

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Angelica archangelica*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
102	CAFFEIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
77	CHLOROGENIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
60	LIMONENE	Root	0.0	1320.0	1.7252265137628358	--
60	LIMONENE	Root Essent. Oil		227000.0	1.5228275750660336	--
53	LINALOOL	Root Essent. Oil				--
53	LINALOOL	Root		10.0	-0.41637162119267096	--
47	BETA-SITOSTEROL	Plant				--
47	BETA-SITOSTEROL	Fruit				--
47	BETA-SITOSTEROL	Seed	1.5	9.5	-0.627327401886418	--
44	SCOPOLETIN	Root				--
44	SCOPOLETIN	Tissue Culture				--
43	XANTHOTOXIN	Shoot				--
43	XANTHOTOXIN	Plant				--
43	XANTHOTOXIN	Fruit		42.0	1.0	--
43	XANTHOTOXIN	Root				--
43	XANTHOTOXIN	Seed	2.0	1900.0	-1.0	--
35	BORNEOL	Root Essent. Oil				--
35	BORNEOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
35	BORNEOL	Root				Pakistan Encyclopedia Planta Medica. 1986.
31	PSORALEN	Seed		100.0	-0.6857885534361138	--
31	CARYOPHYLLENE	Root	8.0	20.0	-0.6816330830044597	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	PSORALEN	Fruit		310.0	-0.3807181031466607	--
31	PSORALEN	Root	2.0	140.0	1.2840756412696184	--
31	CARYOPHYLLENE	Root Essent. Oil				--
31	PSORALEN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
29	TRYPTOPHAN	Leaf				--
28	ADENOSINE	Root				Pakistan Encyclopedia Planta Medica. 1986.
28	ALPHA-PINENE	Root	35.0	5890.0	2.1989183610646146	--
28	ALPHA-PINENE	Fruit				--
28	ALPHA-PINENE	Seed Essent. Oil		149000.0	0.28611774259215744	--
28	ALPHA-PINENE	Seed	170.0	1500.0	-0.34027084756770226	--
28	ALPHA-PINENE	Root Essent. Oil				--
28	ADENOSINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
27	LINOLEIC-ACID	Fruit				--
26	BERGAPTEN	Root				--
26	BERGAPTEN	Seed	2.0	6800.0	1.5453742965682007	--
26	BERGAPTEN	Shoot				--
26	BERGAPTEN	Root Essent. Oil		88000.0		--
26	BERGAPTEN	Plant				--
26	BERGAPTEN	Fruit	48.0	1300.0		--
25	IMPERATORIN	Root				--
25	IMPERATORIN	Shoot				--
25	IMPERATORIN	Seed	50.0	5000.0	0.20180777184913837	--
25	IMPERATORIN	Plant				--
25	IMPERATORIN	Fruit		66.0	1.940524885628408	--
24	ETHANOL	Root				--
23	TERPINEN-4-OL	Root	0.0	10.0	-0.5731321285364237	--
23	ALPHA-TERPINEOL	Plant				--
23	TERPINEN-4-OL	Root Essent. Oil				--
23	ALPHA-TERPINEOL	Root	0.0	12.0	-0.5636245828350195	--
22	MYRCENE	Seed Essent. Oil				--
22	MYRCENE	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	UMBELLIFERONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
