

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Salvia officinalis*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(-)-THUJONE	Plant	2500	13000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	(-)-THUJONE	Essential Oil	--	--		
0	1,8-CINEOL	Leaf Essent. Oil	91000	357000	1.9399550242552641	
0	1,8-CINEOL	Essential Oil	73000	217000	1.9052102662799937	
0	1,8-CINEOL	Et	--	50000		
0	1,8-CINEOL	Leaf	--	--		
67	1,8-CINEOLE	Plant	390	6288	1.2033227605211898	
0	1,8-CINEOLE-SYNTHETASE	Leaf	--	--		
0	1-OCTEN-3-OL	Plant	--	--		
0	2-ALPHA,3-ALPHA-DIHYDROXY-OLEAN-12-EN-28-OIC-ACID	Leaf	--	--		
0	2-ALPHA-HYDROXY-3-OXO-OLEAN-12-EN-28-OIC-ACID	Leaf	1.2	17		
0	2-AMINO-ADIPIC-ACID	Shoot	1.6	1.6		
0	2-METHYL-3-METHYLENE-5-HEPTANE	Leaf	50	280		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-METHYL-3-METHYLENE-HEPT-CIS-5-ENE	Leaf	40	224		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-3-METHYLENE-HEPT-CIS-5-ENE	Leaf Essent. Oil	--	8000		
0	2-METHYL-3-METHYLENE-HEPT-TRANS-5-ENE	Leaf	5	28		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-METHYL-3-METHYLENE-HEPT-TRANS-5-ENE	Leaf Essent. Oil	--	1000		
0	3-CARENE	Plant	--	--		
0	3-EPIOLEANOLIC-ACID	Leaf	1.4	1.4		
2	3-ISOTHUJONE	Leaf	--	--		
0	5-METHOXY-SALVIGENIN	Leaf	--	--		
0	6,7-DIMETHOXY-ROSMANOL	Shoot	--	2		
0	6-METHOXY-GENKWANIN	Plant	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	6-METHOXYGENKWANIN-7-METHYL-ETHER	Plant	--	--		
0	6-METHOXYLUTEOLIN	Plant	--	--		
0	6-METHOXYLUTEOLIN-7-METHYL-ETHER	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	6-METHOXYLUTEOLIN-7-METHYL-ETHER	Leaf	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	7-METHOXY-ROSMANOL	Shoot	--	2	-1	
0	7-O-ACETYL-HORMINONE	Root	--	--		
0	ACETO-HYDROXY-ROYLEANONE	Plant	--	--		
3	ALANINE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	ALLO-AROMADENDRENE	Leaf	15	84	-0.1830077223581628	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALLO-AROMADENDRENE	Essential Oil	--	1800	-1	
10	ALPHA-AMYRIN	Leaf	1800	1800		
10	ALPHA-AMYRIN	Plant	--	--		
0	ALPHA-BETA-THUJONE	Essential Oil	--	347000		
3	ALPHA-CADINOL	Leaf Essent. Oil	--	--		
3	ALPHA-CEDRENE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
3	ALPHA-CEDRENE	Leaf Essent. Oil	--	--		
0	ALPHA-COPAENE	Leaf Essent. Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-COROCALENE	Plant	--	--		
0	ALPHA-GURJUNENE	Plant	--	--		
2	ALPHA-HUMULENE	Leaf	110	616	0.5782902434464878	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ALPHA-HUMULENE	Leaf Essent. Oil	--	29000	0.25622083823143005	
2	ALPHA-HUMULENE	Essential Oil	--	19300	-0.306582227205239	
2	ALPHA-HUMULENE	Et	--	21000		
0	ALPHA-MUUROLENE	Leaf Essent. Oil	--	--		
0	ALPHA-OLEANOLIC-ACID	Plant	--	--		
11	ALPHA-PHELLANDRENE	Leaf	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
11	ALPHA-PHELLANDRENE	Leaf Essent. Oil	--	--		
11	ALPHA-PHELLANDRENE	Essential Oil	--	--		
28	ALPHA-PINENE	Plant	7	1540	0.6083638735756228	
28	ALPHA-PINENE	Essential Oil	11700	40100	-0.2072109908720455	
28	ALPHA-PINENE	Leaf Essent. Oil	35000	55000	-0.4505855480163243	
28	ALPHA-PINENE	Et	--	35000	1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	ALPHA-TERPINENE	Leaf	10	56	-0.2834251845983478	
13	ALPHA-TERPINENE	Essential Oil	--	11200	-0.4634179308976379	
