

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	ZINC	Leaf	1.0	5.9	-0.4905596892021207	--
1	VIRIDIFLOROL	Leaf				--
1	VIRIDIFLOROL	Essential Oil				--
24	VANILLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
6	UVAOL	Plant				--
89	URSOLIC-ACID	Stem		200.0	-0.8584003823146588	--
89	URSOLIC-ACID	Leaf	1255.0	1300.0	-0.38650833417091646	--
89	URSOLIC-ACID	Root				--
8	TYROSINE	Plant				Stitt, Paul. Why George should eat broccoli.
2	TRANS-PINOCARVEOL	Leaf Essent. Oil				--
4	TIN	Leaf	1.3	8.0	-0.9124295958448216	--
71	THYMOL	Leaf				--
71	THYMOL	Essential Oil				--
17	THUJONE	Et		457000.0		--
17	THUJONE	Essential Oil	451300.0	531000.0	1.0	--
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.
31	THIAMIN	Leaf	7.0	8.0	-0.06349209547044472	Father Nature's Farmacy: The aggregate of all these three-letter citations.
9	TERPINOLENE	Plant		112.0	0.2506839298132136	--
9	TERPINOLENE	Leaf Essent. Oil		2000.0	-0.5940205732207128	--
18	TERPINEOL	Leaf				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
18	TERPINEOL	Essential Oil				--
23	TERPINEN-4-OL	Leaf	10.0	1120.0	0.29918716656064637	--
23	TERPINEN-4-OL	Leaf Essent. Oil	2000.0	3000.0	-0.523716551964413	--
23	TERPINEN-4-OL	Essential Oil		4500.0	-0.5734207195469667	--
35	TANNIN	Plant	20000.0	80000.0	-0.053082229266390064	--
12	STIGMASTEROL	Leaf	5.0	230.0	1.7806618408085848	--
12	STIGMASTEROL	Fruit Essent. Oil				--
8	STEARIC-ACID	Seed				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
8	STEARIC-ACID	Fruit Essent. Oil				--
1	SODIUM	Plant	11.0	12.0	-0.30341378566295807	Father Nature's Farmacy: The aggregate of all these three-letter citations.
1	SODIUM	Leaf	170.0	1080.0	-0.4554694713688264	--
4	SILICON	Leaf	0.5	3.1	-0.40397146474890056	--
1	SERINE	Plant				Stitt, Paul. Why George should eat broccoli.
60	SELENIUM	Leaf				--
3	SALVIOL	Essential Oil				--
3	SALVIN-MONOMETHYL-ETHER	Leaf				--
3	SALVIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
34	SALICYLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
5	SABINOL	Leaf	85.0	476.0	0.31621378249351945	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
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.
5	SABINENE	Leaf Essent. Oil		2000.0	-0.6066700271910461	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	SABINENE	Essential Oil		1200.0	-0.5875917391877868	--
57	ROSMARINIC-ACID	Leaf				--
57	ROSMARINIC-ACID	Inflorescence	30000.0	42000.0	0.25850024578765574	--
57	ROSMARINIC-ACID	Tissue Culture				--
57	ROSMARINIC-ACID	Shoot	2000.0	5800.0	-0.5832582116490932	--
57	ROSMARINIC-ACID	Plant	30000.0	50600.0	1.3515537858959146	--
1	ROSMANOL-9-ETHYL-ETHER	Shoot		144.0		--
5	ROSMANOL	Shoot		11.0		--
5	ROSMANOL	Resin, Exudate, Sap				--
5	ROSMANOL	Plant				Stitt, Paul. Why George should eat broccoli.
1	ROSMADIAL	Resin, Exudate, Sap		6000.0		--
15	RIBOFLAVIN	Leaf	0.6	3.6	-0.16098657500422545	--
14	POTASSIUM	Leaf	3878.0	24700.0	-0.24922981870565544	--
14	POTASSIUM	Plant	10700.0	11630.0	-0.7090536999047472	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	POMOLIC-ACID	Leaf		3.0	-1.0	--
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.
12	PINENE	Essential Oil		84000.0	-1.0	--
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.)
