

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Angelica archangelica*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
102	CAFFEIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
77	CHLOROGENIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
60	LIMONENE	Root Essent. Oil		227000.0	1.5228275750660336	--
60	LIMONENE	Root	0.0	1320.0	1.7252265137628358	--
53	LINALOOL	Root Essent. Oil				--
53	LINALOOL	Root		10.0	-0.41637162119267096	--
47	BETA-SITOSTEROL	Seed	1.5	9.5	-0.627327401886418	--
47	BETA-SITOSTEROL	Fruit				--
47	BETA-SITOSTEROL	Plant				--
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				Pakistan Encyclopedia Planta Medica. 1986.
35	BORNEOL	Root Essent. Oil				--
35	BORNEOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
31	PSORALEN	Fruit		310.0	-0.3807181031466607	--
31	PSORALEN	Plant				--
31	CARYOPHYLLENE	Root Essent. Oil				--
31	PSORALEN	Root	2.0	140.0	1.2840756412696184	--
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.

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

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	MYRCENE	Root Essent. Oil				--
22	MYRCENE	Root	7.0	380.0	1.4075966148229513	--
22	UMBELLIFERONE	Fruit				--
22	UMBELLIFERONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
22	UMBELLIFERONE	Root		200.0		--
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	Root Essent. Oil		35000.0		--
17	ANGELICIN	Seed				--
17	ANGELICIN	Root				--
16	P-CYMENE	Root	40.0	980.0	1.731986088156794	--
16	P-CYMENE	Root Essent. Oil				--
16	P-CYMENE	Seed	800.0	5050.0	0.5834563158237798	Wealth of India.
15	MALIC-ACID	Plant				--
15	OSTHOL	Root		2000.0		--
15	ISOPIMPINELLIN	Root Essent. Oil				--
15	LUTEIN	Leaf				--
15	ISOPIMPINELLIN	Root				--
15	ISOPIMPINELLIN	Plant				--
15	MALIC-ACID	Root				--
15	ISOPIMPINELLIN	Fruit		18.0	1.0	--
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	ALPHA-TERPINENE	Root Essent. Oil				--
13	ALPHA-TERPINENE	Fruit				--
13	BETA-PINENE	Fruit				--
13	BETA-PINENE	Root	2.0	2400.0	2.065213478268315	--
13	BETA-PINENE	Seed Essent. Oil				--
13	BETA-PINENE	Root Essent. Oil				--
13	ALPHA-TERPINENE	Root	0.0	6.0	-0.6602197185589468	--
13	BETA-EUDES MOL	Root	1.0	21.0	1.0	--
13	PALMITIC-ACID	Fruit				--
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-EUDES MOL	Root Essent. Oil				--
13	PALMITIC-ACID	Root Essent. Oil		60000.0	-0.14585513924522536	--
12	STIGMASTEROL	Fruit				--
12	STIGMASTEROL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
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	GAMMA-TERPINENE	Root	1.0	12.0	-0.802453903453894	--
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				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	5-METHOXY-PSORALEN	Fruit				--
10	ALPHA-AMYRIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
10	5-METHOXY-PSORALEN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
9	CAMPHENE	Root	2.0	130.0	1.4108316199577506	--
9	TERPINOLENE	Root	0.0	16.0	-1.0	--
9	OXALIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
9	DELTA-CADINENE	Root Essent. Oil				--
9	TERPINOLENE	Root Essent. Oil				--
9	DELTA-CADINENE	Root	1.0	101.0	1.4139785716108804	--
9	CAMPHENE	Fruit				--
9	CAMPHENE	Root Essent. Oil				--
8	TYROSINE	Leaf				--
8	STEARIC-ACID	Fruit				--
8	ISOIMPERATORIN	Seed	12.0	75.0	1.0	Wealth of India.
8	STEARIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
8	TRANS-ANETHOLE	Root	2.0	13.0		--
8	ISOIMPERATORIN	Plant				--
8	ISOIMPERATORIN	Root				--
8	ISOIMPERATORIN	Shoot				--
8	FRUCTOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
8	ISOIMPERATORIN	Fruit		4.0	-0.9645619455667129	--
8	DELTA-3-CARENE	Root	30.0	505.0	1.4140772728836788	--
7	PHENYLALANINE	Leaf				--
7	PIMPINELLIN	Fruit				--
7	PIPERITONE	Root	0.0	3.0		--
7	LIGUSTILIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	SUCCINIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	PIMPINELLIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	LIGUSTILIDE	Root				--
