

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

**Chemicals Found in Citrus reticulata**

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(E)-BETA-OCIMENE	Fruit	4	5	-0.6151691947960529	
0	(Z)-BETA-OCIMENE	Fruit	--	0.1	-0.7485469887599769	
67	1,8-CINEOLE	Fruit	--	76	-0.41910464878819126	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	3',5-DIHYDROXY-6,7,8-TRIMETHOXY-FLAVONE	Pericarp	--	2.1		
0	3'-DIMETHYL-NOBILETIN	Pericarp	--	21.4		
0	3'-HYDROXY-4',5,6,7,8-PENTAMETHOXY-FLAVONE	Leaf	--	--		
0	3,5,5-TRIMETHYLBENZYL-ALCOHOL	Fruit	3	3		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	4',5,7,8-TETRAMETHOXY-FLAVONE	Pericarp	161	185.7		
0	4',5,7-TRI-O-METHYL-APIGENIN	Pericarp	--	5.7		
0	4',5,7-TRIHYDROXY-3',6,8-TRIMETHOXY-FLAVONE	Pericarp	--	--		
0	4'-5-7-TRIMETHOXYFLAVONE	Pericarp	--	--		
1	4'-HYDROXY-5,6,7,8-TETRAMETHOXY-FLAVONE	Pericarp	--	1.4		
0	4,5-DIHYDROXY-7,8-DIMETHOXY-FLAVONE	Pericarp	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5,5'-OXY-DIMETHYLENE-BIS-(2-FURALDEHYDE)	Pericarp	--	--		
0	5-DEMETHYL-NOBILETIN	Pericarp	--	257.1		
0	5-HYDROXY-3',4',6,7-TETRAMETHOXY-FLAVONE	Pericarp	--	35.7		
0	5-HYDROXY-3,5',7,8-TETRAMETHOXY-3',4'-METHYLENEDIOXY-FLAVONE	Fruit	--	--		
0	5-HYDROXY-4',7,8-TRIMETHOXY-FLAVONE	Pericarp	--	--		
0	5-O-DEMETHYL-NOBILETIN	Pericarp	--	4		
0	7-DEMETHYL-TANGERETIN	Pericarp	--	5		
0	7-HYDROXY-3',4',5,6,8-PENTAMETHOXY-FLAVONE	Pericarp	--	10		
0	7-HYDROXY-3',4',5,6-TETRAMETHOXY-FLAVONE	Leaf	--	--		
0	8-HYDROXY-4',5,7-TRIMETHOXY-FLAVONE	Pericarp	--	2.8		
2	8-METHOXY-CIRSILINEOL	Pericarp	--	12.1		
6	ACETALDEHYDE	Fruit	--	2	-0.7067882885418681	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	ALANINE	Fruit	70	2740	-0.3802547043758256	
7	ALPHA-CAROTENE	Fruit	0.2	2	-0.25314632170375756	
0	ALPHA-COPAENE	Fruit	1	2	-0.6867645101915246	
0	ALPHA-CUBEBENE	Fruit	0.7	1	-0.6220320233548484	
2	ALPHA-HUMULENE	Fruit	0.7	1	-0.598173569962584	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	ALPHA-LINOLENIC-ACID	Fruit	100	806	-0.7874611428502755	USDA's Ag Handbook 8 and sequelae)
11	ALPHA-PHELLANDRENE	Fruit	5	6	-0.5736201696885931	
28	ALPHA-PINENE	Fruit	50	55	-0.7044240563995721	
3	ALPHA-SELINENE	Fruit	2	2	-1.0145652291233325	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-SINENSAL	Fruit	2	3	1	
0	ALPHA-SINESAL	Fruit	1	32	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Fruit	0.7	1	-0.4549438642997257	
23	ALPHA-TERPINEOL	Fruit	1	2	-0.40686466721857434	
0	ALPHA-TERPINYL-ACETATE	Fruit	1	5	-0.7106101836720669	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-THUJENE	Fruit	1	2	-0.5946551522156464	
32	ALPHA-TOCOPHEROL	Fruit	3	31	-0.6444565233542005	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-YLANGENE	Fruit	1	1	-0.7179018133512801	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	ALUMINUM	Fruit	1	15	-0.21915758507532193	ACTA AGRIC SCAND SUPPL 22: 1980
14	ARGININE	Fruit	440	3546	-0.20372390514917343	USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Fruit	0.04	0.3	-0.15246528271419005	ACTA AGRIC SCAND SUPPL 22: 1980
112	ASCORBIC-ACID	Fruit	280	3684	-0.05542896425867096	
0	ASH	Fruit	3900	31525	-0.6509769293457256	ACTA AGRIC SCAND SUPPL 22: 1980
2	ASPARAGINE	Fruit	180	850	-0.3407885457306878	
3	ASPARTIC-ACID	Fruit	240	6206	-0.5192722442905813	
1	BEHENIC-ACID	Seed Oil	--	--		
9	BENZYL-ALCOHOL	Fruit	1	2	1.4141599980735915	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-APOCAROTENOL	Fruit	--	--		
