

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Ephedra sinica*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-ISOEPHEDRINE	Plant	--	--		Jim Duke's personal files.
0	(+)-METHYLEPHEDRINE	Shoot	1840	1840		Jim Duke's personal files.
0	(+)-N-METHYLPSEUDOEPHEDRINE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	(+)-PSEUDOEPHEDRINE	Plant	4100	4100		Jim Duke's personal files.
2	(+)-PSEUDOEPHEDRINE	Shoot	1300	7300		Jim Duke's personal files.
0	(-)-ALPHA-TERPINEOL	Essential Oil	--	--		Jim Duke's personal files.
1	(-)-EPHEDRINE	Rhizome	--	--		Jim Duke's personal files.
1	(-)-EPHEDRINE	Shoot	7300	7300		Jim Duke's personal files.
1	(-)-EPHEDRINE	Plant	9800	9800		Jim Duke's personal files.
38	(-)-EPICATECHIN	Stem	--	--		Jim Duke's personal files.
21	(-)-EPIGALLOCATECHIN	Stem	--	--		Jim Duke's personal files.
0	(-)-METHYLEPHEDRINE	Shoot	1100	1100		Jim Duke's personal files.
0	(-)-METHYLEPHEDRINE	Plant	--	--		Jim Duke's personal files.
0	(-)-NOR-EPHEDRINE	Plant	--	--		Jim Duke's personal files.
0	(-)-NOR-EPHEDRINE	Shoot	430	430		Jim Duke's personal files.
0	(N)-METHYL-EPSILON-EPHEDRINE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,2,3-TRIMETHYL-5-(2-PROPENYL)-BENZENE	Shoot	--	--		
0	1,4-CINEOLE	Shoot	--	11		
0	1-ACETYL-1,3-DIMETHYLCYCLOHEX-3-ENE	Essential Oil	53000	53000		Jim Duke's personal files.
0	1-METHYL-3,4-DIHYDROPYRROLOPYRAZINE	Shoot	--	--		
0	1-METHYL-4-ISOPROPYLBENZENE	Shoot	--	22		
0	2,3,5,6-TETRAMETHYLPYRAZINE	Essential Oil	--	--		Jim Duke's personal files.
0	2,3-DIHYDRO-2-METHYLBENZOFURAN	Shoot	--	31		
0	2-ETHYLPHENOL	Shoot	--	--		
0	2-HYDROXY-5-METHOXY-ACETOPHENONE	Shoot	--	11		
0	2-METHYL-PROPAN-1-OL	Shoot	--	--		
0	3,7,11-TRIMETHYL-2,6,10-DODECATRIEN-1-OL	Shoot	--	27		
0	3-METHOXYHERBACETIN	Shoot	--	--		Jim Duke's personal files.
0	4-ISOPROPYL-ACETOPHENONE	Shoot	--	1		
0	4-METHYL-1-(1-PROPENYL)-BENZENE	Shoot	--	15		
16	ACETIC-ACID	Shoot	--	--		
3	ACETONE	Shoot	--	--		
0	ALKALOIDS	Plant	8000	33000	0.4770828807832176	
0	ALPHA-ALPHA-4-TRIMETHYLCYCLOHEX-3-ENE-1-METHANOL	Essential Oil	350000	350000		Jim Duke's personal files.
3	ALPHA-CURCUMENE	Shoot	--	28		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	ALPHA-TERPINENE	Shoot	--	21	-0.4223670281653628	
