

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Citrus limon

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(E)-BETA-OCIMENE	Petiole		6.0		--
0	(Z)-BETA-OCIMENE	Petiole		3.5		--
67	1,8-CINEOLE	Leaf Essent. Oil	11000.0	50000.0	-0.6565847961763176	Jim Duke's personal files.
0	1-HEXEN-3-OL	Petiole		2.0		--
0	2',4',5'-TRIHYDROXY- FLAVONONE-7-O-BETA-D- GLUCOSYL-RHAMNOSIDE	Pericarp				--
0	2'-O-XYLOSYL-VITEXIN	Flower				--
0	2-CARBOXYARABINITOL	Leaf				Jim Duke's personal files.
0	2-DODECENAL	Petiole		0.0		--
2	2-NONENAL	Petiole		1.0		--
0	3',4',5'-TRIHYDROXY- FLAVONE-7-O-BETA-D- RHAMNOSYL	Plant				--
0	3',4',5'-TRIHYDROXY- FLAVONE-7-O-BETA-D- RHAMNOSYL-GLUCOSIDE	Plant				--
0	3',4',5'-TRIHYDROXY- FLAVONONE-7-O-BETA-D- RHAMNOSYL	Plant				--
0	3-(3',4',5'-TRIMETHOXY- PHENYL)-2-PROPENYL- ACETATE	Fruit Essent. Oil				Jim Duke's personal files.
0	3-(3',4',5'-TRIMETHOXY- PHENYL)-2-PROPENYL- PROPIONATE	Fruit Essent. Oil				Jim Duke's personal files.
0	3-(3',4',5'-TRIMETHOXY- PHENYL)-PROPANYL- ACETATE	Fruit Essent. Oil				Jim Duke's personal files.
0	3-(3',4',5'-TRIMETHOXY- PHENYL)-PROPANYL- PROPIONATE	Fruit Essent. Oil				Jim Duke's personal files.
0	3-(4-HYDROXY-3- METHOXY-PHENYL)-1- GLUCOSYL-PROP-2-ENE	Pericarp				Jim Duke's personal files.
0	3-HEXEN-1-OL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	4',5,7'-TRIHYDROXY-3',6,8- TRIMETHOXY-FLAVONE-3- O-BETA-D-GLUCOSIDE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	4',5,7-TRIHYDROXY-3',8-DIMETHOXY-FLAVONE-3-O-BETA-D-GLUCOSIDE	Pericarp				--
0	4',5,7-TRIHYDROXY-3',8-DIMETHOXY-FLAVONE-3-O-BETA-D-GLUCOSYL-RHAMNOSIDE	Pericarp				--
0	4',5,7-TRIHYDROXY-FLAVONE-6,8-DI-C-GLUCOSIDE	Pericarp				--
0	4',5,7-TRIHYDROXY-FLAVONE-6-O-BETA-D-RHAMNOSYL	Plant				--
0	4',5,7-TRIHYDROXY-FLAVONE-8-O-BETA-D-RHAMNOSYL	Plant				--
0	4',5,7-TRIHYDROXY-FLAVONE-8-O-BETA-D-RHAMNOSYL-GLUCOSIDE	Plant				--
0	4',7-DIHYDROXY-3'-METHOXY-FLAVONONE-8-O-BETA-D-GLUCOSYL-RHAMNOSIDE	Pericarp				Jim Duke's personal files.
0	4-(3-METHYL-2-BUTENOXY)-ACETOPHENONE	Pericarp				--
0	5,7-DIMETHOXYCOUMARIN	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	5-(2',3'-DIHYDROXY-3'-METHYL-BUTYL-OXY)-7-METHOXY-COUMARIN	Fruit Essent. Oil				Jim Duke's personal files.
0	5-(2',3'-EPOXY-3'-METHYL-BUTYL-OXY)-7-METHOXY-COUMARIN	Fruit Essent. Oil				Jim Duke's personal files.
0	5-(3'-METHYL-BUT-2'-ENYL-OXY)-7-METHOXY-COUMARIN	Fruit Essent. Oil				Jim Duke's personal files.
0	5-(3'-METHYL-BUT-2'-ENYL-OXY)-8-(2'',3''-EPOXY-3'-METHYL-BUTYL-OXY)-PSORALEN	Fruit Essent. Oil				Jim Duke's personal files.
0	5-(3'-METHYL-BUT-2'-ENYL-OXY)-8-(2',3'-DIHYDROXY-3'-METHYL-BUTYL-OXY)-PSORALEN	Fruit Essent. Oil				Jim Duke's personal files.
