

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Salvia officinalis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
17	THUJONE	Essential Oil	451300.0	531000.0	1.0	--
41	CAMPHOR	Leaf Essent. Oil	44000.0	458000.0	2.005169580755753	--
17	THUJONE	Et		457000.0		--
6	ALPHA-THUJONE	Essential Oil	73300.0	408500.0		--
6	ALPHA-THUJONE	Leaf Essent. Oil	200000.0	363300.0		--
5	BETA-THUJONE	Leaf Essent. Oil	174000.0	356000.0		--
41	CAMPHOR	Essential Oil	76000.0	305000.0	0.54343127227621	--
35	BORNEOL	Leaf Essent. Oil	16000.0	250000.0	2.73359024149356	--
41	CAMPHOR	Pericarp Essent. Oil		229000.0		--
6	ALPHA-THUJONE	Et		206000.0		--
35	BORNEOL	Essential Oil	19700.0	156000.0	0.627691236095563	--
5	BETA-THUJONE	Et		151000.0		--
5	BETA-THUJONE	Essential Oil	52300.0	142500.0		--
15	FIBER	Leaf		87000.0	-0.9217097607872751	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
60	LIMONENE	Essential Oil	6600.0	85000.0	-0.2478161403169539	--
12	PINENE	Essential Oil		84000.0	-1.0	--
35	TANNIN	Plant	20000.0	80000.0	-0.053082229266390064	--
35	BORNEOL	Et		79000.0		--
27	LINOLEIC-ACID	Seed		73000.0	-0.29236236831545726	--
9	CAMPHENE	Leaf Essent. Oil	28000.0	66400.0	1.484566818920243	--
9	CAMPHENE	Essential Oil	30200.0	60700.0	1.1306904837156095	--
2	CARNOSIC-ACID	Resin, Exudate, Sap		57000.0		--
28	ALPHA-PINENE	Leaf Essent. Oil	35000.0	55000.0	-0.4505855480163243	--
13	BETA-PINENE	Leaf Essent. Oil	21000.0	55000.0	1.622889330955553	--
57	ROSMARINIC-ACID	Plant	30000.0	50600.0	1.3515537858959146	--
9	CAMPHENE	Et		47000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
53	LINALOOL	Leaf Essent. Oil	4000.0	46600.0	-0.40077393425160296	--
57	ROSMARINIC-ACID	Inflorescence	30000.0	42000.0	0.25850024578765574	--
28	ALPHA-PINENE	Essential Oil	11700.0	40100.0	-0.2072109908720455	--
60	LIMONENE	Leaf Essent. Oil	10000.0	36400.0	-0.517322999711508	--
20	CARNOSOL	Resin, Exudate, Sap		36000.0		--
18	OLEIC-ACID	Seed		35500.0	-0.6872693677072723	--
28	ALPHA-PINENE	Et		35000.0	1.0	--
31	CARYOPHYLLENE	Essential Oil		33000.0	-0.14865660979366116	--
2	ALPHA-HUMULENE	Leaf Essent. Oil		29000.0	0.25622083823143005	--
7	ISOBORNEOL	Leaf Essent. Oil		28000.0	-1.0	--
13	BETA-PINENE	Essential Oil	11300.0	26100.0	-0.15085215632839455	--
14	POTASSIUM	Leaf	3878.0	24700.0	-0.24922981870565544	--
2	ALPHA-HUMULENE	Et		21000.0		--
4	PELLANDRENE	Essential Oil		20000.0		--
2	ALPHA-HUMULENE	Essential Oil		19300.0	-0.306582227205239	--
9	CAMPHENE	Leaf	20.0	18592.0	6.834837822452428	--
13	BETA-PINENE	Et		18000.0		--
2	HUMULENE	Essential Oil		17900.0	-1.0	--
16	P-CYMENE	Leaf Essent. Oil	7000.0	17700.0	-0.5156620336360256	--
22	MYRCENE	Leaf Essent. Oil	9000.0	15700.0	-0.3056695322092534	--
60	LIMONENE	Et		14000.0	-1.0	--
8	CARYOPHYLLENE-OXIDE	Essential Oil		13100.0		--
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.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CARNOSIC-ACID	Leaf		12400.0	1.5899657743835183	--
14	POTASSIUM	Plant	10700.0	11630.0	-0.7090536999047472	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	ALPHA-TERPINENE	Essential Oil		11200.0	-0.4634179308976379	--
