

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Salvia officinalis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	CHLOROGENIC-ACID	Shoot				--
3	ALPHA-CEDRENE	Plant				Stitt, Paul. Why George should eat broccoli.
13	PALMITIC-ACID	Seed				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	TRANS-PINOCARVEOL	Leaf Essent. Oil				--
7	HISPIDULIN	Leaf				--
101	APIGENIN	Shoot				--
5	ROSMANOL	Plant				Stitt, Paul. Why George should eat broccoli.
2	CAMPESTEROL	Fruit Essent. Oil				--
13	DIOSMETIN	Plant				Stitt, Paul. Why George should eat broccoli.
78	LUTEOLIN	Leaf				--
15	MALIC-ACID	Plant				--
71	THYMOL	Essential Oil				--
10	ALPHA-AMYRIN	Plant				--
71	THYMOL	Leaf				--
12	GLYCINE	Plant				Stitt, Paul. Why George should eat broccoli.
51	ELLAGIC-ACID	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.
1	SERINE	Plant				Stitt, Paul. Why George should eat broccoli.
20	CARNOSOL	Resin, Exudate, Sap		36000.0		--
57	ROSMARINIC-ACID	Leaf				--
102	CAFFEIC-ACID	Inflorescence				--
27	LINOLEIC-ACID	Fruit Essent. Oil				--
3	AROMADENDRENE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	ALPHA-PHELLANDRENE	Essential Oil				--
7	CARNOSOLIC-ACID	Leaf		2100.0		--
2	HUMULENE	Leaf Essent. Oil				--
10	ALPHA-AMYRIN	Leaf		1800.0		--
25	P-COUMARIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
2	BETA-MYRCENE	Essential Oil				--
17	THUJONE	Et		457000.0		--
5	GLUTAMINE	Plant				--
18	OLEIC-ACID	Fruit Essent. Oil				--
6	BETA-SITOSTEROL-D-GLUCOSIDE	Seed				--
60	SELENIUM	Leaf				--
5	BETA-THUJONE	Leaf Essent. Oil	174000.0	356000.0		--
53	LINALOOL	Et		11000.0		--
101	APIGENIN	Plant				Stitt, Paul. Why George should eat broccoli.
7	LUTEOLIN-7-GLUCOSIDE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	ALPHA-HUMULENE	Et		21000.0		--
20	CARNOSOL	Plant				--
11	GAMMA-TERPINENE	Et		4000.0		--
3	ALANINE	Plant				Stitt, Paul. Why George should eat broccoli.
9	OXALIC-ACID	Plant				--
6	ALPHA-THUJONE	Leaf Essent. Oil	200000.0	363300.0		--
35	GERANIOL	Plant				Stitt, Paul. Why George should eat broccoli.
2	MYRTENOL	Leaf Essent. Oil		2000.0		--
3	SALVIOL	Essential Oil				--
2	CARNOSIC-ACID	Resin, Exudate, Sap		57000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
57	ROSMARINIC-ACID	Tissue Culture				--
5	BETA-THUJONE	Et		151000.0		--
2	COBALT	Leaf				--
78	LUTEOLIN	Shoot				--
18	TERPINEOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	ALPHA-THUJONE	Et		206000.0		--
3	GENKWANIN	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	SALVIN-MONOMETHYL-ETHER	Leaf				--
1	ROSMANOL-9-ETHYL-ETHER	Shoot		144.0		--
53	CITRAL	Plant				Stitt, Paul. Why George should eat broccoli.
1	VIRIDIFLOROL	Leaf				--
5	BETA-THUJONE	Essential Oil	52300.0	142500.0		--
1	DELTA-CADINOL	Leaf Essent. Oil				--
2	3-ISOTHUJONE	Leaf				--
6	ALPHA-THUJONE	Essential Oil	73300.0	408500.0		--
18	TERPINEOL	Essential Oil				--
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil				--
3	SALVIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
5	ROSMANOL	Shoot		11.0		--
3	CIRSILIOL	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
24	VANILLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Sprout Seedling				--
