

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Ocimum basilicum***

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
67	1,8-CINEOLE	Plant	135	135	-0.5237695990512106	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
67	1,8-CINEOLE	Plant	--	135	-0.5237695990512106	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
16	ACETIC-ACID	Essential Oil	--	--		
32	AESCULETIN	Leaf	--	--		
33	AESCULIN	Leaf	--	--		
3	AESCULOSIDE	Flower	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	ALANINE	Leaf	7470	7470	-1.1923060818343414	USDA's Ag Handbook 8 and sequelae)
20	ALPHA-BISABOLOL	Essential Oil	--	--		
20	ALPHA-BISABOLOL	Plant	--	90	-0.06989988186929946	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
3	ALPHA-CEDRENE	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	ALPHA-CEDRENE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ALPHA-HUMULENE	Plant	16	16	-0.6253709820933909	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
2	ALPHA-HUMULENE	Plant	--	16	-0.6253709820933909	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
2	ALPHA-HUMULENE	Leaf Essent. Oil	--	5650	-0.5249878546134739	
2	ALPHA-HUMULENE	Essential Oil	--	31300	-0.1980459026032663	
2	ALPHA-HUMULENE	Shoot Essent. Oil	6700	11800	0.818288975563984	
28	ALPHA-PINENE	Plant	2	180	-0.35409162350207984	
28	ALPHA-PINENE	Leaf Essent. Oil	3700	13000	-0.6816393866518402	
28	ALPHA-PINENE	Shoot Essent. Oil	4600	7200	-0.46017762363908365	
28	ALPHA-PINENE	Essential Oil	300	18000	-0.4016792923021472	
3	ALPHA-SELINENE	Plant	--	--		
13	ALPHA-TERPINENE	Plant	1	10	-0.48651836720139585	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
13	ALPHA-TERPINENE	Essential Oil	--	400	-0.766355883758014	
13	ALPHA-TERPINENE	Shoot Essent. Oil	--	300	-0.9635029368323148	
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	600	-0.698535055754104	
23	ALPHA-TERPINEOL	Plant	36	239	-0.2954805858988341	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	ALPHA-TERPINEOL	Essential Oil	6700	23900	0.2853731010302511	
23	ALPHA-TERPINEOL	Leaf Essent. Oil	5650	7000	-0.7232141414984458	
23	ALPHA-TERPINEOL	Shoot Essent. Oil	--	9600	1.3997084244475302	
6	ALPHA-THUJONE	Plant	--	--		
36	ANETHOLE	Plant	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
36	ANETHOLE	Essential Oil	--	--		
30	ANTHOCYANINS	Leaf	--	--		
101	APIGENIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
14	ARGININE	Leaf	6620	6620	-0.863646085190795	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Leaf	27	612	-0.25834558219747267	
3	ASPARTIC-ACID	Leaf	16960	16960	-0.6357584583519637	USDA's Ag Handbook 8 and sequelae)
24	BENZALDEHYDE	Essential Oil	--	700	-0.6916241263883828	
9	BENZYL-ACETATE	Leaf	17	163		
9	BENZYL-ALCOHOL	Essential Oil	--	--		
6	BETA-BISABOLENE	Plant	6.5	6.5	-0.6328717716575204	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
6	BETA-BISABOLENE	Plant	--	6.5	-0.6328717716575204	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	BETA-BISABOLENE	Shoot Essent. Oil	--	2600	1	
53	BETA-CAROTENE	Leaf	4	333	0.31225803965642646	
3	BETA-DAMASCENONE	Shoot Essent. Oil	--	1700		
5	BETA-ELEMENE	Plant	12	12	-0.43128205717178886	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
5	BETA-ELEMENE	Shoot Essent. Oil	4900	81600	1.4135003647459183	
5	BETA-ELEMENE	Essential Oil	--	16100	-0.9072086362241611	
13	BETA-EUDESOL	Shoot Essent. Oil	--	3000	-1	
13	BETA-IONONE	Shoot Essent. Oil	--	1600		
2	BETA-MYRCENE	Plant	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	BETA-MYRCENE	Essential Oil	--	--		
13	BETA-PINENE	Plant	3	160	-0.2627291295986692	
13	BETA-PINENE	Leaf Essent. Oil	7300	2000	-0.9267593911993299	
13	BETA-PINENE	Shoot Essent. Oil	8200	9300	1.1230823071409943	
13	BETA-PINENE	Essential Oil	5500	16000	-0.37511613864599774	
2	BETA-SANTALENE	Essential Oil	--	--		
3	BETA-SELINENE	Plant	--	--		
47	BETA-SITOSTEROL	Flower	1051	1051	-0.8129550273341427	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Leaf	790	1705	-0.15694051781455237	