0	5-GERANOXY-7-METHOXYCOUMARIN	Essential Oil	603.0	630.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5-GERANOXY-7-METHOXYPSORALEN	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	5-GERANYL-OXY-7-METHOXY-COUMARIN	Fruit Essent. Oil				Jim Duke's personal files.
0	5-GERANYL-OXYPsorALEN	Pericarp				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	5-ISOPENTENOXY-7-METHOXYCOUMARIN	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	6,7-DIMETHOXYCOUMARIN	Bark		162.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	6-8-DI-C-GLUCOSYL-DIOSMETIN	Pericarp				Jim Duke's personal files.
0	6-C-GLUCOSYL-DIOSMETIN	Pericarp				Jim Duke's personal files.
0	7-(3'-METHYL-BUT-2'-ENYL-OXY)-COUMARIN	Fruit Essent. Oil				Jim Duke's personal files.
0	7-GLUCOSYL-APIGENIN	Flower				Jim Duke's personal files.
0	7-PENTAHYDROXY-2',3',5,5'-PENTAHYDROXY-FLAVANONE-7-(6-O-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE	Pericarp				--
0	7-RHAMNO-GLUCOSYL-DIOSMETIN	Flower				--
0	7-RHAMNO-GLUCOSYL-LUTEOLIN	Flower				--
0	8-(7',8'-EPOXY-GERANYL-OXY)-PSORALEN	Fruit Essent. Oil				Jim Duke's personal files.
0	8-C-GLUCOSYL-DIOSMETIN	Pericarp				Jim Duke's personal files.
0	8-GERAN-OXYPsorALEN	Pericarp				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	8-GERAN-OXYPsorALEN	Essential Oil		387.0		Jim Duke's personal files.
0	8-GERANYL-OXY-5-METHOXY-PSORALEN	Fruit Essent. Oil				Jim Duke's personal files.
0	8-GERANYLOXYPsorALEN	Fruit Essent. Oil				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ACETIC-ACID	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	ADENOSINE	Pericarp				Jim Duke's personal files.
0	ALPHA,ALPHA-P-TRIMETHYLBENZYL-ALCOHOL	Plant				--
0	ALPHA,ALPHA-P-TRIMETHYLBENZYL-ALCOHOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-AMINO-BUTYRIC-ACID	Plant				--
0	ALPHA-BERGAMOTENE	Petiole				--
0	ALPHA-BERGAMOTENE	Essential Oil		250.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-COPAENE	Petiole		0.0		--
0	ALPHA-COPAENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-CUBEBENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	ALPHA-HUMULENE	Petiole		1.5		--
2	ALPHA-HUMULENE	Essential Oil		10.0	-0.48105436900291004	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Essential Oil		20.0	-0.5926545907300464	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Petiole		2.0		--
28	ALPHA-PINENE	Essential Oil	40.0	500.0	-0.5556700287286983	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	ALPHA-PINENE	Leaf Essent. Oil	500.0	2000.0	-0.7421534872468563	Jim Duke's personal files.
28	ALPHA-PINENE	Pericarp Essent. Oil	5000.0	14000.0		Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Petiole		90.0		--
28	ALPHA-PINENE	Fruit Essent. Oil		7000.0	-0.7563238037559155	Jim Duke's personal files.
28	ALPHA-PINENE	Pericarp				Jim Duke's personal files.
0	ALPHA-SINENSAL	Petiole		0.0		--
13	ALPHA-TERPINENE	Pericarp				Jim Duke's personal files.
13	ALPHA-TERPINENE	Petiole		8.0		--
13	ALPHA-TERPINENE	Essential Oil		70.0	-0.7756123212065256	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Pericarp Essent. Oil	4000.0	73000.0		Jim Duke's personal files.
23	ALPHA-TERPINEOL	Petiole		32.0		--
23	ALPHA-TERPINEOL	Essential Oil	6.0	50.0	-0.7708262254085273	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Pericarp				Jim Duke's personal files.
23	ALPHA-TERPINEOL	Leaf Essent. Oil	4000.0	125000.0	1.6609342933031976	Jim Duke's personal files.
0	ALPHA-TERPINYL-ACETATE	Petiole		0.1		--
0	ALPHA-TERPINYL-PROPIONATE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-THUJENE	Petiole		20.0		--
0	ALPHA-THUJENE	Essential Oil	16.0	40.0	-0.40032749008251933	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	APIGENIN-7-(6-O-ALPHA-RHAMNOSYL-BETA-GLUCOSIDE)	Pericarp				Jim Duke's personal files.