53	BETA-CAROTENE	Fruit	1	44	-0.0657494218885312	
0	BETA-CARYOPHYLLENE	Fruit	1	2	-0.5058677869700708	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-CITRAURIN	Fruit	--	--		
5	BETA-ELEMENE	Fruit	0.7	1	-0.565275335737646	
13	BETA-PINENE	Fruit	20	23	-0.2971064953564389	
5	BETA-SESQUIPELLANDRENE	Fruit	20	20		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
47	BETA-SITOSTEROL	Pericarp	--	--		
47	BETA-SITOSTEROL	Root	--	--		
3	BETA-TERPINEOL	Fruit	40	40	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	BORON	Fruit	1	14	-0.5220324995843817	
0	BRAYLIN	Root	--	--		
0	BROMINE	Fruit	1	1	-0.42563543443835	ACTA AGRIC SCAND SUPPL 22: 1980
3	CADMIUM	Fruit	--	0.02	-0.5848464463574334	ACTA AGRIC SCAND SUPPL 22: 1980
0	CALAMIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
28	CALCIUM	Fruit	140	3077	-0.17982842232359114	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CAMPESTEROL	Pericarp	--	--		
2	CAMPESTEROL	Root	--	--		
9	CAMPHENE	Fruit	1	40	-0.3352175138149692	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CARBOHYDRATES	Fruit	102000	901914	0.6365269983057671	
19	CARVONE	Fruit	--	3	-0.5003949723462134	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Fruit	2	9	-0.395772877445224	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	CHLORINE	Fruit	24	24	-0.6858111593916871	
1	CHOLESTEROL	Pericarp	--	--		
1	CHOLESTEROL	Root	--	--		
24	CHROMIUM	Fruit	0.01	0.08	-0.4963965640383935	ACTA AGRIC SCAND SUPPL 22: 1980
9	CIRSIMARITIN	Pericarp	--	1.4		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	CIS-3-HEXENOL	Fruit	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-CARVEOL	Fruit	1	4		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-SABINENE-HYDRATE	Fruit	--	0.1	-0.7071067811865477	
23	CITRIC-ACID	Fruit	8600	12200	-0.4519563898290651	
20	CITRONELLAL	Fruit	4	5	-0.9952774234291415	
0	CITRONELLIC-ACID	Fruit	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
15	CITRONELLOL	Fruit	0.4	0.8	-0.5199467377830584	
2	CITRONELLYL-ACETATE	Fruit	0.7	1	1.0000000000000002	
2	COBALT	Fruit	--	0.005	-0.5345099214648011	ACTA AGRIC SCAND SUPPL 22: 1980
12	COPPER	Fruit	--	4.8	-0.6241106933300086	
0	CYCLOCALAMIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CYSTINE	Fruit	70	564	-0.48744653821722156	USDA's Ag Handbook 8 and sequelae)
0	DEACETYL-NOMILIN	Seed	--	--		
0	DEACETYL-NOMILIN-17-O-BETA-D-GLUCOSIDE	Seed	--	--		
0	DEACETYL-NOMILINIC-ACID-17-O-BETA-D-GLUCOSIDE	Seed	--	--		
0	DECANAL	Fruit	8	9	-0.816743214675704	
3	DECANOIC-ACID	Fruit	3	3	1.4142131746286055	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	DECANOL	Fruit	4	4	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DECYL-ACETATE	Fruit	1	5	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	DELTA-3-CARENE	Fruit	--	5	-0.6048308539868422	
9	DELTA-CADINENE	Fruit	20	20	-0.4645992072439037	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	DELTA-ELEMENE	Fruit	6	10		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DIMETHYL-ANTHRALINATE	Fruit	90	90		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
34	DIOSMIN	Leaf	--	--		
2	DODECANAL	Fruit	1	15	0.3730620025303552	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DODECANOIC-ACID	Fruit	1	1	1.00000000000000002	
1	DODECANOL	Fruit	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EO	Fruit	7500	10000	-0.625591783140096	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	ETHANOL	Fruit	--	183	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	EUPATILIN	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
