

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in Citrus aurantiifolia

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,4-CINEOLE	Fruit	180	180	-0.9430816794645105	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
67	1,8-CINEOLE	Fruit	70	70	-0.41945193577446593	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	2,2-DIMETHYL-5(-1)-METHYL-1-PROPENYL)TETRA-HYDROFURAN	Plant	30	30		
0	2,6,6-TRIMETHYL-2-VINYL-TETRAHYDROPYRAN	Fruit	16	16		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	5-GERANOXY-7-METHOXYCOUMARIN	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
10	5-METHOXY-PSORALEN	Fruit	--	--		
1	6,7-DIMETHOXYCOUMARIN	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	8-GERAN-OXYPsorALEN	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ALPHA,ALPHA-P-TRIMETHYLBENZYL-ALCOHOL	Fruit	--	60		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	ALPHA-ALPHA-P-TRIMETHYL-BENZYL	Plant	--	--		
0	ALPHA-ALPHA-P-TRIMETHYL-BENZYL-ALCOHOL-ETHER	Fruit	60	20		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-BERGAMOTENE	Fruit	50	250	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-BISABOLENE	Fruit	250	400		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
15	ALPHA-LINOLENIC-ACID	Fruit	190	1615	-0.42109633411209685	USDA's Ag Handbook 8 and sequelae)
0	ALPHA-P-DIMETHYL-STYRENE	Fruit	50	50	1.2787240261820119	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Fruit	20	20	-0.5665622033948856	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	ALPHA-PINENE	Fruit	80	240	-0.6561241736048067	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	ALPHA-TERPINENE	Fruit	80	80	-0.0127221438562562	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	ALPHA-TERPINEOL	Fruit	30	590	0.0769717277948267	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	ALPHA-THUJENE	Fruit	40	40	-0.5594757607508909	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
112	ASCORBIC-ACID	Fruit	291	4444	-0.008174449784343766	
0	ASH	Fruit	2000	3800	-1.3689254367339239	
2	BERGAMOTTIN	Fruit	--	--		
26	BERGAPTEN	Fruit	--	--		
6	BETA-BISABOLENE	Fruit	90	90	-0.8555004504472944	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	BETA-CAROTENE	Fruit	--	2	-0.14693466516508752	
3	BETA-PHELLANDRENE	Fruit	90	90	-0.45703003116030555	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	BETA-PINENE	Fruit	90	1190	-0.2597183887550868	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-TERPINEOL	Fruit	70	70	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
35	BORNEOL	Fruit	60	60	-0.7063054263490658	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
28	CALCIUM	Fruit	90	3084	-0.17821309971085345	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Fruit	50	80	-0.3186300658171268	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CARBOHYDRATES	Fruit	59000	895900	0.6043670496771566	
31	CARYOPHYLLENE	Fruit	30	250	-0.3885919789508993	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	CITRAL	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
23	CITRIC-ACID	Fruit	800	800	-0.6385696610504172	
20	CITRONELLAL	Fruit	140	140	0.8579977788182253	
12	COPPER	Fruit	1	6	-0.5307153602504487	USDA's Ag Handbook 8 and sequelae)
0	DECANAL	Fruit	9	10	-0.798910393394575	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	DECANOL	Fruit	6	6	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	DECYL-ACETATE	Fruit	10	10	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	DIMETHOXYCOUMARIN	Fruit	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	DODECANAL	Fruit	1	1	-1.3678940092779692	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	EO	Pt	--	3100	-1	
0	EO	Plant	3000	10000	0.019853678703787233	
0	FAT	Fruit	2000	26700	-0.4373196374673332	
0	FENCHOL	Fruit	120	120		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
15	FIBER	Fruit	3000	67000	-0.7046822298607128	
0	FOLUENE	Plant	--	--		
6	FURFURAL	Fruit	--	1	-0.7089815020862192	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	GAMMA-SELINENE	Fruit	20	20	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Fruit	60	2170	-0.25199677041945456	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	GERANIAL	Fruit	10	680	0.9705306013879492	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	GERANYL-ACETATE	Fruit	30	310	-0.4216405420735619	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	GERMACRENE-B	Fruit	--	3500	1	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