0	APIGENIN-C-GLYCOSIDE	Plant				--
112	ASCORBIC-ACID	Fruit	5208.0	5566.0	0.061588136058018224	--
112	ASCORBIC-ACID	Fruit Juice				Jim Duke's personal files.
0	ASH	Fruit		28000.0	-0.7422580290226741	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	AURAPTEN	Fruit Essent. Oil				Jim Duke's personal files.
2	AUREUSIDIN	Plant				--
0	AUREUSIDIN-6-GLUCOSIDE	Plant				--
0	AUREUSIDIN-6-RHAMNOGLUCOSIDE	Plant				--
0	BERGAMOTENE	Essential Oil	16.0	40.0		--
2	BERGAMOTTIN	Essential Oil		649.0		Jim Duke's personal files.
2	BERGAMOTTIN	Fruit Essent. Oil				Jim Duke's personal files.
26	BERGAPTEN	Plant				Jim Duke's personal files.
26	BERGAPTEN	Essential Oil		10.0		Jim Duke's personal files.
26	BERGAPTEN	Fruit Essent. Oil				Jim Duke's personal files.
0	BETA-BERGAMOTENE	Leaf Essent. Oil		8000.0		Jim Duke's personal files.
6	BETA-BISABOLENE	Leaf Essent. Oil		8000.0	-0.45226094922261545	Jim Duke's personal files.
6	BETA-BISABOLENE	Essential Oil	23.0	400.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	BETA-BISABOLENE	Petiole		25.0		--
53	BETA-CAROTENE	Fruit	0.0	2.0	-0.14693466516508752	--
0	BETA-CARYOPHYLLENE	Leaf Essent. Oil	100.0	3500.0	-0.38515655776504104	Jim Duke's personal files.
0	BETA-CARYOPHYLLENE	Petiole		13.0		--
5	BETA-ELEMENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-HUMULENE	Essential Oil		10.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Essential Oil		80.0	-1.254423892232491	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Leaf Essent. Oil		3300.0	-0.6449387865926303	Jim Duke's personal files.
3	BETA-PHELLANDRENE	Pericarp Essent. Oil		65900.0		Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	BETA-PHELLANDRENE	Petiole		8.0		--
13	BETA-PINENE	Pericarp Essent. Oil				Jim Duke's personal files.
13	BETA-PINENE	Fruit Essent. Oil		7000.0	-0.6959144908685471	Jim Duke's personal files.
13	BETA-PINENE	Petiole		595.0		--
13	BETA-PINENE	Leaf Essent. Oil		7000.0	-0.6862264928828316	Jim Duke's personal files.
13	BETA-PINENE	Pericarp				Jim Duke's personal files.
13	BETA-PINENE	Essential Oil	40.0	1270.0	-0.7021862831547401	--
0	BETA-SINENSAL	Petiole		1.5		--
47	BETA-SITOSTEROL	Fruit		80.0	-0.6891305552196143	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
47	BETA-SITOSTEROL	Plant				--
0	BRAYLIN	Root				Jim Duke's personal files.
5	BYAKANGELICIN	Fruit Essent. Oil				Jim Duke's personal files.
5	BYAKANGELICIN	Essential Oil		29.0		--
0	BYAKANGELICOL	Fruit Essent. Oil				Jim Duke's personal files.
0	BYAKANGELICOL	Essential Oil				--
4	CADINENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
102	CAFFEIC-ACID	Fruit	21.0	35.0	-0.3324337022744836	--
62	CAFFEINE	Flower		50.0	0.21997067253202995	--
28	CALCIUM	Fruit	700.0	3227.0	-0.14521436633635507	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	CAMPESTEROL	Fruit		20.0	-0.48957181191497545	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	Essential Oil	2.0	50.0	-0.6924881415674572	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Petiole		3.0		--
9	CAMPHENE	Leaf Essent. Oil				Jim Duke's personal files.
0	CARBOHYDRATES	Fruit	111000.0	863000.0	0.42843384218109976	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CARVEOL	Petiole		0.0		--
1	CARVEOL	Essential Oil				Jim Duke's personal files.
19	CARVONE	Essential Oil				Jim Duke's personal files.
31	CARYOPHYLLENE	Essential Oil	11.0	28.0	-0.7680967243064245	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Leaf Essent. Oil				Jim Duke's personal files.
