

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Fragaria* spp

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-ABSCISIC-ACID	Plant				--
0	2-HEXEN-1-AL	Plant				--
0	2-METHYL-NAPHTHALENE	Plant				--
7	AGRIMONIIN	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	ALANINE	Fruit	310.0	3677.0	-0.011987357605646181	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Fruit	780.0	9253.0	3.0378584361502132	USDA's Ag Handbook 8 and sequelae)
23	ALPHA-TERPINEOL	Leaf				--
32	ALPHA-TOCOPHEROL	Fruit	1.0	54.0	-0.29043282933130465	--
5	ALUMINUM	Fruit	3.0	70.0	-0.20315689411885662	ACTA AGRIC SCAND SUPPL 22: 1980
3	ANTHOCYANIN	Plant				--
15	ARBUTIN	Leaf				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	ARGININE	Fruit	260.0	3084.0	-0.3269566084197814	USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Fruit		0.01	-0.5241085631054083	ACTA AGRIC SCAND SUPPL 22: 1980
112	ASCORBIC-ACID	Leaf	3190.0	4350.0	-0.04029552733240095	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
112	ASCORBIC-ACID	Fruit	400.0	6948.0	0.14751674001001847	--
0	ASH	Fruit	3900.0	52065.0	-0.1190864932139459	--
2	ASPARAGINE	Plant				--
0	ASPARAGINIC-ACID	Plant				--
3	ASPARTIC-ACID	Fruit	1380.0	16370.0	0.8160338896556354	USDA's Ag Handbook 8 and sequelae)
53	BETA-CAROTENE	Fruit	0.089	7.0	-0.13726975525121177	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Fruit	100.0	1000.0	0.5196399134210818	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
4	BORON	Fruit	1.0	160.0	2.417500456246469	--
0	BROMINE	Fruit		1.0	-0.42563543443835	ACTA AGRIC SCAND SUPPL 22: 1980
3	CADMIUM	Fruit	0.004	0.18	-0.11461814777859229	ACTA AGRIC SCAND SUPPL 22: 1980
102	CAFFEIC-ACID	Fruit	15.0	34.0	-0.3326188419425253	Jim Duke's personal files.
28	CALCIUM	Fruit	135.0	2900.0	-0.22067300838852968	--
2	CAMPESTEROL	Fruit				Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	CARBOHYDRATES	Fruit	70200.0	850000.0	0.35891616140758126	--
43	CATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	CATECHOL	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
77	CHLOROGENIC-ACID	Fruit				Jim Duke's personal files.
24	CHROMIUM	Fruit	0.005	0.18	-0.4823507517358181	ACTA AGRIC SCAND SUPPL 22: 1980
0	CINNAMIC-ACID-METHYL-ESTER	Plant				--
0	CIS-3-HEXEN-1-OL	Plant				--
53	CITRAL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	CITRIC-ACID	Fruit	3500.0	8000.0	-0.520708647647458	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	COBALT	Fruit	0.004	2.0	-0.29299669899909336	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	COPPER	Fruit	0.4	17.0	0.32540852631218337	USDA's Ag Handbook 8 and sequelae)
7	CYANIDIN	Plant				--
2	CYSTINE	Fruit	50.0	593.0	-0.4571950577473773	USDA's Ag Handbook 8 and sequelae)
0	DIHYDROTRIMETHYLNAPHTHALENE	Leaf				--
51	ELLAGIC-ACID	Seed	1370.0	21650.0	1.0	--
51	ELLAGIC-ACID	Leaf	8080.0	32300.0	1.4141864640925814	--
51	ELLAGIC-ACID	Fruit	430.0	8430.0	1.727725460443337	--
8	ELLAGITANNIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EO	Plant				--
0	FAT	Seed		190000.0	-0.3970934091461325	--
0	FAT	Fruit	2350.0	59893.0	-0.18379417340490822	USDA's Ag Handbook 8 and sequelae)
15	FIBER	Fruit	5300.0	181000.0	0.3710765695959443	USDA's Ag Handbook 8 and sequelae)
0	FLAVONOIDS	Plant				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	FLUORINE	Fruit	0.03	0.9	-0.4479948907171637	ACTA AGRIC SCAND SUPPL 22: 1980