22	UMBELLIFERONE	Fruit				--
22	UMBELLIFERONE	Root		200.0		--
22	MYRCENE	Root	7.0	380.0	1.4075966148229513	--
22	MYRCENE	Fruit				--
21	8-METHOXY-PSORALEN	Plant				--
20	ALPHA-BISABOLOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
19	CARVONE	Root	0.0	2.0	-0.7714223871650727	--
18	OLEIC-ACID	Seed		133000.0	0.11423787911448594	--
17	ANGELICIN	Seed				--
17	ANGELICIN	Root				--
17	ANGELICIN	Root Essent. Oil		35000.0		--
16	P-CYMENE	Seed	800.0	5050.0	0.5834563158237798	Wealth of India.
16	P-CYMENE	Root	40.0	980.0	1.731986088156794	--
16	P-CYMENE	Root Essent. Oil				--
15	ISOPIMPINELLIN	Root Essent. Oil				--
15	ISOPIMPINELLIN	Plant				--
15	ISOPIMPINELLIN	Fruit		18.0	1.0	--
15	ISOPIMPINELLIN	Root				--
15	LUTEIN	Leaf				--
15	OSTHOL	Root		2000.0		--
15	MALIC-ACID	Plant				--
15	MALIC-ACID	Root				--
15	OSTHOL	Fruit				--
15	OSTHOL	Root Essent. Oil		530000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	SUCROSE	Root				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
13	BETA-EUDES MOL	Root Essent. Oil				--
13	BETA-PINENE	Root	2.0	2400.0	2.065213478268315	--
13	ALPHA-TERPINENE	Root Essent. Oil				--
13	PALMITIC-ACID	Fruit				--
13	ALPHA-TERPINENE	Fruit				--
13	PALMITIC-ACID	Root Essent. Oil		60000.0	-0.14585513924522536	--
13	ALPHA-TERPINENE	Root	0.0	6.0	-0.6602197185589468	--
13	BETA-PINENE	Fruit				--
13	BETA-EUDES MOL	Root	1.0	21.0	1.0	--
13	PALMITIC-ACID	Seed				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
13	BETA-PINENE	Seed Essent. Oil				--
13	BETA-PINENE	Root Essent. Oil				--
12	STIGMASTEROL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
12	STIGMASTEROL	Fruit				--
12	BORNYL-ACETATE	Root	25.0	75.0	-0.5747231818271519	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Root				--
11	ALPHA-PHELLANDRENE	Seed Essent. Oil				--
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil		678000.0	1.751978121762097	--
11	ALPHA-PHELLANDRENE	Root Essent. Oil		225000.0		--
11	GAMMA-TERPINENE	Root Essent. Oil				--
11	ALPHA-PHELLANDRENE	Fruit				--
11	GAMMA-TERPINENE	Root	1.0	12.0	-0.802453903453894	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	5-METHOXY-PSORALEN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
10	ALPHA-AMYRIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
10	5-METHOXY-PSORALEN	Fruit				--
9	CAMPHENE	Fruit				--
9	OXALIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
9	CAMPHENE	Root Essent. Oil				--
9	DELTA-CADINENE	Root	1.0	101.0	1.4139785716108804	--
9	TERPINOLENE	Root Essent. Oil				--
9	DELTA-CADINENE	Root Essent. Oil				--
9	CAMPHENE	Root	2.0	130.0	1.4108316199577506	--
9	TERPINOLENE	Root	0.0	16.0	-1.0	--
8	ISOIMPERATORIN	Plant				--
8	ISOIMPERATORIN	Shoot				--
8	FRUCTOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
8	ISOIMPERATORIN	Fruit		4.0	-0.9645619455667129	--
8	STEARIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
8	DELTA-3-CARENE	Root	30.0	505.0	1.4140772728836788	--
8	ISOIMPERATORIN	Seed	12.0	75.0	1.0	Wealth of India.
8	TRANS-ANETHOLE	Root	2.0	13.0		--
8	ISOIMPERATORIN	Root				--
8	STEARIC-ACID	Fruit				--
8	TYROSINE	Leaf				--
7	LAURIC-ACID	Fruit				--
7	SUCCINIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	FUMARIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	PIMPINELLIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	PIPERITONE	Root	0.0	3.0		--
7	GLUCOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	PHENYLALANINE	Leaf				--
7	PIMPINELLIN	Fruit				--
7	LIGUSTILIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	LIGUSTILIDE	Root				--
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.