8	CARYOPHYLLENE-OXIDE	Leaf Essent. Oil	0.8	15600.0	1.322705019532784	Jim Duke's personal files.
0	CHLOROPHYLL-A	Leaf				--
0	CHLOROPHYLL-B	Leaf				--
0	CIS-LIMONENE-1,2-OXIDE	Essential Oil				Jim Duke's personal files.
53	CITRAL	Fruit Essent. Oil		6000.0		Jim Duke's personal files.
53	CITRAL	Essential Oil	250.0	300.0	-0.7878308981922465	--
53	CITRAL	Pericarp				--
23	CITRIC-ACID	Fruit		59500.0	0.3223249898875974	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
23	CITRIC-ACID	Fruit Juice				Jim Duke's personal files.
20	CITRONELLAL	Petiole		3.0		--
20	CITRONELLAL	Leaf Essent. Oil	25000.0	89000.0	-1.0	Jim Duke's personal files.
20	CITRONELLAL	Pericarp Essent. Oil				Jim Duke's personal files.
20	CITRONELLAL	Pericarp				Jim Duke's personal files.
20	CITRONELLAL	Essential Oil				Jim Duke's personal files.
15	CITRONELLOL	Leaf Essent. Oil	3700.0	14000.0	-0.9724708703903254	Jim Duke's personal files.
15	CITRONELLOL	Pericarp Essent. Oil				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	CITRONELLOL	Pericarp				Jim Duke's personal files.
2	CITRONELLYL-ACETATE	Plant	4.0	20.0	-0.6827759635190207	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	CITRONELLYL-ACETATE	Petiole		1.0		--
0	CITRONETIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	CITRONIN	Plant				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CITROPTEN	Fruit Essent. Oil				Jim Duke's personal files.
0	CITROPTEN	Fruit				--
0	CITRUSIN-A	Pericarp				Jim Duke's personal files.
0	CITRUSIN-B	Pericarp				Jim Duke's personal files.
0	CITRUSIN-C	Pericarp				Jim Duke's personal files.
0	CITRUSIN-F	Pericarp				Jim Duke's personal files.
0	CNIDICIN	Fruit Essent. Oil				Jim Duke's personal files.
2	CONIFERIN	Pericarp				Jim Duke's personal files.
0	COUMARINS	Pt				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	D-GALACTURONIC-ACID	Fruit				--
19	D-LIMONENE	Leaf Essent. Oil	99000.0	667000.0	1.0	Jim Duke's personal files.
19	D-LIMONENE	Pericarp				Jim Duke's personal files.
19	D-LIMONENE	Essential Oil				Jim Duke's personal files.
19	D-LIMONENE	Pericarp Essent. Oil		694400.0		Jim Duke's personal files.
0	DEACETYL-NOMILIN	Seed				Jim Duke's personal files.
0	DEACETYL-NOMILIN-17-O-BETA-D-GLUCOPYRANOSIDE	Seed				--
1	DECAN-1-AL	Pericarp				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DECANAL	Essential Oil	6.0	20.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DECANAL	Petiole		1.5		--
3	DECANOIC-ACID	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	DECANOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DECYL-ACETATE	Plant		5.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DECYL-ALDEHYDE	Leaf				--
8	DELTA-3-CARENE	Petiole		1.0		--
0	DELTA-CARENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DICONIFERYL-ALCOHOL-4-BETA-D-GLUCOSIDE	Pericarp				Jim Duke's personal files.
13	DIOSMETIN	Plant				--
34	DIOSMIN	Fruit		5.0		--
34	DIOSMIN	Leaf				Jim Duke's personal files.
3	DIPHENYLAMINE	Plant				Jim Duke's personal files.
2	DODECANAL	Petiole		0.0		--
2	DODECANAL	Essential Oil		10.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DODECANOIC-ACID	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EO	Pt	2000.0	6000.0	1.0	--
0	EO	Pericarp		2600.0	-1.1594356213080714	--
0	EPIJASMONIC-ACID-METHYL-ESTER	Pericarp				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ERIOCITRIN	Fruit		1.0		Jim Duke's personal files.
0	ERIOCITRIN	Leaf				Jim Duke's personal files.
0	ERIODICTYOSIDE	Fruit				--
0	ERIODICTYOSIDE	Pericarp				Jim Duke's personal files.
2	FARNESENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	FAT	Seed	300000.0	400000.0	0.7090517076840918	--
0	FAT	Fruit		28000.0	-0.42739034203512904	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FATTY-ACIDS(C12-C24)	Silk Stigma Style				Jim Duke's personal files.
61	FERULIC-ACID	Fruit	14.0	40.0	-0.3813850356982369	--
15	FIBER	Fruit	17000.0	47000.0	-0.8934118438004772	--
0	GAMMA-SITOSTEROL	Plant				--
11	GAMMA-TERPINENE	Petiole		535.0		--
11	GAMMA-TERPINENE	Essential Oil	290.0	1400.0	-0.8030057127991168	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Leaf Essent. Oil	3000.0	44000.0	-0.14954213307604686	Jim Duke's personal files.