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	2000	-0.5761001164044018	
13	ALPHA-TERPINENE	Et	--	1000		
23	ALPHA-TERPINEOL	Leaf	5	910	1.0071602347564552	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Essential Oil	--	3700	-0.6091856576306849	
23	ALPHA-TERPINEOL	Leaf Essent. Oil	--	1000	-0.8444420280137835	
0	ALPHA-TERPINEOL ACETATE	Et	--	9000		
0	ALPHA-THUJENE	Leaf	--	386	3.2507273876024785	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	ALPHA-THUJENE	Leaf Essent. Oil	--	13800	-0.41897395872827414	
0	ALPHA-THUJENE	Essential Oil	--	1200	-0.3928412484180114	
6	ALPHA-THUJONE	Leaf	200	10172	2.575761084269138	
6	ALPHA-THUJONE	Essential Oil	73300	408500		
6	ALPHA-THUJONE	Et	--	206000		
6	ALPHA-THUJONE	Leaf Essent. Oil	200000	363300		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-URSOLIC-ACID	Plant	--	--		
5	ALUMINUM	Leaf	18	115	-0.6571553869693828	
101	APIGENIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
101	APIGENIN	Shoot	--	--		
0	APIGENIN-7-O-BETA-D-GLUCURONYLPYRANOSIDE	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	APIGENIN-7-O-BETA-D-GLUCURONYLPYRANOSIDE	Shoot	--	--		
3	AROMADENDRENE	Plant	--	--		
112	ASCORBIC-ACID	Leaf	55	350	-0.4114445568899699	
0	ASH	Leaf	13659	87000	-0.5611877153937178	
2	ASPARAGINE	Plant	--	--		
0	AVENASTEROL	Fruit	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	AVENASTEROL	Fruit Essent. Oil	--	--		
9	BETA-AMYRIN	Leaf	1000	1000		
9	BETA-AMYRIN	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-BOURBONENE	Leaf Essent. Oil	--	--		
53	BETA-CAROTENE	Leaf	6	39	-0.9680962342519674	
0	BETA-CARYOPHYLLENE	Leaf	500	760	0.03728060572503595	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil	--	11000	-0.34048091992384494	
0	BETA-CARYOPHYLLENE	Essential Oil	18900	66000	-0.22342680293575198	
0	BETA-CARYOPHYLLENE	Et	--	41000		
0	BETA-COPAENE	Plant	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	BETA-MYRCENE	Essential Oil	--	--		
0	BETA-OLEANOLIC-ACID	Plant	--	--		
3	BETA-PHELLANDRENE	Leaf	5	28	-0.39745256523265804	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	BETA-PHELLANDRENE	Leaf Essent. Oil	--	1000	-0.8347075553554938	
13	BETA-PINENE	Plant	20	1540	1.2273041399455444	
13	BETA-PINENE	Essential Oil	11300	26100	-0.15085215632839455	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETA-PINENE	Leaf Essent. Oil	21000	55000	1.622889330955553	
13	BETA-PINENE	Et	--	18000		
47	BETA-SITOSTEROL	Leaf	5	2450	0.24430946587626218	
47	BETA-SITOSTEROL	Stem	1214	1214	1.0861956164972184	
47	BETA-SITOSTEROL	Fruit Essent. Oil	--	--		
47	BETA-SITOSTEROL	Root	--	--		
47	BETA-SITOSTEROL	Sprout Seedling	--	--		
6	BETA-SITOSTEROL-D-GLUCOSIDE	Seed	--	--		
5	BETA-THUJONE	Leaf	200	9968	2.7606909658238585	
5	BETA-THUJONE	Essential Oil	52300	142500		
5	BETA-THUJONE	Et	--	151000		
5	BETA-THUJONE	Leaf Essent. Oil	174000	356000		
0	BETA-URSOLIC-ACID	Plant	--	--		
13	BETULIN	Leaf	15	15	-0.47962706385165327	
35	BORNEOL	Shoot	7000	7000	6.370019299829522	
35	BORNEOL	Leaf Essent. Oil	16000	250000	2.73359024149356	
35	BORNEOL	Essential Oil	19700	156000	0.627691236095563	
35	BORNEOL	Et	--	79000		
0	BORNEOL-ACETATE	Essential Oil	17900	59000	-0.13264034547163733	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BORNEOL-ACETATE	Et	--	26000		