8	EUPATORIN	Pericarp	--	3.5		
2	FARNESENE	Fruit	1	2	1.0000000000000002	
0	FAT	Fruit	1900	22000	-0.4732178594145328	
61	FERULIC-ACID	Pericarp	--	--		
0	FERULOYL-PUTRESCINE	Fruit	--	--	-1	
15	FIBER	Fruit	1890	43000	-0.9311577665884301	
0	FLUORINE	Fruit	0.1	0.76	-0.5863462540268758	ACTA AGRIC SCAND SUPPL 22: 1980
15	FOLACIN	Fruit	--	2	-0.019192793995839758	USDA's Ag Handbook 8 and sequelae)
22	GAMMA-AMINOBUTYRIC-ACID	Fruit	180	180	-0.6918375369704655	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GAMMA-CADANINE	Fruit	2	2		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-CADINENE	Fruit	1	2	-0.9084313290424243	
0	GAMMA-ELEMENE	Fruit	15	20	-0.6770276034934981	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-SELINENE	Fruit	1	1	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Fruit	23	25	-0.6467237641924287	
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	201500	1.9087625075774095	
0	GARDENIN-B	Pericarp	--	--		
13	GERANIAL	Fruit	5	6	-1.0012482240392633	
35	GERANIOL	Fruit	--	0.1	-0.611319076444153	
35	GERANIOL	Essential Oil	--	--		
5	GERANYL-ACETATE	Fruit	0.7	1	-0.9431637487853173	
0	GERANYL-OXY-PYRANOCOUMARIN	Root	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GIBBERELLIC-ACID	Fruit	--	--		
8	GLUTAMIC-ACID	Fruit	160	5158	-0.6287716109665302	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
12	GLYCINE	Fruit	20	5158	0.6009206138414905	
0	HEPTANOIC-ACID	Fruit	1	1	0.9999999999999999	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	HEPTANOL	Fruit	1	2		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	HESPERIDIN	Leaf	--	--		
31	HESPERIDIN	Seed	--	--		
31	HESPERIDIN	Fruit	--	--		
31	HESPERIDIN	Pericarp	--	47800	-1.3719458405761777	
31	HESPERIDIN	Plant	--	--		
31	HESPERIDIN	Fruit Juice	--	--		
7	HISTIDINE	Fruit	440	3546	1.2854264273564884	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	HUMULENE	Fruit	5	5	-0.7947139016786847	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ICHANGIN-17-O-BETA-D-GLUCOSIDE	Seed	--	--		
6	IRON	Fruit	1	79	-0.2141164748349134	
3	ISOLEUCINE	Fruit	170	1370	-0.681123893553361	USDA's Ag Handbook 8 and sequelae)
3	ISOPULEGOL	Fruit	1	5		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ISOSINENSETIN	Pericarp	--	135.7		
0	KAEMPFERIDE-TRIMETHYL-ETHER	Fruit	--	--		
7	LAURIC-ACID	Seed Oil	--	--		
2	LEUCINE	Fruit	50	1290	-0.8102055642534455	
60	LIMONENE	Fruit	6500	9400	0.5979144802317528	
60	LIMONENE	Essential Oil	--	--		
5	LIMONIN	Pericarp	--	73	1	
5	LIMONIN	Seed	--	--		
0	LIMONIN-17-O-BETA-D-GLUCOSIDE	Seed	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINALOL	Fruit	3	610	-0.5349466145888611	
53	LINALOOL	Fruit	3	610	-0.41515861877017357	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	LINALOOL	Leaf Essent. Oil	--	95500	-0.09113638161798661	
27	LINOLEIC-ACID	Fruit	270	2176	-0.32469981100559747	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Seed Oil	--	--		
0	LONGIFOLENE	Fruit	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
15	LUTEIN	Fruit	0.2	2	-0.6619982620916077	
4	LYSINE	Fruit	40	2579	-0.3976767860750818	
65	MAGNESIUM	Fruit	111	1416	-0.33050162584685566	USDA's Ag Handbook 8 and sequelae)
15	MALIC-ACID	Fruit	1800	2100	-0.8150680933283987	
1	MALONIC-ACID	Fruit	--	--		
14	MANGANESE	Fruit	--	4.6	-0.3732056900241152	