11	GAMMA-TERPINENE	Pericarp Essent. Oil	12000.0	83200.0		Jim Duke's personal files.
11	GAMMA-TERPINENE	Pericarp				Jim Duke's personal files.
13	GERANIAL	Petiole		60.0		--
13	GERANIAL	Essential Oil	42.0	236.0	1.0	--
13	GERANIAL	Pericarp Essent. Oil		17600.0		Jim Duke's personal files.
13	GERANIAL	Leaf Essent. Oil	3000.0	233000.0	1.0	Jim Duke's personal files.
35	GERANIOL	Petiole		80.0		--
35	GERANIOL	Pericarp				Jim Duke's personal files.
35	GERANIOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
35	GERANIOL	Leaf Essent. Oil	13000.0	60200.0	-0.6318280565838599	Jim Duke's personal files.
0	GERANIOL-ACETATE	Pericarp Essent. Oil				Jim Duke's personal files.
0	GERANIOL-ACETATE	Leaf Essent. Oil		8100.0	1.0	Jim Duke's personal files.
5	GERANYL-ACETATE	Petiole		12.0		--
5	GERANYL-ACETATE	Essential Oil	12.0	310.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	GERANYL-BUTYRATE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	GERANYL-FORMATE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GERANYL-OXY-PYRANOCOUMARIN	Root				Jim Duke's personal files.
8	GLUTAMIC-ACID	Plant				--
0	HEPTADECANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HEPTANAL	Essential Oil		4.0	-1.0	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	HERACLENIN	Fruit Essent. Oil				Jim Duke's personal files.
0	HERACLENOL	Fruit Essent. Oil				Jim Duke's personal files.
31	HESPERIDIN	Pericarp	20500.0	68800.0	0.9831655478788394	Jim Duke's personal files.
31	HESPERIDIN	Fruit				Jim Duke's personal files.
31	HESPERIDIN	Leaf				Jim Duke's personal files.
0	HESPERIDOSIDE	Fruit				--
0	HEXADECANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	HEXANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	HEXANOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ICHANGIN-17-O-BETA-D-GLUCOSIDE	Seed				Jim Duke's personal files.
0	ICHANGIN-4-BETA-D-GLUCOSIDE	Pericarp		19.6		Jim Duke's personal files.
25	IMPERATORIN	Fruit				--
25	IMPERATORIN	Fruit Essent. Oil				Jim Duke's personal files.
6	IRON	Fruit	23.0	72.0	-0.24188358819633976	--
0	ISOERIOCITRIN	Leaf				Jim Duke's personal files.
8	ISOIMPERATORIN	Fruit Essent. Oil				Jim Duke's personal files.
8	ISOIMPERATORIN	Essential Oil				--
0	ISOLIMOCITROL	Pericarp				Jim Duke's personal files.
0	ISOLIMOCITROL-3,7,4'-TRIMETHYL-ETHER	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ISOLIMOCITROL-3-BETA-D-GLUCOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
15	ISOPIMPINELLIN	Plant				--
3	ISOPULEGOL	Leaf Essent. Oil		40000.0	-1.0	Jim Duke's personal files.
0	ISOPULEGOLE	Leaf Essent. Oil	18000.0	114000.0	1.0	Jim Duke's personal files.
11	ISORHAMNETIN	Flower				--
0	ISORHAMNETIN-3-ARABINOGLUCOSIDE	Plant				--
0	ISORHOIFOLIN	Leaf				Jim Duke's personal files.
4	ISOVITEXIN	Pericarp				Jim Duke's personal files.
0	JASMONIC-ACID-METHYL-ESTER	Pericarp				Jim Duke's personal files.
0	KILOCALORIES	Fruit		2640.0	-1.5500422105520721	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LAURALDEHYDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LIMETTIN	Shoot				Jim Duke's personal files.
0	LIMETTIN	Essential Oil		295.0		--
0	LIMOCITRIN	Pericarp				Jim Duke's personal files.
0	LIMOCITRIN-3-(6-O-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSE)	Pericarp				Jim Duke's personal files.
0	LIMOCITRIN-3-(6-O-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE)	Pericarp				--
0	LIMOCITRIN-3-O-(3	Plant				--
0	LIMOCITRIN-3-O-(3-HYDROXY-3-METHYL-GLUTARATE-(1,2)-BETA-GLUCOSIDE	Pericarp				Jim Duke's personal files.
0	LIMOCITRIN-3-O-(5-ALPHA-GLUCOSYL-3	Plant				--
0	LIMOCITRIN-3-O-(5-ALPHA-GLUCOSYL-3-HYDROXY-3-METHYL-GLUTARATE-(1,2)-BETA-GLUCOSIDE)	Pericarp				Jim Duke's personal files.
