC-ACID	Root				--
1	CARVEOL	Plant				--
0	P-MENTHA-CIS-2-8-DIEN-1-OL	Essential Oil				--
1	N-BUTYLPHTHALIDE	Seed Essent. Oil	25600.0	72000.0		--
18	GUAIACOL	Seed				--
2	ISOBUTYRIC-ACID	Shoot				--
2	ELEMOL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	E-LIGUSTILIDE	Plant		1.0		--
0	TRANS-OCIMENE	Fruit Essent. Oil		3000.0		--
21	NICOTINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	LUTEOLIN-GLUCOSIDE	Seed				--
14	SHIKIMIC-ACID	Root				--
15	METHIONINE	Pt	50.0	1120.0		USDA's Ag Handbook 8 and sequelae)
0	HEX-CIS-3-EN-1-OL	Essential Oil				--
3	ALPHA-SELINENE	Seed	95.0	250.0		--
3	ISOLEUCINE	Pt	200.0	4290.0		USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-ISOVALIDENE-PHTHALIDE	Plant		0.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SEDANONIC-ALDEHYDE	Shoot				--
0	ASPARAGINE(FREE)	Seed				Wealth of India.
43	XANTHOTOXIN	Pt	0.04	1.6		--
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	DIACETYL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NEROL-ACETATE	Shoot				--
1	TIGLIC-ACID	Plant				--
0	N-PENTYL-AMINE	Pt		0.8		--
0	APIUMOSIDE	Seed		125.0		--
0	FARCARINOL	Root	200.0	1400.0		--
4	LYSINE	Pt	260.0	5410.0		USDA's Ag Handbook 8 and sequelae)
8	FRUCTOSE	Shoot				--
0	ALPHA-EUDESOL	Seed	76.0	225.0		--
10	BUTYLIDENE-PHTHALIDE	Leaf Essent. Oil		15000.0		--
78	LUTEOLIN	Pt	0.0	400.0		--
0	3-ISOVALIDENE-3A,4-DIHYDROPHTHALIDE	Shoot		0.003		--
0	EPOXYCARYOPHYLLENE	Seed Essent. Oil		5500.0		--
0	TETRAHYDROPHTHALIDE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
5	GERANYL-ACETATE	Leaf				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	5-ALPHA-ANDROST-16-EN-3-ONE	Shoot		0.009		--
6	MYRISTIC-ACID	Pt	10.0	190.0		USDA's Ag Handbook 8 and sequelae)
25	IMPERATORIN	Leaf				--
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.
10	5-METHOXY-PSORALEN	Leaf Wax		2.0		--
13	ALPHA-TERPINENE	Leaf Essent. Oil				--
0	CHOLINE-ASCORBATE	Leaf				--
0	SEDANOIC-ACID	Plant				--
7	PIPERITONE	Seed Essent. Oil				--
18	OLEIC-ACID	Seed Oil				--
0	DIHYDRO-ISOCARVEOL	Seed Essent. Oil		2000.0		--
0	N-HEXYLCYCLOHEXADIENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
176	QUERCETIN	Pt		0.0		--
2	UNDECANAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
43	XANTHOTOXIN	Seed				--
5	CNIDILIDE	Root				--
0	P-MENTHA-CIS-1(7)-8-DIEN-2-OL	Essential Oil				--
14	SUCROSE	Plant				--
1	QUINIC-ACID	Pt				--
10	BUTYLIDENE-PHTHALIDE	Stem Essent. Oil		12000.0		--
2	PALMITOLEIC-ACID	Pt	10.0	190.0		USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	GUAIACOL	Leaf				--
0	(E)-ALPHA-BERGAMOTENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	E-BUTYLIDENEPHTHALIDE	Plant				--
0	TRANS-LIMONENE-OXIDE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TOLUIDINE	Stem		1.1		--
78	LUTEOLIN	Seed				--
0	SFA	Pt	370.0	6900.0		USDA's Ag Handbook 8 and sequelae)
0	HEPTAN-1-OL	Shoot				--
8	ISOIMPERATORIN	Seed				--
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Leaf		0.003		--
3	SEDANOLIDE	Seed Essent. Oil				--
0	GLUTAMIC-ACID(FREE)	Seed				Wealth of India.
43	XANTHOTOXIN	Plant	6.0	183.0		--
0	3-N-BUTYLHEXAHYDROPHthalIDE	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		--
