

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Citrus paradisi

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
12	NARINGIN	Fruit	245.0	195000.0		--
15	FIBER	Fruit	2000.0	172000.0	0.28614824332305033	--
14	POTASSIUM	Fruit	1300.0	46200.0	2.502343144222965	--
14	SUCROSE	Fruit		21400.0	-0.5950841762317102	--
23	CITRIC-ACID	Fruit	11900.0	21000.0	-0.3079040401143372	--
7	GLUCOSE	Fruit		19500.0	-0.6881467128834249	--
12	NARINGIN	Pericarp	2701.0	15595.0		--
8	FRUCTOSE	Plant		12400.0		--
28	CALCIUM	Fruit	117.0	11000.0	1.6484860149222178	--
19	D-LIMONENE	Fruit	3410.0	9575.0		--
19	D-LIMONENE	Plant		9000.0	1.999954303307047	Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
4	PHOSPHORUS	Fruit	76.0	5280.0	0.6269205475189703	--
3	ASPARTIC-ACID	Fruit	810.0	4700.0	-0.7171245699225177	--
112	ASCORBIC-ACID	Fruit	337.0	3862.0	-0.044361459552841695	--
65	MAGNESIUM	Fruit	15.0	3300.0	0.5418998341350072	--
1	SERINE	Fruit	150.0	3100.0	-0.19170709792847418	--
8	GLUTAMIC-ACID	Fruit	220.0	2800.0	-0.8122742603309042	--
12	NARINGIN	Seed	200.0	2677.0		--
27	LINOLEIC-ACID	Fruit	190.0	2090.0	-0.32591314054469284	USDA's Ag Handbook 8 and sequelae)
14	SULFUR	Fruit	7.0	2090.0	0.4700861895135408	--
5	LIMONIN	Seed	1188.0	1885.0		--
4	LYSINE	Fruit	160.0	1760.0	-0.6097925666909821	--
13	PALMITIC-ACID	Fruit	120.0	1320.0	-0.34498600170914256	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Fruit	120.0	1320.0	-0.4705714791864392	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Fruit	470.0	760.0	-0.9468544491143548	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	GERANIAL	Pericarp	4.0	700.0		--
13	GERANIAL	Fruit	420.0	700.0	1.029040358819024	--
15	MALIC-ACID	Fruit	400.0	600.0	-0.9127272216734706	--
15	ALPHA-LINOLENIC-ACID	Fruit	50.0	550.0	-0.9033936410418376	USDA's Ag Handbook 8 and sequelae)
5	LIMONIN	Fruit	3.0	477.0		--
2	ASPARAGINE	Fruit		420.0	-0.6477225740518642	--
16	P-CYMENE	Leaf		385.0	-0.08025671568278799	--
1	SODIUM	Fruit	0.0	341.0	-0.15161413942649452	--
16	LYCOPENE	Fruit	30.0	336.0	0.05302712626772389	--
5	ALUMINUM	Fruit	1.0	330.0	-0.12751726414283882	--
23	TERPINEN-4-OL	Leaf		305.0	-0.1661703321057829	--
3	VALINE	Fruit		240.0	-0.8692582235353649	--
15	METHIONINE	Fruit	3.0	222.0	-0.9069733792825451	--
29	TRYPTOPHAN	Fruit	20.0	220.0	-0.8847986548914832	--
4	NERAL	Fruit	0.0	210.0	0.21477685159099982	--
60	LIMONENE	Leaf		205.0	-0.23212407778841473	--
22	MYRCENE	Fruit	72.0	190.0	-0.35491275646315373	--
22	MYRCENE	Pericarp	77.0	185.0		--
2	PHYTOSTEROLS	Fruit		170.0	-0.9989014472088928	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
61	FERULIC-ACID	Pericarp	25.0	160.0	-1.0	--
5	LIMONIN	Plant	9.0	140.0		--
7	HISTIDINE	Fruit		140.0	-1.1025880317240395	--
47	BETA-SITOSTEROL	Fruit		130.0	-0.6234365080108808	--
2	PALMITOLEIC-ACID	Fruit	10.0	110.0	-0.32532624490387124	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Fruit	10.0	110.0	-0.27192646640928014	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	THREONINE	Fruit		100.0	-1.2128642044978408	--
3	ALANINE	Fruit		90.0	-1.4217792176532806	--
6	IRON	Fruit	1.0	88.0	-0.1784159005130795	--
15	CITRONELLOL	Leaf		70.0	-0.42686676977581944	--
7	SALICYLATES	Fruit	0.0	70.0	-0.13601954960792303	--
5	LIMONIN	Pericarp	6.0	65.0	-1.0	--
8	TYROSINE	Fruit		61.0	-0.9769799928135696	--
13	BETA-PINENE	Leaf		55.0	-0.34800512476675877	--