7	LAURIC-ACID	Fruit				--
7	FUMARIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	GLUCOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
6	ZINGIBERENE	Root	0.0	5.0	-1.0	--
6	MYRISTIC-ACID	Fruit				--
6	OXYPEUCEDANIN	Plant				--
6	FURFURAL	Root				Pakistan Encyclopedia Planta Medica. 1986.
6	BETA-BISABOLENE	Root Essent. Oil				--
6	OXYPEUCEDANIN	Root	0.0	385.0	-1.0	--
6	OXYPEUCEDANIN	Shoot				--
6	FENCHONE	Root Essent. Oil				--
6	OXYPEUCEDANIN	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.
6	FENCHONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
6	BETA-BISABOLENE	Root	8.0	72.0	-1.2022170084503725	--
5	XANTHOTOXOL	Fruit				--
5	BETA-ELEMENE	Root Essent. Oil				--
5	BYAKANGELICIN	Root		13.0		--
5	SABINOL	Root	0.0	34.0		--
5	XANTHOTOXOL	Plant				--
5	GLUTAMINE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference 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	SABINENE	Root Essent. Oil				--
5	BETA-ELEMENE	Root	0.0	90.0	-1.0	--
5	SABINENE	Root	2.0	95.0	0.0843149140979014	--
5	ZEAXANTHIN	Leaf				--
5	ERGOSTEROL	Fruit				--
5	BETA-SESQUIPHELLANDRENE	Root	0.0	7.0	-1.0	--
5	ERGOSTEROL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
4	BETA-AMYRIN-ACETATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
4	OSTHOLE	Root				--
4	RUTAMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	ALANINE	Leaf				--
3	BETA-SELINENE	Root				--
3	BETA-PHELLANDRENE	Root	50.0	5320.0	1.0	--
3	CIS-OCIMENE	Root	4.0	125.0		--
3	CEDROL	Root				--
3	VALINE	Leaf				--
3	BETA-PHELLANDRENE	Root Essent. Oil				--
3	BETA-PHELLANDRENE	Fruit				--
3	AR-CURCUMENE	Root	0.0	6.0	-1.0	--
3	CIS-OCIMENE	Root Essent. Oil				--
3	ISOLEUCINE	Leaf				--
3	ASPARTIC-ACID	Leaf				--
2	GERMACRENE-D	Root	2.0	26.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ALPHA-AMYRIN-ACETATE	Fruit		26.0		--
2	ELEMOL	Root Essent. Oil				--
2	ARCHANGELICIN	Shoot				--
2	TRIDECANOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	ARCHANGELICIN	Fruit				--
2	OXYPEUCEDANIN-HYDRATE	Plant				--
2	LUPEOL-ACETATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	CONIFERIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	ARCHANGELICIN	Plant				--
2	2-NONANONE	Root		1.0		--
2	PHELLOPTERIN	Root				Phytochem. Anal. 3(1):42-48. 1992
2	VIOLAXANTHIN	Leaf				--
2	OXYPEUCEDANIN-HYDRATE	Root		1500.0		--
2	OXYPEUCEDANIN-HYDRATE	Shoot				--
2	THUJOPSENE	Root				--
2	PHELLOPTERIN	Plant				--
2	TRANS-BETA-FARNESENE	Root	2.0	10.0		--
2	ALPHA-HUMULENE	Root Essent. Oil				--
2	OXYPEUCEDANIN-HYDRATE	Fruit				--
2	DIACETYL	Root				Pakistan Encyclopedia Planta Medica. 1986.
2	OCTYL-ISOVALERATE	Root Essent. Oil				--
2	GERMACRENE-D	Root Essent. Oil				--
2	CONIFERIN	Root				Pakistan Encyclopedia Planta Medica. 1986.
2	PALMITOLEIC-ACID	Fruit				--
2	LUPEOL-ACETATE	Fruit		40.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	METHANOL	Root				--
2	BETA-MYRCENE	Root				--
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	BISABOLANGELONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	OCTYL-ISOVALERATE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ELEMOL	Root	0.0	18.0		--
2	ALPHA-METHYL-BUTYRIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	OXYPEUCEDANIN-HYDRATE	Seed	0.6	3.8	-1.0	Wealth of India.
2	ARCHANGELICIN	Root				--
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.