0	LIMOCITROL	Pericarp				Jim Duke's personal files.
0	LIMOCITROL-3-O-(5-ALPHA-GLUCOSYL-3	Plant				--
0	LIMOCITROL-3-O-(5-ALPHA-GLUCOSYL-3-HYDROXY-3-METHYL-GLUTARATE-(1,2)-BETA-GLUCOSIDE)	Pericarp				Jim Duke's personal files.
60	LIMONENE	Petiole		3090.0		--
60	LIMONENE	Fruit Essent. Oil	512000.0	980000.0	1.267182025507371	Jim Duke's personal files.
60	LIMONENE	Essential Oil	2796.0	8000.0	-0.6910184174131357	--
60	LIMONENE	Leaf Essent. Oil	284000.0	754000.0	2.654734671831716	--
60	LIMONENE	Pericarp Essent. Oil	512000.0	774000.0		--
5	LIMONIN	Seed				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	LIMONIN	Fruit				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	LIMONIN-17-O-BETA-D-GLUCOPYRANOSIDE	Seed				Jim Duke's personal files.
0	LIMONIN-17-O-BETA-D-GLUCOSIDE	Seed				Jim Duke's personal files.
0	LIMONOATE-A-RING-LACTONE	Fruit				--
0	LIMONOATE-A-RING-LACTONE	Leaf				Jim Duke's personal files.
0	LINALOL	Essential Oil	8.0	30.0	-1.0	--
0	LINALOL	Leaf Essent. Oil	17000.0	81000.0	-1.0	--
0	LINALOL	Pericarp Essent. Oil	7000.0	110000.0		--
53	LINALOOL	Pericarp Essent. Oil	7000.0	111000.0		Jim Duke's personal files.
53	LINALOOL	Petiole		12.0		--
53	LINALOOL	Essential Oil	8.0	30.0	-0.583010006932893	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	LINALOOL	Pericarp				Jim Duke's personal files.
53	LINALOOL	Leaf Essent. Oil	18000.0	81000.0	-0.1829511978385886	Jim Duke's personal files.
0	LINALOOL-ACETATE	Leaf Essent. Oil		22000.0	0.409907762680937	Jim Duke's personal files.
7	LINALYL-ACETATE	Essential Oil				--
0	LINONIN	Leaf				Jim Duke's personal files.
15	LUTEIN	Fruit	0.12	1.2	-0.731124155967682	--
78	LUTEOLIN	Flower				--
0	LUTEOLIN-7-O-BETA-D-RUTINOSIDE	Leaf				Jim Duke's personal files.
0	LUTEOLIN-7-O-BETA-RUTINOSIDE	Leaf				--
0	MENTH-1-EN-9-OL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	METHYL-HEPTANONE	Leaf Essent. Oil				Jim Duke's personal files.