1	MERCURY	Fruit	--	0.001	-0.7865389313824043	ACTA AGRIC SCAND SUPPL 22: 1980

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	METHIONINE	Fruit	130	1048	0.11018842391001216	USDA's Ag Handbook 8 and sequelae)
0	METHYL-HEPTENONE	Fruit	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	METHYL-N-METHYL-ANTHRALINATE	Fruit	1	33		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	METHYL-N-METHYL-ANTHRANILATE	Fruit	--	0.1		
0	METHYL-THYMOL	Fruit	10	10		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	MOLYBDENUM	Fruit	--	0.1	-0.46519775248328327	ACTA AGRIC SCAND SUPPL 22: 1980
22	MYRCENE	Fruit	160	180	-0.3564743999203521	
6	MYRISTIC-ACID	Seed Oil	--	--		
6	MYRISTIC-ACID	Fruit	10	80	-0.2653696344954155	USDA's Ag Handbook 8 and sequelae)
1	N-METHYL-TYRAMINE	Fruit	--	58	1	
1	N-METHYL-TYRAMINE	Pericarp	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	NARINGIN	Pericarp	--	--		
12	NARINGIN	Fruit Juice	--	--		
1	NARIRUTIN	Pericarp	--	2100	-1	
1	NARIRUTIN	Fruit Juice	--	--		
6	NEOHESPERIDIN	Pericarp	--	--		
6	NEOHESPERIDIN	Fruit Juice	--	--		
4	NERAL	Fruit	3	4	-0.8844537428871607	
10	NEROL	Fruit	0.4	0.8	-0.5635185349637161	
5	NERYL-ACETATE	Fruit	1	2	-0.7162496373600711	
39	NIACIN	Fruit	1	35	-0.3435391760304161	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	NICKEL	Fruit	0.01	0.3	-0.6882250201691348	ACTA AGRIC SCAND SUPPL 22: 1980
0	NITROGEN	Fruit	1600	13075	-0.10849236253135133	ACTA AGRIC SCAND SUPPL 22: 1980
0	NOBELITIN	Fruit	--	--		
8	NOBILETIN	Pericarp	1441	3571.4		
2	NOMILIN	Seed	--	--		
0	NOMILIN-17-O-BETA-D-GLUCOSIDE	Seed	--	--		



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NOMILINIC-ACID-17-O-BETA-D-GLUCOSIDE	Seed	--	--		
0	NONANAL	Fruit	0.7	1	-0.9850654184384069	
2	NONANOIC-ACID	Fruit	1	1	-0.6724074507021538	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NONANOL	Fruit	2	10		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	NOOTKATONE	Fruit	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	OBACUNONE	Seed	--	--		
0	OBACUNONE-17-O-BETA-D-GLUCOSIDE	Seed	--	--		
2	OCIMENE	Fruit	8	8		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	OCTANAL	Fruit	7	8	-0.7970811413304556	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	OCTANOIC-ACID	Fruit	4	4	-0.3728250649100773	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	OCTANOL	Fruit	--	0.1	-0.7071067811865478	
0	OCTOPAMINE	Fruit	1	2	1	
0	OCTYL-ACETATE	Fruit	2	4	-0.7079028233983095	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
18	OLEIC-ACID	Seed Oil	--	--		
18	OLEIC-ACID	Fruit	300	2418	-0.4621088253743955	USDA's Ag Handbook 8 and sequelae)
15	OSTHOL	Root	--	--		
9	OXALIC-ACID	Fruit	--	--		
16	P-CYMENE	Fruit	--	0.1	-0.5797537532122179	
16	P-CYMENE	Leaf Essent. Oil	--	162900	1.64248251066809	
0	P-MENTHA-1-EN-9-YL-ACETATE	Fruit	--	--		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
13	PALMITIC-ACID	Fruit	200	1612	-0.3404401792460306	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Seed Oil	--	--		
2	PALMITOLEIC-ACID	Fruit	40	320	-0.28694433994508195	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Seed Oil	--	--		
11	PANTOTHENIC-ACID	Fruit	2	16	-0.13423488366094238	USDA's Ag Handbook 8 and sequelae)
11	PERILLALDEHYDE	Fruit	--	10	-0.6812436875156582	
0	PERILLYL-ACETATE	Fruit	1	10		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	PHENYLALANINE	Fruit	50	1693	-0.5662627709383539	
4	PHOSPHORUS	Fruit	90	1385	-0.5561459282696419	