6	BETA-BISABOLENE	Root	8.0	72.0	-1.2022170084503725	--
6	ZINGIBERENE	Root	0.0	5.0	-1.0	--
6	FENCHONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
6	OXYPEUCEDANIN	Shoot				--
6	OXYPEUCEDANIN	Fruit				--
6	BETA-BISABOLENE	Root Essent. Oil				--
6	FURFURAL	Root				Pakistan Encyclopedia Planta Medica. 1986.
6	MYRISTIC-ACID	Fruit				--
6	OXYPEUCEDANIN	Root	0.0	385.0	-1.0	--
6	FENCHONE	Root Essent. Oil				--
6	OXYPEUCEDANIN	Plant				--
5	ERGOSTEROL	Fruit				--
5	SABINOL	Root	0.0	34.0		--
5	XANTHOTOXOL	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
5	XANTHOTOXOL	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	BETA-ELEMENE	Root Essent. Oil				--
5	BYAKANGELICIN	Root		13.0		--
5	SABINENE	Root Essent. Oil				--
5	ERGOSTEROL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
5	SABINENE	Root	2.0	95.0	0.0843149140979014	--
5	GLUTAMINE	Leaf				--
5	BETA-ELEMENE	Root	0.0	90.0	-1.0	--
5	ZEAXANTHIN	Leaf				--
5	BETA-SESQUIPHELLANDRENE	Root	0.0	7.0	-1.0	--
5	XANTHOTOXOL	Fruit				--
4	BETA-AMYRIN-ACETATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
4	OSTHOLE	Root				--
4	RUTAMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	ASPARTIC-ACID	Leaf				--
3	BETA-PHELLANDRENE	Fruit				--
3	CIS-OCIMENE	Root Essent. Oil				--
3	ISOLEUCINE	Leaf				--
3	ALANINE	Leaf				--
3	VALINE	Leaf				--
3	BETA-PHELLANDRENE	Root	50.0	5320.0	1.0	--
3	CIS-OCIMENE	Root	4.0	125.0		--
3	BETA-SELINENE	Root				--
3	CEDROL	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	AR-CURCUMENE	Root	0.0	6.0	-1.0	--
3	BETA-PHELLANDRENE	Root Essent. Oil				--
2	DIACETYL	Root				Pakistan Encyclopedia Planta Medica. 1986.
2	ALPHA-METHYL-BUTYRIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	METHANOL	Root				--
2	CONIFERIN	Root				Pakistan Encyclopedia Planta Medica. 1986.
2	ASPARAGINE	Leaf				--
2	ALPHA-HUMULENE	Root	18.0	50.0	1.4138559108869015	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	OXYPEUCEDANIN-HYDRATE	Root		1500.0		--
2	BETA-MYRCENE	Root				--
2	THUJOPSENE	Root				--
2	OXYPEUCEDANIN-HYDRATE	Shoot				--
2	ALPHA-AMYRIN-ACETATE	Fruit		26.0		--
2	PHELLOPTERIN	Plant				--
2	ELEMOL	Root Essent. Oil				--
2	CONIFERIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	ARCHANGELICIN	Shoot				--
2	PHELLOPTERIN	Root				Phytochem. Anal. 3(1):42-48. 1992
2	OXYPEUCEDANIN-HYDRATE	Fruit				--
2	VIOLAXANTHIN	Leaf				--
2	OCTYL-ISOVALERATE	Root Essent. Oil				--
2	ARCHANGELICIN	Fruit				--
2	PALMITOLEIC-ACID	Fruit				--
2	LUPEOL-ACETATE	Fruit		40.0		--
2	GERMACRENE-D	Root	2.0	26.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	2-NONANONE	Root		1.0		--
2	TRANS-BETA-FARNESENE	Root	2.0	10.0		--
2	ARCHANGELICIN	Plant				--
2	ELEMOL	Root	0.0	18.0		--
2	OCTYL-ISOVALERATE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	LUPEOL-ACETATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	PALMITOLEIC-ACID	Seed				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	ALPHA-HUMULENE	Root Essent. Oil				--
