

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Pimpinella anisum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,4-BENZOQUINONE	Leaf				--
0	1,4-BENZOQUINONE	Root				--
0	1,4-BENZOQUINONE	Tissue Culture				--
0	1-(1-METHYL-CYCLOHEXYL)-2-HYDROXY-4-METHYLBENZENE-MET.-CHAV	Plant				--
0	1-(1-METHYL-CYCLOHEXYL)-2-HYDROXY-4-METHYLBENZENE-METHYL-CHAV	Plant				--
0	1-METHYL-4-(1-PROPENYL)-BENZENE	Plant				--
0	1-METHYL-4-ISOBUTYLBENZENE	Plant				--
0	1-PROPENYL-2-HYDROXY-5-METHOXY-BENZENE-2-(2-METHYL-BUTYRATE)	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	1-PROPENYL-2-HYDROXY-5-METHOXY-BENZENE-2-(2-METHYL-BUTYRATE)	Fruit				--
0	2,6,10,14-TETRAMETHYLPENTADECANE	Plant				--
0	4-(BETA-D-GLUCOPYRANOSYLOXY)-BENZOIC-ACID	Plant				--
0	4-(BETA-D-GLUCOPYRANOSYLOXY)-BENZOIC-ACID	Seed		9000.0	1.4141463884894743	--
0	4-4'-DIMETHOXY-STILBENE	Seed Essent. Oil				--
0	4-METHOXY-2-(PROP-TRANS-1-ENYL)-PHENYL-(DL)-2-METHYLBUTANOATE	Shoot Essent. Oil		15000.0		--
0	4-METHOXY-2-(TRANS-1-PROPENYL)-PHENYL-2-METHYLBUTYRATE	Seed				--
0	4-METHOXY-2-(TRANS-1-PROPENYL)-PHENYL-2-METHYLBUTYRATE	Plant				--
0	411/	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	5-METHOXY-PSORALEN	Seed				--
0	ABSCISIC-ACID	Seed		0.2	0.09148552676223409	--
6	ACETALDEHYDE	Fruit				--
6	ACETALDEHYDE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	ACETOANISOLE	Seed		100.0		--
0	ACETOANISOLE	Fruit		100.0		--
19	ACETYL-CHOLINE	Seed		64.0	-0.30258926220331656	--
0	ALPHA-HIMACHALENE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
28	ALPHA-PINENE	Seed	1.0	306.0	-0.47075335776323696	--
28	ALPHA-PINENE	Fruit	1.0	306.0	-0.6388928640672148	--
28	ALPHA-PINENE	Essential Oil				--
13	ALPHA-TERPINENE	Essential Oil				--
23	ALPHA-TERPINEOL	Seed		1.0	-0.5030431687010171	--
23	ALPHA-TERPINEOL	Fruit		1.0	-0.40768751823050187	--
0	ALPHA-THUJENE	Essential Oil				--
32	ALPHA-TOCOPHEROL	Leaf				--
32	ALPHA-TOCOPHEROL	Root				--
32	ALPHA-TOCOPHEROL	Tissue Culture				--
0	ALPHA-TOCOQUINONE	Leaf				--
0	ALPHA-TOCOQUINONE	Root				--
0	ALPHA-TOCOQUINONE	Tissue Culture				--
1	ALPHA-ZINGIBERENE	Plant				--
0	ANETHOL-GLYCOL	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
36	ANETHOLE	Tissue Culture				--
36	ANETHOLE	Root				--
36	ANETHOLE	Seed Essent. Oil	800000.0	900000.0	1.0	--
36	ANETHOLE	Shoot				--
36	ANETHOLE	Essential Oil				--
36	ANETHOLE	Seed				--
36	ANETHOLE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
7	ANISALDEHYDE	Fruit		300.0	-1.3470948397420839	--
7	ANISALDEHYDE	Essential Oil				--
7	ANISALDEHYDE	Seed	140.0	1960.0	1.383989134171019	--
6	ANISIC-ACID	Fruit				--
6	ANISIC-ACID	Essential Oil				--
6	ANISIC-ACID	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	ANISKETONE	Fruit		731.0		--
0	ANISKETONE	Seed		731.0		--
0	ANISYL KETONE	Seed Essent. Oil				--
2	ANISYL-ALCOHOL	Seed	100.0	1750.0		--
2	ANISYL-ALCOHOL	Fruit	100.0	1750.0	1.0	--
101	APIGENIN	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	APIGENIN-7-GLUCOSIDE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	APIGENIN-7-O-GLUCOSIDE	Seed				--
3	AR-CURCUMENE	Seed		200.0		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
3	AR-CURCUMENE	Fruit		200.0		--
112	ASCORBIC-ACID	Seed	8.0	9.0	-0.33305350561319974	--
112	ASCORBIC-ACID	Fruit	8.0	9.0	-0.2839294125391348	--
0	ASH	Fruit	66000.0	77000.0	0.526613994855476	--
