

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Angelica sinensis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,4-DIHYDRO-PHTHALIC-ANHYDRIDE	Root Essent. Oil				Jim Duke's personal files.
11	ADENINE	Root				Jim Duke's personal files.
3	ALANINE	Root				Jim Duke's personal files.
28	ALPHA-PINENE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
32	ALPHA-TOCOPHEROL	Root				Jim Duke's personal files.
5	ALUMINUM	Root	93.0	422.0	-0.0860532203055952	--
1	ANGELIC-ACID	Root				Jim Duke's personal files.
0	ANGELICA-POLYMORPHA-ALKALOID	Root				Jim Duke's personal files.
0	ANGELICA-POLYSACCHARIDE-AS-1	Root				Jim Duke's personal files.
0	ANGELICA-SINENSIS-COMPOUND-E-232	Root				Jim Duke's personal files.
0	ANGELICIDE	Root		10.0		Jim Duke's personal files.
0	ANGELICIDE	Plant				Jim Duke's personal files.
0	ANGELICONE	Root				Jim Duke's personal files.
0	ANGELOL	Root				Jim Duke's personal files.
12	ARACHIDONIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
14	ARGININE	Root				Jim Duke's personal files.
112	ASCORBIC-ACID	Root	67.0	304.0	-0.4721936580133219	--
0	ASH	Root	12320.0	56000.0	-0.3300669201297154	--
3	ASPARTIC-ACID	Root				Jim Duke's personal files.
26	BERGAPTEN	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	BETA-CADINENE	Root Essent. Oil				Jim Duke's personal files.
53	BETA-CAROTENE	Root	0.3	1.2	-0.42874913335629994	--
47	BETA-SITOSTEROL	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	BETA-SITOSTEROL-GLUCOSIDE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	BIOTIN	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	BREFELDIN-A	Root				Jim Duke's personal files.
0	BUTYLIDENE-NEPHTHALIDE	Root Essent. Oil				Jim Duke's personal files.
10	BUTYLIDENE-PHTHALIDE	Root				Jim Duke's personal files.
4	CADINENE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	CALCIUM	Root	620.0	2820.0	-0.5018997684435467	--
0	CARBOHYDRATES	Root	176000.0	800000.0	-0.38552046590540956	--
37	CARVACROL	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
37	CARVACROL	Root Essent. Oil				Jim Duke's personal files.
20	CHOLINE	Root		2470.0	-0.12100326278601606	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
24	CHROMIUM	Root	0.2	0.9	-0.3805576061834531	--
0	CIS-BETA-OCIMENE	Root Essent. Oil		121800.0		Jim Duke's personal files.
2	COBALT	Root	3.3	15.1	-0.21746232835558876	--
12	COPPER	Root		5.0	-0.7439970811056329	Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
2	CYSTINE	Root				Jim Duke's personal files.
0	D-SUCROSE	Root				Jim Duke's personal files.
0	DODECAN-1-OL	Root				Jim Duke's personal files.
0	EO	Tissue Culture				Jim Duke's personal files.
0	EO	Shoot				Jim Duke's personal files.
0	EO	Root	880.0	7000.0	-0.3250740058070961	--
13	FALCARINDIOL	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
16	FALCARINOL	Root				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	FALCARINONE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	FAT	Root	3960.0	18000.0	-0.16273509823001947	--
61	FERULIC-ACID	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
61	FERULIC-ACID	Plant		940.0	0.7045758177797922	Jim Duke's personal files.
15	FIBER	Root		172000.0	1.8630150734263555	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Root		172000.0	1.7960562990838373	--
0	FIBER(DIETARY)	Root		350000.0	-0.5288907611400689	--
15	FOLACIN	Root				--
23	FOLIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	FOLINIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
8	FRUCTOSE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
22	GABA	Root				Jim Duke's personal files.
22	GAMMA-AMINOBUTYRIC-ACID	Root				Jim Duke's personal files.
7	GLUCOSE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
8	GLUTAMIC-ACID	Root				Jim Duke's personal files.
12	GLYCINE	Root				Jim Duke's personal files.
7	HISTIDINE	Root				Jim Duke's personal files.
6	IRON	Root	19.4	88.0	-0.313807642199598	--
3	ISOLEUCINE	Root				Jim Duke's personal files.
0	ISOSAFROL	Root Essent. Oil				Jim Duke's personal files.
3	ISOSAFROLE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	KILOCALORIES	Root		2820.0	-1.2035188668532102	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	L-MALIC-ACID	Root		2.6		Jim Duke's personal files.