15	FOLACIN	Fruit	0.1	0.2	-0.7547576455042277	USDA's Ag Handbook 8 and sequelae)
6	FURFURAL	Leaf				--
62	GALLIC-ACID	Fruit	80.0	121.0	-1.0679444233170081	Jim Duke's personal files.
0	GALLOCATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	GAMMA-AMINOBUTYRIC-ACID	Plant				--
8	GENTISIC-ACID	Fruit				Jim Duke's personal files.
8	GLUTAMIC-ACID	Fruit	900.0	10676.0	-0.19935362148704966	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	GLUTAMINE	Plant				--
12	GLYCINE	Fruit	240.0	2847.0	-0.2930620299572446	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Fruit	120.0	1423.0	-0.20305117000932518	USDA's Ag Handbook 8 and sequelae)
25	IMPERATORIN	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
12	IODINE	Plant	0.157	0.23	-0.44667578476512965	--
6	IRON	Fruit	3.0	100.0	-0.1308151347506343	--
3	ISOLEUCINE	Fruit	140.0	1661.0	-0.5937234937471108	USDA's Ag Handbook 8 and sequelae)
75	KAEMPFEROL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	KAEMPFEROL-3-BETA-GLUCURONIDE	Plant				--
0	KAEMPFEROL-3-BETA-MONOGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	KAEMPFEROL-7-MONOGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	KILOCALORIES	Fruit	300.0	3559.0	-0.15423994717171058	USDA's Ag Handbook 8 and sequelae)
20	LECITHIN	Fruit		620.0		--
2	LEUCINE	Fruit	310.0	3667.0	-0.3048833842735342	USDA's Ag Handbook 8 and sequelae)
1	LEUCOANTHOCYANIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LINALOL	Leaf				--
53	LINALOOL	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
27	LINOLEIC-ACID	Seed		153900.0	0.40079686330537195	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
27	LINOLEIC-ACID	Fruit	1080.0	12811.0	-0.17465609416514233	USDA's Ag Handbook 8 and sequelae)
0	LINOLENIC-ACID	Seed		9975.0	-0.4057233720289396	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	LUTEIN	Fruit	0.3	3.0	-0.575590894746515	--
0	LUTEOFOROL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	LYSINE	Fruit	250.0	2966.0	-0.29744625237745853	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Fruit	98.0	1545.0	-0.27076713097548605	--
15	MALIC-ACID	Fruit	3500.0	8000.0	-0.4309421885044489	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	MALVIDIN-3,5-DIGLUCOSIDE	Fruit				--
14	MANGANESE	Fruit	1.4	125.0	0.4206962038295751	--
1	MERCURY	Fruit	0.0	0.009	-0.4128575999976608	ACTA AGRIC SCAND SUPPL 22: 1980
15	METHIONINE	Fruit	10.0	119.0	-1.0338107469929971	USDA's Ag Handbook 8 and sequelae)
0	METHYL-FURFURAL	Plant				--
21	METHYL-SALICYLATE	Leaf				--
2	MOLYBDENUM	Fruit		0.1	-0.46519775248328327	ACTA AGRIC SCAND SUPPL 22: 1980
13	MUFA	Fruit	520.0	6168.0	-0.16420989440179143	USDA's Ag Handbook 8 and sequelae)
0	N-NONAL	Leaf				--
0	N-NONANOL	Leaf				--

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0	N-OCTANOL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	NEO-CHLOROGENIC-ACID	Fruit				Jim Duke's personal files.