3	ALPHA-CEDRENE	Leaf Essent. Oil				--
1	ROSMADIAL	Resin, Exudate, Sap		6000.0		--
2	CAMPESTEROL	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	DELTA-CADINENE	Leaf Essent. Oil				--
34	SALICYLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
5	ROSMANOL	Resin, Exudate, Sap				--
62	GALLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
10	CIRSILINEOL	Plant				Stitt, Paul. Why George should eat broccoli.
6	UVAOL	Plant				--
47	BETA-SITOSTEROL	Root				--
1	LABIATIC-ACID	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	ALPHA-CADINOL	Leaf Essent. Oil				--
3	CYNAROSIDE	Leaf				--
63	MENTHOL	Plant				--
41	CAMPHOR	Pericarp Essent. Oil		229000.0		--
7	FUMARIC-ACID	Plant				--
7	CHRYSOERIOL	Plant				Stitt, Paul. Why George should eat broccoli.
47	BETA-SITOSTEROL	Fruit Essent. Oil				--
1	ISOCARYOPHYLLENE	Plant				--
35	BORNEOL	Et		79000.0		--
4	PHELLANDRENE	Essential Oil		20000.0		--
102	CAFFEIC-ACID	Shoot				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	STEARIC-ACID	Seed				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	CHOLESTEROL	Fruit Essent. Oil				--
4	NEPETIN	Plant				--
13	ALPHA-TERPINENE	Et		1000.0		--
12	STIGMASTEROL	Fruit Essent. Oil				--
63	MENTHOL	Leaf				--
9	BETA-AMYRIN	Plant				--
9	CAMPHENE	Et		47000.0		--
2	METHYL-ISOVALERATE	Plant	7.0	42.0		--
1	ISOROSMANOL	Shoot		57.0		--
11	ALPHA-PHELLANDRENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
24	PECTIN	Shoot				--
13	BETA-PINENE	Et		18000.0		--
1	VIRIDIFLOROL	Essential Oil				--
13	PALMITIC-ACID	Fruit Essent. Oil				--
77	CHLOROGENIC-ACID	Inflorescence				--
8	STEARIC-ACID	Fruit Essent. Oil				--
2	MANOOL	Shoot	556.0	1478.0		--
9	BETA-AMYRIN	Leaf		1000.0		--
61	FERULIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
43	CATECHIN	Plant				--
1	CHOLESTEROL	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	TYROSINE	Plant				Stitt, Paul. Why George should eat broccoli.
7	ISOBORNEOL	Essential Oil		3800.0		--
11	PANTOTHENIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
89	URSOLIC-ACID	Root				--
8	CARYOPHYLENE-OXIDE	Essential Oil		13100.0		--
2	ASPARAGINE	Plant				--
17	FARNESOL	Plant				--
2	MANOOL	Essential Oil				--
7	ISOBORNEOL	Leaf Essent. Oil		28000.0	-1.0	--
2	HUMULENE	Essential Oil		17900.0	-1.0	--
22	MYRCENE	Et		8000.0	-1.0	--
2	POMOLIC-ACID	Leaf		3.0	-1.0	--
60	LIMONENE	Et		14000.0	-1.0	--
12	PINENE	Essential Oil		84000.0	-1.0	--
16	P-CYMENE	Et		11000.0	-1.0	--
53	BETA-CAROTENE	Leaf	6.0	39.0	-0.9680962342519674	--
20	CARNOSOL	Shoot		34.0	-0.9354703756918734	--
15	FIBER	Leaf		87000.0	-0.9217097607872751	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	TIN	Leaf	1.3	8.0	-0.9124295958448216	--
6	MASLINIC-ACID	Leaf		46.0	-0.8872714302780136	--
6	IRON	Leaf	2.4	15.0	-0.8825570778618611	--
89	URSOLIC-ACID	Stem		200.0	-0.8584003823146588	--
23	ALPHA-TERPINEOL	Leaf Essent. Oil		1000.0	-0.8444420280137835	--
3	BETA-PHELLANDRENE	Leaf Essent. Oil		1000.0	-0.8347075553554938	--
14	POTASSIUM	Plant	10700.0	11630.0	-0.7090536999047472	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	OLEIC-ACID	Seed		35500.0	-0.6872693677072723	--
