

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Carum carvi*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
19	CARVONE	Seed Essent. Oil	595300.0	900000.0	1.38528277461378	--
37	CARVACROL	Seed Essent. Oil		595300.0		--
19	CARVONE	Essential Oil	264000.0	580000.0	1.456771501873754	--
0	CARBOHYDRATES	Seed	300000.0	554000.0	0.12160149368264386	--
0	CARBOHYDRATES	Fruit	499000.0	554000.0	-1.2239479546663645	--
60	LIMONENE	Essential Oil	250000.0	500000.0	2.140871457019611	--
0	PROTEIN	Seed	190521.0	400000.0	1.478470052739822	--
60	LIMONENE	Seed Essent. Oil		381600.0	0.7234037553203063	--
10	CUMINALDEHYDE	Essential Oil		370000.0	1.0	--
0	PETROSELINIC-ACID	Seed	40000.0	354000.0	-0.8033510875816932	--
18	OLEIC-ACID	Seed	29000.0	241000.0	1.0020612909785875	--
15	FIBER	Seed	112730.0	223000.0	0.6966094834523356	--
0	PROTEIN	Fruit	190521.0	220000.0	1.4813201219223062	--
0	FAT	Seed	100000.0	180000.0	-0.44976698613804794	--
0	FAT	Fruit	127000.0	176826.0	0.7093306748827288	--
15	FIBER	Fruit	112730.0	155640.0	0.13176741912032305	--
0	WATER	Seed	91880.0	155000.0	-0.27862372656365736	--
0	POLYSACCHARIDES	Seed		130000.0	-0.6376825261439872	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
18	OLEIC-ACID	Fruit	54400.0	95648.0	0.2564460151509538	--
0	EO	Seed	20000.0	82000.0	0.4861364448600147	--
13	MUFA	Seed	71250.0	79085.0	-0.21948429390500326	Revised USDA data received 1993.
0	EO	Fruit	30000.0	70000.0	0.54062890380803	--
0	ASH	Fruit	56460.0	67620.0	0.28371563599880156	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASH	Seed	55000.0	67620.0	0.5937289975821403	--
2	(+)-CARVONE	Seed	9000.0	55760.0		--
27	LINOLEIC-ACID	Fruit	20300.0	46714.0	0.3036638054156712	--
27	LINOLEIC-ACID	Seed	19600.0	46714.0	-0.5175834259469172	--
5	STARCH	Fruit		45000.0	-0.3878494415116057	--
5	STARCH	Seed		45000.0	-1.0737470069854615	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
19	CARVONE	Fruit	9000.0	44310.0	1.99999975413892	--
60	LIMONENE	Seed	3000.0	42000.0	2.245951109203175	--
4	PUFA	Seed	32720.0	36320.0	-0.5293414540891105	Revised USDA data received 1993.
8	GLUTAMIC-ACID	Seed	31690.0	35175.0	-0.2758530020526007	Revised USDA data received 1993.
0	PETROSELINIC-ACID	Plant		33020.0		--
19	CARVONE	Seed	10880.0	32640.0	0.5757430989637712	--
60	LIMONENE	Fruit	7860.0	30180.0	3.5781164025182557	--
0	SUGARS	Seed		30000.0	-0.6664407950618276	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	SUGARS	Fruit		30000.0	-0.7603640515097223	--
4	CADINENE	Plant	3720.0	29760.0	1.4141020257548391	--
3	ASPARTIC-ACID	Seed	20840.0	23130.0	0.048029804288976026	Revised USDA data received 1993.
14	POTASSIUM	Seed	10810.0	15670.0	0.2726200242002285	--
14	POTASSIUM	Fruit	12902.0	15665.0	-0.19919899891978007	--
12	GLYCINE	Seed	13220.0	14675.0	0.5382536999822551	Revised USDA data received 1993.
11	GAMMA-TERPINENE	Seed	12.0	14160.0	1.7263032899871258	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Fruit	12.0	14160.0	1.9544259127217853	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	ARGININE	Seed	12520.0	13900.0	-0.45478768617160453	Revised USDA data received 1993.