1	QUINIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	ANGELIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	TRANS-CARVEOL	Root	0.0	11.0		--
1	BEHENIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	ETHYL-PALMITATE	Root		10.0		--
1	ETHYL-MYRISTATE	Root Essent. Oil				--
1	ETHYL-OLEATE	Root				--
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	CUPARENE	Root	3.0	10.0	1.0	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
1	XANTHOXYLETIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	ETHYL-MYRISTATE	Root				--
1	OSTRUTHOL	Root		2000.0		--
1	OLEIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
1	LAURIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
1	ACONITIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	VISNAGIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	SPHONDIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	ETHYL-LAURATE	Root				--
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	BYAKANGELICIN-ANGELATE	Root		8.0		--
1	PALMITIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
1	CUPARENE	Root Essent. Oil				--
1	PENTADECANOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	2'-ANGELOYL-3'-ISOVALERYL-VAGINATE	Root				Phytochem. Anal. 3(1):42-48. 1992
1	8-(2-(3-METHYLBUTOXY)-3-HYDROXY-3-METHYLBUTOXY)PSORALEN	Root				Phytochem. Anal. 3(1):42-48. 1992
1	OSTRUTHOL	Seed	9.0	57.0		Wealth of India.
1	TRANS-CARVEOL	Root Essent. Oil				--
0	TRANS-OCIMENE	Root	10.0	268.0		--
0	DEHYDRODEOXYANGELICAN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	EICOSANE	Root	0.0	5.0	-1.0	--
0	BYAKANGELICIN-2'-O-ISOVALERATE	Root		2.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOBERGAPTEN	Root Essent. Oil		88000.0		--
0	NONAN-2-ONE	Root Essent. Oil				--
0	5-METHOXY-GAMMA-HYDROXYPSORALEN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	GAMMA-MUUROLENE	Root Essent. Oil				--
0	TRANS-PIPERITOL	Root Essent. Oil				--
0	CIS-1-ETHOXY-2-P-MENTHENE	Root		16.0		--
0	O-CYMENE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CIS-P-MENTH-2-EN-1-OL	Root	0.0	62.0		--
0	BETA-HIMACHALENE	Root	0.0	12.0		--
0	ALPHA-MUUROLENE	Root Essent. Oil				--
0	P-MENTH-TRANS-2-EN-1-OL	Root Essent. Oil				--
0	ANGELICAIN	Plant				--
0	7-METHOXY-8-(3-METHYL-2-BUTENYL)-2H-1-BENZOPYRAN-2-ONE	Root	50.0	2000.0		--
0	HEPTADECAN-1-OL-ACETATE	Root				--
0	1,1-DIETHOXYHEXANE	Root				--
0	TERT-O-BETA-D-GLUCOPYRANOSYL-(R)-HERACLLENOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ETHYL-STEARATE	Root				--
0	15-PENTADECANOLIDE	Root	15.0	75.0		--
0	TRIDECANOLIDE	Root	15.0	45.0		--
0	ISOAMYL-ISOVALERATE	Root		2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EO	Seed	2000.0	38000.0	-0.07010761007370915	--
0	OCTADECANE	Root	0.0	5.0		--
0	CRYPTONE	Root Essent. Oil				--
0	BETA-SITOSTEROL-PALMITATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DIHYDROCARVONE	Seed	160.0	1025.0	0.004692483254163068	--
0	OSTHENOL	Shoot				--
0	ALPHA-COPAENE	Root	10.0	190.0		--
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	DEHYDROASCORBIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	DIPRENYL-NARINGENIN	Root				Wealth of India.
0	SABINYL-ACETATE	Root	0.0	5.0		--
0	ISOAMYL-ISOVALERATE	Root Essent. Oil				--
0	NONAN-1-AL	Root Essent. Oil				--
0	5,7-DIHYDROXY-2-METHYL-CHROMONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ETHYL-PENTADECANOATE	Root Essent. Oil				--
0	TRANS-PINOCARVEOL-ACETATE	Root 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.
0	BETA-COPAENE	Root Essent. Oil				--
0	8-HYDROXY-5-METHOXY-PSORALEN	Fruit		62.0		--
0	P-MENTH-CIS-2-EN-1-OL	Root Essent. Oil				--
0	M-CYMEN-8-OL	Root		9.0		--
0	TERT-O-BETA-D-GLUCOPYRANOSYL-(R)-BYAKANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ETHYL-PENTADECANOATE	Root				--
0	13-TRIDECANOLIDE	Root	15.0	50.0		--
0	EICOSENOIC-ACID	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISELIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	EO	Root	1000.0	19000.0	0.24015740661431922	--