2	TRIDECANOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	GERMACRENE-D	Root Essent. Oil				--
2	OXYPEUCEDANIN-HYDRATE	Seed	0.6	3.8	-1.0	Wealth of India.
2	OXYPEUCEDANIN-HYDRATE	Plant				--
2	ARCHANGELICIN	Root				--
2	BISABOLANGELONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	XANTHOXYLETIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	ETHYL-LAURATE	Root				--
1	8-(2-(3-METHYLBUTOXY)-3-HYDROXY-3-METHYLBUTOXY)PSORALEN	Root				Phytochem. Anal. 3(1):42-48. 1992
1	OLEIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
1	MALONIC-ACID	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	ANGELIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	OSTRUTHOL	Root		2000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	VISNAGIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	SPHONDIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	BEHENIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	TRANS-CARVEOL	Root Essent. Oil				--
1	PALMITIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
1	PENTADECANOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	TIGLIC-ACID	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	ETHYL-MYRISTATE	Root Essent. Oil				--
1	ETHYL-PALMITATE	Root		10.0		--
1	BYAKANGELICIN-ANGELATE	Root		8.0		--
1	ACONITIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	QUINIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	ETHYL-OLEATE	Root				--
1	2'-ANGELOYL-3'-ISOVALERYL-VAGINATE	Root				Phytochem. Anal. 3(1):42-48. 1992
1	CUPARENE	Root	3.0	10.0	1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	ETHYL-MYRISTATE	Root				--
1	TRANS-CARVEOL	Root	0.0	11.0		--
1	OSTRUTHOL	Seed	9.0	57.0		Wealth of India.
1	CUPARENE	Root Essent. Oil				--
1	LAURIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
0	BETA-COPAENE	Root	8.0	20.0		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	OCTADECANE	Root	0.0	5.0		--
0	TRANS-4-ETHOXY-THUJANE	Root Essent. Oil				--
0	5-METHYL-ANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	DIHYDROCARVONE	Seed	160.0	1025.0	0.004692483254163068	--
0	OXYPEUCIDANIN-HYDRATE	Root				--
0	ZOZYMIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	METHYL-ETHYL-ACETIC-ACID	Seed				--
0	HEXADECAN-1-OL	Root				--
0	FURANCHROMONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CRYPTONE	Root	16.0	50.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-COPAEN-8-OL	Root				--
0	TRANS-VERBENYL-ACETATE	Root	15.0	46.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-PIPERITOL	Root Essent. Oil				--
0	PRANGOLARIN	Plant				--
0	(+)-ALPHA-CURCUMENE	Root Essent. Oil				--
0	ETHYL-CAPRATE	Root Essent. Oil				--
0	ETHYL-LINOLEATE	Root		8.0		--
0	BETA-FARNESENE	Root Essent. Oil				--
0	CIS-4-ETHOXY-2-PINENE	Root		5.0		--
0	DIPRENYL-NARINGENIN	Root				Wealth of India.
0	SPATHULENOL	Root				--
0	1-O-BETA-D-GLUCOPYRANOSYL-(2S,3P)-3-HYDROXY-MARMESINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	SABINYL-ACETATE	Root	0.0	5.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OROSELONE	Root Essent. Oil		25000.0		--
0	HEXYL-METHYL-PHTHALATE	Seed	3600.0	13680.0		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	CUMINYL-ALDEHYDE	Root Essent. Oil				--
0	BETA-THUJENE	Root	6900.0	8700.0		--
0	13-TRIDECANOLIDE	Root	15.0	50.0		--
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.