0	METHYL-HEPTANONE	Essential Oil				--
0	METHYL-HEPTENONE	Leaf Essent. Oil		6000.0		--
3	MUCILAGE	Fruit				--
22	MYRCENE	Pericarp Essent. Oil				Jim Duke's personal files.
22	MYRCENE	Pericarp				Jim Duke's personal files.
22	MYRCENE	Essential Oil	65.0	1270.0	-0.42741750795730477	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
22	MYRCENE	Leaf Essent. Oil	5500.0	10000.0	-0.32786228882013646	Jim Duke's personal files.
22	MYRCENE	Petiole		75.0		--
1	N-METHYL-TYRAMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
56	NARINGENIN	Pericarp				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
12	NARINGIN	Leaf				Jim Duke's personal files.
12	NARINGIN	Pericarp				Jim Duke's personal files.
0	NARINGIN-6"-MALONATE	Leaf				Jim Duke's personal files.
0	NARINGIN-GLUCOSIDE	Leaf				Jim Duke's personal files.
0	NARINGOSIDE	Fruit				--
1	NARIRUTIN	Leaf				Jim Duke's personal files.
1	NARIRUTIN	Pericarp		3600.0	1.0	Jim Duke's personal files.
0	NARIRUTIN-GLUCOSIDE	Leaf				Jim Duke's personal files.
0	NEOBYAKANGELICOL	Fruit Essent. Oil				Jim Duke's personal files.
6	NEOHESPERIDIN	Pericarp				Jim Duke's personal files.
0	NEOHESPERIDOSIDE	Pericarp				--
2	NEOXANTHIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	NERAL	Essential Oil	27.0	130.0	1.0	--
4	NERAL	Pericarp Essent. Oil				Jim Duke's personal files.
4	NERAL	Leaf Essent. Oil	4000.0	172700.0	1.0	Jim Duke's personal files.
4	NERAL	Petiole		60.0		--
10	NEROL	Pericarp Essent. Oil				Jim Duke's personal files.
10	NEROL	Leaf Essent. Oil	8000.0	76000.0	-1.0	Jim Duke's personal files.
10	NEROL	Pericarp				Jim Duke's personal files.
10	NEROL	Petiole		41.0		--
0	NEROL-ACETATE	Essential Oil	16.0	310.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NEROL-ACETATE	Pericarp Essent. Oil				Jim Duke's personal files.
0	NEROL-ACETATE	Leaf Essent. Oil		9000.0	1.0	Jim Duke's personal files.
5	NERYL-ACETATE	Petiole		13.0		--
0	NERYL-ACETONE	Leaf Essent. Oil		28000.0		Jim Duke's personal files.
2	NERYL-FORMATE	Essential Oil		20.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Fruit	10.0	19.0	-0.5574314089774005	--
8	NOBILETIN	Pericarp				Jim Duke's personal files.
2	NOMILIN	Seed				Jim Duke's personal files.
2	NOMILIN	Sprout Seedling				Jim Duke's personal files.
0	NOMILIN-17-O-BETA-D-GLUCOPYRANOSIDE	Seed				Jim Duke's personal files.
0	NOMILIN-17-O-BETA-D-GLUCOSIDE	Seed				Jim Duke's personal files.
0	NOMILINIC-ACID-17-O-BETA-D-GLUCOSIDE	Seed				Jim Duke's personal files.
0	NOMILINIC-ACID-4-BETA-D-GLUCOSIDE	Pericarp		9.8		Jim Duke's personal files.
0	NONAN-1-AL	Pericarp				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NONAN-1-AL	Essential Oil	3.0	7.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NONAN-1-OL	Leaf Essent. Oil		14000.0		Jim Duke's personal files.
0	NONANAL	Petiole		1.5		--
0	NONANAL	Essential Oil	9.0	30.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NONANOL	Petiole		0.0		--
0	NONYL-ACETATE	Plant				--
0	NONYL-ALDEHYDE	Essential Oil				--
3	NOOTKATONE	Petiole		0.0		--
3	NOOTKATONE	Plant				--
3	NOOTKATONE	Tissue Culture				Jim Duke's personal files.
3	NOOTKATONE	Essential Oil		1.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	O-PHENYLPHENOL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	OBACUNONE	Seed				Jim Duke's personal files.
0	OBACUNONE-17-O-BETA-D-GLUCOPYRANOSIDE	Seed				Jim Duke's personal files.
0	OBACUNONE-17-O-BETA-D-GLUCOSIDE	Seed				Jim Duke's personal files.
2	OCIMENE	Leaf Essent. Oil				Jim Duke's personal files.
0	OCTAN-1-AL	Pericarp				Jim Duke's personal files.
0	OCTANAL	Petiole		2.0		--
5	OCTANOIC-ACID	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	OCTANOL	Essential Oil	10.0	15.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OCTANOL	Petiole		2.0		--
0	OCTOPAMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTYL-ACETATE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	OCTYL-ALDEHYDE	Essential Oil				--
15	OSTHOL	Root				Jim Duke's personal files.
4	OSTHOLE	Root				--
6	OXYPEUCEDANIN	Fruit Essent. Oil				Jim Duke's personal files.
6	OXYPEUCEDANIN	Essential Oil		207.0		--
2	OXYPEUCEDANIN-HYDRATE	Essential Oil		64.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-ALPHA-DIMETHYLSTYRENE	Plant				--
25	P-COUMARIC-ACID	Fruit	6.0	102.0	-0.20876433550573723	--
16	P-CYMENE	Pericarp Essent. Oil				Jim Duke's personal files.
16	P-CYMENE	Leaf Essent. Oil	4100.0	20000.0	-0.4814765484301064	Jim Duke's personal files.
16	P-CYMENE	Essential Oil	12.0	31.0	-0.6331366260891432	--
16	P-CYMENE	Petiole		7.5		--
0	P-CYMOL	Essential Oil				--
0	P-MENTHA-1,8-DIEN-9-YL-ACETATE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-MENTHA-2,8-DIEN-1-OL	Essential Oil				--