53	LINALOOL	Et		11000.0		--
16	P-CYMENE	Et		11000.0	-1.0	--
28	CALCIUM	Leaf	1696.0	10800.0	-0.5218305708813075	--
22	MYRCENE	Essential Oil	3700.0	10400.0	-0.3077036496607786	--
6	ALPHA-THUJONE	Leaf	200.0	10172.0	2.575761084269138	--
5	BETA-THUJONE	Leaf	200.0	9968.0	2.7606909658238585	--
41	CAMPHOR	Leaf	0.0	9324.0	-0.03988163889064865	--
22	MYRCENE	Et		8000.0	-1.0	--
35	BORNEOL	Shoot		7000.0	6.370019299829522	--
67	1,8-CINEOLE	Plant	390.0	6288.0	1.2033227605211898	--
7	LINALYL-ACETATE	Plant	0.0	6048.0	2.330313404492723	--
1	ROSMADIAL	Resin, Exudate, Sap		6000.0		--
57	ROSMARINIC-ACID	Shoot	2000.0	5800.0	-0.5832582116490932	--
16	P-CYMENE	Essential Oil	3100.0	5400.0	-0.5888102139189108	--
53	LINALOOL	Essential Oil	1700.0	5000.0	-0.560725569158283	--
23	TERPINEN-4-OL	Essential Oil		4500.0	-0.5734207195469667	--
11	GAMMA-TERPINENE	Et		4000.0		--
7	ISOBORNEOL	Essential Oil		3800.0		--
23	ALPHA-TERPINEOL	Essential Oil		3700.0	-0.6091856576306849	--
53	LINALOOL	Plant	0.0	3500.0	-0.1908197582561713	--
11	GAMMA-TERPINENE	Leaf Essent. Oil		3000.0	-0.6853547696905973	--
23	TERPINEN-4-OL	Leaf Essent. Oil	2000.0	3000.0	-0.523716551964413	--
65	MAGNESIUM	Leaf	444.0	2830.0	-0.5003307709599559	--
47	BETA-SITOSTEROL	Leaf	5.0	2449.0	0.24430946587626218	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.)
60	LIMONENE	Plant	39.0	2380.0	0.9769131249982739	--
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.
7	CARNOSOLIC-ACID	Leaf		2100.0		--
9	TERPINOLENE	Leaf Essent. Oil		2000.0	-0.5940205732207128	--
2	MYRTENOL	Leaf Essent. Oil		2000.0		--
5	SABINENE	Leaf Essent. Oil		2000.0	-0.6066700271910461	--
13	ALPHA-TERPINENE	Leaf Essent. Oil		2000.0	-0.5761001164044018	--
10	ALPHA-AMYRIN	Leaf		1800.0		--
12	BORNYL-ACETATE	Shoot	5.0	1780.0	2.5481701537732313	--
20	CARNOSOL	Leaf		1660.0	-0.5296891454855135	--
13	BETA-PINENE	Plant	20.0	1540.0	1.2273041399455444	--
28	ALPHA-PINENE	Plant	7.0	1540.0	0.6083638735756228	--
2	MANOOL	Shoot	556.0	1478.0		--
31	CARYOPHYLLENE	Leaf	1.0	1430.0	0.1300669724943753	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
89	URSOLIC-ACID	Leaf	1255.0	1300.0	-0.38650833417091646	--
4	PHOSPHORUS	Leaf	201.0	1280.0	-0.6791795625313858	--
47	BETA-SITOSTEROL	Stem		1214.0	1.0861956164972184	--
5	SABINENE	Essential Oil		1200.0	-0.5875917391877868	--
23	TERPINEN-4-OL	Leaf	10.0	1120.0	0.29918716656064637	--
1	SODIUM	Leaf	170.0	1080.0	-0.4554694713688264	--
3	BETA-PHELLANDRENE	Leaf Essent. Oil		1000.0	-0.8347075553554938	--
23	ALPHA-TERPINEOL	Leaf Essent. Oil		1000.0	-0.8444420280137835	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	ALPHA-TERPINENE	Et		1000.0		--
9	BETA-AMYRIN	Leaf		1000.0		--
23	ALPHA-TERPINEOL	Leaf	5.0	910.0	1.0071602347564552	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
64	OLEANOLIC-ACID	Leaf	140.0	786.0	-0.36135857674665767	--
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.
2	ALPHA-HUMULENE	Leaf	110.0	616.0	0.5782902434464878	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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.
16	P-CYMENE	Shoot	15.0	495.0	-0.10900236438234769	--
5	SABINOL	Leaf	85.0	476.0	0.31621378249351945	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
64	OLEANOLIC-ACID	Stem		400.0	1.0	--
112	ASCORBIC-ACID	Leaf	55.0	350.0	-0.4114445568899699	--
22	MYRCENE	Plant	0.0	336.0	-0.10695418064014987	--
8	CARYOPHYLLENE-OXIDE	Plant	55.0	308.0	0.16441757054150238	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
12	STIGMASTEROL	Leaf	5.0	230.0	1.7806618408085848	--
89	URSOLIC-ACID	Stem		200.0	-0.8584003823146588	--
1	ROSMANOL-9-ETHYL-ETHER	Shoot		144.0		--
11	GAMMA-TERPINENE	Leaf	15.0	140.0	-0.1019870841807531	--
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.)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	ALUMINUM	Leaf	18.0	115.0	-0.6571553869693828	--
9	TERPINOLENE	Plant		112.0	0.2506839298132136	--
39	NIACIN	Leaf	10.0	62.0	-0.4318167758906651	--
1	ISOROSMANOL	Shoot		57.0		--
13	ALPHA-TERPINENE	Leaf	10.0	56.0	-0.2834251845983478	--
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.
