

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Vitis vinifera*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ZIRCONIUM	Fruit	0.44	1.54	-0.41983235298720856	--
77	ZINC	Stem		75.0	-0.6142974269256724	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
77	ZINC	Fruit	0.4	27.0	-0.09932995693106657	--
5	ZEAXANTHIN	Fruit				--
0	ZEATIN-RIBOSIDE	Resin, Exudate, Sap				--
2	ZEATIN	Resin, Exudate, Sap				--
3	XYLOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	WATER	Stem		792000.0	0.21078766023930146	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	WATER	Fruit	761000.0	897000.0	0.5497045312138683	--
0	VOMIFOLIOL	Fruit				--
0	VITISPIRANE	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)
0	VITIS-ARABINO GALACTAN-PROTEIN-AG-P	Fruit				--
0	VITILAGIN	Leaf		89.0		--
0	VITAMIN-B-6	Fruit	1.0	6.0		USDA's Ag Handbook 8 and sequelae)
0	VIT-B-6	Fruit	1.0	6.0	-0.3708031557292606	--
2	VIOLAXANTHIN	Fruit				--
28	VANILLIN	Fruit				--
0	VANILLIC-ALDEHYDE	Leaf				--
24	VANILLIC-ACID	Leaf				--
24	VANILLIC-ACID	Hull Husk				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	VALINE	Fruit	180.0	926.0	-0.7277174826511351	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	URSOLIC-ALDEHYDE	Stem				--
89	URSOLIC-ACID	Fruit				--
8	TYROSINE	Fruit	120.0	617.0	-0.7465880361585973	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Fruit	30.0	154.0	-0.9774261540468739	USDA's Ag Handbook 8 and sequelae)
0	TRIACONTAN-1-OL-TRIDECANOATE	Root				--
1	TRIACONTAN-1-OL	Root				--
5	TRANS-RESVERATROL	Fruit				--
0	TRANS-PICEID	Fruit				--
0	TRANS-COUTARIC-ACID	Fruit Juice				--
0	TRANS-CAFTARIC-ACID	Fruit Juice				--
0	TRANS-CAFFEIC-ACID	Fruit				Jim Duke's personal files.
0	TITANIUM	Fruit	0.11	7.7	-0.5795941269861224	--
4	TIN	Stem		12.0	0.7071067811865475	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	THREONINE	Fruit	180.0	926.0	-0.8695024361765752	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Stem		11.0	0.36791183185934545	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
31	THIAMIN	Fruit	0.8	4.9	-0.05538912844659949	USDA's Ag Handbook 8 and sequelae)
0	TARTARIC-ACID-CAFFEOYL-ESTER	Fruit	15.0	20.0		--
6	TARTARIC-ACID	Fruit	15.0	20.0	-0.657218517797534	--
6	TARTARIC-ACID	Leaf				--
2	TARAXEROL	Leaf				--
2	TARAXEROL	Stem				--
2	TARAXASTEROL	Stem				--
2	TARAXASTEROL	Leaf				--
35	TANNIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	SYRINGIC-ACID	Leaf				--
6	SYRINGIC-ACID	Hull Husk				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	SYRINGALDEHYDE	Leaf				--
14	SULFUR	Fruit	7.0	888.0	-0.3664842839566224	--
0	SUGAR	Fruit	30000.0	189000.0	0.005740941518907065	--
7	SUCCINIC-ACID	Fruit				--
0	SUCCINDEHYDROGENASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	STRONTIUM	Fruit	1.54	38.5	-0.4672073193158673	--
12	STIGMASTEROL	Plant				--
12	STIGMASTEROL	Root				--
12	STIGMASTEROL	Seed				--
0	STEARIC-ACID-BUTYL-ESTER	Seed				--
8	STEARIC-ACID	Seed	1440.0	4800.0	-0.4612463396361093	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	STEARIC-ACID	Seed Oil				--
1	STACHYOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
10	SQUALENE	Seed				--
10	SQUALENE	Seed Oil				--
1	SODIUM	Fruit	2.0	454.0	-0.1408984763342879	--
1	SODIUM	Stem		156.0	-0.5194124752401025	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
9	SINAPIC-ACID	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	SILVER	Fruit	0.022	0.077	-0.5251184109620559	--
4	SILICON	Stem		365.0	-0.5461064151412073	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	SILICON	Fruit	1.0	28.0	-0.5174716882721563	ACTA AGRIC SCAND SUPPL 22: 1980
14	SHIKIMIC-ACID	Root				--
14	SHIKIMIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	SFA	Fruit	1890.0	9722.0	-0.16575412818647417	USDA's Ag Handbook 8 and sequelae)
1	SERINE	Fruit	320.0	1646.0	-0.7050443362120865	USDA's Ag Handbook 8 and sequelae)
60	SELENIUM	Stem		18.0	1.924519185907645	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
60	SELENIUM	Fruit	0.0	0.012	-0.3832115202693911	--
34	SALICYLIC-ACID	Root				--
34	SALICYLIC-ACID	Leaf				--
7	SALICYLATES	Fruit	2.0	80.0	-0.1073449080720807	--
87	RUTIN	Leaf				--
0	RUBIDIUM	Fruit	0.4	5.5	-1.0186549557194133	ACTA AGRIC SCAND SUPPL 22: 1980
0	ROSEOSIDE	Fruit				--
15	RIBOFLAVIN	Stem		6.9	-0.48723714845751276	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	RIBOFLAVIN	Plant	0.5	3.2	-0.5722447215531815	--
68	RESVERATROL	Fruit Juice	0.06	3.3		Creasy, L. L., Creasy, M. T. 1998. Grape Chemistry and the Significance of Resveratrol: An Overview. Pharm. Biol., 36: 8-13.