0	NONADECANE	Root	0.0	5.0	1.0	--
0	CIS-CARVEOL-ACETATE	Root Essent. Oil				--
0	STEARIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
0	P-CYMENE-8-OL	Root Essent. Oil				--
0	OSTHENOL	Fruit				--
0	ALPHA-COPAEN-11-OL	Root	15.0	45.0		--
0	GAMMA-MUUROLENE	Root	1.0	4.0	-1.0	--
0	D-ALPHA-PHELLANDRENE	Root	15.0	2660.0		--
0	D-ALPHA-PHELLANDRENE	Seed	1140.0	7220.0	-1.0	Wealth of India.
0	BORNEOL-ISOVALERATE	Root Essent. Oil				--
0	PETROSELINIC-ACID	Seed		427000.0	-0.4900561802158002	--
0	7-ISOPROPYL-5-METHYL-BICYCLO(2.2.2)-OCT-5-EN-2-ONE	Root Essent. Oil		100.0		--
0	4-ETHOXY-1-P-MENTHENE	Root		3.0		--
0	BETA-CEDRENE	Root				--
0	OXYPEUCIDANIN-METHANOLATE	Root				--
0	ANGALCIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	12-METHYL-13-TRIDECANOLIDE	Root	1.0	12.0		--
0	DIHYDROEUDESMOL	Root				--
0	TRANS-OCIMENE	Root Essent. Oil				--
0	CAMPESIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRANS-VERBENYL-ISOVALERATE	Root	6.0	17.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PROTEIN	Seed	319000.0	325000.0	0.8113062118868037	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EICOSENOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	METHYL-ETHYL-ACETIC-ACID	Root				--
0	CIS-BETA-FARNESENE	Root				--
0	ARACHIDIC-ACID	Fruit				--
0	OSTHENOL	Root		115.0		--
0	TRANS-6-NITRO-1(7),2-P-MENTHADIENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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	BORNEOL-ACETATE	Root Essent. Oil				--
0	PETROSELINIC-ACID	Fruit				--
0	PRANGOLARIN	Seed	12.0	75.0		Wealth of India.
0	4,4,6-TRIMETHYLCYCLOHEX-2-EN-1-ONE	Root				--
0	AZULENOGENIC-HYDROCARBON	Seed	930.0	5890.0		Wealth of India.
0	BETA-CARYOPHYLLENE	Root Essent. Oil		110000.0	1.0368391024927353	--
0	12-METHYL-OMEGA-TRIDECANOLIDE	Root Essent. Oil				--
0	OXYPEUCIDANIN-HYDRATE	Root				--
0	ALPHA-THUJENE	Root	1.0	13.0		--
0	ZOZYMIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	LINALOL	Root		1.0	-0.7415836394549143	--
0	DELTA-ELEMENE	Root				--
0	CIS-VERBENOL	Root Essent. Oil				--
0	TRANS-4-ETHOXY-THUJANE	Root Essent. Oil				--
0	CAMPESENIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-VERBENYL-ACETATE	Root	15.0	46.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HYDROXPENTADECANOIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	PRANGOLARIN	Plant				--
0	DIHYDROFUROCOUMARIN-GLYCOSIDE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CHRYSANTHENOL-ACETATE	Root				--
0	SPATHULENOL	Root				--
0	O-CYMENE	Root Essent. Oil				--
0	OROSELONE	Root Essent. Oil		25000.0		--
0	ALPHA-ALKYL-FUROCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRANS-4-ETHOXY-THUJANE	Root		10.0		--
0	5-UNDECEN-3-YNE	Root	2.0	15.0		--
0	HEPTADECADIENOLIDE	Root Essent. Oil		10000.0		--
0	CHRYSANTHENYL-ACETATE-II	Root	1.0	95.0		--
0	BORNEOL-ACETATE	Root				--
0	PENTADECANOLIDE	Root Essent. Oil		60000.0		--
0	ARCHANGELICAIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	1,8-CINEOL	Fruit Essent. Oil		538000.0	1.0	--
0	2-NITRO-1,5-P-MENTHADIENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	PRANGOLARIN	Root				--
0	NONANAL	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ARCHANGELIN	Root		2000.0		--
0	1,1-DIETHOXYOCTANE	Root Essent. Oil				--
0	OXYPEUCIDANIN	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-THUJENOL	Root				--
0	TRANS-4-ETHOXY-PIN-2-ENE	Root Essent. Oil				--