6	MASLINIC-ACID	Leaf		46.0	-0.8872714302780136	--
2	METHYL-ISOVALERATE	Plant	7.0	42.0		--
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).
53	BETA-CAROTENE	Leaf	6.0	39.0	-0.9680962342519674	--
2	CARNOSIC-ACID	Shoot		35.0	-0.666399572485972	--
20	CARNOSOL	Shoot		34.0	-0.9354703756918734	--
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.
6	IRON	Leaf	2.4	15.0	-0.8825570778618611	--
13	BETULIN	Leaf		15.0	-0.47962706385165327	--
9	DELTA-CADINENE	Plant	2.0	14.0	-0.4659017963716953	--
1	SODIUM	Plant	11.0	12.0	-0.30341378566295807	Father Nature's Farmacy: The aggregate of all these three-letter citations.
5	ROSMANOL	Shoot		11.0		--
31	THIAMIN	Leaf	7.0	8.0	-0.06349209547044472	Father Nature's Farmacy: The aggregate of all these three-letter citations.
12	COPPER	Leaf	7.0	8.0	-0.540960423661207	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	TIN	Leaf	1.3	8.0	-0.9124295958448216	--
77	ZINC	Leaf	1.0	5.9	-0.4905596892021207	--
15	RIBOFLAVIN	Leaf	0.6	3.6	-0.16098657500422545	--
4	SILICON	Leaf	0.5	3.1	-0.40397146474890056	--
2	POMOLIC-ACID	Leaf		3.0	-1.0	--
14	MANGANESE	Leaf	0.5	3.0	-0.4548985090553243	--
24	CHROMIUM	Leaf	0.1	0.3	-0.621193465203015	--
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				--
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.
57	ROSMARINIC-ACID	Tissue Culture				--
102	CAFFEIC-ACID	Inflorescence				--
27	LINOLEIC-ACID	Fruit Essent. Oil				--
3	AROMADENDRENE	Plant				--
11	ALPHA-PHELLANDRENE	Essential Oil				--
2	HUMULENE	Leaf Essent. Oil				--
25	P-COUMARIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	BETA-MYRCENE	Essential Oil				--
5	GLUTAMINE	Plant				--
18	OLEIC-ACID	Fruit Essent. Oil				--
6	BETA-SITOSTEROL-D-GLUCOSIDE	Seed				--
60	SELENIUM	Leaf				--
101	APIGENIN	Plant				Stitt, Paul. Why George should eat broccoli.
18	TERPINEOL	Essential Oil				--
7	LUTEOLIN-7-GLUCOSIDE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
20	CARNOSOL	Plant				--
3	ALANINE	Plant				Stitt, Paul. Why George should eat broccoli.
9	OXALIC-ACID	Plant				--
35	GERANIOL	Plant				Stitt, Paul. Why George should eat broccoli.
3	SALVIOL	Essential Oil				--
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.
3	GENKWANIN	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	SALVIN-MONOMETHYL-ETHER	Leaf				--
5	ROSMANOL	Resin, Exudate, Sap				--
53	CITRAL	Plant				Stitt, Paul. Why George should eat broccoli.
1	VIRIDIFLOROL	Leaf				--
1	DELTA-CADINOL	Leaf Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	3-ISOTHUJONE	Leaf				--
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil				--
3	SALVIN	Plant				J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.
3	CIRSILIOI	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.
47	BETA-SITOSTEROL	Sprout Seedling				--
3	ALPHA-CEDRENE	Leaf Essent. Oil				--
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				--
12	STIGMASTEROL	Fruit Essent. Oil				--
34	SALICYLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
62	GALLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
1	VIRIDIFLOROL	Essential Oil				--
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				--
8	STEARIC-ACID	Fruit Essent. Oil				--
63	MENTHOL	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	FUMARIC-ACID	Plant				--
89	URSOLIC-ACID	Root				--
7	CHRYSOERIOL	Plant				Stitt, Paul. Why George should eat broccoli.
47	BETA-SITOSTEROL	Fruit Essent. Oil				--
1	ISOCARYOPHYLLENE	Plant				--
102	CAFFEIC-ACID	Shoot				--
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				--
63	MENTHOL	Leaf				--
9	BETA-AMYRIN	Plant				--
2	TRANS-PINOCARVEOL	Leaf Essent. Oil				--
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	PALMITIC-ACID	Fruit Essent. Oil				--
77	CHLOROGENIC-ACID	Inflorescence				--
61	FERULIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
43	CATECHIN	Plant				--
71	THYMOL	Leaf				--
1	CHOLESTEROL	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
8	TYROSINE	Plant				Stitt, Paul. Why George should eat broccoli.
11	PANTOTHENIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
57	ROSMARINIC-ACID	Leaf				--
17	FARNESOL	Plant				--
2	MANOOL	Essential Oil				--
2	ASPARAGINE	Plant				--
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.
7	HISPIDULIN	Leaf				--
101	APIGENIN	Shoot				--