2	LEUCINE	Seed	12180.0	13520.0	-0.3408978107463804	Revised USDA data received 1993.
3	VALINE	Seed	10370.0	11510.0	-0.061769047027664975	Revised USDA data received 1993.
4	LYSINE	Seed	10310.0	11445.0	-0.08853511037990262	Revised USDA data received 1993.
0	PHYTATE	Seed	10190.0	10900.0	-0.19448774169058122	--
1	SERINE	Seed	9460.0	10500.0	-0.014241088185932402	Revised USDA data received 1993.
0	PROLINE	Seed	9170.0	10180.0	-0.2270794734050652	Revised USDA data received 1993.
3	ALANINE	Seed	9140.0	10150.0	-0.0013229586167773184	Revised USDA data received 1993.
0	EO	Plant		10000.0	0.019853678703787233	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	PHENYLALANINE	Seed	8670.0	9625.0	-0.22873636959027158	Revised USDA data received 1993.
3	ISOLEUCINE	Seed	8260.0	9170.0	-0.16863241397137768	Revised USDA data received 1993.
13	PALMITIC-ACID	Seed	2000.0	9000.0	-0.5139018470842157	--
4	THREONINE	Seed	7560.0	8390.0	0.056493706448137275	Revised USDA data received 1993.
28	CALCIUM	Fruit	6426.0	8160.0	0.993126554897215	--
28	CALCIUM	Seed	1530.0	8160.0	0.7371261230888665	--
8	TYROSINE	Seed	6420.0	7125.0	-0.14274154462014257	Revised USDA data received 1993.
0	SFA	Seed	6200.0	6880.0	-0.5108368608268686	Revised USDA data received 1993.
13	PALMITIC-ACID	Fruit	2000.0	6658.0	-0.2618846307910205	--
4	PHOSPHORUS	Seed	5650.0	6580.0	0.3241524123754052	--
4	PHOSPHORUS	Fruit	5680.0	6302.0	0.9373426112560593	--
7	HISTIDINE	Seed	5500.0	6105.0	-0.005073065220825094	Revised USDA data received 1993.
0	DIHYDROCARVONE	Essential Oil		5000.0	-0.5088490622892315	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINOLENIC-ACID	Seed	600.0	4140.0	-0.5075880129054059	Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