0	CAMPESELOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
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	HYDROXYMYRISTIC-ACID	Seed				--
0	DIHYDROFURANOCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	LIMONENE-1,2-OXIDE	Plant	0.0	15.0		--
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	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	ANGELICAIN	Root				--
0	M-CYMENE-8-OL	Root Essent. Oil				--
0	TRANS-4-ETHOXY-2-PINENE	Root		79.0		--
0	FURANOCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	5-ISOPROPYLBICYCLO-(3,1,0)-HEXAN-2-ONE	Plant	10.0	30.0		--
0	TRIDECANOLIDE	Root Essent. Oil				--
0	CIS-CARVYL-ACETATE	Root		2.0		--
0	OSTRUTOL	Plant				--
0	CUMINYL-ALCOHOL	Root		2.0		--
0	CHRYSANTHENYL-ACETATE-I	Root	0.0	7.0		--
0	ALPHA-PHELLANDRENE-8-OL	Root Essent. Oil				--
0	PENTADECAN-1-AL	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ARCHANGELENONE	Plant				--
0	PHELLANDRAL	Root	0.0	4.0		--
0	1,1-DIETHOXYHEXANE	Root Essent. Oil				--
0	HUMULENE-MONOXIDE	Root Essent. Oil				--
0	2-DECANONE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	KVANNIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ETHYL-LINOLENATE	Root				--
0	DECAN-2-ONE	Root Essent. Oil				--
0	CIS-SABINENE-HYDRATE	Root Essent. Oil				--
0	ARCHANGELENONE	Root		50.0		--
0	TRANS-VERBENOL	Root	20.0	64.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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	TRANS-3-ETHOXY-1-P-MENTHANE	Root		4.0		--
0	FURANCHROMONE	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	GERMANIUM	Root		146.0	-1.0	--
0	TRIDECAN-1-OL	Root				--
0	CIS-ALPHA-COPAENE-8-OL	Plant				--
0	CRYPTONE	Root	16.0	50.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BISABOLOL	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTADECAN-1-AL	Root				--
0	ARACHIDIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	PEUCENIN-7-METHYL-ETHER	Root				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	ALPHA-CUBEBENE	Root	0.0	5.0		--
0	HEXADECAN-1-OL	Root				--
0	UNDEC-5-EN-3-YNE	Root				--
0	2'-BETA-D-GLUCOPYRANOSYLOXY-MARMESINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	METHYL-ETHYL-ACETIC-ACID	Seed				--
0	(+)-ALPHA-CURCUMENE	Root Essent. Oil				--
0	ETHYL-LINOLEATE	Root		8.0		--
0	DECA-TRANS-2,TRANS-4-DIEN-1-AL	Root				--
0	CIS-PIPERITOL	Root Essent. Oil				--
0	TETRADECAN-1-OL-ACETATE	Root				--
0	BORNYL-ISOVALERATE	Root	0.0	7.0	-1.0	--
0	APTERIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TRANS-SABINENE-HYDRATE	Root		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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	PETROSELINIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CAR-3-ENE	Root				--
0	ALPHA-COPAENE-11-OL	Root Essent. Oil				--
0	TRANS-1-ETHOXY-2-P-MENTHENE	Root		6.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	4-METHOXY-7H-FURO(3,2-G)(1)BENZOPYRAN-7-ONE	Root	1.0	225.0		--
0	TRANS-VERBENOL-ISOVALERATE	Root Essent. Oil				--
0	CIS-6-NITRO-1(7),2-P-MENTHADIENE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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	BYAKANGELICOL	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	BISABOLENE	Root Essent. Oil				--
0	ALPHA-COPAENE-8-OL	Root	6.0	18.0		--
0	HERACLENOL-2'-O-SENECIOATE	Root		1.0		--
0	UMBELLIPRENIN	Root				--
0	15-HYDROXYPENTADECANOIC-ACID	Root				Wealth of India.