0	BORNEOL-ACETATE	Leaf Essent. Oil	1000	63500	-0.028206534857999635	
12	BORNYL-ACETATE	Shoot	5	1780	2.5481701537732313	
4	BORON	Leaf	25	41	-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).
102	CAFFEIC-ACID	Shoot	--	--		
102	CAFFEIC-ACID	Inflorescence	--	--		
0	CALAMENE	Plant	5	28	1	
28	CALCIUM	Leaf	1696	10800	-0.5218305708813075	
2	CAMPESTEROL	Fruit	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	CAMPESTEROL	Leaf	--	120	-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 Essent. Oil	--	--		
9	CAMPHENE	Leaf	20	18592	6.834837822452428	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Leaf Essent. Oil	28000	66400	1.484566818920243	
9	CAMPHENE	Essential Oil	30200	60700	1.1306904837156095	
9	CAMPHENE	Et	--	47000		
41	CAMPHOR	Leaf	--	9324	-0.03988163889064865	
41	CAMPHOR	Pericarp Essent. Oil	--	229000		
41	CAMPHOR	Leaf Essent. Oil	44000	458000	2.005169580755753	
41	CAMPHOR	Essential Oil	76000	305000	0.54343127227621	
0	CARBOHYDRATES	Leaf	103620	660000	0.38292106761842515	
2	CARNOSIC-ACID	Leaf	--	12400	1.5899657743835183	
2	CARNOSIC-ACID	Shoot	--	35	-0.666399572485972	
2	CARNOSIC-ACID	Resin, Exudate, Sap	--	57000		
0	CARNOSIC-ACID-12-METHYL-ETHER	Shoot	--	--		
0	CARNOSIC-ACID-METHYL-ESTER	Shoot	--	45		
0	CARNOSIC-ACID-METHYL-ESTER	Resin, Exudate, Sap	--	39000		
20	CARNOSOL	Leaf	--	1660	-0.5296891454855135	
20	CARNOSOL	Plant	--	--		
20	CARNOSOL	Shoot	--	34	-0.9354703756918734	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	CARNOSOL	Resin, Exudate, Sap	--	36000		
7	CARNOSOLIC-ACID	Leaf	2100	2100		
31	CARYOPHYLLENE	Leaf	1	1430	0.1300669724943753	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Essential Oil	--	33000	-0.14865660979366116	
8	CARYOPHYLLENE-OXIDE	Plant	55	308	0.16441757054150238	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	CARYOPHYLLENE-OXIDE	Essential Oil	--	13100		
43	CATECHIN	Plant	--	--		
77	CHLOROGENIC-ACID	Shoot	--	--		
77	CHLOROGENIC-ACID	Inflorescence	--	--		
1	CHOLESTEROL	Fruit	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	CHOLESTEROL	Fruit Essent. Oil	--	--		
24	CHROMIUM	Leaf	0.1	0.3	-0.621193465203015	
7	CHRYSOERIOL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CINAROSIDE	Shoot	--	--		
0	CINEOLE	Shoot	500	6075	1	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
10	CIRSILINEOL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
3	CIRSILIOLOL	Plant	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	CIRSILION	Plant	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIRSIMARITRIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	CIS-BETA-OCIMENE	Leaf Essent. Oil	--	--		
0	CIS-BETA-TERPINEOL	Leaf	10	56		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-BETA-TERPINEOL	Leaf Essent. Oil	10	56		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-SABINENE-HYDRATE	Leaf	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	CIS-SABINENE-HYDRATE	Leaf Essent. Oil	--	--		
0	CIS-SALVENE	Essential Oil	--	3200		
53	CITRAL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
2	COBALT	Leaf	--	--		
12	COPPER	Leaf	7	8	-0.540960423661207	USDA's Ag Handbook 8 and sequelae)
3	CYNAROSIDE	Leaf	--	--		
9	DELTA-CADINENE	Plant	2	14	-0.4659017963716953	
9	DELTA-CADINENE	Leaf Essent. Oil	--	--		
1	DELTA-CADINOL	Leaf Essent. Oil	--	--		
0	DELTA-TERPINEOL	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	DELTA-TERPINEOL	Leaf Essent. Oil	--	--		
13	DIOSMETIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DIPENTENE-O-DIPHENOLLACTONE	Leaf	3500	3500		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
0	EO	Plant	5000	28000	1.3878217608821395	
0	EO	Leaf	--	20000	0.7445770670718886	
0	EPIOLEANOLIC-ACID	Leaf	20	20		
0	EPIROSMANOL	Resin, Exudate, Sap	--	--		
0	EPIROSMANOL	Shoot	--	1		
0	EUGENOL-GLUCOSIDE	Leaf	--	9		
17	FARNESOL	Plant	--	--		
0	FAT	Leaf	21666	138000	1.6247882242706593	