4	PHOSPHORUS	Leaf	201.0	1280.0	-0.6791795625313858	--
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.
4	PHELLANDRENE	Essential Oil		20000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	PECTIN	Shoot				--
11	PANTOTHENIC-ACID	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.
13	PALMITIC-ACID	Fruit Essent. Oil				--
16	P-CYMENE	Et		11000.0	-1.0	--
16	P-CYMENE	Leaf Essent. Oil	7000.0	17700.0	-0.5156620336360256	--
16	P-CYMENE	Essential Oil	3100.0	5400.0	-0.5888102139189108	--
16	P-CYMENE	Shoot	15.0	495.0	-0.10900236438234769	--
25	P-COUMARIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
9	OXALIC-ACID	Plant				--
18	OLEIC-ACID	Seed		35500.0	-0.6872693677072723	--
18	OLEIC-ACID	Fruit Essent. Oil				--
64	OLEANOLIC-ACID	Stem		400.0	1.0	--
64	OLEANOLIC-ACID	Leaf	140.0	786.0	-0.36135857674665767	--
39	NIACIN	Leaf	10.0	62.0	-0.4318167758906651	--
4	NEPETIN	Plant				--
2	MYRTENOL	Leaf Essent. Oil		2000.0		--
22	MYRCENE	Et		8000.0	-1.0	--
22	MYRCENE	Plant	0.0	336.0	-0.10695418064014987	--
22	MYRCENE	Essential Oil	3700.0	10400.0	-0.3077036496607786	--
22	MYRCENE	Leaf Essent. Oil	9000.0	15700.0	-0.3056695322092534	--
2	METHYL-ISOVALERATE	Plant	7.0	42.0		--
63	MENTHOL	Plant				--
63	MENTHOL	Leaf				--
6	MASLINIC-ACID	Leaf		46.0	-0.8872714302780136	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	MANOOL	Shoot	556.0	1478.0		--
2	MANOOL	Essential Oil				--
14	MANGANESE	Leaf	0.5	3.0	-0.4548985090553243	--
15	MALIC-ACID	Plant				--
65	MAGNESIUM	Leaf	444.0	2830.0	-0.5003307709599559	--
7	LUTEOLIN-7-GLUCOSIDE	Plant				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
78	LUTEOLIN	Shoot				--
78	LUTEOLIN	Leaf				--
27	LINOLEIC-ACID	Fruit Essent. Oil				--
27	LINOLEIC-ACID	Seed		73000.0	-0.29236236831545726	--
7	LINALYL-ACETATE	Plant	0.0	6048.0	2.330313404492723	--
53	LINALOOL	Plant	0.0	3500.0	-0.1908197582561713	--
53	LINALOOL	Et		11000.0		--
53	LINALOOL	Leaf Essent. Oil	4000.0	46600.0	-0.40077393425160296	--
53	LINALOOL	Essential Oil	1700.0	5000.0	-0.560725569158283	--
60	LIMONENE	Et		14000.0	-1.0	--
60	LIMONENE	Essential Oil	6600.0	85000.0	-0.2478161403169539	--
60	LIMONENE	Leaf Essent. Oil	10000.0	36400.0	-0.517322999711508	--
60	LIMONENE	Plant	39.0	2380.0	0.9769131249982739	--
1	LABIATIC-ACID	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	ISOROSMANOL	Shoot		57.0		--
1	ISOCARYOPHYLLENE	Plant				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	ISOBORNEOL	Essential Oil		3800.0		--
7	ISOBORNEOL	Leaf Essent. Oil		28000.0	-1.0	--
6	IRON	Leaf	2.4	15.0	-0.8825570778618611	--
2	HUMULENE	Essential Oil		17900.0	-1.0	--
2	HUMULENE	Leaf Essent. Oil				--
7	HISPIDULIN	Leaf				--
12	GLYCINE	Plant				Stitt, Paul. Why George should eat broccoli.
5	GLUTAMINE	Plant				--
35	GERANIOL	Plant				Stitt, Paul. Why George should eat broccoli.
3	GENKWANIN	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	GAMMA-TERPINENE	Et		4000.0		--
11	GAMMA-TERPINENE	Leaf Essent. Oil		3000.0	-0.6853547696905973	--
11	GAMMA-TERPINENE	Leaf	15.0	140.0	-0.1019870841807531	--
62	GALLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
7	FUMARIC-ACID	Plant				--
15	FIBER	Leaf		87000.0	-0.9217097607872751	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
61	FERULIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
17	FARNESOL	Plant				--
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.