28	ALPHA-PINENE	Leaf		55.0	-0.22097367328296394	--
25	P-COUMARIC-ACID	Fruit	0.0	53.0	-0.4886747256490017	--
102	CAFFEIC-ACID	Fruit	40.0	51.0	-0.3294714675858169	--
28	ALPHA-PINENE	Pericarp	12.0	47.0		--
5	SABINENE	Leaf		45.0	-0.23253758249077405	--
39	NIACIN	Fruit	2.0	44.0	-0.2232247949977374	--
61	FERULIC-ACID	Fruit	25.0	35.0	-0.5720775535473553	--
9	SINAPIC-ACID	Pericarp	2.0	35.0	-1.0	--
4	BORON	Fruit	1.0	33.0	-0.13949053957899715	--
13	GERANIAL	Leaf		31.0	-0.4010084489455154	--
11	PANTOTHENIC-ACID	Plant	3.0	31.0	0.07338228684128613	--
62	CAFFEINE	Flower		29.0	-1.3198240351921797	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
32	ALPHA-TOCOPHEROL	Fruit	3.0	29.0	-0.6752411923996696	--
2	ALPHA-HUMULENE	Leaf		29.0	-0.41881559329428053	--
23	ALPHA-TERPINEOL	Leaf		29.0	-0.5393424102140746	--
9	TERPINOLENE	Leaf		28.0	-0.19642611566435517	--
3	NOOTKATONE	Pericarp		27.0		--
5	SABINENE	Pericarp	13.0	26.0		--
25	P-COUMARIC-ACID	Pericarp	5.0	25.0	-1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
77	ZINC	Fruit	0.0	22.0	-0.24975934398276664	--
12	STIGMASTEROL	Fruit		20.0	-0.8951703667819086	--
2	CAMPESTEROL	Fruit		20.0	-0.48957181191497545	--
9	DELTA-CADINENE	Pericarp		17.0		--
2	GERMACRENE-D	Pericarp		13.0		--
9	TERPINOLENE	Pericarp	1.0	11.0		--
5	GERANYL-ACETATE	Leaf		10.0	-1.0179833272400691	--
14	MANGANESE	Fruit	0.0	7.7	-0.3527646944182478	--
3	NICKEL	Fruit	0.04	7.7	1.5622677545774823	--
12	COPPER	Fruit	0.0	7.7	-0.3984053050544054	--
2	ALPHA-HUMULENE	Pericarp		7.0		--
23	ALPHA-TERPINEOL	Pericarp		7.0		--
31	THIAMIN	Fruit	0.0	6.0	0.08541669233982067	--
7	CHLORINE	Plant		6.0	-1.4797990466255704	--
5	GERANYL-ACETATE	Pericarp		5.0		--
15	RIBOFLAVIN	Fruit	0.0	5.0	-0.0019916133753625524	--
9	SINAPIC-ACID	Fruit	2.0	5.0	-1.4113126084211554	--
53	BETA-CAROTENE	Fruit	0.0	5.0	-0.14113571921676207	--
2	ARSENIC	Fruit	0.001	4.4	5.101801784885793	--
4	TIN	Fruit	0.66	3.3	-0.3642012762593144	--
23	TERPINEN-4-OL	Pericarp		3.0		--
10	NEROL	Pericarp		3.0		--
2	DECANOL	Pericarp		3.0		--
11	LITHIUM	Fruit	0.088	2.31	1.8670378728368338	--
11	ALPHA-PHELLANDRENE	Pericarp	1.0	2.0		--
13	BETA-PINENE	Pericarp	0.7	2.0		--
35	GERANIOL	Pericarp		2.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CYSTINE	Fruit		2.0	-1.0736993666328245	--
4	SILICON	Fruit		2.0	-0.6019449725946585	ACTA AGRIC SCAND SUPPL 22: 1980
3	ISOPULEGOL	Pericarp		2.0		--
1	COPAENE	Pericarp		2.0		--
11	GAMMA-TERPINENE	Pericarp	0.4	1.0		--
13	ALPHA-TERPINENE	Pericarp		1.0		--
15	LUTEIN	Fruit	0.095	0.95	-0.7527259978039551	--
2	MOLYBDENUM	Fruit	0.1	0.77	-0.3309149921902472	--
2	DODECANAL	Pericarp		0.7		--
24	CHROMIUM	Fruit	0.002	0.55	-0.43038124621628904	--
5	NERYL-ACETATE	Pericarp		0.4		--
1	DECYL-ACETATE	Pericarp		0.4		--
2	CRYPTOXANTHIN	Fruit	0.03	0.3	-0.636682262247135	--
2	COBALT	Fruit	0.005	0.22	-0.5084821806978201	--
3	SILVER	Fruit	0.022	0.11	-0.43140967622714665	--
3	CADMIUM	Fruit	0.002	0.066	-0.44965581051601666	--
60	SELENIUM	Fruit	0.0	0.027	-0.3794918743602091	--
1	MERCURY	Fruit	0.0	0.001	-0.7865389313824043	--
5	PHYLLOQUINONE	Fruit		0.001	-0.23285139490462353	--
11	TYRAMINE	Fruit		0.0	-1.414213562373095	--
7	ALPHA-CAROTENE	Fruit		0.0	-0.5519699729560847	--
8	DELTA-3-CARENE	Pericarp		0.0		--
3	SUBAPHYLLIN	Fruit				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	CONIFERIN	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