0	FAT	Seed	250000	250000	-0.08105194719463996	
61	FERULIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	FIBER	Leaf	87000	87000	-0.9217097607872751	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Leaf	--	196000	1.790184111544934	
0	FIBER(DIETARY)	Leaf	--	289000	-1.0282378241946064	
7	FUMARIC-ACID	Plant	--	--		
62	GALLIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	GAMMA-CADINENE	Plant	2	14	-0.45984857009077795	
0	GAMMA-CADINENE	Leaf Essent. Oil	--	--		
0	GAMMA-MAALIENE	Plant	--	--		
11	GAMMA-TERPINENE	Leaf	15	140	-0.1019870841807531	
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	3000	-0.6853547696905973	
11	GAMMA-TERPINENE	Et	--	4000		
3	GENKWANIN	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
35	GERANIOL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	GERMANICOL	Plant	--	--		
5	GLUTAMINE	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	GLYCINE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
7	HISPIDULIN	Leaf	--	--		
0	HORMINONE	Root	--	--		
2	HUMULENE	Leaf Essent. Oil	--	--		
2	HUMULENE	Essential Oil	--	17900	-1	
0	HYDROXY-ROYLEANONE	Plant	--	--		
6	IRON	Leaf	2.4	15	-0.8825570778618611	
7	ISOBORNEOL	Shoot	--	784	1.1758265637832626	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	ISOBORNEOL	Leaf Essent. Oil	--	28000	-1	
7	ISOBORNEOL	Essential Oil	--	3800		
0	ISOBORNEOL-ACETATE	Shoot	168	9436		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	ISOBORNEOL-ACETATE	Essential Oil	--	33700	1	
1	ISOCARYOPHYLLENE	Plant	--	--		
1	ISOROSMANOL	Shoot	--	57		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	KILOCALORIES	Leaf	3420	3420	0.6478563559445962	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	LABIATIC-ACID	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LEDENE	Plant	--	--		
0	LEDOL	Leaf Essent. Oil	--	3000	-1	
60	LIMONENE	Plant	39	2380	0.9769131249982739	
60	LIMONENE	Leaf Essent. Oil	10000	36400	-0.517322999711508	
60	LIMONENE	Essential Oil	6600	85000	-0.2478161403169539	
60	LIMONENE	Et	--	14000	-1	
0	LINALOL	Plant	--	3500	0.3590366860587444	
53	LINALOOL	Plant	--	3500	-0.1908197582561713	
53	LINALOOL	Essential Oil	1700	5000	-0.560725569158283	
53	LINALOOL	Leaf Essent. Oil	4000	46600	-0.40077393425160296	
53	LINALOOL	Et	--	11000		
0	LINALOOL-ACETATE	Essential Oil	2000	216000	1.9636083246350857	
0	LINALOOL-ACETATE	Leaf Essent. Oil	2000	34900	1.6339378873531796	
0	LINALOOL-ACETATE	Et	--	10000		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	LINALYL-ACETATE	Plant	--	6048	2.330313404492723	
27	LINOLEIC-ACID	Seed	73000	73000	-0.29236236831545726	
27	LINOLEIC-ACID	Fruit Essent. Oil	--	--		
0	LINOLENIC-ACID	Seed	42000	86750	0.9345778796061399	
0	LINOLENIC-ACID	Fruit Essent. Oil	--	--		
78	LUTEOLIN	Shoot	--	--		
78	LUTEOLIN	Leaf	--	--		
7	LUTEOLIN-7-GLUCOSIDE	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	LUTEOLIN-7-GLYCOSIDE	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	LUTEOLIN-7-GLYCOSIDE	Root	--	--		
0	LUTEOLIN-7-METHYL-ETHER	Plant	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	LUTEOLIN-7-O-BETA-D-GLUCOSIDE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LUTEOLIN-7-O-GLUCURONIDE	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
65	MAGNESIUM	Leaf	444	2830	-0.5003307709599559	
15	MALIC-ACID	Plant	--	--		
14	MANGANESE	Leaf	0.5	3	-0.4548985090553243	
2	MANOOL	Essential Oil	--	--		
2	MANOOL	Shoot	556	1478		
6	MASLINIC-ACID	Leaf	46	46	-0.8872714302780136	
63	MENTHOL	Leaf	--	--		
63	MENTHOL	Plant	--	--		
2	METHYL-ISOVALERATE	Plant	7	42		
22	MYRCENE	Plant	--	336	-0.10695418064014987	
22	MYRCENE	Leaf Essent. Oil	9000	15700	-0.3056695322092534	
22	MYRCENE	Essential Oil	3700	10400	-0.3077036496607786	
22	MYRCENE	Et	--	8000	-1	
2	MYRTENOL	Leaf Essent. Oil	--	2000		
0	N-TRIACONTANE	Plant	--	--		
4	NEPETIN	Plant	--	--		
39	NIACIN	Leaf	10	62	-0.4318167758906651	
