

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

**Chemicals found in Carica papaya**

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	OLEIC-ACID	Seed Oil	743000.0	755000.0	2.266462351347825	Jim Duke's personal files.
18	OLEIC-ACID	Seed	193545.0	202400.0	0.6847466271086402	--
13	PALMITIC-ACID	Seed Oil	162000.0	190000.0	0.05419140224469152	Jim Duke's personal files.
25	PAPAIN	Latex Exudate	51000.0	135000.0		--
13	PALMITIC-ACID	Seed	28791.0	30107.0	-0.07839595078720965	--
15	FIBER	Leaf	18000.0	145000.0	-0.20447325046745057	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	STEARIC-ACID	Seed	12650.0	13282.0	-0.2772157419739704	--
14	POTASSIUM	Leaf	6520.0	28978.0	-0.060322902844285126	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Fruit	5000.0	92198.0	-0.46690178925800363	--
28	CALCIUM	Leaf	3440.0	23800.0	0.36642881915355097	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	MALIC-ACID	Fruit	3150.0	23333.0	0.567329421438877	--
6	TARTARIC-ACID	Fruit	3150.0	23333.0	-0.24237898104354536	--
7	FUMARIC-ACID	Fruit	3150.0	23333.0	1.4090927316950586	--
20	BENZYL-ISOTHIOCYANATE	Seed	2000.0	5000.0	-1.0	Jim Duke's personal files.
4	PHOSPHORUS	Leaf	1420.0	6311.0	0.24645891872875847	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
112	ASCORBIC-ACID	Leaf	1400.0	6222.0	0.13340221850054146	--
14	POTASSIUM	Fruit	690.0	5110.0	-1.1330381120971724	--
112	ASCORBIC-ACID	Fruit	640.0	4741.0	0.010292117056281466	--
3	ASPARTIC-ACID	Fruit	490.0	4387.0	-0.7582452723944939	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Fruit	380.0	3402.0	-0.2044785517519125	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Fruit	320.0	2865.0	-0.320933619156033	--
4	PUFA	Fruit	310.0	2775.0	-0.6408686079046128	USDA's Ag Handbook 8 and sequelae)
14	SULFUR	Fruit	300.0	900.0	-0.35813249886374227	--
15	ALPHA-LINOLENIC-ACID	Fruit	250.0	2238.0	-0.1389637310912248	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	LYSINE	Fruit	250.0	2238.0	-0.48599361292492554	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Fruit	200.0	1790.0	-0.01827100523355692	--
12	GLYCINE	Fruit	180.0	1611.0	-0.7711938117552699	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Fruit	180.0	1611.0	-0.4683286447061981	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Fruit	170.0	1260.0	-0.5941134018186989	--
1	SODIUM	Leaf	160.0	711.0	-0.521006410073194	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	LEUCINE	Fruit	160.0	1432.0	-0.7800180381461054	USDA's Ag Handbook 8 and sequelae)
28	CALCIUM	Fruit	159.0	1180.0	-0.6175808503755033	--
1	SERINE	Fruit	150.0	1343.0	-0.8120190151666494	USDA's Ag Handbook 8 and sequelae)
17	CARPAININE	Leaf	150.0	4000.0		--
3	ALANINE	Fruit	140.0	1253.0	-0.9646875161658541	USDA's Ag Handbook 8 and sequelae)
53	BETA-CAROTENE	Leaf	116.0	514.0	1.1005033579469683	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	THREONINE	Fruit	110.0	985.0	-0.8449765955821991	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Fruit	110.0	815.0	-0.608799543813469	--
3	VALINE	Fruit	100.0	895.0	-0.7341136385803058	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Fruit	100.0	895.0	-0.9108448929638525	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Fruit	90.0	806.0	-0.8738816258110772	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Fruit	80.0	716.0	-0.8775495343550369	USDA's Ag Handbook 8 and sequelae)
6	MYRISTIC-ACID	Fruit	70.0	627.0	-0.23956447622829535	--
1	SODIUM	Fruit	60.0	444.0	-0.14184676510350971	--
27	LINOLEIC-ACID	Fruit	60.0	537.0	-0.347823614663473	--
8	TYROSINE	Fruit	50.0	448.0	-0.8166172460051626	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Fruit	50.0	448.0	-0.8866430953186365	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Fruit	40.0	716.0	-0.18868896426915321	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
