

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Opuntia ficus-indica*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5-DEHYDRO-AVENASTEROL	Seed Oil		30000.0		--
0	7-DEHYDRO-AVENASTEROL	Seed Oil		26000.0		--
3	ALANINE	Bud		7180.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
3	ALANINE	Seed		8480.0	-0.35633155145991213	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	ARABINOSE	Fruit				--
0	ARABINOSE	Gum				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	ARGININE	Seed		27100.0	0.10414881640060081	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
14	ARGININE	Bud		4955.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
112	ASCORBIC-ACID	Flower		940.0	-0.5453992673923802	--
112	ASCORBIC-ACID	Fruit	65.0	1690.0	-0.17940988776105046	--
0	ASH	Seed	31700.0	241000.0	5.808588480786801	--
0	ASH	Fruit	3000.0	27000.0	-0.7681533764487589	--
0	ASH	Bud		235000.0	1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
3	ASPARTIC-ACID	Seed		15900.0	-0.5938172126155349	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ASPARTIC-ACID	Bud		8315.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
53	BETA-CAROTENE	Bud		0.3	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
53	BETA-CAROTENE	Fruit	0.08	0.09	-0.150626660752188	Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
47	BETA-SITOSTEROL	Seed Oil		680000.0	-1.0	--
47	BETA-SITOSTEROL	Stem				--
47	BETA-SITOSTEROL	Flower		400.0	-0.980631141191375	--
5	BETANIN	Fruit		7.9		--
28	CALCIUM	Fruit	180.0	3065.0	-0.18259754680257	--
28	CALCIUM	Be		560.0		--
28	CALCIUM	Bud		560.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
4	CALCIUM-OXALATE	Leaf				--
4	CALCIUM-OXALATE	Fruit				Abstract (See species file)
2	CAMPESTEROL	Seed Oil		140000.0		--
0	CARBOHYDRATES	Seed	482000.0	558000.0	0.13749830178383302	--
0	CARBOHYDRATES	Fruit	56000.0	892000.0	0.5835117454451012	--
0	CARBOHYDRATES	Bud		118600.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
1	CELLULOSE	Fruit		13000.0	-0.5275153196014987	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	CHOLESTEROL	Seed Oil		15000.0		--
23	CITRIC-ACID	Leaf		310.0	-0.6262670151342493	--
23	CITRIC-ACID	Fruit	475.0	4560.0	-0.5770200207177607	--
12	COPPER	Seed		3.4	-1.0353484581888348	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
13	CYSTEINE	Seed		5740.0	0.19737371409175955	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	DEHYDROASCORBIC-ACID	Fruit Juice		30.0		Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	FAT	Seed	54000.0	182000.0	-0.4392322707396648	--
0	FAT	Fruit	4000.0	29400.0	-0.4166972546466015	--
0	FAT	Bud		24800.0	1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
15	FIBER	Seed	111000.0	524000.0	3.0733568917795826	--
15	FIBER	Fruit	11000.0	59000.0	-0.7801740754366187	--
15	FIBER	Bud		89400.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
8	FRUCTOSE	Fruit	4500.0	44100.0	-0.22371990810302178	--
1	GALACTOSE	Fruit				--
1	GALACTOSE	Gum				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	GALACTURONIC-ACID	Stem				--
7	GLUCOSE	Stem				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	GLUCOSE	Fruit	50.0	480.0	-0.8900165864849618	--
8	GLUTAMIC-ACID	Seed		37500.0	-0.17775919429183049	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
8	GLUTAMIC-ACID	Bud		16000.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
12	GLYCINE	Seed		14200.0	0.4695769747206912	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
12	GLYCINE	Bud		4745.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
18	HISTAMINE	Seed		4550.0	1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
18	HISTAMINE	Bud		2555.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
1	INDICAXANTHIN	Fruit		22.0		--
6	IRON	Fruit	12.0	65.0	-0.2696507015577661	--
6	IRON	Seed		100.0	-0.2360003199095645	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
1	ISOBETANIN	Fruit				--
3	ISOLEUCINE	Seed		6775.0	-0.474238068486464	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
3	ISOLEUCINE	Bud		4140.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOMALTOSE	Fruit				--
11	ISORHAMNETIN	Flower		2500.0		--
0	ISORHAMNETIN-GLUCOSIDE	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
75	KAEMPFEROL	Pt				--
75	KAEMPFEROL	Flower				--
0	KILOCALORIES	Fruit	670.0	3600.0	-0.09196802900131361	--
0	KILOCALORIES	Bud		1140.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
7	LAURIC-ACID	Flower				--
2	LEUCINE	Seed		12800.0	-0.4098153600457443	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
2	LEUCINE	Bud		7040.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
27	LINOLEIC-ACID	Seed	39640.0	133590.0	0.22677876696150248	--
27	LINOLEIC-ACID	Seed Oil		734000.0	1.3484158912417201	--
0	LINOLEOYLDIOLEIN	Seed				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
78	LUTEOLIN	Pt				--
78	LUTEOLIN	Flower				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	LYSINE	Seed		6275.0	-0.7888391793942429	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
4	LYSINE	Bud		6005.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
65	MAGNESIUM	Seed		790.0	-0.8518625124201381	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
65	MAGNESIUM	Bud		1420.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
15	MALIC-ACID	Plant				--
15	MALIC-ACID	Fruit	180.0	1700.0	-0.8411105275537513	--
15	MALIC-ACID	Leaf		950.0	-1.176047821354511	--
1	MALONIC-ACID	Leaf				--
1	MALONIC-ACID	Fruit				--
10	MESCALINE	Shoot				--
15	METHIONINE	Seed		4830.0	0.13303493967693916	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