4	NERAL	Shoot				--
71	THYMOL	Plant				--
0	N-METHYL-PHENETHYLAMINE	Pt		0.5		--
60	LIMONENE	Essential Oil				--
0	APIUMETRIN	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	DELTA-7,8-OCTADECANOIC-ACID	Seed				Wealth of India.
0	LUTEOLIN-GLYCOSIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	FORMALDEHYDE	Shoot				--
0	ALLOOCIMENE-II	Leaf Essent. Oil		1000.0		--
0	CIS-DIHYDRO-ISOCARVONE	Fruit Essent. Oil		15000.0		--
10	BUTYLIDENE-PHTHALIDE	Fruit Essent. Oil		4000.0		--
101	APIGENIN	Pt	0.0	1910.0		--
2	PROPIONALDEHYDE	Leaf	3.0	1050.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3-ISOBUTYLIDENE-3-(A)-4-DIHYDRO-PHTHALIDE	Seed Essent. Oil	727.0	10000.0		--
0	P-COUMAROYL-QUINIC-ACID	Leaf				--
8	GENTISIC-ACID	Leaf				Griffiths, L. A. 1959. On the Distribution of Gentisic Acid in Green Plants. J. Exp. Biol. 10: 437.
0	N-PENTYL-AMINE	Stem		0.8		--
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	LEUCINE	Pt	310.0	6530.0		USDA's Ag Handbook 8 and sequelae)
20	CHOLINE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	BUTYLPHENYL-KETONE	Seed	38.0	60.0		Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	SEDANENOLIDE	Seed	90.0	900.0		--
76	EUGENOL	Seed Essent. Oil				--
0	OCTAN-1-AL	Shoot				--
2	DIHYDROCARVEOL	Seed Essent. Oil		1000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	MYRTENOL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
0	PROPIONIC-ALDEHYDE	Plant				--
22	UMBELLIFERONE	Seed				--
43	XANTHOTOXIN	Root				--
2	CITRONELLYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-MENTHA-2,8-DIEN-1-OL	Seed Essent. Oil				--
0	SUCCINIC-ACID-DEHYDROGENASE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
25	IMPERATORIN	Root				--
0	QUERCETIN-3-O-BETA-GLUCOSIDE	Plant				Stitt, Paul. Why George should eat broccoli.
10	BUTYLIDENE-PHTHALIDE	Seed Essent. Oil		4000.0		--
26	BERGAPTEN	Pt	0.04	0.81		--
0	GRAVEOBIOSIDE-B	Seed				--
26	BERGAPTEN	Root				--
0	DIPENTENE-OXIDE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	DODECANAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-FARNESENE	Essential Oil				--
32	ALPHA-TOCOPHEROL	Seed				--
0	SESALIN	Seed				--
18	MANNITOL	Stem		20000.0		--
0	HEPTAN-1-AL	Shoot				--
0	ISOCITRIC-ACID	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-ISOVALIDENE-3A,4-DIHYDROPHthalIDE	Essential Oil		255.0		--
3	SEDANOLIDE	Essential Oil				--
0	CAR-3-ENE	Essential Oil				--
0	L-TRYPTOPHAN	Seed				--
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	DEHYDROASCORBIC-ACID	Plant				--
22	MYRCENE	Shoot				--
4	THREONINE	Pt	190.0	4105.0		USDA's Ag Handbook 8 and sequelae)
0	N-METHYL-ANILINE	Pt		7.0		--
0	CIS-LIGUSTILIDE	Root				--
0	APIUMETIN	Seed		13.0		--
0	DELTA-6,7-OCTADECANOIC-ACID	Seed				Wealth of India.
5	LUTEOLIN-7-O-BETA-GLUCOSIDE	Plant				--
0	ALLOOCIMENE-I	Leaf Essent. Oil		1000.0		--
0	CIS-CARVYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	SERINE	Pt	200.0	4105.0		USDA's Ag Handbook 8 and sequelae)
1	QUINIC-ACID	Root				--
0	BUTYLIDENE-NAPHTHALIDE	Essential Oil				--
7	PIPERITONE	Fruit				--
0	3-ISOBUTYLIDENE-3-(A)-4-DIHYDROPHthalIDE	Shoot		0.7		--
31	CARYOPHYLLENE	Seed Essent. Oil		1700.0		--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GAMMA-TERPINEOL	Seed	57.0	125.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	DIMETHYL-AMINE	Stem		5.1		--
0	CIS-DIHYDRO-ISOCARVONE	Seed Essent. Oil		15000.0		--
0	5-METHOXY-8-O-BETA-D-GLUCOSYL-OXYPORALEN	Seed		2.9		--
0	TERPINENE	Seed Essent. Oil				--
77	CHLOROGENIC-ACID	Leaf				--
3	BETA-SELINENE	Seed Essent. Oil	55000.0	325000.0		--
3	SCOPOLIN	Leaf				--
0	BETA-HUMULENE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EUDESMOL	Seed Essent. Oil	2900.0	10000.0		--