0	ASH	Seed	60000.0	100000.0	1.5676426558251149	--
10	AZULENE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
26	BERGAPTEN	Tissue Culture		5000.0		--
26	BERGAPTEN	Fruit				--
26	BERGAPTEN	Seed				--
9	BETA-AMYRIN	Plant				--
9	BETA-AMYRIN	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
6	BETA-BISABOLENE	Tissue Culture				--
6	BETA-BISABOLENE	Plant				--
6	BETA-BISABOLENE	Essential Oil				--
0	BETA-CARYOPHYLLENE	Plant				--
0	BETA-CARYOPHYLLENE	Seed Essent. Oil				--
0	BETA-CARYOPHYLLENE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	BETA-ELEMENE	Seed Essent. Oil				--
0	BETA-FARNESENE	Plant				--
0	BETA-FARNESENE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	BETA-HIMACHALENE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
13	BETA-PINENE	Fruit		1.0	-0.2978113268433539	--
13	BETA-PINENE	Seed		1.0	-0.6922432681985977	--
47	BETA-SITOSTEROL	Tissue Culture				--
0	BISABOLENE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
4	BORON	Seed		20.0	-0.19502544137632458	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).
4	BORON	Fruit		20.0	-0.4012297753721551	--
6	BUTYRIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CADALENE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
102	CAFFEIC-ACID	Seed		2060.0	1.1988438057610096	--
102	CAFFEIC-ACID	Plant				--
0	CAFFEOYLQUINIC-ACID	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	CALCIUM	Seed	6460.0	7843.0	0.6789065535817028	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Fruit	7138.0	7843.0	0.9199755165775227	--
9	CAMPHENE	Fruit		119.0	-0.30245730401923043	--
9	CAMPHENE	Essential Oil				--
9	CAMPHENE	Seed		119.0	-1.1787017615236954	--
41	CAMPHOR	Seed Essent. Oil				--
0	CARBOHYDRATES	Seed	453000.0	552000.0	0.1136530896320493	--
0	CARBOHYDRATES	Fruit	509000.0	552000.0	-1.234642982477675	--
0	CARVENE	Seed		4240.0		--
0	CARVENE	Fruit		4240.0		--
19	CARVONE	Seed Essent. Oil				--
10	CHAMAZULENE	Essential Oil				--
77	CHLOROGENIC-ACID	Seed		1000.0	-0.58319807588173	--
77	CHLOROGENIC-ACID	Plant				--
20	CHOLINE	Seed		3950.0	2.1437280155533487	--
20	CHOLINE	Plant				--
60	CINNAMALDEHYDE	Seed Essent. Oil				--
6	CINNAMYL-ALCOHOL	Seed Essent. Oil				--
1	CIS-ANETHOLE	Essential Oil				--
1	CIS-ANETHOLE	Seed Essent. Oil				--
1	CIS-ANETHOLE	Fruit		200.0	-0.20203050891044272	--
1	CIS-ANETHOLE	Seed		200.0	-1.0	--
3	CIS-OCIMENE	Fruit		25.0	-1.0	--
3	CIS-OCIMENE	Seed		25.0	-1.0	--
12	COPPER	Seed		9.0	-0.5274011339177476	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	COUMARINS	Seed				Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
5	CRESOL	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
3	CYNAROSIDE	Seed		1280.0	1.0	--
7	D-CARVONE	Plant				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	DELTA-ELEMENE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
1	DIANETHOLE	Fruit				--
1	DIANETHOLE	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	DIANISOIN	Seed				Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
0	DIHYDROCARVONE-ACETATE	Seed Essent. Oil				--
1	DIHYDROCARVYL-ACETATE	Plant				--
0	EO	Seed	6100.0	140000.0	1.219367244545378	--
0	EO	Tissue Culture				--
0	EO	Plant	10000.0	60000.0	3.819765018088099	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EPOXY-PSEUDOISOEUGENOL-(2-METHYL-BUTYRATE)	Plant				--