47	BETA-SITOSTEROL	Root	408	408	-0.2659856197797314	
47	BETA-SITOSTEROL	Sprout Seedling	230	230	-1.0962039963725738	
47	BETA-SITOSTEROL	Stem	230	845	0.24120717836480773	
47	BETA-SITOSTEROL	Seed	--	527	-0.4287473793704042	
5	BETA-THUJONE	Plant	--	--		
35	BORNEOL	Plant	3	3	-0.6682251883160577	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
35	BORNEOL	Plant	--	3	-0.6682251883160577	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
35	BORNEOL	Essential Oil	--	1200	-0.9038697263749434	
35	BORNEOL	Shoot Essent. Oil	--	1200	-0.7871147430282157	
4	BORON	Plant	18	31	-0.49409835011398384	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).
6	BUTYRIC-ACID	Essential Oil	--	--		
102	CAFFEIC-ACID	Leaf	19000	19100	1.933822416683755	
102	CAFFEIC-ACID	Tissue Culture	--	--		
28	CALCIUM	Leaf	3200	22112	0.35959605461482125	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CAMPESTEROL	Leaf	--	90	-0.37970082853926607	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
9	CAMPHENE	Plant	--	400	0.07840780100655714	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	CAMPHENE	Leaf Essent. Oil	300	900	-0.8450720560025149	
9	CAMPHENE	Shoot Essent. Oil	--	500	-0.8123496252026575	
9	CAMPHENE	Essential Oil	--	900	-0.666936586225485	
41	CAMPHOR	Plant	2	31	-0.6381982068688171	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
41	CAMPHOR	Essential Oil	2100	7200	-1.1929832436449845	
41	CAMPHOR	Leaf Essent. Oil	--	10000	-0.7795867266952746	
41	CAMPHOR	Shoot Essent. Oil	--	4500	-1	
1	CAPROIC-ACID	Essential Oil	--	--		
37	CARVACROL	Shoot Essent. Oil	--	6800	-0.7212680383887677	
37	CARVACROL	Plant	--	--		
19	CARVONE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
19	CARVONE	Shoot Essent. Oil	--	16000	-0.6664162971220318	
31	CARYOPHYLLENE	Plant	18	3196	3.6582342247473596	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	CARYOPHYLLENE-OXIDE	Essential Oil	--	--		
3	CHAVICOL	Plant	3	3	-0.7071067811865478	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
3	CHAVICOL	Plant	--	3	-0.7071067811865478	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
1	CIS-3-HEXENOL	Plant	--	--		
1	CIS-ANETHOLE	Plant	--	--		
3	CIS-OCIMENE	Plant	3	252	0.3293039459859423	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
53	CITRAL	Plant	560	7000	-0.02464955373944787	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
53	CITRAL	Essential Oil	--	700000	1.6605158904602735	
15	CITRONELLOL	Plant	0.2	0.2	-0.7485510521834722	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
15	CITRONELLOL	Plant	--	0.2	-0.7485510521834722	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
15	CITRONELLOL	Essential Oil	80000	241900	1.7378875538585694	
1	COPAENE	Essential Oil	--	1400	-0.8722389827292886	
12	COPPER	Leaf	14	14	-0.3758429396758034	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CYSTINE	Leaf	1590	1590	-1.117533773233964	USDA's Ag Handbook 8 and sequelae)