39	NIACIN	Leaf	21.0	93.0	-0.05474550834730091	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	STEARIC-ACID	Fruit	20.0	179.0	-0.2673505228936131	--
15	METHIONINE	Fruit	10.0	179.0	-0.9599249017247726	--
7	LAURIC-ACID	Fruit	10.0	90.0	-0.4444146432555388	--
6	IRON	Leaf	8.0	38.0	-0.824258114808842	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	RIBOFLAVIN	Leaf	5.0	21.0	-0.07942432526480918	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	BORON	Fruit	5.0	15.0	-0.5018987122156774	--
39	NIACIN	Fruit	4.0	30.0	-0.41038049882634875	--
2	COBALT	Fruit	2.0	14.0	1.1597144135765933	--
11	PANTOTHENIC-ACID	Fruit	2.0	19.0	0.05712424299404392	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Fruit	1.2	10.0	-0.5759531928031193	--
31	THIAMIN	Leaf	1.0	4.0	-0.8971070751644596	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	SALICYLATES	Fruit	0.8	8.0	-0.31380232713014544	--
6	IRON	Fruit	0.4	3.0	-0.5155879913303996	--
15	RIBOFLAVIN	Fruit	0.4	3.0	-0.4303249009534089	--
31	THIAMIN	Fruit	0.2	2.6	-0.34980129918184183	USDA's Ag Handbook 8 and sequelae)
24	CHROMIUM	Fruit	0.1	1.0	-0.3671750908546996	--
14	MANGANESE	Fruit	0.1	1.0	-0.3969436204051225	--
60	SELENIUM	Fruit	0.1	1.0	-0.13821084305127834	--
12	COPPER	Fruit	0.1	5.0	-0.6085448044834153	--
20	BENZYL-ISOTHIOCYANATE	Fruit	0.001	291.0		--
18	OLEIC-ACID	Flower				Jim Duke's personal files.
2	GERANYL-ACETONE	Fruit				--
11	ALPHA-PHELLANDRENE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	N-HEXACOSANE	Seed Oil				Jim Duke's personal files.
14	SUCROSE	Leaf				Jim Duke's personal files.
23	CITRIC-ACID	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	CYCLOARTENOL	Seed Oil				Jim Duke's personal files.
2	METHANOL	Fruit				Jim Duke's personal files.
2	CAMPESTEROL	Seed Oil				Jim Duke's personal files.
47	BETA-SITOSTEROL	Seed Oil				Jim Duke's personal files.
18	OLEIC-ACID	Leaf				Jim Duke's personal files.
11	GAMMA-TERPINENE	Fruit				--
3	N-HENTRIACONTANE	Seed Oil				Jim Duke's personal files.
4	CARPOSIDE	Leaf				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	CRYPTOXANTHIN	Pericarp				Jim Duke's personal files.
14	SUCROSE	Bark				Jim Duke's personal files.
16	LYCOPENE	Pericarp				Jim Duke's personal files.
102	CAFFEIC-ACID	Leaf				Jim Duke's personal files.
47	BETA-SITOSTEROL	Leaf				Jim Duke's personal files.
53	BETA-CAROTENE	Fruit				--
53	LINALOOL	Fruit		0.0	-0.5857755812776223	--
2	NEOXANTHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	GAMMA-CAROTENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	GLUCOSE	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
15	MALIC-ACID	Latex Exudate		4400.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
17	CARPAIN	Seed				--
4	CHYMOPAPAIN	Latex Exudate				--
3	STYRENE	Fruit				Jim Duke's personal files.
27	LINOLEIC-ACID	Flower				Jim Duke's personal files.
2	ISOBUTYL-ALCOHOL	Fruit				Jim Duke's personal files.
25	PAPAIN	Fruit				--
3	PYRIDINE	Fruit				Jim Duke's personal files.
2	ISOAMYL-ACETATE	Fruit				--
5	OCTANOIC-ACID	Fruit				Jim Duke's personal files.
3	N-ACETYL-HEXOSAMIDASE	Latex Exudate				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	FIBER	Seed		170000.0	0.27811243148773734	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	4-TERPINEOL	Fruit				--
7	GLUCOSE	Bark				Jim Duke's personal files.
17	CARPAIN	Root				--
20	CHOLINE	Leaf		200.0	-0.47726562792110133	Jim Duke's personal files.
12	STIGMASTEROL	Seed Oil				Jim Duke's personal files.
27	LINOLEIC-ACID	Leaf				Jim Duke's personal files.
3	ISOBUTYL-ACETATE	Fruit				Jim Duke's personal files.
2	PRUNASIN	Leaf				Jim Duke's personal files.
24	BENZALDEHYDE	Fruit		300.0	-0.06377099858893052	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	ANTHERAXANTHIN	Fruit				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	N-NONACOSANE	Seed Oil				Jim Duke's personal files.