13	DIOSMETIN	Plant				Stitt, Paul. Why George should eat broccoli.
1	DELTA-CADINOL	Leaf Essent. Oil				--
9	DELTA-CADINENE	Plant	2.0	14.0	-0.4659017963716953	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	DELTA-CADINENE	Leaf Essent. Oil				--
3	CYNAROSIDE	Leaf				--
12	COPPER	Leaf	7.0	8.0	-0.540960423661207	USDA's Ag Handbook 8 and sequelae)
2	COBALT	Leaf				--
53	CITRAL	Plant				Stitt, Paul. Why George should eat broccoli.
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.
10	CIRSILINEOL	Plant				Stitt, Paul. Why George should eat broccoli.
7	CHRYSOERIOL	Plant				Stitt, Paul. Why George should eat broccoli.
24	CHROMIUM	Leaf	0.1	0.3	-0.621193465203015	--
1	CHOLESTEROL	Fruit Essent. Oil				--
1	CHOLESTEROL	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
77	CHLOROGENIC-ACID	Shoot				--
77	CHLOROGENIC-ACID	Inflorescence				--
43	CATECHIN	Plant				--
8	CARYOPHYLLENE-OXIDE	Plant	55.0	308.0	0.16441757054150238	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Essential Oil		13100.0		--
31	CARYOPHYLLENE	Leaf	1.0	1430.0	0.1300669724943753	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Essential Oil		33000.0	-0.14865660979366116	--
7	CARNOSOLIC-ACID	Leaf		2100.0		--
20	CARNOSOL	Resin, Exudate, Sap		36000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	CARNOSOL	Shoot		34.0	-0.9354703756918734	--
20	CARNOSOL	Plant				--
20	CARNOSOL	Leaf		1660.0	-0.5296891454855135	--
2	CARNOSIC-ACID	Resin, Exudate, Sap		57000.0		--
2	CARNOSIC-ACID	Shoot		35.0	-0.666399572485972	--
2	CARNOSIC-ACID	Leaf		12400.0	1.5899657743835183	--
41	CAMPHOR	Essential Oil	76000.0	305000.0	0.54343127227621	--
41	CAMPHOR	Leaf Essent. Oil	44000.0	458000.0	2.005169580755753	--
41	CAMPHOR	Pericarp Essent. Oil		229000.0		--
41	CAMPHOR	Leaf	0.0	9324.0	-0.03988163889064865	--
9	CAMPHENE	Leaf	20.0	18592.0	6.834837822452428	--
9	CAMPHENE	Et		47000.0		--
9	CAMPHENE	Essential Oil	30200.0	60700.0	1.1306904837156095	--
9	CAMPHENE	Leaf Essent. Oil	28000.0	66400.0	1.484566818920243	--
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.)
2	CAMPESTEROL	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	CAMPESTEROL	Fruit Essent. Oil				--
28	CALCIUM	Leaf	1696.0	10800.0	-0.5218305708813075	--
102	CAFFEIC-ACID	Inflorescence				--
102	CAFFEIC-ACID	Shoot				--
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).