15	METHIONINE	Bud		1890.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
3	MUCILAGE	Stem				--
6	MYRISTIC-ACID	Flower				--
1	N-METHYL-TYRAMINE	Shoot				--
0	NEOBETANIN	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	NEOBETANIN	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NEOBETANIN	Fruit				--
39	NIACIN	Bud		4.6	-0.999999999999999	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
39	NIACIN	Fruit	3.0	27.0	-0.45048529250390834	--
18	OLEIC-ACID	Flower				--
18	OLEIC-ACID	Seed Oil		88000.0	-1.2183511412251653	--
18	OLEIC-ACID	Seed	4750.0	16015.0	-0.8474475082644206	--
0	OPUNTIA XANTHIN	Fruit				--
9	OXALIC-ACID	Fruit				--
13	PALMITIC-ACID	Seed	6480.0	21840.0	-0.24897098488430294	--
13	PALMITIC-ACID	Seed Oil		120000.0	-0.4112562243968307	--
13	PALMITIC-ACID	Flower				--
0	PALMITOYL DILINOLEIN	Seed				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
24	PECTIN	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
24	PECTIN	Stem				--
4	PENDULETIN	Flower				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
4	PENDULETIN	Pt				--
7	PHENYLALANINE	Seed		8255.0	-0.3923386950214408	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	PHENYLALANINE	Bud		4250.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	PHORBIC-ACID	Stem				--
0	PHORBIC-ACID	Fruit				--
4	PHOSPHORUS	Bud		243.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
4	PHOSPHORUS	Seed		1605.0	-0.9905361988638606	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
4	PHOSPHORUS	Fruit	320.0	1985.0	-0.3739020552341689	--
0	PISCIDIC-ACID	Fruit				--
0	PISCIDIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	PISCIDIC-ACID-DIETHYL-ESTER	Plant				--
0	PISCIDIC-ACID-DIETHYLEETHER	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PISCIDIC-ACID-METHYL-ESTER	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PISCIDIC-ACID-MONOETHYL-ESTER	Plant				--
0	PISCIDIC-ACID-MONOETHYLEETHER	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	POTASSIUM	Seed		1720.0	-0.9541918289732769	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	POTASSIUM	Fruit	700.0	6615.0	-0.999885306286469	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
14	POTASSIUM	Bud		2600.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	PROLINE	Seed		10500.0	-0.16421252006446033	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	PROLINE	Bud		3995.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	PROTEIN	Seed	121000.0	175300.0	-0.5203528144558208	--
0	PROTEIN	Fruit	11000.0	73500.0	-0.4825760823596808	--
0	PROTEIN	Bud		110300.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
44	QUERCITRIN	Pt				--
44	QUERCITRIN	Flower				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
1	QUINIC-ACID	Fruit	150.0	1400.0	-1.2698481607343142	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	RHAMNOSE	Fruit				--
0	RHAMNOSE	Gum				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	RIBOFLAVIN	Fruit	0.2	2.2	-0.6016582159846274	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	RIBOFLAVIN	Bud		0.6	-1.0000000000000002	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
87	RUTIN	Flower				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
87	RUTIN	Pt				--
1	SERINE	Seed		7665.0	-0.5575702858818078	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
1	SERINE	Bud		3830.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
14	SHIKIMIC-ACID	Fruit	25.0	220.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
1	SODIUM	Seed		714.0	0.4177001325446195	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
1	SODIUM	Bud		90.0	-1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
8	STEARIC-ACID	Seed	3130.0	10555.0	-0.3363823818967071	--
8	STEARIC-ACID	Flower				--
8	STEARIC-ACID	Seed Oil		58000.0	-0.46568311898509607	--
0	STIGMAST-7-EN-3-BETA-OL	Seed Oil		70000.0		--
12	STIGMASTEROL	Seed Oil		65000.0		--
7	SUCCINIC-ACID	Fruit				--
14	SUCROSE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SUGARS	Fruit	56000.0	560000.0	1.4273313943014194	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	TARTARIC-ACID	Fruit				--
31	THIAMIN	Fruit	0.1	1.3	-0.5162081782930655	--
31	THIAMIN	Bud		0.1	-0.9999999999999998	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
4	THREONINE	Seed		7330.0	-0.1806224771123855	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
4	THREONINE	Bud		3845.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
93	TOCOPHEROL	Bud		2.5		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
29	TRYPTOPHAN	Seed		1665.0	-0.5661475332704833	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
11	TYRAMINE	Shoot				--
8	TYROSINE	Seed		6590.0	-0.26667553919347564	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
8	TYROSINE	Bud		3220.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	URONIC-ACID	Gum				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	VALINE	Seed		10500.0	-0.1861604693189085	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
3	VALINE	Bud		5485.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	VIT-D	Bud		0.07		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
0	VIT-D0.07	Bud				--
0	WATER	Seed	53000.0	136000.0	-0.3515346520842564	--
0	WATER	Fruit	814000.0	864000.0	0.40621744229328755	--
0	WATER	Bud		952600.0	1.0	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
3	XYLOSE	Gum				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	XYLOSE	Fruit				--
77	ZINC	Seed		15.0	-0.8554549124568511	Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.