0	PENTADECANOLIDE	Root Essent. Oil		60000.0		--
0	PRANGOLARIN	Root				--
0	TRANS-4-ETHOXY-THUJANE	Root		10.0		--
0	NONADECANE	Root	0.0	5.0	1.0	--
0	TRANS-4-ETHOXY-PIN-2-ENE	Root Essent. Oil				--
0	OXYPEUCIDANIN	Root				--
0	HERACLENOL-2'-O-SENECIOATE	Root		1.0		--
0	ALPHA-CARYOPHYLLENE	Root				--
0	TRANS-VERBENYL-2-METHYL-BUTYRATE	Root	1.0	4.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	(+)-CUPARENE	Root				--
0	CIS-3-ETHOXY-1-P-MENTHENE	Root		8.0		--
0	D-ALPHA-PHELLANDRENE	Seed	1140.0	7220.0	-1.0	Wealth of India.
0	1,1-DIETHOXYOCTANE	Root				--
0	HEPTYL-ISOVALERATE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CUMINYL-ALCOHOL	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DELTOIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	BETA-SITOSTERYL-ARACHINATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	12-METHYL-13-TRIDECANOLIDE	Root	1.0	12.0		--
0	TRIDECANOLIDE	Root Essent. Oil				--
0	PENTADECAN-1-AL	Root Essent. Oil				--
0	TRANS-4-ETHOXY-2-PINENE	Root		79.0		--
0	OSTRUTOL	Plant				--
0	METHYL-ETHYL-ACETIC-ACID	Root				--
0	5-METHOXY-GAMMA-HYDROXYPSORALEN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	MARMEZIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	HERACLENOL-2'-O-ISOVALERATE	Root		13.0		--
0	BYAKANGELICIN-2'-O-ISOVALERATE	Root		2.0		--
0	CIS-VERBENOL	Root	3.0	10.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-VERBENOL	Root	20.0	64.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-4-ETHOXY-THUJANE	Root Essent. Oil				--
0	(+)-ALPHA-COPAENE	Seed Essent. Oil				--
0	ISOCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ETHYL-CAPRATE	Root				--
0	CIS-1-ETHOXY-2-P-MENTHENE	Root		16.0		--
0	7-METHOXY-8-(3-METHYL-2-BUTENYL)-2H-1-BENZOPYRAN-2-ONE	Root	50.0	2000.0		--
0	ANGELICAIN	Plant				--
0	1,1-DIETHOXYHEXANE	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PRANGOLARIN	Seed	12.0	75.0		Wealth of India.
0	CRYPTONE	Root Essent. Oil				--
0	BETA-SITOSTEROL-PALMITATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRIDECAN-1-OL	Root				--
0	ALPHA-COPAENE	Root	10.0	190.0		--
0	AZULENOGENIC-HYDROCARBON	Seed	930.0	5890.0		Wealth of India.
0	PENTADECAN-1-AL	Root				--
0	TRANS-3-ETHOXY-1-P-MENTHANE	Root		4.0		--
0	ALPHA-THUJENE	Root Essent. Oil				--
0	HEPTADECANOLIDE	Root				--
0	TETRADECAN-1-OL-ACETATE	Root				--
0	5,7-DIHYDROXY-2-METHYL-CHROMONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	GAMMA-TERPINEOL	Root				--
0	MARMESININE	Plant				--
0	HEPTYL-ISOVALERATE	Root Essent. Oil				--
0	CIS-SABINENE-HYDRATE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-4-ETHOXY-PIN-2-ENE	Root Essent. Oil				--
0	PETROSELINIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRANS-CARVEOL-ACETATE	Root Essent. Oil				--
0	ISOBERGAPTOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	EICOSENOIC-ACID	Fruit				--
0	BETA-COPAENE	Root Essent. Oil				--
0	5-UNDECEN-3-YNE	Root	2.0	15.0		--
0	CHRYSANTHENYL-ACETATE-II	Root	1.0	95.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-SABINENE-HYDRATE	Root		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-CARVEOL-ACETATE	Root Essent. Oil				--
0	TRANS-VERBENOL-ISOVALERATE	Root Essent. Oil				--
0	ALPHA-COPAEN-11-OL	Root	15.0	45.0		--
0	ARCHANGELIN	Root		2000.0		--
0	8-HYDROXY-5-METHOXY-PSORALEN	Seed				--
0	TRANS-1-ETHOXY-2-P-MENTHENE	Root		6.0		--