11	GAMMA-TERPINENE	Leaf Essent. Oil		3000.0	-0.6853547696905973	--
4	PHOSPHORUS	Leaf	201.0	1280.0	-0.6791795625313858	--
2	CARNOSIC-ACID	Shoot		35.0	-0.666399572485972	--
5	ALUMINUM	Leaf	18.0	115.0	-0.6571553869693828	--
24	CHROMIUM	Leaf	0.1	0.3	-0.621193465203015	--
23	ALPHA-TERPINEOL	Essential Oil		3700.0	-0.6091856576306849	--
5	SABINENE	Leaf Essent. Oil		2000.0	-0.6066700271910461	--
9	TERPINOLENE	Leaf Essent. Oil		2000.0	-0.5940205732207128	--
16	P-CYMENE	Essential Oil	3100.0	5400.0	-0.5888102139189108	--
5	SABINENE	Essential Oil		1200.0	-0.5875917391877868	--
57	ROSMARINIC-ACID	Shoot	2000.0	5800.0	-0.5832582116490932	--
13	ALPHA-TERPINENE	Leaf Essent. Oil		2000.0	-0.5761001164044018	--
23	TERPINEN-4-OL	Essential Oil		4500.0	-0.5734207195469667	--
53	LINALOOL	Essential Oil	1700.0	5000.0	-0.560725569158283	--
4	BORON	Leaf	25.0	41.0	-0.5517818218876644	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).
12	COPPER	Leaf	7.0	8.0	-0.540960423661207	USDA's Ag Handbook 8 and sequelae)
20	CARNOSOL	Leaf		1660.0	-0.5296891454855135	--
23	TERPINEN-4-OL	Leaf Essent. Oil	2000.0	3000.0	-0.523716551964413	--
28	CALCIUM	Leaf	1696.0	10800.0	-0.5218305708813075	--
60	LIMONENE	Leaf Essent. Oil	10000.0	36400.0	-0.517322999711508	--
16	P-CYMENE	Leaf Essent. Oil	7000.0	17700.0	-0.5156620336360256	--
65	MAGNESIUM	Leaf	444.0	2830.0	-0.5003307709599559	--
77	ZINC	Leaf	1.0	5.9	-0.4905596892021207	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETULIN	Leaf		15.0	-0.47962706385165327	--
9	DELTA-CADINENE	Plant	2.0	14.0	-0.4659017963716953	--
13	ALPHA-TERPINENE	Essential Oil		11200.0	-0.4634179308976379	--
1	SODIUM	Leaf	170.0	1080.0	-0.4554694713688264	--
14	MANGANESE	Leaf	0.5	3.0	-0.4548985090553243	--
28	ALPHA-PINENE	Leaf Essent. Oil	35000.0	55000.0	-0.4505855480163243	--
39	NIACIN	Leaf	10.0	62.0	-0.4318167758906651	--
112	ASCORBIC-ACID	Leaf	55.0	350.0	-0.4114445568899699	--
4	SILICON	Leaf	0.5	3.1	-0.40397146474890056	--
53	LINALOOL	Leaf Essent. Oil	4000.0	46600.0	-0.40077393425160296	--
3	BETA-PHELLANDRENE	Leaf	5.0	28.0	-0.39745256523265804	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
89	URSOLIC-ACID	Leaf	1255.0	1300.0	-0.38650833417091646	--
64	OLEANOLIC-ACID	Leaf	140.0	786.0	-0.36135857674665767	--
4	PHELLANDRENE	Leaf	100.0	560.0	-0.35918289789876834	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
12	PINENE	Leaf	420.0	2352.0	-0.35113562909022744	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
22	MYRCENE	Essential Oil	3700.0	10400.0	-0.3077036496607786	--
2	ALPHA-HUMULENE	Essential Oil		19300.0	-0.306582227205239	--
22	MYRCENE	Leaf Essent. Oil	9000.0	15700.0	-0.3056695322092534	--
1	SODIUM	Plant	11.0	12.0	-0.30341378566295807	Father Nature's Farmacy: The aggregate of all these three-letter citations.