0	PONKANETIN	Pericarp	--	--		
14	POTASSIUM	Fruit	1200	13127	-0.4237450594829465	
0	PROLINE	Fruit	310	2499	-0.4140853937927713	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Fruit	6130	80228	-0.3923843167459661	
1	QUINIC-ACID	Fruit	--	--		
0	RETICULAXANTHIN	Fruit	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	RETROCALAMIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
2	RETUSIN	Fruit	--	--		
15	RIBOFLAVIN	Fruit	--	4	-0.21615825716438572	
0	RUBIDIUM	Fruit	0.25	2.4	-1.2520743067131963	ACTA AGRIC SCAND SUPPL 22: 1980
1	RUBIXANTHIN	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	SABINENE	Fruit	32	35	-0.5246096791708357	
0	SABINENE-HYDRATE	Fruit	1	20		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	SALICYLATES	Fruit	5	50	-0.19336883267960767	
0	SALVIGENIN	Pericarp	--	10		
22	SCOPARONE	Pericarp	--	4		
60	SELENIUM	Fruit	--	--	-0.38618723699673646	ACTA AGRIC SCAND SUPPL 22: 1980

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SERINE	Fruit	120	1773	-0.6602067645050584	
3	SESELIN	Root	--	--		
4	SILICON	Fruit	3	23	-0.5337165506418682	ACTA AGRIC SCAND SUPPL 22: 1980
2	SINENSETIN	Pericarp	--	35.7		
1	SODIUM	Fruit	8	154	-0.16934713941094268	
8	STEARIC-ACID	Seed Oil	--	--		
8	STEARIC-ACID	Fruit	10	80	-0.27391600706826585	USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Pericarp	--	--		
12	STIGMASTEROL	Root	--	--		
0	SUBEROSIN	Root	--	--		
0	SUGARS	Fruit	69400	113600	-0.4152860528874366	USDA's Ag Handbook 8 and sequelae)
14	SULFUR	Fruit	130	1000	-0.28853428975640755	ACTA AGRIC SCAND SUPPL 22: 1980
0	SYNEPHERINE	Fruit	50	280	1	
5	SYNEPHRINE	Pericarp	--	--		
5	SYNEPHRINE	Fruit	--	--		
0	TANGERAXANTHIN	Fruit	--	--		
15	TANGERETIN	Pericarp	203	1214.2		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TANGERITIN	Fruit	--	--		
0	TANGERITIN	Pericarp	--	--		
23	TERPINEN-4-OL	Fruit	--	0.1	-0.358333842321623	
23	TERPINEN-4-OL	Leaf Essent. Oil	--	71300	0.05582026899192498	
0	TERPINEOLENE	Fruit	4	110		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	TERPINOLENE	Fruit	2	3	-0.7430510373433167	
0	TETRADECANAL	Fruit	5	5	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	THIAMIN	Fruit	1	8	0.3414272755878574	
4	THREONINE	Fruit	100	806	-0.9193855017922554	USDA's Ag Handbook 8 and sequelae)
71	THYMOL	Fruit	--	0.1	-0.7071067811865474	
0	THYMYL-METHYL-ETHER	Fruit	10	10	1	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
1	TRANS-CARVEOL	Fruit	--	4	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-SABINENE-HYDRATE	Fruit	--	0.1	-0.5231287251565837	
29	TRYPTOPHAN	Fruit	60	484	-0.5142886582699204	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	TYRAMINE	Fruit	1	1	0.7071067811865478	
8	TYROSINE	Fruit	110	887	-0.634707050013197	USDA's Ag Handbook 8 and sequelae)
2	UNDECANAL	Fruit	--	0.1	-0.8307063685526169	
0	UNDECANOIC-ACID	Fruit	1	1	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	UNDECANOL	Fruit	1	1		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	VALENCENE	Fruit	6	7	1	
3	VALINE	Fruit	20	2176	-0.4698079693781215	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VIT-B-6	Fruit	1	5	-0.538913394725687	USDA's Ag Handbook 8 and sequelae)
0	WATER	Fruit	879720	886000	0.5018755015736748	
1	XANTHOXYLETIN	Root	--	--		
1	XANTHYLETIN	Root	--	--		
5	ZEAXANTHIN	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
77	ZINC	Fruit	0.8	8	-0.6709616277275268	ACTA AGRIC SCAND SUPPL 22: 1980