25	IMPERATORIN	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	IRON	Fruit	--	67	-0.26171724059735857	
8	ISOIMPERATORIN	Fruit	--	--		
15	ISOPIMPINELLIN	Fruit	--	--		
0	LIMETTIN	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
60	LIMONENE	Fruit	4700	7500	0.3254224854124864	
0	LINALOL	Fruit	9	20	-0.636217155719963	
53	LINALOOL	Fruit	9	20	-0.5801815825068863	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
27	LINOLEIC-ACID	Fruit	360	3060	-0.31222791202233824	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Fruit	140	1190	-0.7574189341525978	USDA's Ag Handbook 8 and sequelae)
15	MALIC-ACID	Fruit	2000	2000	-0.8215787018847368	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	MALONIC-ACID	Fruit	--	--		
15	METHIONINE	Fruit	20	170	-0.9710077785150063	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.
22	MYRCENE	Fruit	70	1030	-0.22373470605849002	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
6	MYRISTIC-ACID	Fruit	10	85	-0.26513375553502133	USDA's Ag Handbook 8 and sequelae)
4	NERAL	Fruit	40	460	1.5487945633363407	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	NERYL-ACETATE	Fruit	1	310	1.7013381797018676	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	NERYL-FORMATE	Fruit	20	20	1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Fruit	1	29	-0.4237487633855353	
0	NONANAL	Fruit	20	20	0.043299578832457684	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	NONANE	Fruit	6	6		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	NONANOL	Fruit	1	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.
0	OCTANAL	Fruit	30	80	1.4102204808154215	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	OCTANOIC-ACID	Fruit	2	2	-0.5716518444101517	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	OCTANOL	Fruit	1	1	1.4142135623730945	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
18	OLEIC-ACID	Plant	160	1360	-0.6725782785123336	
9	OXALIC-ACID	Fruit	--	--		
2	OXYPEUCEDANIN-HYDRATE	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
16	P-CYMENE	Fruit	50	1160	-0.4262066202868709	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
13	PALMITIC-ACID	Fruit	10	85	-0.36421233986648255	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	PALMITOLEIC-ACID	Fruit	30	255	-0.2988244533847072	USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Fruit	2	18	-0.006662132557618176	USDA's Ag Handbook 8 and sequelae)
11	PERILLALDEHYDE	Fruit	--	--		
2	PHELLOPTERIN	Fruit	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PHLOBOTANNIN	Fruit	--	--		
4	PHOSPHORUS	Fruit	110	2000	-0.3693459584082821	
0	POLYHYDROXYPHLOBAN	Fruit	--	--		
14	POTASSIUM	Fruit	820	9533	-0.7417192681764139	
0	PROTEIN	Fruit	4000	65000	-0.5965222785125606	
1	QUINIC-ACID	Fruit	--	--		
15	RIBOFLAVIN	Fruit	--	2	-0.6444915447424321	
5	SABINENE	Fruit	160	160	-0.4853487568252894	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
1	SODIUM	Fruit	10	222	-0.16289877578023426	
8	STEARIC-ACID	Fruit	10	85	-0.2735844169584349	
7	SUCCINIC-ACID	Fruit	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SUGARS	Fruit	--	17400	-0.8123734149384401	
0	TERPINEN-1-OL	Fruit	70	70		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
23	TERPINEN-4-OL	Fruit	166	166	-0.33320430132175255	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	TERPINOLENE	Fruit	60	120	0.047285066012756526	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	THIAMIN	Fruit	--	3	-0.29859918253223444	
0	THYMYL-METHYL-ETHER	Fruit	2	2	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRIDECANE	Fruit	2	2		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
29	TRYPTOPHAN	Fruit	30	255	-0.8356780113999882	USDA's Ag Handbook 8 and sequelae)
0	UNDECANE	Fruit	3	3		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	WATER	Fruit	877000	911000	0.6105778416650238	
0	XANTHOPHYLLS	Fruit	11	19	-1	

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1	XANTHYLETIN	Plant	--	--		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	1	9	-0.6408757503171868	USDA's Ag Handbook 8 and sequelae)