1	D-GLUCOSE	Seed	--	--		Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
9	DELTA-CADINENE	Plant	5	5	-0.5302645800660227	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
9	DELTA-CADINENE	Plant	--	5	-0.5302645800660227	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
9	DELTA-CADINENE	Shoot Essent. Oil	2600	66600	1	
2	ELEMOL	Essential Oil	--	--		
10	ERIODICTYOL	Leaf	--	--		
30	ESCULETIN	Leaf	--	--		Plantes Medicinales et Phytotherapie, 24: 193.
29	ESCULIN	Leaf	--	--		
12	ESTRAGOLE	Plant	35	9000	-0.6985578481954239	
12	ESTRAGOLE	Essential Oil	300	872100	0.7157318089649249	
12	ESTRAGOLE	Leaf Essent. Oil	7500	900000	1.0365049414283074	
12	ESTRAGOLE	Leaf	--	--		
12	ESTRAGOLE	Flower Essent. Oil	--	--		
12	ESTRAGOLE	Shoot Essent. Oil	--	--		
76	EUGENOL	Leaf	14	8575	0.19127842889726174	



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
76	EUGENOL	Plant	--	14	-0.6109651056315911	
76	EUGENOL	Essential Oil	300	857500	1.714831728119204	
76	EUGENOL	Shoot Essent. Oil	5700	26700		
76	EUGENOL	Leaf Essent. Oil	51200	270000	-0.30638029986732646	
5	EUGENOL-METHYL-ETHER	Plant	375	2500		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	EUGENOL-METHYL-ETHER	Essential Oil	--	26800	0.04687758407501351	
5	EUGENOL-METHYL-ETHER	Shoot Essent. Oil	2000	8200		
5	EUGENOL-METHYL-ETHER	Leaf Essent. Oil	--	378000	1	
17	FARNESOL	Plant	--	--		
6	FENCHONE	Plant	30	30	-0.4714639178202843	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
6	FENCHONE	Plant	--	30	-0.4714639178202843	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
6	FENCHONE	Shoot Essent. Oil	--	12900		
1	FENCHYL-ALCOHOL	Plant	7	7		Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
1	FENCHYL-ALCOHOL	Plant	--	7		Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	FIBER	Leaf	145790	154290	-0.08959174734898213	
6	FURFURAL	Plant	--	--		
11	GAMMA-TERPINENE	Plant	1	10	-0.529894116080377	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
11	GAMMA-TERPINENE	Leaf Essent. Oil	2000	14900	-0.5298384190634473	
13	GERANIAL	Plant	5	5	-0.8456994799530183	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
13	GERANIAL	Plant	--	5	-0.8456994799530183	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
13	GERANIAL	Shoot Essent. Oil	--	2100		
13	GERANIAL	Leaf Essent. Oil	--	2000	-1	
35	GERANIOL	Plant	1	1000	-0.27782019166414046	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
35	GERANIOL	Plant	--	3	-0.44914525148490203	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
35	GERANIOL	Essential Oil	--	100000	0.4011550201900289	
35	GERANIOL	Shoot Essent. Oil	1100	3900		
5	GERANYL-ACETATE	Leaf	11	84	-0.6125829219693176	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	GERMACRENE-D	Plant	35	35	-0.3920642941811044	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
2	GERMACRENE-D	Plant	--	35	-0.3920642941811044	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
2	GERMACRENE-D	Leaf Essent. Oil	--	11100	-0.6029429234203527	
2	GERMACRENE-D	Shoot Essent. Oil	13600	36200	-1.277169083049922	
8	GLUTAMIC-ACID	Leaf	15650	15650	-1.204342874821576	USDA's Ag Handbook 8 and sequelae)
12	GLYCINE	Leaf	6900	6900	-0.9337878392435092	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Leaf	2870	2870	-1.2578053845584176	USDA's Ag Handbook 8 and sequelae)
2	HUMULENE	Essential Oil	--	--		
6	IRON	Leaf	48	478	0.2910263957706515	
1	ISOCARYOPHYLLENE	Plant	--	--		
16	ISOEUGENOL	Plant	8	95		
3	ISOLEUCINE	Leaf	5880	5880	-1.5930724298495411	USDA's Ag Handbook 8 and sequelae)
22	ISOQUERCITRIN	Leaf	--	--		
75	KAEMPFEROL	Leaf	--	--		
2	LEUCINE	Leaf	10780	10780	-0.8829732628709146	USDA's Ag Handbook 8 and sequelae)
60	LIMONENE	Plant	20	20	-0.4735121569427471	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Plant	--	20	-0.4735121569427471	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
60	LIMONENE	Essential Oil	3100	77600	-0.2904096059080155	
60	LIMONENE	Shoot Essent. Oil	--	7100	-0.8611251092370704	
60	LIMONENE	Leaf Essent. Oil	1000	2900	-0.6654054021595263	
53	LINALOOL	Plant	5	8730	0.5167217771424646	
53	LINALOOL	Leaf	--	--		