0	TRANS-OCIMENE	Stem Essent. Oil		67000.0		--
8	INOSINE	Plant				--
2	DIHYDROCARVEOL	Essential Oil				--
5	MYRTENAL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
61	FERULIC-ACID	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	TYROSINE	Pt	90.0	1865.0		USDA's Ag Handbook 8 and sequelae)
43	XANTHOTOXIN	Stem				--
20	CITRONELLAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-MENTH-8(9)-ENE-1,2-DIOL	Seed Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	SUCCINIC-ACID	Pt				--
0	HYPOXANTHINE	Shoot				--
0	ALPHA-TERPINYL-PROPIONATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	N-PENTYL-CYCLOHEXADIENE	Seed Essent. Oil		3000.0		--
13	PALMITIC-ACID	Pt	280.0	5970.0		USDA's Ag Handbook 8 and sequelae)
0	GRAVEOBIOSIDE-A	Seed				--
17	BENZYL-BENZOATE	Shoot				--
0	DELTA-SELINENE	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
2	DIMETHYL-AMINE	Pt		5.1		--
0	TRANS-DIHYROCARVONE	Fruit Essent. Oil		14000.0		--
5	NERYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LINALOOL-ACETATE	Shoot				--
18	GUAIACOL	Shoot				--
23	CITRIC-ACID	Pt				--
4	ISOCHLOROGENIC-ACID	Leaf				--
0	3-ISOVALERIDENE-PHTHALIDE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SEDANOLIC-ACID	Essential Oil				--
1	SENKYUNOLIDE-N	Seed				--
0	QUERCETIN-3-O-GALACTOSIDE	Plant				--
10	3-N-BUTYL-PHTHALIDE	Seed Essent. Oil		108000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-P-MENTHENE-9-AL	Seed				Charalambous, G. (Ed.). 1994. Spices, Herbs and Edible Fungi. Elsevier Science B. V. Amsterdam. 764 pp.
1	DECYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	N-BUTYLPHTHALIDE	Seed	190.0	1800.0		--
20	APIOLE	Essential Oil				--
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	LUTEOLIN-7-APIOSYL-GLUCOSIDE	Fruit				--
3	ALANINE	Pt	220.0	4665.0		USDA's Ag Handbook 8 and sequelae)
1	PYRUVIC-ACID	Shoot				--
30	MENTHONE	Essential Oil				--
0	N-METHYL-PHENETHYLAMINE	Stem		0.5		--
0	TRANS-DIHYDROCARVONE	Seed Essent. Oil		14000.0		--
9	OXALIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	SEDANONIC-ANHYDRIDE	Seed Essent. Oil	30000.0	80000.0		--
0	GAMMA-TERPINEOL	Fruit Essent. Oil	3000.0	5000.0		--
6	ACETALDEHYDE	Shoot				--
77	CHLOROGENIC-ACID	Seed				Wealth of India.
0	5-ALPHA-ANDROST-16-EN-3-ONE	Plant		0.009		--
6	TARTARIC-ACID	Root				--
0	CELEROSIDE	Seed				--
44	SCOPOLETIN	Plant				--
13	BETA-EUDES MOL	Seed	76.0	225.0		--
5	BETA-ELEMENE	Seed Essent. Oil		35000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-OCIMENE	Seed Essent. Oil		3000.0		--
0	INDOSTEROL	Pt		300.0		--
0	CIS-CARVEOL	Seed Essent. Oil		1000.0		--
0	METHYL-PHENYLKETONE	Seed	55.0	90.0		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.
29	TRYPTOPHAN	Pt	90.0	1865.0		USDA's Ag Handbook 8 and sequelae)
0	(-)-MARMESIN	Seed		12.0		--
2	HUMULENE	Seed Essent. Oil				--
0	ALPHA-TERPINYL-ACETATE	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	COLUMBIANETIN	Stem				--
5	P-METHOXY-CINNAMIC-ACID	Seed		7.5		--
4	GLYCOLIC-ACID	Root				--
0	PENTYL-BENZENE	Seed Essent. Oil	200.0	9000.0		--
0	DIHYDRONEOISOCARVEOL	Fruit Essent. Oil		2000.0		--
0	TRANS-CARVYL-ACETATE	Plant		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	NERAL	Leaf				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
18	GUAIACOL	Essential Oil				--
0	CIS-P-MENTHA-2,8-DIEN-1-OL	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ISOBUTYRIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	3-ISOVALERIDENE-3A,4-DIHYDROPHthalIDE	Leaf				--
0	SEDANOIC-ANHYDRIDE	Seed Essent. Oil	79000.0	80000.0		--
32	ALPHA-TOCOPHEROL	Shoot	0.0	64.0		--
1	PYRUVIC-ACID	Plant				--
0	3-ISOVALIDENE-PHTHALIDE	Seed Essent. Oil				--
0	BENZYL-AMINE	Stem		3.4		--