12	ESTRAGOLE	Seed Essent. Oil		40000.0	-1.2234041605170691	--
12	ESTRAGOLE	Fruit				--
12	ESTRAGOLE	Essential Oil		815000.0	0.5522423148479244	--
12	ESTRAGOLE	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.
76	EUGENOL	Essential Oil				--
76	EUGENOL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
76	EUGENOL	Plant				--
76	EUGENOL	Seed Essent. Oil				--
0	FAT	Fruit	176000.0	304000.0	1.680675457417445	--
0	FAT	Seed	80000.0	304000.0	0.20338536856170333	--
6	FENCHONE	Seed Essent. Oil				--
15	FIBER	Fruit		161000.0	0.1823469556561799	--
15	FIBER	Seed	120000.0	250000.0	0.9098060948305273	--
0	FOENICULIN	Seed				--
6	FURFURAL	Fruit		30000.0	1.4142119041181418	--
6	FURFURAL	Seed		30000.0	1.0	--
0	GAMMA-HIMACHALENE	Plant				--
0	GAMMA-HIMACHALENE	Seed	200.0	1200.0		Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
0	GLUCINOL	Tissue Culture				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
32	HYDROQUINONE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	HYDROQUINONE-METHYL-ETHER	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
25	IMPERATORIN	Leaf				--
6	IRON	Seed	348.0	409.0	1.1997083472388452	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	IRON	Fruit	391.0	409.0	1.0949045836323292	--
1	ISOCARYOPHYLLENE	Plant				--
0	ISOCHAVIBETOL	Seed		250.0		--
0	ISOCHAVIBETOL	Fruit		250.0		--
4	ISOORIENTIN	Seed				--
4	ISOORIENTIN	Plant				--
15	ISOPIMPINELLIN	Root				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
22	ISOQUERCITRIN	Leaf				--
4	ISOVITEXIN	Seed				--
4	ISOVITEXIN	Fruit				--
0	KILOCALORIES	Seed	3370.0	4150.0	-0.5547236655567672	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
60	LIMONENE	Fruit	25.0	459.0	-0.6843754806519635	--
60	LIMONENE	Essential Oil				--
60	LIMONENE	Seed Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Seed	25.0	459.0	-0.7313417774490227	Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	LINALOL	Fruit		50.0	-0.631067806170924	--
53	LINALOOL	Seed		50.0	-0.5278640443024313	--
53	LINALOOL	Seed Essent. Oil				--
27	LINOLEIC-ACID	Seed	13700.0	52000.0	-0.47229245316140794	--
78	LUTEOLIN	Seed		1250.0		--
0	LUTEOLIN-7-O-XYLOSIDE	Plant				--
0	LUTEOLIN-7-GLYCOSIDE	Plant				--
0	LUTEOLIN-7-O-BETA-D-XYLOSIDE	Seed		1580.0		--
0	LUTEOLIN-7-O-BETA-D-XYLOXIDE	Seed				--
2	LUTEOLIN-7-O-GLUCOSIDE	Seed				--
0	LUTEOLIN-7-O-XYLOSIDE	Plant				--
65	MAGNESIUM	Fruit		1878.0	-0.11656878374939247	--
65	MAGNESIUM	Seed		1878.0	-0.42200084611180505	--
14	MANGANESE	Fruit		23.0	-0.25187849029896653	--
14	MANGANESE	Seed		23.0	-0.38019666348740133	USDA's Ag Handbook 8 and sequelae)
18	MANNITOL	Root				--
6	METHYL-CHAVICOL	Seed	100.0	1200.0	-0.32819721111182903	--
6	METHYL-CHAVICOL	Fruit		1050.0	-0.5040863930849152	--
0	MYRICANOL	Root				--
6	MYRISTIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
31	MYRISTICIN	Seed				--
31	MYRISTICIN	Tissue Culture				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	MYRISTICIN	Plant				--
18	OLEIC-ACID	Seed	44800.0	217000.0	0.8047671994532317	--
11	P-ANISALDEHYDE	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	P-ANISIC-ACID	Seed Essent. Oil				--
25	P-COUMARIC-ACID	Seed		737.0	1.636780984285061	--
0	P-CREOSOL	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
8	P-CRESOL	Plant				--
1	P-METHOXYPHENYLACETONE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
1	P-METHOXYPHENYLACETONE	Plant				--
13	PALMITIC-ACID	Seed	2560.0	9730.0	-0.4988395784388936	--
0	PETROSELINIC-ACID	Seed	18800.0	489000.0	-0.22397009450778158	--
4	PELLANDRENE	Seed Essent. Oil				--
4	PELLANDRENE	Fruit		408.0		--