0	NICOTINIC-ACID-AMIDE	Plant	5000	5000		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	O-METHYL-CARNOSIC-ACID	Shoot	--	17		
0	OLEAN-12-EN-28-OIC-ACID	Shoot	--	86		
64	OLEANOLIC-ACID	Leaf	140	786	-0.36135857674665767	
64	OLEANOLIC-ACID	Stem	400	400	1	
18	OLEIC-ACID	Seed	35500	35500	-0.6872693677072723	
18	OLEIC-ACID	Fruit Essent. Oil	--	--		
9	OXALIC-ACID	Plant	--	--		
25	P-COUMARIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	P-CYMEN-8-OL	Plant	--	--		
16	P-CYMENE	Shoot	15	495	-0.10900236438234769	
16	P-CYMENE	Essential Oil	3100	5400	-0.5888102139189108	
16	P-CYMENE	Leaf Essent. Oil	7000	17700	-0.5156620336360256	
16	P-CYMENE	Et	--	11000	-1	
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	--	--		
11	PANTOTHENIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	PECTIN	Shoot	--	--		
0	PECTOLINAMARIGENIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
4	PELLANDRENE	Leaf	100	560	-0.35918289789876834	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
4	PELLANDRENE	Essential Oil	--	20000		
4	PHOSPHORUS	Leaf	201	1280	-0.6791795625313858	
2	PHYTOSTEROLS	Leaf	--	2440	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.)
0	PICROSALVIN	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
12	PINENE	Leaf	420	2352	-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	-1	
0	PLANTEOSE	Seed	--	--		
2	POMOLIC-ACID	Leaf	2.4	3	-1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	POTASSIUM	Leaf	3878	24700	-0.24922981870565544	
14	POTASSIUM	Plant	10700	11630	-0.7090536999047472	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	POTASSIUM-NITRATE	Plant	--	--		
0	PRISTANE	Leaf	56	56		
0	PROTEIN	Leaf	18055	115000	-0.9661229417649582	
0	PROTEIN	Seed	180000	180000	-0.4785438804290316	
0	RESIN	Plant	50000	60000	-0.5271561735476993	
15	RIBOFLAVIN	Leaf	0.6	3.6	-0.16098657500422545	
1	ROSMADIAL	Resin, Exudate, Sap	--	6000		
5	ROSMANOL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
5	ROSMANOL	Resin, Exudate, Sap	--	--		
5	ROSMANOL	Shoot	--	11		
0	ROSMANOL-7-ETHYL-ETHER	Shoot	--	144		
1	ROSMANOL-9-ETHYL-ETHER	Shoot	--	144		
57	ROSMARINIC-ACID	Plant	30000	50600	1.3515537858959146	
57	ROSMARINIC-ACID	Shoot	2000	5800	-0.5832582116490932	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
57	ROSMARINIC-ACID	Tissue Culture	--	--		
57	ROSMARINIC-ACID	Inflorescence	30000	42000	0.25850024578765574	
57	ROSMARINIC-ACID	Leaf	--	--		
0	ROYLEANONE	Root	20300	20300		
5	SABINENE	Leaf	10	56	-0.22552904691038753	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	SABINENE	Essential Oil	--	1200	-0.5875917391877868	
5	SABINENE	Leaf Essent. Oil	--	2000	-0.6066700271910461	
5	SABINOL	Leaf	85	476	0.31621378249351945	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	SABINYL-ACETATE	Plant	110	616		
0	SACCHAROPINE	Shoot	1.6	1.6	-0.7071067811865464	
0	SAFFICINOLIDE	Shoot	35	57		
0	SAGEONE	Shoot	22	73		
0	SAGEQUINONE-METHIDE-A	Shoot	--	207		
0	SAGERINIC-ACID	Plant	--	1300		
34	SALICYLIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SALVIANOLIC-ACID-K	Plant	--	5760		
0	SALVIATANNIN	Leaf	--	--		
0	SALVIGENIN	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	SALVIGENIN	Shoot	--	--		
0	SALVIGENIN-7-O-GLUCURONIDE	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
3	SALVIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
3	SALVIN-MONOMETHYL-ETHER	Leaf	--	--		
3	SALVIOL	Essential Oil	--	--		
0	SAPONIN	Plant	--	--		
60	SELENIUM	Leaf	--	--		
0	SELIN-11-EN-4-OL	Leaf Essent. Oil	--	54000		
0	SELINA-5,11-DIENE	Plant	--	--		
1	SERINE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
4	SILICON	Leaf	0.5	3.1	-0.40397146474890056	
1	SODIUM	Leaf	170	1080	-0.4554694713688264	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Plant	11	12	-0.30341378566295807	Father Nature's Farmacy: The aggregate of all these three-letter citations.