27	LINOLEIC-ACID	Seed		73000.0	-0.29236236831545726	--
13	ALPHA-TERPINENE	Leaf	10.0	56.0	-0.2834251845983478	--
14	POTASSIUM	Leaf	3878.0	24700.0	-0.24922981870565544	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Essential Oil	6600.0	85000.0	-0.2478161403169539	--
5	SABINENE	Leaf	10.0	56.0	-0.22552904691038753	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
28	ALPHA-PINENE	Essential Oil	11700.0	40100.0	-0.2072109908720455	--
2	CAMPESTEROL	Leaf		120.0	-0.2035509596292973	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
53	LINALOOL	Plant	0.0	3500.0	-0.1908197582561713	--
15	RIBOFLAVIN	Leaf	0.6	3.6	-0.16098657500422545	--
13	BETA-PINENE	Essential Oil	11300.0	26100.0	-0.15085215632839455	--
31	CARYOPHYLLENE	Essential Oil		33000.0	-0.14865660979366116	--
16	P-CYMENE	Shoot	15.0	495.0	-0.10900236438234769	--
22	MYRCENE	Plant	0.0	336.0	-0.10695418064014987	--
11	GAMMA-TERPINENE	Leaf	15.0	140.0	-0.1019870841807531	--
31	THIAMIN	Leaf	7.0	8.0	-0.06349209547044472	Father Nature's Farmacy: The aggregate of all these three-letter citations.
35	TANNIN	Plant	20000.0	80000.0	-0.053082229266390064	--
41	CAMPHOR	Leaf	0.0	9324.0	-0.03988163889064865	--
2	PHYTOSTEROLS	Leaf		2440.0	0.0028854038801737	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
31	CARYOPHYLLENE	Leaf	1.0	1430.0	0.1300669724943753	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Plant	55.0	308.0	0.16441757054150238	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
47	BETA-SITOSTEROL	Leaf	5.0	2449.0	0.24430946587626218	--
9	TERPINOLENE	Plant		112.0	0.2506839298132136	--
2	ALPHA-HUMULENE	Leaf Essent. Oil		29000.0	0.25622083823143005	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
57	ROSMARINIC-ACID	Inflorescence	30000.0	42000.0	0.25850024578765574	--
23	TERPINEN-4-OL	Leaf	10.0	1120.0	0.29918716656064637	--
5	SABINOL	Leaf	85.0	476.0	0.31621378249351945	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
41	CAMPHOR	Essential Oil	76000.0	305000.0	0.54343127227621	--
2	ALPHA-HUMULENE	Leaf	110.0	616.0	0.5782902434464878	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	ALPHA-PINENE	Plant	7.0	1540.0	0.6083638735756228	--
35	BORNEOL	Essential Oil	19700.0	156000.0	0.627691236095563	--
60	LIMONENE	Plant	39.0	2380.0	0.9769131249982739	--
28	ALPHA-PINENE	Et		35000.0	1.0	--
17	THUJONE	Essential Oil	451300.0	531000.0	1.0	--
64	OLEANOLIC-ACID	Stem		400.0	1.0	--
23	ALPHA-TERPINEOL	Leaf	5.0	910.0	1.0071602347564552	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
47	BETA-SITOSTEROL	Stem		1214.0	1.0861956164972184	--
9	CAMPHENE	Essential Oil	30200.0	60700.0	1.1306904837156095	--
7	ISOBORNEOL	Shoot	0.0	784.0	1.1758265637832626	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
67	1,8-CINEOLE	Plant	390.0	6288.0	1.2033227605211898	--
13	BETA-PINENE	Plant	20.0	1540.0	1.2273041399455444	--
57	ROSMARINIC-ACID	Plant	30000.0	50600.0	1.3515537858959146	--
17	THUJONE	Leaf	1453.0	12636.0	1.4138087279087124	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	CAMPHENE	Leaf Essent. Oil	28000.0	66400.0	1.484566818920243	--
2	CARNOSIC-ACID	Leaf		12400.0	1.5899657743835183	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETA-PINENE	Leaf Essent. Oil	21000.0	55000.0	1.622889330955553	--
12	STIGMASTEROL	Leaf	5.0	230.0	1.7806618408085848	--
17	THUJONE	Plant	2500.0	13000.0	1.9856348958487122	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
41	CAMPHOR	Leaf Essent. Oil	44000.0	458000.0	2.005169580755753	--
7	LINALYL-ACETATE	Plant	0.0	6048.0	2.330313404492723	--
12	BORNYL-ACETATE	Shoot	5.0	1780.0	2.5481701537732313	--
6	ALPHA-THUJONE	Leaf	200.0	10172.0	2.575761084269138	--
35	BORNEOL	Leaf Essent. Oil	16000.0	250000.0	2.73359024149356	--
5	BETA-THUJONE	Leaf	200.0	9968.0	2.7606909658238585	--
35	BORNEOL	Shoot		7000.0	6.370019299829522	--
9	CAMPHENE	Leaf	20.0	18592.0	6.834837822452428	--