0	8-HYDROXY-5-METHOXY-PSORALEN	Seed				--
0	CYMENE	Root				--
0	TETRADECAN-1-AL	Root				--
0	(+)-CUPARENE	Root				--
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	TRANS-PIPERITOL	Root		30.0		--
0	HEPTYL-ISOVALERATE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PENTADECANOLIDE	Root	15.0	37.0		--
0	DELTOIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	HEXADECANE	Root	0.0	7.0	0.9999999999999999	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CAR-3-ENE	Root Essent. Oil				--
0	ROSIFOLIOL	Root				--
0	BETA-CYMOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ALPHA-COPAENE	Root Essent. Oil				--
0	OCTAN-1-AL	Root Essent. Oil				--
0	(+)-OXYPEUCEDANIN	Root				--
0	8-HYDROXY-5-METHOXY-PSORALEN	Plant				--
0	TRANS-1(7),5-P-MENTHADIEN-2-YL-ACETATE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	2-PENTYL-FURAN	Root	0.0	4.0	1.0	--
0	TRANS-VERBENOL-ACETATE	Root Essent. Oil				--
0	CIS-4-ETHOXY-THUJANE	Root		6.0		--
0	OROSELONE	Plant				--
0	CIS-VERBENOL	Root	3.0	10.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BICYCLOGERMACRENE	Root				--
0	APTERIN	Root				--
0	HERACLENOL-2'-O-ISOVALERATE	Root		13.0		--
0	LINOLENIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
0	UMBELLIPRENIN	Fruit				--
0	12-METHYL-OMEGA-TRIDECANOLIDE	Root				--
0	MARMEZIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	UMBELLIPRENIN	Seed	4.0	57.0		--
0	ISOCOUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
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	ETHYL-CAPRATE	Root				--
0	GAMMA-CADINENE	Root	2.0	14.0	1.0	--
0	CIS-4-ETHOXY-THUJANE	Root Essent. Oil				--
0	(+)-ALPHA-COPAENE	Seed Essent. Oil				--
0	ALPHA-MUUROLENE	Root	10.0	120.0		--
0	TRANS-PINOCARVYL-ACETATE	Root	5.0	17.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HEPTADECANOLIDE	Root				--
0	HEPTADECANE	Root	0.0	7.0		--
0	ALPHA-THUJENE	Root Essent. Oil				--
0	QUERCETIN-GLYCOSIDE	Fruit				--
0	BETA-COPAENE	Root	8.0	20.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TETRADECANE	Root	0.0	2.0		--
0	ALPHA-COPAEN-8-OL	Root				--
0	OCTADECAN-1-OL	Root				--
0	(+)-LIMONENE	Root				--
0	5-METHYL-ANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ETHYL-CAPRATE	Root Essent. Oil				--
0	GAMMA-TERPINEOL	Root				--
0	TRANS-VERBENOL	Root Essent. Oil				--
0	CIS-4-ETHOXY-2-PINENE	Root		5.0		--
0	CIS-SABINENE-HYDRATE	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-FARNESENE	Root Essent. Oil				--
0	HEPTYL-ISOVALERATE	Root Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINOLEIC-ACID-ETHYL-ESTER	Root Essent. Oil				--
0	1-O-BETA-D-GLUCOPYRANOSYL-(2S,3P)-3-HYDROXY-MARMESINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	MARMESININE	Plant				--
0	TETRADECANAL	Root		2.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ISOBERGAPTOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CUMINYL-ALDEHYDE	Root Essent. Oil				--
0	CIS-4-ETHOXY-PIN-2-ENE	Root Essent. Oil				--
0	TERPINENOL	Root Essent. Oil				--
0	BETA-THUJENE	Root	6900.0	8700.0		--
0	TRANS-CARVEOL-ACETATE	Root Essent. Oil				--
0	TRANS-P-MENTH-2-EN-1-OL	Root	0.0	25.0		--
0	PENTADECANAL	Root				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-CARYOPHYLLENE	Root	0.0	6.0		--
0	ALPHA-TERPINOLENE	Root				--
0	TANNINS	Root				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	ALPHA-CARYOPHYLLENE	Root				--
0	ISOBERGAPTEN	Fruit				--
0	OCTADEC-9-EN-18-OLIDE	Root Essent. Oil		20000.0		--
0	17-HEPTADECANOLIDE	Root	2.0	20.0		--
0	TRANS-SABINENE-HYDRATE	Root Essent. Oil				--
0	CIS-3-ETHOXY-1-P-MENTHENE	Root		8.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OCTANAL	Root		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-PIPERITOL	Root	0.0	8.0		--
0	HEPTADECANOLIDE	Root Essent. Oil				--
0	1,1-DIETHOXYOCTANE	Root				--
0	MARMESIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	TERT-O-BETA-D-GLUCOPYRANOSYL-(R)-ISOBYAKANGELICIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	FAT	Seed	189000.0	203000.0	-0.3286177590566424	--
0	UMBELLIFEREN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	ISOBERGAPTIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
0	CUMINYL-ALCOHOL	Root Essent. Oil				--
0	BETA-THUJENE	Seed Essent. Oil		870000.0		--
0	BETA-SITOSTERYL-ARACHINATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.