53	LINALOOL	Leaf Essent. Oil	14000	593000	3.0590616231923224	
53	LINALOOL	Essential Oil	10	630000	2.241643366280597	
53	LINALOOL	Flower Essent. Oil	--	416000		
53	LINALOOL	Shoot Essent. Oil	49500	177100	0.31770222209079224	
7	LINALYL-ACETATE	Plant	15	240	-0.4626561664258833	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
27	LINOLEIC-ACID	Seed	53240	145200	0.32625439958347807	
78	LUTEOLIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
4	LYSINE	Leaf	6180	6180	-1.5226687945679613	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	4100	4340	0.08273170384575512	USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Leaf	32	32	-0.40668721364691	USDA's Ag Handbook 8 and sequelae)

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63	MENTHOL	Plant	4	32	-0.6155897076601419	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
63	MENTHOL	Essential Oil	--	--		
30	MENTHONE	Plant	1	1	-0.5150338999298373	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
30	MENTHONE	Essential Oil	--	--		
15	METHIONINE	Leaf	2020	2020	-0.8867496430331252	USDA's Ag Handbook 8 and sequelae)
6	METHYL-CHAVICOL	Plant	238	8780	0.8345194128913528	
5	METHYL-CINNAMATE	Plant	1	2800		
20	METHYL-EUGENOL	Plant	13	1400	0.9663911485584473	
15	METHYL-ISOEUGENOL	Plant	--	--		
3	MUCILAGE	Seed	93000	93000	-0.6574211348716195	
3	MUCILAGE	Seed Oil	--	--		
22	MYRCENE	Leaf	2	80	-0.14380734093480035	
22	MYRCENE	Plant	2	80	-0.3882101667097782	
22	MYRCENE	Essential Oil	--	1300	-0.4270241436912702	
22	MYRCENE	Shoot Essent. Oil	2600	18000	-0.40439631676723714	
22	MYRCENE	Leaf Essent. Oil	1000	8600	-0.3333131413210551	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	NERAL	Plant	5	5	-0.761795742829685	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
4	NERAL	Shoot Essent. Oil	--	2000		
4	NERAL	Leaf Essent. Oil	--	1000	-1	
10	NEROL	Plant	2.5	300	-0.24843221504215574	
10	NEROL	Essential Oil	--	30000	-0.586310919290707	
10	NEROL	Shoot Essent. Oil	--	700		
1	NEROLIDIOL	Plant	--	5		Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
1	NEROLIDIOL	Essential Oil	--	--		
11	NEROLIDOL	Essential Oil	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
11	NEROLIDOL	Plant	5	5	-0.9701964434020749	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
11	NEROLIDOL	Shoot Essent. Oil	--	4700		
39	NIACIN	Leaf	8	69	-0.34667165096151836	
6	O-METHOXYCINNAMALDEHYDE	Plant	--	--		
2	OCIMENE	Essential Oil	--	--		
2	OCIMENE	Leaf Essent. Oil	--	1000	-1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
64	OLEANOLIC-ACID	Flower	1300	1300	-0.6357280607585934	
64	OLEANOLIC-ACID	Leaf	--	1700	0.19433717473155765	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
18	OLEIC-ACID	Seed	26620	36300	-0.6806928979897604	
4	ORIENTIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
25	P-COUMARIC-ACID	Leaf	760	760	-0.150429773215176	
16	P-CYMENE	Plant	1	16	-0.4160900695992076	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
16	P-CYMENE	Essential Oil	--	2400	-0.6135781849583403	
16	P-CYMENE	Shoot Essent. Oil	--	300	-1.3971068639782231	
16	P-CYMENE	Leaf Essent. Oil	--	300	-0.7742826608460229	
16	P-CYMENE	Tissue Culture	--	--		
2	P-METHOXYCINNAMALDEHYDE	Essential Oil	1000	4000		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	P-METHOXYCINNAMALDEHYDE	Flower Essent. Oil	--	40000		
13	PALMITIC-ACID	Seed	--	16940	-0.350073884010438	
4	PELLANDRENE	Plant	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Leaf	380	5168	0.04848893148250219	
2	PHYTOSTEROLS	Leaf	1060	1060	-0.47114523357690347	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Leaf	4290	42900	0.5544414923455223	
6	PROPIONIC-ACID	Essential Oil	--	--		
176	QUERCETIN	Leaf	--	--		
15	RIBOFLAVIN	Leaf	3	4	-0.15911158075734227	
57	ROSMARINIC-ACID	Plant	1000	19000	-0.5696167858896972	
57	ROSMARINIC-ACID	Root	--	--		
57	ROSMARINIC-ACID	Tissue Culture	--	--		
57	ROSMARINIC-ACID	Shoot	--	1300	-0.7944986102342779	
87	RUTIN	Leaf	--	--		
5	SABINENE	Plant	8	8	-0.4483811260005284	Die Nahrung. Pino, J., Rosado, A., Goire, I., Roncal, E., and Garcia, I. 1993. Analysis of the Essential Oil from Cuban Basil. Die Nahrung 37:(5): 501-504.