68	RESVERATROL	Fruit		13.3		--
68	RESVERATROL	Leaf	375.0	90400.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
68	RESVERATROL	Shoot				--
1	RAFFINOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	QUINIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	QUINIC-ACID	Fruit				Jim Duke's personal files.
1	QUINIC-ACID	Root				--
44	QUERCITRIN	Leaf				--
44	QUERCITRIN	Fruit				--
6	QUERCIMERITRIN	Leaf				--
0	QUERCETIN-GLUCURONOSIDE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	QUERCETIN-3-O-GLUCOSIDE	Plant				--
0	QUERCETIN-3-GLUCURONIDE	Leaf				--
176	QUERCETIN	Leaf				--
176	QUERCETIN	Fruit	0.5	16.0	-0.7176094612628865	--
1	PYRROLIDINE	Fruit Juice				--
0	PYROPHOSPHATASE-NUCLOETIDE	Root				--
4	PUFA	Fruit	1690.0	8693.0	-0.21721248210881625	USDA's Ag Handbook 8 and sequelae)
19	PTEROSTILBENE	Leaf				--
0	PROTOPECTINASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
43	PROTocatechuic-acid	Leaf				--
1	PROTocatechualdehyde	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	PROTocatechualdehyde	Fruit				--
0	PROTEIN	Seed	70000.0	100000.0	-1.190185310672251	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PROTEIN	Fruit	6350.0	35236.0	-0.9955216411354211	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Stem		89000.0	-0.7071067811865476	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROLINE	Fruit	220.0	1132.0	-0.7893812127923229	USDA's Ag Handbook 8 and sequelae)
27	PROCYANIDINS	Fruit				--
0	PROCYANIDIN-G	Pericarp				--
1	PROCYANIDIN-C-2	Seed				--
0	PROCYANIDIN-C-1	Leaf				--
0	PROCYANIDIN-C-1	Seed				--
0	PROCYANIDIN-B1,3'-O-GALLATE	Seed				--
0	PROCYANIDIN-B-8	Seed				--
0	PROCYANIDIN-B-7	Seed				--
1	PROCYANIDIN-B-6	Seed				--
0	PROCYANIDIN-B-5	Seed				--
0	PROCYANIDIN-B-4-3'-GALLATE	Seed				--
4	PROCYANIDIN-B-4	Pericarp				--
4	PROCYANIDIN-B-4	Leaf				--
4	PROCYANIDIN-B-4	Seed				--
2	PROCYANIDIN-B-3	Pericarp				--
2	PROCYANIDIN-B-3	Leaf				--
2	PROCYANIDIN-B-3	Seed				--
3	PROCYANIDIN-B-2-3,3'-DI-O-GALLATE	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	PROCYANIDIN-B-2-3'-O-GALLATE	Seed				--
3	PROCYANIDIN-B-2-3'-O-GALLATE	Fruit				--
0	PROCYANIDIN-B-2-3'-O-GALLATE	Leaf				--
1	PROCYANIDIN-B-2	Pericarp				--
1	PROCYANIDIN-B-2	Leaf				--
1	PROCYANIDIN-B-2	Seed				--
1	PROCYANIDIN-B-1	Pericarp				--
1	PROCYANIDIN-B-1	Seed				--
1	PROCYANIDIN-B-1	Leaf				--
0	PROANTHOCYANIDIN-POLYMER	Fruit				--
0	PROANTHOCYANIDIN-B4	Leaf	7.0	37.0		--
0	PROANTHOCYANIDIN-B3	Leaf	7.0	37.0		--
0	PROANTHOCYANIDIN-B2-3,3'-O-GALLATE	Leaf	0.0	4.0		--
0	PROANTHOCYANIDIN-B2-3'-O-GALLATE	Leaf	3.0	25.0		--
0	PROANTHOCYANIDIN-B2	Leaf	17.0	94.0		--
0	PROANTHOCYANIDIN-B1-3-O-GALLATE	Leaf	0.0	6.0		--
0	PROANTHOCYANIDIN-B1	Leaf	88.0	333.0		--
1	POTASSIUM-BITARTRATE	Leaf				--
14	POTASSIUM	Stem		20100.0	0.5104500914352443	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	POTASSIUM	Fruit	1784.0	24640.0	0.5948517865626541	--
0	POPULNIN	Leaf				--
0	POLYPHENOL-OXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	PICEID	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	PHYTOSTEROLS	Fruit	40.0	206.0	-0.9525233048912787	USDA's Ag Handbook 8 and sequelae)
0	PHYTOFLUENE	Fruit				--
0	PHYTOENE	Fruit				--
5	PHYLLOQUINONE	Fruit	0.04	0.09	-0.21889420119445582	--
4	PHOSPHORUS	Stem		1710.0	-0.5945154579676041	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	PHOSPHORUS	Fruit	117.0	1848.0	-0.41551440624393526	--
0	PHOSPHODIESTERASE	Root				--
0	PHOSPHATIDYL-SERINE	Seed				--
0	PHOSPHATIDYL-INOSITOL	Seed				--
0	PHENYLPROPANOIC-ACIDS	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
7	PHENYLALANINE	Fruit	140.0	720.0	-0.9037071292147459	USDA's Ag Handbook 8 and sequelae)
1	PETUNIDIN-3-O-BETA-D-GLUCOSIDE	Exocarp				--