23	ALPHA-TERPINEOL	Stem	--	--		Jim Duke's personal files.
23	ALPHA-TERPINEOL	Shoot	--	130	-0.15179805725566703	
0	ALPHA-THUJENE	Shoot	--	--		
5	ALUMINUM	Plant	13	63	-0.6317772724119737	
7	ANISALDEHYDE	Shoot	--	1		
101	APIGENIN	Shoot	--	--		Jim Duke's personal files.
0	APIGENIN-5-O-RHAMNOSIDE	Shoot	--	--		Jim Duke's personal files.
112	ASCORBIC-ACID	Plant	151	721	-0.42442441223017924	
0	ASH	Plant	11760	56000	-1.174516161001471	
24	BENZALDEHYDE	Shoot	--	15	-0.18767194580421803	
3	BENZENE	Shoot	--	--		
20	BENZOIC-ACID	Shoot	--	--		
53	BETA-CAROTENE	Plant	8	37	-0.5267913001492441	
0	BETA-CARYOPHYLLENE	Shoot	--	15	-0.3795611290738971	
13	BETA-IONONE	Shoot	--	7	-0.5099506113180887	
0	BETA-TERPINENE	Shoot	--	4	1.4138737841527484	
3	BETA-TERPINEOL	Stem	--	--		Jim Duke's personal files.
3	BETA-TERPINEOL	Essential Oil	65000	65000	1	Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BUTAN-1-OL	Shoot	--	4		
0	CALAMENENE	Shoot	--	5	-0.45758835460299646	
28	CALCIUM	Plant	922	4390	-0.9840279377525842	
0	CARBOHYDRATES	Plant	171570	817000	0.9310666774344681	
24	CHROMIUM	Plant	--	--		
6	CINNAMYL-ALCOHOL	Shoot	--	18		
0	CIS-P-MENTH-2-EN-7-OL	Shoot	--	31		
15	CITRONELLOL	Shoot	--	6	-0.17688319436547048	
2	COBALT	Plant	0.8	4	-0.3467413826991892	
1	COPAENE	Shoot	--	6	-0.6695815733686479	
0	CYCLOHEX-3-ENE-1-CARBOXALDEHYDE	Essential Oil	--	--		Jim Duke's personal files.
0	D-N-METHYL-PSEUDOEPHEDRINE	Plant	--	--		
5	D-NORPSEUDOEPHEDRINE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-PSEUDOEPHEDRINE	Stem	400	5000		
3	DECANOIC-ACID	Shoot	--	--		
9	DELTA-CADINENE	Shoot	--	5	-0.41132142010207945	
2	DIHYDROCARVEOL	Essential Oil	--	--		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EICOSANE	Shoot	--	--		
16	ELEMICIN	Shoot	--	7	-1	
51	ELLAGIC-ACID	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EO	Plant	1000	4000	-0.4361356820223302	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	EPHEDRADINE-A	Root	--	--		
0	EPHEDRADINE-B	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	EPHEDRADINE-C	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
49	EPHEDRINE	Shoot	1700	22700		Jim Duke's personal files.
49	EPHEDRINE	Root	--	--		Jim Duke's personal files.
49	EPHEDRINE	Plant	700	22500	1	
3	EPHEDROXANE	Plant	--	10		
3	EPHEDROXANE	Shoot	10	10		Jim Duke's personal files.
0	EPSILON-EPHEDRINE	Plant	--	--		
24	ETHANOL	Shoot	--	2	-0.4494207779171692	
6	ETHYL-ACETATE	Shoot	--	1	-1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
76	EUGENOL	Shoot	--	4	-0.49005956913368254	
0	FAT	Plant	3990	19000	-0.4779556486147383	
5	FERULOYLHISTAMINE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
15	FIBER	Plant	98000	98000	-0.9227393238771348	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Plant	--	98000	-0.11209991698565153	
0	FIBER(DIETARY)	Plant	--	319000	-0.4864687195092701	
3	FLUORIDE	Shoot	3.5	3.5	-1	Jim Duke's personal files.
6	FURFURAL	Shoot	--	1	-1	
62	GALLIC-ACID	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HENEICOSANE	Shoot	--	--		
0	HEPTANOIC-ACID	Shoot	--	3		
1	HERBACETIN	Shoot	--	--		Jim Duke's personal files.
5	HEXANAL	Shoot	--	4	1.2719029063014613	
0	HYDROXYSUCCINIC-ACID	Shoot	--	--		Jim Duke's personal files.
6	IRON	Plant	4.4	21	-0.7135724651785726	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOBUTYROPHENONE	Shoot	--	10		
1	ISOMENTHOL	Shoot	--	7	-0.8923611301960851	
75	KAEMPFEROL	Shoot	--	--		Jim Duke's personal files.
0	KAEMPFEROL-RHAMNOSIDE	Shoot	--	--		Jim Duke's personal files.
0	KILOCALORIES	Plant	3100	3100	-0.18505812231826163	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	L-ALPHA-TERPINEOL	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	L-EPHEDRINE	Stem	--	--		