0	ALPHA-TERPINOLENE	Root				--
0	OSTHENOLE	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ISOBERGAPTEN	Fruit				--
0	TETRADECAN-1-AL	Root				--
0	4-ETHOXY-1-P-MENTHENE	Root		3.0		--
0	UMBELLIFEROSE	Root				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	MARMESIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	HEPTADECANOLIDE	Root Essent. Oil				--
0	FAT	Seed	189000.0	203000.0	-0.3286177590566424	--
0	BORNEOL-ISOVALERATE	Root Essent. Oil				--
0	CIS-PIPERITOL	Root	0.0	8.0		--
0	7-ISOPROPYL-5-METHYL-BICYCLO(2.2.2)-OCT-5-EN-2-ONE	Root Essent. Oil		100.0		--
0	LIMONENE-1,2-OXIDE	Plant	0.0	15.0		--
0	BETA-THUJENE	Seed Essent. Oil		870000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTADECANOLIDE	Root	15.0	37.0		--
0	ISOBERGAPTIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	DIHYDROEUDESMOL	Root				--
0	BETA-CEDRENE	Root				--
0	CAMPESIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	5-ISOPROPYLBICYCLO-(3,1.0)-HEXAN-2-ONE	Plant	10.0	30.0		--
0	ANGALCIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CHRYSANTHENYL-ACETATE-I	Root	0.0	7.0		--
0	ROSIFOLIOL	Root				--
0	PELLANDRAL	Root	0.0	4.0		--
0	OCTAN-1-AL	Root Essent. Oil				--
0	TRANS-PIPERITOL	Root		30.0		--
0	DEHYDRODEOXYANGELICAN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ARACHIDIC-ACID	Fruit				--
0	TRANS-VERBENOL-ACETATE	Root Essent. Oil				--
0	ARCHANGELENONE	Root		50.0		--
0	LINOLENIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
0	TRANS-1(7),5-P-MENTHADIEN-2-YL-ACETATE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	OROSELONE	Plant				--
0	ISOBERGAPTEN	Root Essent. Oil		88000.0		--
0	CIS-BETA-FARNESENE	Root				--
0	UMBELLIPRENIN	Seed	4.0	57.0		--
0	GAMMA-MUUROLENE	Root Essent. Oil				--
0	SEC-O-BETA-D-GLUCOPYRANOSYL-(R)-BYAKANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-MUUROLENE	Root Essent. Oil				--
0	HEPTADECAN-1-OL-ACETATE	Root				--
0	ETHYL-STEARATE	Root				--
0	BORNEOL-ACETATE	Root Essent. Oil				--
0	CIS-P-MENTH-2-EN-1-OL	Root	0.0	62.0		--
0	4,4,6-TRIMETHYLCYCLOHEX-2-EN-1-ONE	Root				--
0	ISOAMYL-ISOVALERATE	Root		2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DELTA-ELEMENE	Root				--
0	EO	Seed	2000.0	38000.0	-0.07010761007370915	--
0	BETA-CARYOPHYLLENE	Root Essent. Oil		110000.0	1.0368391024927353	--
0	CAMPESENIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	4-METHOXY-7-HYDROXYPSORALEN	Seed				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	UNDEC-5-EN-3-YNE	Root				--
0	ALPHA-THUJENE	Root	1.0	13.0		--
0	QUERCETIN-GLYCOSIDE	Fruit				--
0	PEUCENIN-7-METHYL-ETHER	Root				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	OCTADECAN-1-OL	Root				--
0	TRANS-PINOCARVYL-ACETATE	Root	5.0	17.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DEHYDROASCORBIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRANS-VERBENOL	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-ALKYL-FUROCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	APTERIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	LINOLEIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
0	TETRADECANAL	Root		2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ISOAMYL-ISOVALERATE	Root Essent. Oil				--
0	CHRYSANTHENOL-ACETATE	Root				--
0	2-NITRO-1,5-P-MENTHADIENE	Plant				J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.