1	PETUNIDIN-3-O-BETA-D-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	PETUNIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
0	PETUNIDIN-3-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PETUNIDIN-3-CAFFEYOYLGLUCOSIDE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PETUNIDIN-3-(6-P-COUMAROYLGLUCOSIDE)	Fruit				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
0	PETUNIDIN-3,5-DIGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	PETUNIDIN	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PEROXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PEONIDIN-3-P-COUMAROYL-GLUCOSIDE	Tissue Culture				--
1	PEONIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
1	PEONIDIN-3-O-BETA-D-GLUCOSIDE	Exocarp				--
1	PEONIDIN-3-O-BETA-D-GLUCOSIDE	Tissue Culture				--
3	PEONIDIN	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
7	PELARGONIDIN	Fruit				--
0	PECTIN-METHYL-ESTERASE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	PECTIN	Fruit	300.0	3900.0	-0.5839446324584245	--
24	PECTIN	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
11	PANTOTHENIC-ACID	Fruit	0.2	1.3	-1.0718946042703752	USDA's Ag Handbook 8 and sequelae)
0	PALMITIC-ACID-BUTYL-ESTER	Seed				--
13	PALMITIC-ACID	Seed	3300.0	11000.0	-0.472635357644977	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	PALMITIC-ACID	Fruit	1620.0	8333.0	-0.23580842316871725	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Seed Oil				--
0	PAEONIDIN-3-O-GLUCOSIDE	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	PAEONIDIN-3-O-BETA-D-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PAEONIDIN-3-CAFFEYOYLGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PAEONIDIN-3-5,-DIGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PAEONIDIN-3-(6-P-COUMAROYLGLUCOSIDE)	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PAEONIDIN	Fruit				--
13	P-HYDROXY-BENZOIC-ACID	Leaf				--
13	P-HYDROXY-BENZOIC-ACID	Root				--
13	P-HYDROXY-BENZOIC-ACID	Hull Husk				--
0	P-COUMAROYL-TRANS-TARTRATE	Fruit				--
0	P-COUMAROYL-CIS-TARTRATE	Fruit				--
25	P-COUMARIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	OXALIC-ACID	Fruit		34.0	-0.3044741963579158	--
25	OPCS	Leaf	170.0	640.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	OLEIC-ACID	Seed	22200.0	74000.0	-0.3707767625520139	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
18	OLEIC-ACID	Plant	230.0	1183.0	-0.7096693225803793	--
18	OLEIC-ACID	Seed Oil				--
0	OLEANOLIC-ALDEHYDE	Stem				--
1	OLEANOLIC-ACID-METHYL-ESTER	Leaf				--
64	OLEANOLIC-ACID	Pericarp				--
64	OLEANOLIC-ACID	Leaf Wax				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OENIN	Pericarp				Chemical Constituents of Oriental Herbs (3 diff. books)
0	OENIN	Petiole				--
0	OCTAN-1-OL	Stem				--
0	OBTUSIFOLIOL	Stem				--
0	O-HYDROXYBENZOIC-ACID	Hull Husk				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	NUCLEOTIDE-PYROPHOSPHATASE	Root				--
0	NONANAL	Seed				--
2	NONACOSANE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	NITROGEN	Fruit	1100.0	7220.0	-0.519032430701182	ACTA AGRIC SCAND SUPPL 22: 1980
3	NICKEL	Fruit	0.01	0.77	-0.5452883169082009	--
39	NIACIN	Stem				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
39	NIACIN	Fruit	3.0	15.4	-0.605557161390472	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NEROL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	NEROL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	NEROL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	NEROL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	NEROL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	NEROL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	NEROL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
10	NEROL	Leaf				--
2	NEOXANTHIN	Fruit				--
2	NEO-CHLOROGENIC-ACID	Fruit		20.0		--
