

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Pimpinella anisum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	5-METHOXY-PSORALEN	Seed				--
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.
19	ACETYL-CHOLINE	Seed		64.0	-0.30258926220331656	--
28	ALPHA-PINENE	Essential Oil				--
28	ALPHA-PINENE	Fruit	1.0	306.0	-0.6388928640672148	--
28	ALPHA-PINENE	Seed	1.0	306.0	-0.47075335776323696	--
13	ALPHA-TERPINENE	Essential Oil				--
23	ALPHA-TERPINEOL	Seed		1.0	-0.5030431687010171	--
23	ALPHA-TERPINEOL	Fruit		1.0	-0.40768751823050187	--
32	ALPHA-TOCOPHEROL	Leaf				--
32	ALPHA-TOCOPHEROL	Root				--
32	ALPHA-TOCOPHEROL	Tissue Culture				--
1	ALPHA-ZINGIBERENE	Plant				--
36	ANETHOLE	Seed				--
36	ANETHOLE	Essential Oil				--
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.
36	ANETHOLE	Tissue Culture				--
36	ANETHOLE	Root				--
36	ANETHOLE	Shoot				--
36	ANETHOLE	Seed Essent. Oil	800000.0	900000.0	1.0	--
7	ANISALDEHYDE	Seed	140.0	1960.0	1.383989134171019	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	ANISALDEHYDE	Fruit		300.0	-1.3470948397420839	--
7	ANISALDEHYDE	Essential Oil				--
6	ANISIC-ACID	Fruit				--
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.
6	ANISIC-ACID	Essential 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.
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	Fruit	8.0	9.0	-0.2839294125391348	--
112	ASCORBIC-ACID	Seed	8.0	9.0	-0.33305350561319974	--
10	AZULENE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
26	BERGAPTEN	Seed				--
26	BERGAPTEN	Fruit				--
26	BERGAPTEN	Tissue Culture		5000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
9	BETA-AMYRIN	Plant				--
6	BETA-BISABOLENE	Plant				--
6	BETA-BISABOLENE	Essential Oil				--
6	BETA-BISABOLENE	Tissue Culture				--
5	BETA-ELEMENE	Seed Essent. Oil				--
13	BETA-PINENE	Fruit		1.0	-0.2978113268433539	--
13	BETA-PINENE	Seed		1.0	-0.6922432681985977	--
47	BETA-SITOSTEROL	Tissue Culture				--
4	BORON	Fruit		20.0	-0.4012297753721551	--
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).
6	BUTYRIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
102	CAFFEIC-ACID	Plant				--
102	CAFFEIC-ACID	Seed		2060.0	1.1988438057610096	--
28	CALCIUM	Fruit	7138.0	7843.0	0.9199755165775227	--
28	CALCIUM	Seed	6460.0	7843.0	0.6789065535817028	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	CAMPHENE	Seed		119.0	-1.1787017615236954	--
9	CAMPHENE	Fruit		119.0	-0.30245730401923043	--
9	CAMPHENE	Essential Oil				--
41	CAMPHOR	Seed Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	Seed		25.0	-1.0	--
3	CIS-OCIMENE	Fruit		25.0	-1.0	--
12	COPPER	Seed		9.0	-0.5274011339177476	USDA's Ag Handbook 8 and sequelae)
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.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	DIANETHOLE	Fruit				--
1	DIHYDROCARVYL-ACETATE	Plant				--
12	ESTRAGOLE	Essential Oil		815000.0	0.5522423148479244	--
12	ESTRAGOLE	Seed Essent. Oil		40000.0	-1.2234041605170691	--
12	ESTRAGOLE	Fruit				--
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	Plant				--
76	EUGENOL	Seed Essent. Oil				--
76	EUGENOL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	FENCHONE	Seed Essent. Oil				--
15	FIBER	Fruit		161000.0	0.1823469556561799	--
15	FIBER	Seed	120000.0	250000.0	0.9098060948305273	--
6	FURFURAL	Seed		30000.0	1.0	--
6	FURFURAL	Fruit		30000.0	1.4142119041181418	--
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.
25	IMPERATORIN	Leaf				--
6	IRON	Fruit	391.0	409.0	1.0949045836323292	--
6	IRON	Seed	348.0	409.0	1.1997083472388452	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	ISOCARYOPHYLLENE	Plant				--
4	ISOORIENTIN	Plant				--
4	ISOORIENTIN	Seed				--
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	Fruit				--
4	ISOVITEXIN	Seed				--
60	LIMONENE	Fruit	25.0	459.0	-0.6843754806519635	--
60	LIMONENE	Essential Oil				--
60	LIMONENE	Seed Essent. Oil				--
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.
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		--
2	LUTEOLIN-7-O-GLUCOSIDE	Seed				--
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	Fruit		1050.0	-0.5040863930849152	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	METHYL-CHAVICOL	Seed	100.0	1200.0	-0.32819721111182903	--
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				--
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.
25	P-COUMARIC-ACID	Seed		737.0	1.636780984285061	--
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	--
4	PELLANDRENE	Seed		408.0		--
4	PELLANDRENE	Seed Essent. Oil				--
4	PELLANDRENE	Fruit		408.0		--
4	PHOSPHORUS	Seed	4400.0	4862.0	-0.12984457940531013	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	PHOSPHORUS	Fruit		4862.0	0.4999573159709243	--
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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	PROPIONIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Seed				--
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	Tissue Culture		25000.0		--
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	Leaf				--
3	SESELIN	Leaf				--
1	SODIUM	Seed	160.0	177.0	-0.43474340055439425	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	SODIUM	Fruit		177.0	-0.16716607524173246	--
10	SQUALENE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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				--
18	TERPINEOL	Essential Oil				--
71	THYMOL	Essential Oil				--
8	TRANS-ANETHOLE	Seed Essent. Oil		752000.0	-1.0	--
8	TRANS-ANETHOLE	Shoot Essent. Oil		875000.0	1.0	--
8	TRANS-ANETHOLE	Essential Oil		98000.0	-0.9178041314476871	--
8	TRANS-ANETHOLE	Plant	14000.0	54000.0	2.4367165173216563	--
8	TRANS-ANETHOLE	Leaf Essent. Oil		825000.0	0.6789462696628319	--
8	TRANS-ANETHOLE	Seed	14000.0	126000.0	1.1233240836084317	--
22	UMBELLIFERONE	Fruit				--
22	UMBELLIFERONE	Tissue Culture		5000.0		--
22	UMBELLIFERONE	Seed				--
43	XANTHOTOXIN	Seed				--
77	ZINC	Seed		59.0	0.39371381474900113	--
77	ZINC	Fruit		59.0	0.8634181201998136	--