15	METHIONINE	Seed	3610.0	4005.0	-0.07999578248445874	Revised USDA data received 1993.
0	KILOCALORIES	Seed	3330.0	3700.0	-0.9069114205711409	Revised USDA data received 1993.
2	CYSTINE	Seed	3290.0	3650.0	0.34786844092544134	Revised USDA data received 1993.
1	CARVEOL	Seed	120.0	3240.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
19	CARVONE	Plant		3120.0	0.11898806640618137	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
65	MAGNESIUM	Seed	2070.0	2950.0	0.0015393251037586135	--
65	MAGNESIUM	Fruit	2580.0	2863.0	0.3395434445319955	--
102	CAFFEIC-ACID	Seed		2840.0	1.9446682932160153	--
0	DIHYDROPINOL	Essential Oil		2800.0		--
29	TRYPTOPHAN	Seed	2440.0	2710.0	-0.20976729388732002	Revised USDA data received 1993.
11	GAMMA-TERPINENE	Plant	270.0	2215.0	0.3668556912256766	--
0	DIHYDROCARVONE	Seed	240.0	1890.0	1.222391887709424	--
8	STEARIC-ACID	Seed	1000.0	1800.0	-0.5263361525324093	--
0	EICOSENOIC-ACID	Seed	1000.0	1800.0	-1.3117937762239429	--
15	ALPHA-LINOLENIC-ACID	Seed	1500.0	1664.0	-0.29806400798854177	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Fruit	1500.0	1664.0	-0.39890612938011816	--
22	MYRCENE	Seed	12.0	1560.0	-0.1814418669231581	--
22	MYRCENE	Fruit	180.0	1560.0	-0.14096760282697604	--
0	DIHYDROCARVONE	Fruit	240.0	1500.0		--
16	P-CYMENE	Seed	0.1	1320.0	-0.39090586317354775	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-CARYOPHYLLENE	Seed	20.0	1320.0	0.9233136232225039	--
14	PERILLYL-ALCOHOL	Plant	160.0	1310.0	-1.0	--
11	ALPHA-PHELLANDRENE	Seed	3.0	1230.0	-0.5312072630899651	--
8	STEARIC-ACID	Plant	1100.0	1221.0	-0.31662981705011717	--
6	IRON	Seed	123.0	1200.0	4.874936682884126	--
0	HEXADECENIC-ACID	Seed		1000.0		Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
2	PALMITOLEIC-ACID	Fruit	900.0	999.0	-0.16284284724499656	--
2	PALMITOLEIC-ACID	Seed	900.0	999.0	-0.27448704739952007	USDA's Ag Handbook 8 and sequelae)
23	TERPINEN-4-OL	Plant	120.0	985.0	0.14761831910973383	--
31	MYRISTICIN	Seed	60.0	985.0	-0.9148647060412254	--
2	DIHYDROCARVEOL	Plant		950.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-LIMONENE-EPOXIDE	Seed	300.0	900.0		--
9	CAMPHENE	Fruit	1.0	900.0	0.021412618138643334	--
9	CAMPHENE	Seed	1.0	900.0	1.5222256000900138	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
14	PERILLYL-ALCOHOL	Essential Oil		800.0		--
2	DIHYDROCARVEOL	Seed	200.0	780.0		--
2	PHYTOSTEROLS	Fruit		760.0	-0.23881522589243726	--
2	PHYTOSTEROLS	Seed		760.0	-0.4421772689232783	USDA's Ag Handbook 8 and sequelae)
2	DIHYDROCARVEOL	Fruit	360.0	720.0		--
0	TRANS-1-CARVEOL	Seed	230.0	690.0		--
13	BETA-PINENE	Fruit	270.0	600.0	-0.2786206877223514	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-LIMONENE-EPOXIDE	Seed	200.0	600.0		--
13	BETA-PINENE	Seed	40.0	600.0	-0.6190200878086086	--
0	(+)-DIHYDROCARVEOL	Essential Oil		600.0		--
28	ALPHA-PINENE	Seed	4.0	540.0	-0.4451814085289362	--
28	ALPHA-PINENE	Fruit	42.0	540.0	-0.577800039343025	--
0	CARVYL-ACETATE	Seed	45.0	455.0		--
1	DIHYDROCARVYL-ACETATE	Seed	45.0	455.0		--
6	MYRISTIC-ACID	Seed	400.0	444.0	-0.29019087360930124	USDA's Ag Handbook 8 and sequelae)
6	MYRISTIC-ACID	Fruit	400.0	444.0	-0.24819764617872128	--