0	N-PROPYL-AMINE	Fruit Juice				--
0	N(6)-ISO-PENTENYL-ADENINE	Resin, Exudate, Sap				--
6	MYRISTIC-ACID	Fruit	50.0	257.0	-0.25701951929746253	USDA's Ag Handbook 8 and sequelae)
0	MYRICETIN-3-O-BETA-D-GLUCOSIDE	Leaf				--
0	MYRICETIN-3-MONOGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
34	MYRICETIN	Fruit	1.0	9.3	0.39776676515655446	--
0	MUTATOXANTHIN	Fruit				--
13	MUFA	Fruit	230.0	1183.0	-0.23678373998760255	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MONOFERULYLSUCCINIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MONOCAFFEYOYL-TARTARIC-ACID	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	MONOCAFFEIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MONOCAFFEIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MONO-P-COUMARYL-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MONO-P-COUMARYL-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	MOLYBDENUM	Fruit	0.1	0.539	-0.37721248118680145	--
1	METHYL-AMINE	Fruit Juice				--
15	METHIONINE	Fruit	220.0	1132.0	0.21362860728552646	USDA's Ag Handbook 8 and sequelae)
1	MERCURY	Fruit	0.0	0.011	-0.3194372671514748	--
0	MELIBIOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	MEGASTIGM-5-EN-7-YNE-3,9-DIOL	Fruit Juice				--
14	MANGANESE	Stem		986.0	-0.3806285370071949	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	MANGANESE	Fruit	0.5	54.0	-0.047468534240292154	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MALVIDIN-MONOGLUCOSIDE	Tissue Culture				--
0	MALVIDIN-3-O-BETA-D-GLUCOSIDE	Exocarp				--
0	MALVIDIN-3-O-BETA-D-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MALVIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
0	MALVIDIN-3-GLUCOSIDE	Fruit				--
0	MALVIDIN-3-CHLOROGENIC-ACID-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MALVIDIN-3-CAFFEYOYLGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MALVIDIN-3-(P-COUMAROYLGLUCOSIDE)	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MALVIDIN-3-(6-P-COUMAROYLGLUCOSIDE)-5-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	MALVIDIN	Fruit				--
15	MALIC-ACID	Plant				--
15	MALIC-ACID	Fruit	1500.0	2000.0	-0.8215787018847368	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
65	MAGNESIUM	Stem		4360.0	-0.17001174539444178	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
65	MAGNESIUM	Fruit	58.0	2310.0	0.08347231535472893	--
4	LYSINE	Fruit	150.0	772.0	-0.8656782702911159	USDA's Ag Handbook 8 and sequelae)
16	LYCOPENE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LUTEOXANTHIN	Fruit				--
78	LUTEOLIN	Leaf				--
0	LUTEIN-5-8-EPOXIDE	Fruit				--
0	LUTEIN-5,6-EPOXIDE	Fruit				--
15	LUTEIN	Fruit	0.7	7.0	-0.22996142536614406	--
21	LUPEOL	Leaf				--
21	LUPEOL	Root				--
21	LUPEOL	Stem				--
11	LITHIUM	Fruit	0.088	0.308	-0.672367806726868	--
0	LINOLENIC-ACID	Seed Oil				--
0	LINOLEIC-ACID-ETHYL-ESTER	Seed				--
27	LINOLEIC-ACID	Seed	33000.0	110000.0	0.02465730498455117	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
27	LINOLEIC-ACID	Fruit	1300.0	6687.0	-0.26105644413514206	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Seed Oil				--
0	LINALOOL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	LINALOOL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	LINALOOL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	LINALOOL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
53	LINALOOL	Leaf Essent. Oil		273000.0	1.032803610048003	--
53	LINALOOL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINALOL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	LINALOL-6-0-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	LINALOL-6-0-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	LINALOL-6-0-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	LINALOL	Fruit				--