0	SPATHULENOL	Leaf 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	--	--		
12	STIGMASTEROL	Leaf	5	230	1.7806618408085848	
12	STIGMASTEROL	Fruit Essent. Oil	--	--		
35	TANNIN	Plant	20000	80000	-0.053082229266390064	
0	TANNINS	Leaf	785	10000	-1.0854284522770363	
23	TERPINEN-4-OL	Leaf	10	1120	0.29918716656064637	
23	TERPINEN-4-OL	Essential Oil	--	4500	-0.5734207195469667	
23	TERPINEN-4-OL	Leaf Essent. Oil	2000	3000	-0.523716551964413	
18	TERPINEOL	Leaf	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
18	TERPINEOL	Essential Oil	--	--		
9	TERPINOLENE	Plant	--	112	0.2506839298132136	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	TERPINOLENE	Leaf Essent. Oil	--	2000	-0.5940205732207128	
31	THIAMIN	Leaf	7	8	-0.06349209547044472	Father Nature's Farmacy: The aggregate of all these three-letter citations.
0	THIAMINE	Leaf	1.3	8.2	0.7312289774690919	
0	THUJOL-ACETATE	Essential Oil	--	1300		
17	THUJONE	Leaf	1453	12636	1.4138087279087124	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
17	THUJONE	Plant	2500	13000	1.9856348958487122	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
17	THUJONE	Essential Oil	451300	531000	1	
17	THUJONE	Et	--	457000		
71	THYMOL	Essential Oil	--	--		
71	THYMOL	Leaf	--	--		
4	TIN	Leaf	1.3	8	-0.91242959584448216	
0	TRANS-3-HEXENAL	Plant	--	--		
0	TRANS-ALLO-OCIMENE	Plant	--	--		
0	TRANS-BETA-OCIMENE	Leaf Essent. Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-OCIMENE	Plant	--	--		
2	TRANS-PINOCARVEOL	Leaf Essent. Oil	--	--		
0	TRANS-SABINENE-HYDRATE	Leaf	10	56	1.6793837527948157	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRANS-SABINENE-HYDRATE	Leaf Essent. Oil	--	2000	-1	
0	TRANS-SABINOL	Leaf	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRANS-SABINOL	Leaf Essent. Oil	--	--		
0	TRANS-SALVENE	Essential Oil	--	800		
0	TRICYCLENE	Leaf	15	84	1.3596086072298736	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	TRICYCLENE	Leaf Essent. Oil	--	3000	-1	
8	TYROSINE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	URS-12-EN-28-OIC-ACID	Leaf	14	14		
89	URSOLIC-ACID	Leaf	1255	1300	-0.38650833417091646	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
89	URSOLIC-ACID	Stem	200	200	-0.8584003823146588	
89	URSOLIC-ACID	Root	--	--		
6	UVAOL	Plant	--	--		
0	VALERANONE	Leaf Essent. Oil	--	--		
24	VANILLIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
1	VIRIDIFLOROL	Leaf	--	--		
1	VIRIDIFLOROL	Essential Oil	--	--		
0	WATER	Leaf	--	843000	0.1764219759131201	
0	WAX	Plant	--	--		
77	ZINC	Leaf	1	5.9	-0.4905596892021207	