5	SABINENE	Shoot Essent. Oil	3100	3500	-0.7938224515162632	
5	SABINENE	Essential Oil	--	2500	-0.5783801713741707	
5	SABINENE	Leaf Essent. Oil	2000	3900	-0.5747006667443069	
29	SAFROLE	Plant	60	400	0.8497176108557255	
1	SERINE	Leaf	5610	5610	-1.1663710510980512	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Plant	294	386	-0.28271053121447925	



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Leaf	120	890	-0.4892147785607772	
8	STEARIC-ACID	Seed	--	485	-0.5548671871852875	
12	STIGMASTEROL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
12	STIGMASTEROL	Leaf	--	180	1.194435720377775	
7	SUCCINIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
35	TANNIN	Tissue Culture	--	--		
35	TANNIN	Plant	--	50000	-0.4910667725786353	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	TERPINEN-4-OL	Plant	2	120	-0.2292113627770182	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
23	TERPINEN-4-OL	Leaf Essent. Oil	24300	25700	-0.33110328936252614	
23	TERPINEN-4-OL	Essential Oil	1700	6800	-0.5510718514991831	
23	TERPINEN-4-OL	Shoot Essent. Oil	--	--		
9	TERPINOLENE	Plant	1	22	-0.5437369745244341	
9	TERPINOLENE	Essential Oil	--	1000	-0.38815736668905965	
9	TERPINOLENE	Shoot Essent. Oil	--	400	-1	
9	TERPINOLENE	Leaf Essent. Oil	--	2600	-0.536195561668254	
31	THIAMIN	Leaf	1	6	-0.4802995853174522	
4	THREONINE	Leaf	5880	5880	-1.3106860880630495	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
71	THYMOL	Leaf	1415	1415	0.34997957884319775	
71	THYMOL	Essential Oil	--	--		
71	THYMOL	Shoot Essent. Oil	--	1000	-0.6751908682417391	
8	TRANS-ANETHOLE	Plant	11	74	-0.4532712115799402	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
8	TRANS-ANETHOLE	Essential Oil	--	7400	-1.2051729948329528	Hussain, R.A., et. al. 1990. Sweetening Agents of Plant Origin: Phenylpropanoid Constituents of Seven Sweet-Tasting Plants. Econ. Bot. 44 2: 174-182. Program Collab. Res. Pharm. Sci. Coll. Pharmacy Univ. Illinois at Chicago IL 60680, USA.
8	TRANS-ANETHOLE	Shoot Essent. Oil	--	6300	-1	
29	TRYPTOPHAN	Leaf	2210	2210	-0.8173232064374916	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Leaf	4320	4320	-1.0238955187502574	USDA's Ag Handbook 8 and sequelae)
89	URSOLIC-ACID	Flower	--	1740		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
89	URSOLIC-ACID	Leaf	--	--		
89	URSOLIC-ACID	Sprout Seedling	--	63		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
89	URSOLIC-ACID	Stem	--	845	0.7881966335751702	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
9	VALERIC-ACID	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	VALINE	Leaf	7170	7170	-1.5483541431568815	USDA's Ag Handbook 8 and sequelae)
12	VICENIN-2	Leaf	--	--		
3	XANTHOMICROL	Leaf	350	350		
3	XYLOSE	Seed	--	--		Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
77	ZINC	Leaf	5	6	-0.48994598747101986	USDA's Ag Handbook 8 and sequelae)