0	LINALOL	Leaf Essent. Oil		273000.0	1.0	--
60	LIMONENE	Plant				Stitt, Paul. Why George should eat broccoli.
1	LEUCOCYANIDIN	Plant				--
0	LEUCOANTHOCYANIDOLE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	LEUCINE	Fruit	140.0	720.0	-0.9313808451068529	USDA's Ag Handbook 8 and sequelae)
20	LECITHIN	Seed				--
0	LEAD	Fruit	0.02	9.0	0.04188042425593692	--
8	LACTIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	KAEMPFEROL-3-O-GLUCOSIDE	Plant				--
0	KAEMPFEROL-3-MONOGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
75	KAEMPFEROL	Leaf				--
75	KAEMPFEROL	Fruit		2.0	-0.5794291374991353	--
0	JU	Plant				--
0	JASMONIC-ACID	Bud				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOVITILAGIN	Leaf		163.0		--
22	ISOQUERCITRIN	Leaf				--
3	ISOLEUCINE	Fruit	50.0	257.0	-1.0154078969360296	USDA's Ag Handbook 8 and sequelae)
4	ISOCHLOROGENIC-ACID	Fruit		200.0	-1.0	--
0	ISOBUTYL-AMINE	Fruit Juice				--
0	ISOAMYL-AMINE	Fruit Juice				--
6	IRON	Stem		900.0	0.1561374515042096	--
6	IRON	Fruit	1.5	154.0	0.08338831118036903	--
8	INOSITOL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
30	HYPEROSIDE	Leaf				--
0	HYDROXY-CITRONELLOL	Essential Oil				--
7	HISTIDINE	Fruit	240.0	1235.0	-0.33486171560742833	USDA's Ag Handbook 8 and sequelae)
0	HIRSUTRIN	Leaf				--
0	HEXOKINASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	HEPTACOSAN-1-OL	Root				--
0	HENTRIACONTANE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	GRASSHOPPER-KETONE	Fruit Juice				--
4	GLYCOLIC-ACID	Leaf				--
12	GLYCINE	Fruit	200.0	1029.0	-0.9963335342523983	USDA's Ag Handbook 8 and sequelae)
3	GLYCERIC-ACID	Leaf				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
8	GLUTAMIC-ACID	Fruit	1380.0	7099.0	-0.47772044794013085	USDA's Ag Handbook 8 and sequelae)
0	GLUCOSE-6-PHOSPHATE-DEHYDROGENASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	GLUCOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	GERMANICOL	Stem				--
0	GERANIOL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	GERANIOL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	GERANIOL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
35	GERANIOL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
35	GERANIOL	Leaf Essent. Oil		145200.0	0.2933293044777782	--
8	GENTISIC-ACID	Leaf				--
8	GENTISIC-ACID	Hull Husk				--
2	GAMMA-CAROTENE	Fruit				--
0	GALLOYL-PROCYANIDIN	Leaf				--
0	GALLOCATECHIN	Leaf				--
0	GALLOCATECHIN	Hr				--
0	GALLOCATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
62	GALLIC-ACID	Leaf				--
62	GALLIC-ACID	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
62	GALLIC-ACID	Root				--
62	GALLIC-ACID	Fruit				--
0	GALACTURONIC-ACID	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	GALACTOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
22	GABA	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	FUMARIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	FRUCTOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FR	Plant				--
13	FORMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	FOLACIN	Fruit	0.03	0.23	-0.7424982313124213	USDA's Ag Handbook 8 and sequelae)
0	FLUORINE	Fruit	0.1	0.6	-0.744462097809404	ACTA AGRIC SCAND SUPPL 22: 1980
0	FLAVONOL-GLUCOSIDES	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	FLAVONOIDS	Leaf	40000.0	50000.0	1.097856271722259	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	FIBER	Fruit	4210.0	24640.0	-1.104411552185134	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FERULOYL-SUCCINIC-ACID	Plant				--