1	CARVEOL	Plant		430.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	MYRISTICIN	Fruit	60.0	420.0		--
60	LIMONENE	Plant		420.0	-0.22767736339342154	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
47	BETA-SITOSTEROL	Seed		420.0	-0.4698064371659858	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	2,8-P-MENTHADIENE-1-OL	Seed	120.0	365.0		--
0	TRANS-DIHYDROCARVONE	Fruit	177.0	354.0	1.0	--
0	TRANS-DIHYDROCARVONE	Seed	15.0	354.0	-1.0	--
1	SODIUM	Seed	149.0	340.0	-0.17599424618728202	--
0	2,8-P-MENTHADIENE-6-OL	Seed	110.0	330.0		--
12	STIGMASTEROL	Seed		310.0	-0.13634492946832524	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
13	FALCARINDIOL	Root		290.0	1.3544986584188263	--
6	IRON	Fruit	123.0	286.0	0.6069967345672661	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-2-CARVEOL	Seed	75.0	230.0		--
0	DIHYDROCARVONE	Plant		230.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	SODIUM	Fruit	149.0	212.0	-0.16384706454945608	--
1	TRANS-CARVEOL	Seed	105.0	210.0	-1.0	--
8	DELTA-3-CARENE	Fruit	90.0	180.0	-0.31208082478300797	--
8	DELTA-3-CARENE	Seed	90.0	180.0	-0.16222142113076254	--
0	CIS-LIMONENE-DIEPOXIDE	Seed	55.0	160.0		--
0	1-P-MENTHENE-6-AN-OL	Seed	50.0	155.0		--
22	MYRCENE	Plant		150.0	-0.3113042330188643	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-LIMONENE-DIEPOXIDE	Seed	45.0	140.0		--
0	1-P-MENTHENE-8,9-DIOL	Seed	40.0	125.0		--
31	MYRISTICIN	Plant		120.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	CAPRIC-ACID	Seed	100.0	110.0	-0.5239374828451797	USDA's Ag Handbook 8 and sequelae)
7	LAURIC-ACID	Fruit	100.0	110.0	-0.44416811720185917	--
7	LAURIC-ACID	Seed	100.0	110.0	-0.511344659660987	USDA's Ag Handbook 8 and sequelae)
3	CAPRIC-ACID	Fruit	100.0	110.0	-0.6828803041071304	--
8	DELTA-3-CARENE	Plant		100.0	-0.29930598714761825	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	LINALOOL	Seed	5.0	96.0	-0.464767259448611	--
0	LINALOL	Fruit	48.0	96.0	-0.6231721368623974	--
1	DIHYDROCARVYL-ACETATE	Fruit	45.0	90.0		--
25	P-COUMARIC-ACID	Seed		86.0	-0.2878871950232701	--
0	8-P-MENTHENE-1,2-DIOL	Seed	30.0	85.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	8-P-MENTHENE-7-AL	Seed	30.0	85.0		--
0	8-P-MENTHENE-1,2-DIOL-ISOMER	Seed	30.0	85.0		--
0	CARVONE-EPOXIDE(8,9)	Seed	25.0	80.0		--
77	ZINC	Seed	47.0	66.0	0.592445203168114	--
77	ZINC	Fruit	47.0	61.0	0.9235898750204936	--
5	SABINENE	Seed	4.0	60.0	-0.43864204594661615	--
11	PERILLALDEHYDE	Seed	20.0	60.0	-0.4953847300732596	--
5	SABINENE	Fruit	30.0	60.0	-0.5167574947017265	--
39	NIACIN	Fruit	21.0	56.0	-0.0628056202874991	--
39	NIACIN	Seed	21.0	56.0	0.3925544644928447	USDA's Ag Handbook 8 and sequelae)
0	CARVYL-ACETATE	Plant		55.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	LIMONENE-4-OL	Seed	20.0	55.0		--
1	DIHYDROCARVYL-ACETATE	Plant		55.0	-0.6178866361535852	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-DIHYDROCARVONE	Seed	15.0	50.0	-0.70302870575708	--
2	N-OCTANAL	Seed	24.0	48.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	N-OCTANAL	Fruit	24.0	48.0		--
0	CIS-CARVEOL	Seed	21.0	42.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BENZOIC-ACID-4-O-BETA-D-GLUCOSIDE	Seed		37.0	-1.0	--
14	MANGANESE	Fruit	13.0	34.0	-0.17934592524588852	--
