

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Vitis vinifera*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Fruit	0.5	16.0	-0.7176094612628865	--
176	QUERCETIN	Leaf				--
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)
102	CAFFEIC-ACID	Root				--
102	CAFFEIC-ACID	Fruit				--
102	CAFFEIC-ACID	Leaf				--
89	URSOLIC-ACID	Fruit				--
87	RUTIN	Leaf				--
78	LUTEOLIN	Leaf				--
77	CHLOROGENIC-ACID	Leaf				--
77	CHLOROGENIC-ACID	Shoot				--
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	--
77	CHLOROGENIC-ACID	Root				--
77	CHLOROGENIC-ACID	Fruit		1400.0	0.11655949578196001	--
75	KAEMPFEROL	Leaf				--
75	KAEMPFEROL	Fruit		2.0	-0.5794291374991353	--
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		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
68	RESVERATROL	Shoot				--
68	RESVERATROL	Leaf	375.0	90400.0		--
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	--
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.
62	GALLIC-ACID	Leaf				--
62	GALLIC-ACID	Seed				--
62	GALLIC-ACID	Root				--
62	GALLIC-ACID	Fruit				--
61	FERULIC-ACID	Fruit				--
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	--
60	CINNAMALDEHYDE	Fruit				--
60	LIMONENE	Plant				Stitt, Paul. Why George should eat broccoli.
57	COUMARIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
53	LINALOOL	Leaf Essent. Oil		273000.0	1.032803610048003	--
53	BETA-CAROTENE	Stem		43.0	-0.5551411085990826	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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
53	BETA-CAROTENE	Fruit	0.5	2.1	-0.14674136696680995	--
51	ELLAGIC-ACID	Fruit				--
47	BETA-SITOSTEROL	Fruit	30.0	150.0	-0.5971588891273873	--
47	BETA-SITOSTEROL	Seed				--
44	QUERCITRIN	Leaf				--
44	QUERCITRIN	Fruit				--
43	CATECHIN	Seed				--
43	PROTOCATECHUIC-ACID	Leaf				--
40	EPICATECHIN	Seed				--
40	EPICATECHIN	Fruit				--
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)
38	(-)-EPICATECHIN	Fruit				--
38	(-)-EPICATECHIN	Seed				--
38	(-)-EPICATECHIN	Leaf				--
38	(-)-EPICATECHIN	Pericarp				--
35	TANNIN	Seed				--
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	--
34	SALICYLIC-ACID	Root				--
34	SALICYLIC-ACID	Leaf				--
34	MYRICETIN	Fruit	1.0	9.3	0.39776676515655446	--
32	ALPHA-TOCOPHEROL	Fruit	6.0	31.0	-0.6444565233542005	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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)
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	(+)-CATECHIN	Pericarp				--
30	(+)-CATECHIN	Leaf				--
30	(+)-CATECHIN	Seed				--
30	ANTHOCYANINS	Leaf		3000.0		Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
30	HYPEROSIDE	Leaf				--
30	ANTHOCYANINS	Fruit				--
29	TRYPTOPHAN	Fruit	30.0	154.0	-0.9774261540468739	USDA's Ag Handbook 8 and sequelae)
28	VANILLIN	Fruit				--
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	--
27	PROCYANIDINS	Fruit				--
27	LINOLEIC-ACID	Seed Oil				--
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)
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	OPCS	Leaf	170.0	640.0		--
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.
24	CHROMIUM	Stem		9.0	0.4664861453042604	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
24	VANILLIC-ACID	Leaf				--
24	CHROMIUM	Fruit	0.005	0.385	-0.45355683651553846	--
23	CITRIC-ACID	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				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	ALPHA-TERPINEOL	Leaf Essent. Oil		108000.0	1.3174552815097405	--
22	GABA	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				--
22	ISOQUERCITRIN	Leaf				--
21	LUPEOL	Root				--
21	LUPEOL	Stem				--
21	(-)-EPIGALLOCATECHIN	Leaf				--
21	LUPEOL	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	BENZOIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	LECITHIN	Seed				--
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.
19	PTEROSTILBENE	Leaf				--
18	OLEIC-ACID	Seed Oil				--
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	CINNAMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
16	LYCOPENE	Fruit				--
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.