61	FERULIC-ACID	Fruit				--
0	FERTARIC-ACID	Fruit				--
0	FAT	Seed	60000.0	200000.0	-0.34441983215421706	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FAT	Fruit	5010.0	33898.0	-0.3823418924511751	USDA's Ag Handbook 8 and sequelae)
0	ETHYL-AMINE	Fruit Juice				--
2	ERUCIC-ACID	Seed				--
5	ERGOSTEROL	Fruit				--
4	EPSILON-VINIFERIN	Leaf		30900.0		--
1	EPICATECHIN-3-O-GALLATE	Seed				--
1	EPICATECHIN-3-O-GALLATE	Fruit				--
0	EPICATECHIN-3-GALLATE	Seed				--
0	EPICATECHIN-3-GALLATE	Fruit				--
40	EPICATECHIN	Seed				--
40	EPICATECHIN	Fruit				--
0	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-3-O-GALLATE-(4-BETA-8)-CATECHIN	Seed				--
0	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-(4-BETA-8)-CATECHIN	Seed				--
0	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-(4-BETA-6)-EPI-CATECHIN	Seed				--
0	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-(4-BETA-6)-CATECHIN	Seed				--
0	EPI-CATECHIN-(4-BETA-6)-EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN	Seed				--
0	EPI-CATECHIN-(4-BETA-6)-EPI-CATECHIN-(4-BETA-8)-CATECHIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ENOTANNIN	Seed				--
0	ENOMELANIN	Fruit				--
0	ENOMELANIN	Plant				--
0	ENGELETIN	Pericarp				--
51	ELLAGIC-ACID	Fruit				--
0	ELEMOL-ACETATE	Leaf Essent. Oil		130200.0		--
2	DIMETHYL-AMINE	Fruit Juice				--
1	DIHYDROZEATIN	Resin, Exudate, Sap				--
0	DIHYDROQUERCETIN-3-RHAMNOSIDE	Pericarp				--
0	DIHYDROPHASEIC-ACID-4'-BETA-D-GLUCOSIDE	Fruit				--
0	DIHYDROKAEMPFEROL-3-RHAMNOSIDE	Pericarp				--
0	DIHYDROFURAN-I	Fruit Juice				--
2	DIETHYL-AMINE	Fruit Juice				--
1	DELPHINIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
0	DELPHINIDIN-3-CAFFEYOYLGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DELPHINIDIN-3-0-BETA-D-GLUCOSIDE	Fruit				--
0	DELPHINIDIN-3-(P-COUMAROYLGLUCOSIDE)-5-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DELPHINIDIN-3-(6-P-COUMAROYLGLUCOSIDE)	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DELPHINIDIN-3,5-DIGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	DELPHINIDIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DEHYDROVOMIFOLIOL	Fruit				--
0	DEHYDROHEXAHYDROXY DIPHENIC-ACID	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	DAMASCENONE	Fruit Juice	0.013	0.085		--
4	D-CATECHIN	Leaf				--
4	D-CATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	CYSTINE	Fruit	110.0	566.0	-0.4853602292193013	USDA's Ag Handbook 8 and sequelae)
7	CYCLOARTENOL	Stem				--
5	CYANIN	Tissue Culture				--
19	CYANIDIN-3-O-GLUCOSIDE	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
19	CYANIDIN-3-O-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CYANIDIN-3-GLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CYANIDIN-3-GALACTOSIDE	Fruit				--
7	CYANIDIN	Fruit				--
7	CYANIDIN	Pericarp				--
2	CRYPTOXANTHIN	Fruit				--
0	CRYPTOCHLOROGENIC- ACID	Fruit				Jim Duke's personal files.
57	COUMARIN	Fruit				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
12	COPPER	Fruit	0.7	11.6	-0.09487047254583593	--
5	CONIFERYL-ALDEHYDE	Fruit				--
2	COBALT	Stem		33.0	0.7427055671504605	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
2	COBALT	Fruit	0.005	0.22	-0.5084821806978201	--
1	CITROSTADIENOL	Stem				--
15	CITRONELLOL	Leaf				--
23	CITRIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	CITRIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	CIS-RESVERATROL	Fruit				--