2	LEUCINE	Root				Jim Duke's personal files.
1	LIGNOCERIC-ACID	Root				Jim Duke's personal files.
7	LIGUSTILIDE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
7	LIGUSTILIDE	Essential Oil		450000.0	1.0	Jim Duke's personal files.
7	LIGUSTILIDE	Root Essent. Oil		739800.0	1.0	Jim Duke's personal files.
27	LINOLEIC-ACID	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	LYSINE	Root				Jim Duke's personal files.
0	LYSOPHOSPHATIDYLCHOLINE	Root				Jim Duke's personal files.
65	MAGNESIUM	Root	583.0	2650.0	0.047066853971341596	--
14	MANGANESE	Root	0.6	2.6	-0.5148269484931834	--
15	METHIONINE	Root				Jim Duke's personal files.
6	MYRISTIC-ACID	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	N-BUTYLIDENEPHTHALIDE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	N-BUTYLIDENPHTHALIDE	Root				--
1	N-BUTYLPHTHALIDE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	N-DODECANOL	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	N-TETRADECANE	Root				Jim Duke's personal files.
0	N-VALEROPHENONE-O-CARBONIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	N-VALEROPHENONE-O-CARBOXYLIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	NEOANGELIDE	Root				Jim Duke's personal files.
39	NIACIN	Root	15.0	68.0	0.5147577614900641	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	NICOTINAMIDE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	NICOTINIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
18	OLEIC-ACID	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
16	P-CYMENE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	PALMITIC-ACID	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	PANTOTHENIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
7	PHENYLALANINE	Root				Jim Duke's personal files.
2	PHOSPHATIDYL-CHOLINE	Root				Jim Duke's personal files.
4	PHOSPHORUS	Root	735.0	3340.0	-0.031231075436283107	--
0	PHTHALIDES	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	POLYSACCHARIDE	Root				Jim Duke's personal files.
14	POTASSIUM	Root	2354.0	10700.0	-0.37188592487614675	--
0	PROLINE	Root				Jim Duke's personal files.
0	PROTEIN	Root	28600.0	130000.0	0.1301143428510278	--
15	RIBOFLAVIN	Root	0.8	3.4	-0.14761901787013534	--
29	SAFROLE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
29	SAFROLE	Root Essent. Oil				Jim Duke's personal files.
44	SCOPOLETIN	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	SEDANOIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
60	SELENIUM	Root	0.1	0.4	-0.3339983213346751	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SERINE	Root				Jim Duke's personal files.
0	SESQUITERPENE	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	SILICON	Root	0.8	3.4	-0.327286207739498	--
1	SODIUM	Root				--
0	SPHINGOMYELIN	Root				Jim Duke's personal files.
5	STARCH	Root	33000.0	150000.0	-0.6933088087748416	--
8	STEARIC-ACID	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
7	SUCCINIC-ACID	Root				Jim Duke's personal files.
14	SUCROSE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	SUGARS	Root	24200.0	110000.0	0.05921602494532206	--
0	TETRADECAN-1-OL	Root				Jim Duke's personal files.
31	THIAMIN	Root				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Root				--
4	THREONINE	Root				Jim Duke's personal files.
4	TIN	Root	0.9	4.0	-1.2692190956073157	--
29	TRYPTOPHAN	Root				Jim Duke's personal files.
8	TYROSINE	Root				Jim Duke's personal files.
22	UMBELLIFERONE	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	URACIL	Root				Jim Duke's personal files.
0	VALEROPHENONE-CARBOXYLIC-ACID	Root Essent. Oil				Jim Duke's personal files.
3	VALINE	Root				Jim Duke's personal files.
0	VANILIC-ACID	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
0	VIT-B12	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VIT-E	Root		77.0		--
0	VITAMIN-A	Root				Jim Duke's personal files.
0	VITAMIN-B12	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
75	VITAMIN-E	Root		77.0		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	WATER	Root		780000.0	0.07039472351276986	--
77	ZINC	Root				--