0	ETHYL-PENTADECANOATE	Root Essent. Oil				--
0	8-HYDROXY-5-METHOXY-PSORALEN	Fruit		62.0		--
0	M-CYMEN-8-OL	Root		9.0		--
0	HEPTADECADIENOLIDE	Root Essent. Oil		10000.0		--
0	ETHYL-PENTADECANOATE	Root				--
0	BORNEOL-ACETATE	Root				--
0	1,8-CINEOL	Fruit Essent. Oil		538000.0	1.0	--
0	ARCHANGELICAIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TERPINENOL	Root Essent. Oil				--
0	PENTADECANAL	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-CYMENE-8-OL	Root Essent. Oil				--
0	ISELIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	EO	Root	1000.0	19000.0	0.24015740661431922	--
0	CAMPESELOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	4-METHOXY-7H-FURO(3,2-G)(1)BENZOPYRAN-7-ONE	Root	1.0	225.0		--
0	UMBELLIPRENIN	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BYAKANGELICOL	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	OCTADEC-9-EN-18-OLIDE	Root Essent. Oil		20000.0		--
0	TRANS-P-MENTH-2-EN-1-OL	Root	0.0	25.0		--
0	D-ALPHA-PHELLANDRENE	Root	15.0	2660.0		--
0	ANGELICAIN	Root				--
0	BETA-FARNESENE	Root	5.0	15.0	-0.584230956900959	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-SABINENE-HYDRATE	Root Essent. Oil				--
0	TERT-O-BETA-D-GLUCOPYRANOSYL-(R)-ISOBYAKANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	OCTANAL	Root		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-MUUROLENE	Root	1.0	4.0	-1.0	--
0	UMBELLIFEREN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CIS-CARVYL-ACETATE	Root		2.0		--
0	1,1-DIETHOXYHEXANE	Root Essent. Oil				--
0	(+)-OXYPEUCEDANIN	Root				--
0	ARCHANGELENONE	Plant				--
0	HEXADECANE	Root	0.0	7.0	0.9999999999999999	--
0	2-DECANONE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DECAN-2-ONE	Root Essent. Oil				--
0	EICOSENOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	2-PENTYL-FURAN	Root	0.0	4.0	1.0	--
0	UMBELLIPRENIN	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NONAN-2-ONE	Root Essent. Oil				--
0	TRANS-OCIMENE	Root	10.0	268.0		--
0	GAMMA-CADINENE	Root	2.0	14.0	1.0	--
0	TRANS-PIPERITOL	Root Essent. Oil				--
0	P-MENTH-TRANS-2-EN-1-OL	Root Essent. Oil				--
0	TERT-O-BETA-D-GLUCOPYRANOSYL-(R)-HERACLLENOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	O-CYMENE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	GAMMA-CADINENE	Plant				--
0	CYMEN-8-OL	Root	6.0	18.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TETRADECANE	Root	0.0	2.0		--
0	OSTHENOL	Shoot				--
0	TRIDECANOLIDE	Root	15.0	45.0		--
0	CIS-VERBENOL	Root Essent. Oil				--
0	12-METHYL-OMEGA-TRIDECANOLIDE	Root Essent. Oil				--
0	LINALOL	Root		1.0	-0.7415836394549143	--
0	GERMANIUM	Root		146.0	-1.0	--
0	BISABOLOL	Root Essent. Oil				--
0	CIS-ALPHA-COPAENE-8-OL	Plant				--
0	ALPHA-CUBEBENE	Root	0.0	5.0		--
0	(+)-LIMONENE	Root				--
0	ARACHIDIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	HEPTADECANE	Root	0.0	7.0		--