0	CIS-PICEID	Fruit				--
0	CIS-COUTARIC-ACID	Fruit Juice				--
0	CIS-CAFTARIC-ACID	Fruit Juice				--
0	CIS-CAFFEIC-ACID	Fruit				Jim Duke's personal files.
18	CINNAMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	CINNAMALDEHYDE	Fruit				--
24	CHROMIUM	Stem		9.0	0.4664861453042604	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
24	CHROMIUM	Fruit	0.005	0.385	-0.45355683651553846	--
1	CHOLESTEROL	Fruit				--
77	CHLOROGENIC-ACID	Root				--
77	CHLOROGENIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	CHLOROGENIC-ACID	Shoot				--
77	CHLOROGENIC-ACID	Fruit		1400.0	0.11655949578196001	--
1	CEPHALIN	Seed				--
0	CATECHOL-OXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
43	CATECHIN	Seed				--
1	CATALASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CARBOHYDRATES	Fruit	177700.0	914095.0	0.7016650651905534	USDA's Ag Handbook 8 and sequelae)
2	CAMPESTEROL	Plant				Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	CAMPESTEROL	Seed				--
0	CALCIUM-PECTATE	Leaf		69000.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
28	CALCIUM	Stem		17700.0	-0.11330590567075993	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	CALCIUM	Fruit	92.0	4774.0	0.2117719310786729	--
3	CAFTARIC-ACID	Fruit				--
0	CAFFEYLTARTARIC-ACID	Fruit				--
3	CAFFEOYLTARTARIC-ACID	Fruit				Jim Duke's personal files.
0	CAFFEOYL-TARTRATE	Fruit				Jim Duke's personal files.
102	CAFFEIC-ACID	Fruit				--
102	CAFFEIC-ACID	Root				--
102	CAFFEIC-ACID	Leaf				--
3	CADMIUM	Fruit	0.001	0.231	0.03526712239341311	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BROMINE	Fruit		1.0	-0.42563543443835	USDA's Ag Handbook 8 and sequelae)
0	BREVILAGIN-I	Leaf		533.3		--
4	BORON	Fruit	1.0	50.0	0.20278384568897864	--
4	BIOTIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	BETULINIC-ACID	Root				--
14	BETAINE	Fruit Juice				--
47	BETA-SITOSTEROL	Fruit	30.0	150.0	-0.5971588891273873	--
47	BETA-SITOSTEROL	Seed				--
0	BETA-PHENYLETHANOL-BETA-D-RUTINOSIDE	Fruit Juice				--
0	BETA-PHENYLETHANOL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	BETA-PHENYLETHANOL-6-BETA-D-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
13	BETA-IONONE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
53	BETA-CAROTENE	Stem		43.0	-0.5551411085990826	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
53	BETA-CAROTENE	Fruit	0.5	2.1	-0.14674136696680995	--
9	BETA-AMYRIN	Stem				--
9	BETA-AMYRIN	Leaf				--
0	BETA-3-OXO-DAMASCONE	Fruit Juice				--
0	BENZYL-ALCOHOL-BETA-D-RUTINOSIDE	Leaf				--
0	BENZYL-ALCOHOL-BETA-D-GLUCOSIDE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BENZYL-ALCOHOL-6-O-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Leaf				--
9	BENZYL-ALCOHOL	Leaf				--
0	BENZYL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
20	BENZOIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	BARIUM	Fruit	0.66	15.4	-0.5127937102474286	--
0	B-HEMICELLULOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	ASTRAGALIN	Leaf				--
1	ASTILBIN	Pericarp				--
0	ASRAGALIN	Flower				--
3	ASPARTIC-ACID	Fruit	810.0	4167.0	-0.78714800256649	USDA's Ag Handbook 8 and sequelae)
0	ASH	Stem		88000.0	0.9172643481683129	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ASH	Fruit	4290.0	77000.0	0.526613994855476	--
0	ASCORBIC-ACID-OXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
112	ASCORBIC-ACID	Stem		310.0	-1.1858763373403332	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
112	ASCORBIC-ACID	Leaf	3490.0	3870.0	-0.08483341087930922	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
112	ASCORBIC-ACID	Fruit	99.0	600.0	-0.24718280983607235	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ARSENIC	Fruit	0.001	0.889	0.6023550350459049	--