14	MANGANESE	Seed	13.0	34.0	-0.24317239745397942	--
7	SALICYLATES	Seed	28.0	30.0	-0.17921879008985586	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Plant		30.0	-0.5545069597862352	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	CAMPESTEROL	Seed		30.0	-0.5601817141925177	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	P-1(7),8-MENTHADIENE-6-OL	Seed	10.0	25.0		--
13	BETA-PINENE	Plant		20.0	-0.4138919250596763	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-CARYOPHYLLENE-OXIDE	Seed	5.0	20.0		--
28	ALPHA-PINENE	Plant		20.0	-0.46732168198180957	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DELTA-3-CARENE-EPOXIDE	Seed	5.0	20.0		--
12	COPPER	Seed	9.0	18.0	0.2889427800893567	--
24	CHROMIUM	Fruit		15.5	1.6694676930187362	--
24	CHROMIUM	Seed		15.5	1.5756788450079844	--
12	COPPER	Fruit	9.0	13.8	0.07635430476669072	--
5	N-NONANAL	Fruit	6.0	12.0		--
13	ALPHA-TERPINENE	Seed	6.0	12.0	-0.5062619617372923	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	N-NONANAL	Seed	6.0	12.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	(-)-DIHYDROCARVONE	Essential Oil		10.0		--
3	NICKEL	Seed	7.0	10.0	1.003733061132988	--
3	NICKEL	Fruit		7.0	1.349383302912262	--
11	ALPHA-PHELLANDRENE	Fruit	3.0	6.0	-0.5736201696885931	--
15	RIBOFLAVIN	Seed	3.0	4.0	0.18234587940570884	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	RIBOFLAVIN	Fruit	3.0	4.0	-0.21615825716438572	--
31	THIAMIN	Fruit	3.0	4.0	-0.17059389090821606	--
31	THIAMIN	Seed	3.0	4.0	-0.6165338688916807	USDA's Ag Handbook 8 and sequelae)
53	BETA-CAROTENE	Seed		2.0	-0.30429005311638807	--
53	BETA-CAROTENE	Fruit		2.0	-0.14693466516508752	--
2	COBALT	Seed		1.0	-0.16257255524625883	--
2	COBALT	Fruit		1.0	-0.4140559583804006	--
0	ABSCISIC-ACID	Seed		0.12	-0.49402184451606584	--
0	8-CIS-MENTHENE	Seed		0.1		--
67	1,8-CINEOLE	Seed		0.1	-0.7134832654336017	--
15	CITRONELLOL	Seed		0.1		--
75	KAEMPFEROL	Flower				--
6	FURFURAL	Fruit				--
7	ASTRAGALIN	Seed				--
0	NEOISODIHYDROCARVEOL	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ISORHAMNETIN-3-GLUCOSIDE	Seed				Wealth of India.
2	(+)-CARVONE	Plant				--
6	ACETALDEHYDE	Fruit				--
0	BETA-FENCHENE	Seed				--
0	POLYACETYLENES	Root				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
176	QUERCETIN	Leaf				--
0	(E)-P-MENTHA-2,8-DIEN-1-OL	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
75	KAEMPFEROL	Leaf				--
23	ALPHA-TERPINEOL	Seed				--
1	ISORHAMNETIN-3-GALACTOSIDE	Seed				Wealth of India.
35	TANNIN	Plant				--
43	XANTHOTOXIN	Seed				--
0	ISODIHYDROCARVONE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NEOISODIHYDROCARVEOL	Fruit				--
37	CARVACROL	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
1	CARVEOL	Essential Oil				--
0	PHYTOFLUENE	Plant				Wealth of India.
0	(Z)-DIHYDROCARVONE	Seed				--
75	KAEMPFEROL	Seed				--
0	QUERCETIN-3-GLUCURONIDE	Seed				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
17	THUJONE	Seed				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
2	METHANOL	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HYDROXYCOUMARINS	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
22	UMBELLIFERONE	Root				--
10	5-METHOXY-PSORALEN	Plant				Wealth of India.