0	2'-BETA-D-GLUCOPYRANOSYLOXY-MARMESINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	O-CYMENE	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HYDROXPENTADECANOI C-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	DECA-TRANS-2,TRANS-4- DIEN-1-AL	Root				--
0	DIHYDROFUROCOUMARIN- GLYCOSIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	BORNYL-ISOVALERATE	Root	0.0	7.0	-1.0	--
0	NONAN-1-AL	Root Essent. Oil				--
0	TRANS-CARVYL-ACETATE	Root	2.0	5.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-CYMEN-8-OL	Root	1.0	31.0		--
0	ALPHA-COPAENE-11-OL	Root Essent. Oil				--
0	TRANS-PINOCARVEOL- ACETATE	Root Essent. Oil				--
0	P-MENTH-CIS-2-EN-1-OL	Root Essent. Oil				--
0	TERT-O-BETA-D- GLUCOPYRANOSYL-(R)- BYAKANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	NONANAL	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CAR-3-ENE	Root				--
0	OSTHENOL	Fruit				--
0	CIS-THUJENOL	Root				--
0	1,1-DIETHOXYOCTANE	Root Essent. Oil				--
0	BISABOLENE	Root Essent. Oil				--
0	CIS-6-NITRO-1(7),2-P- MENTHADIENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ALPHA-COPAENE-8-OL	Root	6.0	18.0		--
0	GAMMA-CARYOPHYLLENE	Root	0.0	6.0		--
0	STEARIC-ACID-ETHYL- ESTER	Root Essent. Oil				--
0	15- HYDROXPENTADECANOI C-ACID	Root				Wealth of India.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TANNINS	Root				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	M-CYMENE-8-OL	Root Essent. Oil				--
0	HYDROXYMYRISTIC-ACID	Seed				--
0	CYMENE	Root				--
0	DIHYDROFURANOCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	17-HEPTADECANOLIDE	Root	2.0	20.0		--
0	ALPHA-PHELLANDRENE-8-OL	Root	15.0	40.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PETROSELINIC-ACID	Seed		427000.0	-0.4900561802158002	--
0	BETA-CYMOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRANS-OCIMENE	Root Essent. Oil				--
0	8-HYDROXY-5-METHOXY-PSORALEN	Plant				--
0	OXYPEUCIDANIN-METHANOLATE	Root				--
0	ALPHA-PHELLANDRENE-8-OL	Root Essent. Oil				--
0	HUMULENE-MONOXIDE	Root Essent. Oil				--
0	FURANOCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CAR-3-ENE	Root Essent. Oil				--
0	CUMINYL-ALCOHOL	Root		2.0		--
0	ALPHA-COPAENE	Root Essent. Oil				--
0	TRANS-VERBENYL-ISOVALERATE	Root	6.0	17.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-SABINENE-HYDRATE	Root Essent. Oil				--
0	PROTEIN	Seed	319000.0	325000.0	0.8113062118868037	--
0	KVANNIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ETHYL-LINOLENATE	Root				--
0	BICYCLOGERMACRENE	Root				--
0	CIS-4-ETHOXY-THUJANE	Root		6.0		--
0	APTERIN	Root				--
0	EICOSANE	Root	0.0	5.0	-1.0	--
0	12-METHYL-OMEGA-TRIDECANOLIDE	Root				--
0	OSTHENOL	Root		115.0		--
0	HUMULENE-MONOXIDE	Root	13.0	40.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DIHYDROCARVONE	Plant				--
0	15-PENTADECANOLIDE	Root	15.0	75.0		--
0	ALPHA-MUUROLENE	Root	10.0	120.0		--
0	BETA-HIMACHALENE	Root	0.0	12.0		--
0	PETROSELINIC-ACID	Fruit				--
0	TRANS-6-NITRO-1(7),2-P-MENTHADIENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.