14	ARGININE	Fruit	490.0	2520.0	-0.47739653189299114	USDA's Ag Handbook 8 and sequelae)
30	ANTHOCYANINS	Leaf		3000.0		Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
30	ANTHOCYANINS	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
30	ANTHOCYANINS	Fruit				--
10	ANTHOCYANIDINS	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	ANTHERAXANTHIN	Fruit				--
5	ALUMINUM	Stem		1030.0	0.044464754302322065	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	ALUMINUM	Fruit	1.0	154.0	-0.1787194752035278	--
0	ALPHA-VINIFERIN	Leaf		23400.0		--
32	ALPHA-TOCOPHEROL	Fruit	6.0	31.0	-0.6444565233542005	--
23	ALPHA-TERPINEOL	Leaf Essent. Oil		108000.0	1.3174552815097405	--
15	ALPHA-LINOLENIC-ACID	Fruit	390.0	2006.0	-0.24402755757732797	USDA's Ag Handbook 8 and sequelae)
0	ALPHA-HYDROXY-CAROTENE	Fruit				--
7	ALPHA-CAROTENE	Fruit				--
10	ALPHA-AMYRIN	Stem				--
0	ALPHA-AMYL-AMINE	Fruit Juice				--
0	ALPHA-3-OXO-IONONE	Fruit Juice				--
0	ALPHA-3-OXO-DAMASCONONE	Fruit Juice				--
3	ALANINE	Fruit	280.0	1440.0	-0.8911912580591054	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ACUMINOSIDE	Fruit Juice				--
16	ACETIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
16	ACETIC-ACID	Fruit	1500.0	2000.0	-0.06645757225743394	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	ABSCISSIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	A-HEMICELLULOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	9-HYDROXY-MEGASTIGM-4,6,7-TRIEN-3-ONE	Fruit Juice				--
0	6-9-DIHYDROXY-MEGASTIGM-7-EN-3-ONE	Fruit				--
3	4-HYDROXYBENZALDEHYDE	Leaf				--
0	30-NOR-LUPAN-3-BETA-OL-20-ONE	Root				--
0	3-OXO-OLEAN-12-EN-28-OIC-ACID	Pericarp				--
0	3-OXO-BETA-DAMASCONE	Fruit Juice				--
0	3-OXO-ALPHA-IONOL	Fruit				--
0	3-HYDROXY-BETA-DAMASCONE	Fruit Juice				--
0	3-BETA-HYDROXY-OLEAN-12-EN-28-ALDEHYDE	Pericarp				--
0	3-BETA-29-DIHYDROXY-OLEAN-12-EN-28-OIC-ACID	Pericarp				--
0	3,7-DIMETHYL-OCTA-1,7-DIEN-3,6-DIOL	Fruit				--
0	3,7-DIMETHYL-OCTA-1,6-DIEN-3,5-DIOL	Fruit				--
0	3,7-DIMETHYL-OCTA-1,5-DIEN-3,7-DIOL	Fruit				--
0	3,7-DIMETHYL-OCTA-1,5,7-TRIEN-3-OL	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3,7-DIMETHYL-OCT-1-ENE-3,7-DIOL	Fruit				--
0	3,7-DIMETHYL-OCT-1-ENE-3,6,7-TRIOL	Fruit				--
0	24-METHYL-CYCLOARTENOL	Stem				--
0	2-TRANS-HEPTANAL	Seed				--
0	2-TRANS-DECENAL	Seed				--
0	2-TRANS-4-CIS-DECADIENAL	Seed				--
0	2-PHENYLETHYL-AMINE	Fruit Juice				--
0	2-PHENYLETHAN-2-OL-6-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit				--
0	2-PHENYLETHAN-2-OL-6-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	2-PHENYLETHAN-1-OL	Leaf				--
0	2-METHOXY-3-ISOBUTYL-PYRAZINE	Stem				--
0	2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-BETA-D-GLUCOPYRANOSIDE	Plant				--
0	2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-6-O-ALPHA-D-ARABINOFURANOSYL-BETA-D-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	2,6-DIMETHYL-TRANS,TRANS-OCTA-2,6-DIEN-1,8-DIOL	Fruit				--
0	2,2,6-TRIMETHYL-8-(1-HYDROXY-ETHYL)-7-OXA-BICYCLO-(4,3,0)-NONA-4,9-DIENE	Fruit				--
0	2,2,6-TRIMETHYL-8-(1-HYDRFOXY-ETHYL)-7-OXA-BICYCLO-(4,3,0)-NONA-4,9-DIENE	Fruit				--
0	16-BETA-HYDROXY-3-OXOLEAN-12-EN-28-OIC-ACID	Pericarp				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	16-BETA-HYDROXY-3-OXO-OLEAN-1-12-DIEN-28-OIC-ACID	Pericarp				--
0	(DL)-GALLOCATECHIN	Leaf				--
0	(-)-GALLOCATECHIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
21	(-)-EPIGALLOCATECHIN	Leaf				--
0	(-)-EPICATECHIN-3-GALLATE	Leaf				--
38	(-)-EPICATECHIN	Seed				--
38	(-)-EPICATECHIN	Leaf				--
38	(-)-EPICATECHIN	Pericarp				--
38	(-)-EPICATECHIN	Fruit				--
7	(+)-GALLOCATECHIN	Leaf				--
30	(+)-CATECHIN	Pericarp				--
30	(+)-CATECHIN	Leaf				--
30	(+)-CATECHIN	Seed				--