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2	UNDECANAL	Pericarp				--
31	HESPERIDIN	Fruit				--
2	HUMULENE	Pericarp				--
22	UMBELLIFERONE	Fruit				--
16	P-CYMENE	Pericarp				--
6	NEOHESPERIDIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CARVEOL	Pericarp				--
8	HESPERETIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	OSTHOL	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	NARIRUTIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CITROSTADIENOL	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	CADINENE	Pericarp				--
12	GLYCINE	Fruit				--
2	RHOIFOLIN	Leaf				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
30	ESCULETIN	Fruit				--
7	LINALYL-ACETATE	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
1	QUINIC-ACID	Fruit				--
28	ALPHA-PINENE	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
9	OXALIC-ACID	Plant				--
3	MANNOSE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	ERIODICTYOL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	ELEMENE	Pericarp				--
53	CITRAL	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
176	QUERCETIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	OSTHOLE	Root				--
3	BETA-PHELLANDRENE	Pericarp				--
5	GERANYL-ACETATE	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
31	CARYOPHYLLENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	MARMIN	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	MALONIC-ACID	Fruit				--
2	CITRONELLYL-ACETATE	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
56	NARINGENIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
75	KAEMPFEROL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CHOLESTEROL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
20	CITRONELLAL	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	BETA-BISABOLENE	Pericarp				--

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35	GERANIOL	Plant				--
2	BERGAMOTTIN	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	OBACUNONE	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	CYCLOEUCALENOL	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	N-NONACOSANE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
11	ISORHAMNETIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
32	AESCULETIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	SESELIN	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	XYLOSE	Fruit				--
8	PHLOROGLUCINOL	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	NOMILIN	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	CYCLOARTENOL	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
16	ACETIC-ACID	Fruit				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
22	CATECHOL	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	ALPHA-CRYPTOXANTHIN	Fruit				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.



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1	N-METHYL-TYRAMINE	Fruit				--
2	GAMMA-CAROTENE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	XANTHYLETIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	PHENYLALANINE	Fruit				--
1	4',5,6,7,8-PENTAMETHOXY-FLAVONE	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	HUMULENE	Fruit				--
2	N-HEXACOSANE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	XANTHOXYLETIN	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
24	PECTIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	SUBAPHYLLIN	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	3',4',5,6,7,8-HEXAMETHOXYFLAVONE	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	CAMPHENE	Pericarp				--
44	SCOPOLETIN	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	N-HENTRIACONTANE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	FRIEDELIN	Pericarp				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
11	PERILLALDEHYDE	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.