6	MYRISTIC-ACID	Seed				--
7	GLUCOSE	Fruit				Jim Duke's personal files.
1	CHOLESTEROL	Seed Oil				Jim Duke's personal files.
8	STEARIC-ACID	Flower				Jim Duke's personal files.
27	LINOLEIC-ACID	Seed Oil		4000.0	-1.5223259403119926	Jim Duke's personal files.
9	BENZYL-ALCOHOL	Fruit		0.0	-0.7177394965097122	Jim Duke's personal files.
2	ISOPROPYL-ALCOHOL	Fruit				Jim Duke's personal files.
1	BEHENIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	XYLITOL	Bark				Jim Duke's personal files.
21	NICOTINE	Leaf		102.8	-0.7499661778472884	Jim Duke's personal files.
8	GENTISIC-ACID	Leaf				Jim Duke's personal files.
17	CARPAIN	Bark				--
17	CARPAIN	Fruit		200.0		Jim Duke's personal files.
8	STEARIC-ACID	Leaf				Jim Duke's personal files.
1	BEHENIC-ACID	Seed Oil		16000.0	0.29658976365227746	Jim Duke's personal files.
24	PECTIN	Fruit				Jim Duke's personal files.
1	LIGNOCERIC-ACID	Seed Oil				Jim Duke's personal files.
2	VIOLAXANTHIN	Leaf				Jim Duke's personal files.
1	MYRISTOLEIC-ACID	Fruit				Jim Duke's personal files.
22	MYRCENE	Fruit				--
1	ETHYL-BUTYRATE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	GALACTOSE	Bark				Jim Duke's personal files.
9	TERPINOLENE	Fruit				--
16	LYCOPENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
17	CARPAIN	Plant				Jim Duke's personal files.
8	STEARIC-ACID	Seed Oil		50000.0	-0.5312228391740013	Jim Duke's personal files.
31	CARYOPHYLLENE	Fruit				--
2	PALMITOLEIC-ACID	Flower				Jim Duke's personal files.
5	HEXANAL	Fruit				--
7	LAURIC-ACID	Flower				Jim Duke's personal files.
15	5-HYDROXYTRYPTAMINE	Plant				Jim Duke's personal files.
1	MYRISTOLEIC-ACID	Flower				Jim Duke's personal files.
2	MYOSMINE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	ETHYL-BENZOATE	Fruit				--
8	FRUCTOSE	Leaf				Jim Duke's personal files.
1	EPSILON-CAROTENE	Pericarp				Jim Duke's personal files.
10	SQUALENE	Seed Oil				Jim Duke's personal files.
27	LINOLEIC-ACID	Seed		5389.0	-0.871660128625913	--
77	ZINC	Fruit				--
13	PALMITIC-ACID	Flower				Jim Duke's personal files.
7	LAURIC-ACID	Leaf				Jim Duke's personal files.
1	TOLUENE	Fruit		0.005	-0.707116857507301	Jim Duke's personal files.
6	MYRISTIC-ACID	Flower				Jim Duke's personal files.
6	ETHYL-ACETATE	Fruit				--
8	FRUCTOSE	Bark				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	BUTYL-ALCOHOL	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
53	BETA-CAROTENE	Pericarp				Jim Duke's personal files.
47	BETA-SITOSTEROL	Seed				Jim Duke's personal files.
5	ZEAXANTHIN	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
13	PALMITIC-ACID	Leaf				Jim Duke's personal files.
8	GLUTAMIC-ACID	Fruit				USDA's Ag Handbook 8 and sequelae)
7	LAURIC-ACID	Seed Oil		4000.0	-0.7012763853261376	Jim Duke's personal files.
32	ALPHA-TOCOPHEROL	Leaf				Jim Duke's personal files.
6	MYRISTIC-ACID	Leaf				Jim Duke's personal files.
21	METHYL-SALICYLATE	Fruit				--
1	EPSILON-CAROTENE	Fruit				--
8	FRUCTOSE	Fruit				Jim Duke's personal files.
14	SUCROSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	MYRISTIC-ACID	Seed Oil		4000.0	-0.5619514869490164	Jim Duke's personal files.
53	BETA-CAROTENE	Seed Oil				Jim Duke's personal files.
47	BETA-SITOSTEROL	Fruit				Jim Duke's personal files.
2	VIOLAXANTHIN	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
21	NICOTINE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	GERMACRENE-D	Fruit				--



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	ALPHA-TERPINENE	Fruit				--
1	HEXYL-ACETATE	Fruit				Jim Duke's personal files.
3	METHYL-ACETATE	Fruit				--
24	ETHANOL	Fruit				Jim Duke's personal files.
3	BETA-PHELLANDRENE	Fruit				--
2	MYOSMINE	Leaf		1.4		Jim Duke's personal files.
1	CAPROIC-ACID	Fruit				Jim Duke's personal files.
47	BETA-SITOSTEROL	Flower				Jim Duke's personal files.
7	LAURIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.