1	PABULENOL	Fruit Essent. Oil				Jim Duke's personal files.
0	PE	Plant				--
24	PECTIN	Pericarp				--
24	PECTIN	Exocarp				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTADECANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PENTADECANE	Plant				--
11	PERILLALDEHYDE	Fruit				--
2	PHELLOPTERIN	Fruit Essent. Oil				Jim Duke's personal files.
2	PHELLOPTERIN	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	PHLORIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
4	PHOSPHORUS	Fruit	100.0	1979.0	-0.3757244939645237	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	PHYTOSTEROLS	Fruit		120.0	-1.0633155337611349	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	PONCIRIN	Plant				--
14	POTASSIUM	Fruit		14700.0	-0.28457604716385243	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROTEIN	Fruit	10000.0	111000.0	0.020127724197141796	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
176	QUERCETIN	Flower				--
0	QUERCETIN-3,5-DIGLUCOSIDE	Plant				--
2	RHOIFOLIN	Leaf				Jim Duke's personal files.
15	RIBOFLAVIN	Fruit	2.0	3.0	-0.4303249009534089	--
87	RUTIN	Leaf				Jim Duke's personal files.
87	RUTIN	Fruit	1.0	2.0	-0.6531383244068485	--
5	SABINENE	Petiole		95.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	SABINENE	Essential Oil	50.0	175.0	-0.5948547061177535	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	SABINENE	Pericarp Essent. Oil				Jim Duke's personal files.
5	SABINENE	Leaf Essent. Oil		10000.0	-0.4720621937310914	Jim Duke's personal files.
7	SALICYLATES	Fruit		0.0	-0.3367420403588193	--
22	SCOPARONE	Leaf				Jim Duke's personal files.
22	SCOPARONE	Bark		162.5		Jim Duke's personal files.
44	SCOPOLETIN	Leaf				Jim Duke's personal files.
44	SCOPOLETIN	Shoot				Jim Duke's personal files.
1	SELINENE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	SESELIN	Root				Jim Duke's personal files.
3	SESELIN	Leaf				Jim Duke's personal files.
9	SINAPIC-ACID	Fruit	14.0	18.0	0.6272500481871801	--
1	SODIUM	Fruit		470.0	-0.13938121430353298	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	STACHYDRINE	Plant				--
12	STIGMASTEROL	Fruit		10.0	-1.0338847831220805	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	SUBEROSIN	Root				Jim Duke's personal files.
5	SYNEPHRINE	Pericarp				Jim Duke's personal files.
5	SYNEPHRINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	SYRINGIN	Pericarp				Jim Duke's personal files.
15	TANGERETIN	Pericarp				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	TERPINEN-4-OL	Essential Oil	1.0	40.0	-0.6167580897613645	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	TERPINEN-4-OL	Leaf Essent. Oil	29600.0	31000.0	-0.2861319108695746	Jim Duke's personal files.
23	TERPINEN-4-OL	Pericarp Essent. Oil	1000.0	11000.0		Jim Duke's personal files.
23	TERPINEN-4-OL	Petiole		22.0		--
9	TERPINOLENE	Essential Oil	14.0	120.0	-0.39476259711357375	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	TERPINOLENE	Pericarp Essent. Oil				Jim Duke's personal files.
9	TERPINOLENE	Leaf Essent. Oil				Jim Duke's personal files.
9	TERPINOLENE	Petiole		26.0		--
0	TETRADECANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TETRADECANE	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TETRAHYDROGERANIOL	Essential Oil		10.0		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	THIAMIN	Fruit	4.0	6.0	0.08541669233982067	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
71	THYMOL	Leaf Essent. Oil		11000.0	1.0	Jim Duke's personal files.
71	THYMOL	Pericarp Essent. Oil	53000.0	111000.0		Jim Duke's personal files.
0	TRANS-BETA-OCIMENE	Leaf Essent. Oil		7500.0	0.027166291246208063	Jim Duke's personal files.
0	TRANS-LIMONENE-1,2-OXIDE	Essential Oil				Jim Duke's personal files.
0	TRIDECANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	TYRAMINE	Leaf				--
22	UMBELLIFERONE	Shoot				Jim Duke's personal files.
0	UMBELLIPRENIN	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	UNDECANAL	Essential Oil				Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	VALENCENE	Tissue Culture				Jim Duke's personal files.
12	VICENIN-2	Pericarp				Jim Duke's personal files.
2	VIOLAXANTHIN	Leaf				--
0	WATER	Fruit	850000.0	894000.0	0.5366602504029064	--
1	XANTHOXYLETIN	Root				Jim Duke's personal files.
1	XANTHYLETIN	Root				Jim Duke's personal files.
0	XYLOSYL-VITEXIN	Flower				--
5	ZEAXANTHIN	Leaf				--