4	PELLANDRENE	Seed		408.0		--
4	PHOSPHORUS	Fruit		4862.0	0.4999573159709243	--
4	PHOSPHORUS	Seed	4400.0	4862.0	-0.12984457940531013	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PHOTOANETHOLE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PHOTOANETHOLE	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	PLASTOHYDROQUINONE-9	Leaf				--
0	PLASTOHYDROQUINONE-9	Root				--
0	PLASTOHYDROQUINONE-9	Tissue Culture				--
0	PLASTOQUINONE 9	Leaf				--
0	PLASTOQUINONE 9	Root				--
0	PLASTOQUINONE 9	Tissue Culture				--
14	POTASSIUM	Fruit		15923.0	-0.1763728036379452	--
14	POTASSIUM	Seed	14410.0	15923.0	0.2948697302111889	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PREGEIJERENE	Root Essent. Oil		164000.0		--
0	PRISTANE	Plant				--
0	PROAZULENE	Plant				--
6	PROPIONIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PROTEIN	Fruit	188000.0	213000.0	1.3874820780316992	--
0	PROTEIN	Seed	188000.0	213000.0	-0.1849917904537036	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PSEUDOISOEUGENOL-(2-METHYL-BUTYRATE)	Root				--
0	PSEUDOISOEUGENOL-(2-METHYL-BUTYRATE)	Seed	500.0	3000.0		Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp.
0	PSEUDOISOEUGENOL-(2-METHYL-BUTYRATE)	Plant				--
0	PSEUDOISOEUGENOL-(2-METHYL-BUTYRATE)	Shoot				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	QUERCETIN-3-GLUCURONIDE	Plant				--
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Seed				--
0	QUERCETIN-GLUCOSIDES	Fruit				--
0	QUERCETIN-GLUCOSIDES	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.
87	RUTIN	Fruit				--
87	RUTIN	Seed				--
5	SABINENE	Fruit		1.0	-0.5352886500488243	--
5	SABINENE	Seed		1.0	-0.44137425565894484	--
29	SAFROLE	Essential Oil				--
7	SALICYLATES	Seed	30.0	230.0	0.8938405258857307	--
22	SCOPARONE	Leaf				--
44	SCOPOLETIN	Leaf				--
44	SCOPOLETIN	Fruit				--
44	SCOPOLETIN	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.
44	SCOPOLETIN	Tissue Culture		25000.0		--
3	SESELIN	Leaf				--
1	SODIUM	Seed	160.0	177.0	-0.43474340055439425	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Fruit		177.0	-0.16716607524173246	--
10	SQUALENE	Plant				--
5	STARCH	Seed		50000.0	-1.0534998914823648	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
12	STIGMASTEROL	Seed				--
12	STIGMASTEROL	Tissue Culture				--
12	STIGMASTEROL	Plant				--
0	STIGMASTEROL-PALMITATE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	STIGMASTEROL-STEARATE	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	SUGAR	Seed	30000.0	50000.0	-0.33796445974687406	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
18	TERPINEOL	Essential Oil				--
71	THYMOL	Essential Oil				--
0	TRANS-ALPHA-BERGAMOTENE	Seed Essent. Oil				--
8	TRANS-ANETHOLE	Leaf Essent. Oil		825000.0	0.6789462696628319	--
8	TRANS-ANETHOLE	Plant	14000.0	54000.0	2.4367165173216563	--
8	TRANS-ANETHOLE	Seed Essent. Oil		752000.0	-1.0	--
8	TRANS-ANETHOLE	Shoot Essent. Oil		875000.0	1.0	--
8	TRANS-ANETHOLE	Seed	14000.0	126000.0	1.1233240836084317	--
8	TRANS-ANETHOLE	Essential Oil		98000.0	-0.9178041314476871	--
22	UMBELLIFERONE	Seed				--
22	UMBELLIFERONE	Tissue Culture		5000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	UMBELLIFERONE	Fruit				--
0	UMBELLIPRENINE	Plant				--
0	UMBELLIPRENINE	Seed				--
0	VITAMIN-K-1	Leaf				--
0	VITAMIN-K-1	Root				--
0	VITAMIN-K-1	Tissue Culture				--
0	WATER	Seed	95000.0	110000.0	-0.45130749753349714	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
43	XANTHOTOXIN	Seed				--
77	ZINC	Seed		59.0	0.39371381474900113	--
77	ZINC	Fruit		59.0	0.8634181201998136	--