6	FURFURAL	Seed				--
0	NEODIHYDROCARVEOL	Fruit				--
22	UMBELLIFERONE	Plant				Wealth of India.
0	PETROSELINIC-ACID	Seed Oil				--
0	(E)-DIHYDROCARVONE	Seed				--
22	ISOQUERCITRIN	Shoot				--
3	FALCARINONE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	TRIFOLIN	Seed				--
2	DIACETYL	Fruit				--
176	QUERCETIN	Seed				--
0	ALPHA-THUJENE	Seed				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	(-)-TRANS-CARVEOL	Seed Essent. Oil				--
22	ISOQUERCITRIN	Seed				--
0	FALCARINOL-ONE	Root				--
2	DIACETYL	Seed				--
12	HERNIARIN	Plant				Wealth of India.
1	TRANS-CARVEOL	Flower Essent. Oil				--
2	DIHYDROCARVEOL	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Root				--
3	MANNOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
0	(+)-TRANS-CARVEOL	Seed Essent. Oil				--
30	HYPEROSIDE	Seed				--
0	FALCARINDION	Root				--
10	5-METHOXY-PSORALEN	Seed				--
7	GLUCOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
0	TRANS-BETA-OCIMENE	Seed				--
1	DECAN-1-AL	Seed				--
4	CALCIUM-OXALATE	Seed				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	P-MENTHA-2,8-DIEN-1-OL	Seed				--
0	ISODIHYDROCARVONE	Fruit				--
2	BETA-MYRCENE	Seed				--
0	2,4-HEXADIENAL	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MANNANS	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
0	TRICYCLEN	Fruit				--
3	BETA-PHELLANDRENE	Seed				Wealth of India.
0	HEXA-2,4-DIEN-1-AL	Seed				--
0	(-)-LIMONENE	Seed Essent. Oil				--
1	GALACTOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
44	SCOPOLETIN	Root				--
0	DECANAL	Seed				--
44	SCOPOLETIN	Plant				Wealth of India.
0	D-PERILLALDEHYDE	Fruit				--
0	ISO-DIHYDROCARVEOL	Fruit				--
5	BETA-ELEMENE	Seed Essent. Oil				--
37	CARVACROL	Plant				--
0	(-)-CIS-CARVEOL	Seed Essent. Oil				--
0	ARABINOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
2	GERMACRENE-D	Seed Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISO-DIHYDROCARVEOL	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	(+)-LIMONENE	Seed Essent. Oil				--
0	FUCOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
0	QUERCETIN-3-O-CAFFEYL-GLUCOSIDE	Seed				--
0	RHAMNOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
6	ACETALDEHYDE	Seed				--
0	D-DIHYDROPINOL	Seed				--
5	BETA-ELEMENE	Essential Oil				--
0	TRICYCLENE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	(+)-CIS-CARVEOL	Seed Essent. Oil				--
21	8-METHOXY-PSORALEN	Plant				Wealth of India.
2	GERMACRENE-D	Essential Oil				--
0	METHYL-3,7-DIMETHYL-2,6-OCTADIENOATE	Seed				--
176	QUERCETIN	Fruit				--
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Seed				--
0	(Z)-BETA-OCIMENE	Seed				--
0	CIS-CARVEOL	Flower Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	CUMINALDEHYDE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	QUERCETIN-3'-GLUCOSIDE	Seed				Wealth of India.
17	THUJONE	Fruit				--
0	D-PERILLALDEHYDE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	TERPINOLENE	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	KAEMPFEROL-3-O-GLUCOSIDE	Seed				Wealth of India.
0	4-METHYL-BENZALDEHYDE	Seed				--
13	GERANIAL	Seed				--
0	(-)-CARVONE	Seed Essent. Oil				--
0	CIS-BETA-OCIMENE	Seed				--
0	QUERCETIN-3-O-GALACTOSIDE	Seed				Wealth of India.
2	QUERCETIN-3-O-BETA-D-GLUCOSIDE	Seed				--
0	(E)-BETA-OCIMENE	Seed				--
0	KAEMPFEROL-3-O-GALACTOSIDE	Seed				Wealth of India.
9	TERPINOLENE	Fruit				--
4	CALCIUM-OXALATE	Fruit				--
0	2-METHYL-BENZALDEHYDE	Seed				--
0	NEODIHYDROCARVEOL	Seed				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-ELEMENE	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	XYLOSE	Seed				Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin.
2	(+)-CARVONE	Seed Essent. Oil				--
2	METHANOL	Fruit				--
0	CIS-P-MENTH-8-EN-1-OL	Plant				--
176	QUERCETIN	Flower				--
0	(Z)-P-MENTHA-2,8-DIEN-1-OL	Seed				--