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	BORNYL-ACETATE	Shoot	5.0	1780.0	2.5481701537732313	--
35	BORNEOL	Shoot		7000.0	6.370019299829522	--
35	BORNEOL	Et		79000.0		--
35	BORNEOL	Essential Oil	19700.0	156000.0	0.627691236095563	--
35	BORNEOL	Leaf Essent. Oil	16000.0	250000.0	2.73359024149356	--
13	BETULIN	Leaf		15.0	-0.47962706385165327	--
5	BETA-THUJONE	Leaf	200.0	9968.0	2.7606909658238585	--
5	BETA-THUJONE	Leaf Essent. Oil	174000.0	356000.0		--
5	BETA-THUJONE	Et		151000.0		--
5	BETA-THUJONE	Essential Oil	52300.0	142500.0		--
6	BETA-SITOSTEROL-D-GLUCOSIDE	Seed				--
47	BETA-SITOSTEROL	Stem		1214.0	1.0861956164972184	--
47	BETA-SITOSTEROL	Leaf	5.0	2449.0	0.24430946587626218	--
47	BETA-SITOSTEROL	Sprout Seedling				--
47	BETA-SITOSTEROL	Root				--
47	BETA-SITOSTEROL	Fruit Essent. Oil				--
13	BETA-PINENE	Plant	20.0	1540.0	1.2273041399455444	--
13	BETA-PINENE	Et		18000.0		--
13	BETA-PINENE	Leaf Essent. Oil	21000.0	55000.0	1.622889330955553	--
13	BETA-PINENE	Essential Oil	11300.0	26100.0	-0.15085215632839455	--
3	BETA-PHELLANDRENE	Leaf Essent. Oil		1000.0	-0.8347075553554938	--
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.
2	BETA-MYRCENE	Essential Oil				--
53	BETA-CAROTENE	Leaf	6.0	39.0	-0.9680962342519674	--
9	BETA-AMYRIN	Plant				--

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9	BETA-AMYRIN	Leaf		1000.0		--
2	ASPARAGINE	Plant				--
112	ASCORBIC-ACID	Leaf	55.0	350.0	-0.4114445568899699	--
3	AROMADENDRENE	Plant				--
101	APIGENIN	Plant				Stitt, Paul. Why George should eat broccoli.
101	APIGENIN	Shoot				--
5	ALUMINUM	Leaf	18.0	115.0	-0.6571553869693828	--
6	ALPHA-THUJONE	Leaf Essent. Oil	200000.0	363300.0		--
6	ALPHA-THUJONE	Essential Oil	73300.0	408500.0		--
6	ALPHA-THUJONE	Et		206000.0		--
6	ALPHA-THUJONE	Leaf	200.0	10172.0	2.575761084269138	--
23	ALPHA-TERPINEOL	Leaf Essent. Oil		1000.0	-0.8444420280137835	--
23	ALPHA-TERPINEOL	Essential Oil		3700.0	-0.6091856576306849	--
23	ALPHA-TERPINEOL	Leaf	5.0	910.0	1.0071602347564552	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Et		1000.0		--
13	ALPHA-TERPINENE	Leaf Essent. Oil		2000.0	-0.5761001164044018	--
13	ALPHA-TERPINENE	Leaf	10.0	56.0	-0.2834251845983478	--
13	ALPHA-TERPINENE	Essential Oil		11200.0	-0.4634179308976379	--
28	ALPHA-PINENE	Plant	7.0	1540.0	0.6083638735756228	--
28	ALPHA-PINENE	Et		35000.0	1.0	--
28	ALPHA-PINENE	Leaf Essent. Oil	35000.0	55000.0	-0.4505855480163243	--
28	ALPHA-PINENE	Essential Oil	11700.0	40100.0	-0.2072109908720455	--
11	ALPHA-PHELLANDRENE	Essential Oil				--
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil				--

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11	ALPHA-PHELLANDRENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	ALPHA-HUMULENE	Et		21000.0		--
2	ALPHA-HUMULENE	Essential Oil		19300.0	-0.306582227205239	--
2	ALPHA-HUMULENE	Leaf Essent. Oil		29000.0	0.25622083823143005	--
2	ALPHA-HUMULENE	Leaf	110.0	616.0	0.5782902434464878	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ALPHA-CEDRENE	Plant				Stitt, Paul. Why George should eat broccoli.
3	ALPHA-CEDRENE	Leaf Essent. Oil				--
3	ALPHA-CADINOL	Leaf Essent. Oil				--
10	ALPHA-AMYRIN	Plant				--
10	ALPHA-AMYRIN	Leaf		1800.0		--
3	ALANINE	Plant				Stitt, Paul. Why George should eat broccoli.
2	3-ISOTHUJONE	Leaf				--
67	1,8-CINEOLE	Plant	390.0	6288.0	1.2033227605211898	--