39	NIACIN	Fruit	2.3	27.0	-0.45048529250390834	USDA's Ag Handbook 8 and sequelae)
3	NICKEL	Fruit	0.03	0.36	-0.669977781454973	ACTA AGRIC SCAND SUPPL 22: 1980
11	NICOTINIC-ACID	Plant		2.0	-0.7514645828078942	--
0	NITROGEN	Fruit	880.0	10000.0	-0.32410478091260314	ACTA AGRIC SCAND SUPPL 22: 1980
18	OLEIC-ACID	Seed		9975.0	-0.8970998546316352	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
18	OLEIC-ACID	Fruit	510.0	6050.0	-0.434115784713792	USDA's Ag Handbook 8 and sequelae)
25	P-COUMARIC-ACID	Fruit	63.0	125.0	-0.07737782584665391	Jim Duke's personal files.
13	P-HYDROXY-BENZOIC-ACID	Fruit	19.0	108.0	-0.6101426726864799	Jim Duke's personal files.
13	PALMITIC-ACID	Fruit	140.0	1661.0	-0.339677352873796	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Fruit	10.0	119.0	-0.32368130611992313	USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Fruit	3.4	40.0	1.396638129578948	USDA's Ag Handbook 8 and sequelae)
24	PECTIN	Fruit		5400.0	-0.5661356985488837	--
9	PEDUNCULAGIN	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	PELARGONIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PELARGONIDIN-3-GLUCOSIDE	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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0	PELARGONIDIN-3-MONOGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	PHOSPHORUS	Fruit	185.0	3191.0	-0.007591870432868103	--
5	PHYLLOQUINONE	Fruit		0.03	-0.22830354526872618	--
0	PHYTATE	Fruit	60.0	230.0	-0.7115399295657975	--
2	PHYTOSTEROLS	Fruit	120.0	1423.0	0.6153155617902918	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Leaf	1400.0	22500.0	-0.34637690026129236	--
0	POTASSIUM-OXIDE	Plant				--
0	PROLINE	Fruit	190.0	1898.0	-0.5790837750793335	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Fruit	5840.0	85000.0	-0.3284135816822552	--
43	PROTocatechuic-acid	Fruit				Jim Duke's personal files.
4	PUFA	Fruit	1860.0	22064.0	0.7399869193808079	USDA's Ag Handbook 8 and sequelae)
176	QUERCETIN	Leaf				--
0	QUERCETIN-3-BETA-GLUCURONIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	QUERCETIN-3-BETA-MONOGLUCOSIDE	Fruit				--
44	QUERCITRIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	RIBOFLAVIN	Fruit	0.7	8.0	0.6405083179917069	--
0	RUBIDIUM	Fruit	0.2	6.5	-0.943358390882709	ACTA AGRIC SCAND SUPPL 22: 1980
7	SALICYLATES	Fruit		0.0	-0.3367420403588193	--
34	SALICYLIC-ACID	Fruit				Jim Duke's personal files.
60	SELENIUM	Fruit		0.002	-0.38569128420884563	ACTA AGRIC SCAND SUPPL 22: 1980
1	SERINE	Fruit	230.0	2728.0	-0.3230423473380366	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SFA	Fruit	200.0	2372.0	-0.3270654285846573	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Fruit	10.0	270.0	0.26877965042190327	ACTA AGRIC SCAND SUPPL 22: 1980
1	SODIUM	Fruit	8.0	106.0	-0.17389892550320743	--
8	STEARIC-ACID	Fruit	40.0	475.0	-0.247720388391621	USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Fruit				Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
14	SULFUR	Fruit	77.0	1270.0	-0.1006191251666038	ACTA AGRIC SCAND SUPPL 22: 1980
35	TANNIN	Leaf				--
31	THIAMIN	Fruit	0.2	4.0	-0.17059389090821606	--
4	THREONINE	Fruit	190.0	2254.0	-0.3174631766963803	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Fruit	70.0	830.0	-0.028696011182569342	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Fruit	180.0	2135.0	-0.47826740141347635	USDA's Ag Handbook 8 and sequelae)
24	VANILLIC-ACID	Fruit	3.0	25.0	-1.0	Jim Duke's personal files.
0	VIT-B-6	Fruit	0.6	7.0	-0.2026929167328342	USDA's Ag Handbook 8 and sequelae)
0	WATER	Fruit	870000.0	917000.0	0.6366664032869477	--
77	ZINC	Fruit	1.1	17.0	-0.40018873103446667	--