0	L-N-METHYL-EPHEDRINE	Plant	--	--		
0	L-NOREPHEDRINE	Plant	--	--		
3	LIGUSTRAZINE	Stem	--	--		Jim Duke's personal files.
60	LIMONENE	Shoot	--	23	-0.3167307772189595	
0	LINALOL	Shoot	--	32	-0.21646739575716864	
0	LONGIFOLENE	Shoot	--	4	1.404878717372541	
65	MAGNESIUM	Plant	443	2110	-0.607299956389678	
14	MANGANESE	Plant	1	5.4	-0.656202131723187	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	MAOKONINE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	METHYL-BUTANOATE	Shoot	--	28		
20	METHYL-EUGENOL	Shoot	--	23	-0.5855534179535692	
0	METHYL-PHENYL-CARBINOL	Shoot	--	7		
0	METHYLBENZYLAMINE	Plant	--	--		Jim Duke's personal files.
0	METHYLEPHEDRINE	Plant	700	700		Jim Duke's personal files.
0	METHYLEPHEDRINE	Shoot	310	1340		Jim Duke's personal files.
22	MYRCENE	Stem	--	--		Jim Duke's personal files.
22	MYRCENE	Essential Oil	--	--		Jim Duke's personal files.
31	MYRISTICIN	Shoot	--	2		
1	N-METHYL-EPHEDRINE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
39	NIACIN	Plant	19	90	0.18616654712916966	
0	NONACOSAN-10-OL	Plant	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
2	NONACOSANE	Plant	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	NONADECANE	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NONANAL	Shoot	--	2	-0.7290331034157462	
2	NONANOIC-ACID	Shoot	--	3	-0.4027361982238935	
0	NOR-EPHEDRINE	Plant	--	--		
0	NOR-EPHEDRINE	Shoot	180	1420		Jim Duke's personal files.
0	NOR-PSEUDOEPHEDRINE	Shoot	1100	1420		Jim Duke's personal files.
0	NOR-PSEUDOEPHEDRINE	Plant	--	--		Jim Duke's personal files.
0	OCTADECANE	Shoot	--	--		
5	OCTANOIC-ACID	Shoot	--	6	1.7320508075688772	
9	OXALIC-ACID	Shoot	--	--		Jim Duke's personal files.
8	P-CRESOL	Shoot	--	1		
0	P-MENTH-2-EN-7-OL	Essential Oil	--	--		Jim Duke's personal files.
0	P-MENTH-2-EN-7-OL	Stem	--	--		Jim Duke's personal files.
0	P-MENTHA-1,5-DIEN-7-OL	Shoot	--	1		
0	PERILLYL-ACETATE	Shoot	--	5	-1	
4	PHOSPHORUS	Plant	678	3230	-0.17234785353799417	
14	POTASSIUM	Plant	2772	13200	-0.5995632744454569	
0	PROTEIN	Plant	22680	108000	-0.5364847835043116	
17	PSEUDOEPHEDRINE	Stem	--	--		Jim Duke's personal files.
17	PSEUDOEPHEDRINE	Shoot	270	21400		Jim Duke's personal files.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
17	PSEUDOEPHEDRINE	Plant	--	--		Jim Duke's personal files.
28	PULEGONE	Shoot	--	7	-0.26896838500015907	
15	RIBOFLAVIN	Plant	2.3	11	-0.02869421956212218	
29	SAFROLE	Shoot	--	2		
60	SELENIUM	Plant	0.3	1.2	-0.37396858642864567	
4	SILICON	Plant	0.7	3.1	-0.5274474639457364	
1	SODIUM	Plant	90	430	-0.28027485422054055	
3	STYRENE	Shoot	--	--		
23	TERPINEN-4-OL	Stem	--	--		Jim Duke's personal files.
23	TERPINEN-4-OL	Shoot	--	39	-0.15101428503873887	
23	TERPINEN-4-OL	Essential Oil	--	--		Jim Duke's personal files.
22	TETRAMETHYL-PYRAZINE	Shoot	--	39		
31	THIAMIN	Plant	47	47	3.3489230314701466	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Plant	10	47	2.112132606381872	
4	TIN	Plant	2.3	11	-0.6692895216686466	
0	TRANS-P-MENTH-2-EN-7-OL	Shoot	--	2		
9	TRICIN	Shoot	--	--		Jim Duke's personal files.
0	TRIMETHYL-PYRAZINE	Shoot	--	1		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TROCOSAN-1-OL	Plant	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	UNDECANE	Shoot	--	1	-0.726867512175322	
0	VERBENOL	Shoot	--	10		
0	WATER	Plant	--	790000	0.08163587188253452	
77	ZINC	Plant	0.4	2.1	-0.49357775433623324	