15	CITRONELLOL	Leaf				--
15	METHIONINE	Fruit	220.0	1132.0	0.21362860728552646	USDA's Ag Handbook 8 and sequelae)
15	FOLACIN	Fruit	0.03	0.23	-0.7424982313124213	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Fruit	390.0	2006.0	-0.24402755757732797	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	LUTEIN	Fruit	0.7	7.0	-0.22996142536614406	--
15	MALIC-ACID	Plant				--
15	RIBOFLAVIN	Stem		6.9	-0.48723714845751276	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
15	RIBOFLAVIN	Plant	0.5	3.2	-0.5722447215531815	--
15	FIBER	Fruit	4210.0	24640.0	-1.104411552185134	USDA's Ag Handbook 8 and sequelae)
14	SHIKIMIC-ACID	Root				--
14	BETAINE	Fruit Juice				--
14	SULFUR	Fruit	7.0	888.0	-0.3664842839566224	--
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	--
14	MANGANESE	Stem		986.0	-0.3806285370071949	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	ARGININE	Fruit	490.0	2520.0	-0.47739653189299114	USDA's Ag Handbook 8 and sequelae)
14	SHIKIMIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	MANGANESE	Fruit	0.5	54.0	-0.047468534240292154	--
13	PALMITIC-ACID	Seed Oil				--
13	P-HYDROXY-BENZOIC-ACID	Leaf				--
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	P-HYDROXY-BENZOIC-ACID	Root				--
13	FORMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	PALMITIC-ACID	Fruit	1620.0	8333.0	-0.23580842316871725	USDA's Ag Handbook 8 and sequelae)
13	BETA-IONONE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
13	MUFA	Fruit	230.0	1183.0	-0.23678373998760255	USDA's Ag Handbook 8 and sequelae)
13	P-HYDROXY-BENZOIC-ACID	Hull Husk				--
12	GLYCINE	Fruit	200.0	1029.0	-0.9963335342523983	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Fruit	0.7	11.6	-0.09487047254583593	--
12	STIGMASTEROL	Root				--
12	STIGMASTEROL	Plant				--
12	STIGMASTEROL	Seed				--
11	PANTOTHENIC-ACID	Fruit	0.2	1.3	-1.0718946042703752	USDA's Ag Handbook 8 and sequelae)
11	LITHIUM	Fruit	0.088	0.308	-0.672367806726868	--
10	NEROL	Leaf				--
10	SQUALENE	Seed				--
10	SQUALENE	Seed Oil				--
10	ANTHOCYANIDINS	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
10	ALPHA-AMYRIN	Stem				--
9	BETA-AMYRIN	Stem				--
9	OXALIC-ACID	Fruit		34.0	-0.3044741963579158	--
9	SINAPIC-ACID	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	BENZYL-ALCOHOL	Leaf				--
9	BETA-AMYRIN	Leaf				--
9	DELPHINIDIN	Plant				--
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	GENTISIC-ACID	Leaf				--
8	FRUCTOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	STEARIC-ACID	Seed Oil				--
8	GENTISIC-ACID	Hull Husk				--
8	GLUTAMIC-ACID	Fruit	1380.0	7099.0	-0.47772044794013085	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Fruit	120.0	617.0	-0.7465880361585973	USDA's Ag Handbook 8 and sequelae)
8	INOSITOL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	LACTIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	GLUCOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	FUMARIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	CYCLOARTENOL	Stem				--
7	HISTIDINE	Fruit	240.0	1235.0	-0.33486171560742833	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Fruit	140.0	720.0	-0.9037071292147459	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	PICEID	Fruit				--
7	SALICYLATES	Fruit	2.0	80.0	-0.1073449080720807	--
7	CYANIDIN	Fruit				--
7	(+)-GALLOLATECHIN	Leaf				--
7	SUCCINIC-ACID	Fruit				--
7	CYANIDIN	Pericarp				--
7	ALPHA-CAROTENE	Fruit				--
7	ASTRAGALIN	Leaf				--
7	PELARGONIDIN	Fruit				--
6	IRON	Fruit	1.5	154.0	0.08338831118036903	--
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.
6	MYRISTIC-ACID	Fruit	50.0	257.0	-0.25701951929746253	USDA's Ag Handbook 8 and sequelae)
6	MALVIDIN	Fruit				--
6	QUERCIMERITRIN	Leaf				--
6	TARTARIC-ACID	Leaf				--
6	IRON	Stem		900.0	0.1561374515042096	--
6	TARTARIC-ACID	Fruit	15.0	20.0	-0.657218517797534	--
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	--
5	PHYLLOQUINONE	Fruit	0.04	0.09	-0.21889420119445582	--
5	ERGOSTEROL	Fruit				--
5	CYANIN	Tissue Culture				--
5	CONIFERYL-ALDEHYDE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	TRANS-RESVERATROL	Fruit				--
5	ZEAXANTHIN	Fruit				--
4	BORON	Fruit	1.0	50.0	0.20278384568897864	--
4	LYSINE	Fruit	150.0	772.0	-0.8656782702911159	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Stem		1710.0	-0.5945154579676041	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	BIOTIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	PHOSPHORUS	Fruit	117.0	1848.0	-0.41551440624393526	--
4	SYRINGALDEHYDE	Leaf				--
4	PROCYANIDIN-B-4	Pericarp				--
4	PROCYANIDIN-B-4	Leaf				--
4	EPSILON-VINIFERIN	Leaf		30900.0		--
4	PROCYANIDIN-B-4	Seed				--
4	TIN	Stem		12.0	0.7071067811865475	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	PUFA	Fruit	1690.0	8693.0	-0.21721248210881625	USDA's Ag Handbook 8 and sequelae)
4	KAEMPFEROL-3-O-GLUCOSIDE	Plant				--
4	THREONINE	Fruit	180.0	926.0	-0.8695024361765752	USDA's Ag Handbook 8 and sequelae)
4	ISOCHLOROGENIC-ACID	Fruit		200.0	-1.0	--
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
4	GLYCOLIC-ACID	Leaf				--
4	D-CATECHIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	D-CATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	CAFTARIC-ACID	Fruit				--
3	ASPARTIC-ACID	Fruit	810.0	4167.0	-0.78714800256649	USDA's Ag Handbook 8 and sequelae)
3	ALANINE	Fruit	280.0	1440.0	-0.8911912580591054	USDA's Ag Handbook 8 and sequelae)
3	CAFFEYOYL TARTARIC-ACID	Fruit				Jim Duke's personal files.
3	CIS-RESVERATROL	Fruit				--
3	PROCYANIDIN-B-2-3'-O-GALLATE	Fruit				--
3	NICKEL	Fruit	0.01	0.77	-0.5452883169082009	--
3	PETUNIDIN	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	ISOLEUCINE	Fruit	50.0	257.0	-1.0154078969360296	USDA's Ag Handbook 8 and sequelae)
3	SILVER	Fruit	0.022	0.077	-0.5251184109620559	--
3	ABSCISSIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	PEONIDIN	Pericarp				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	VALINE	Fruit	180.0	926.0	-0.7277174826511351	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.
3	PROCYANIDIN-B-2-3,3'-DI-O-GALLATE	Seed				--
3	CADMIUM	Fruit	0.001	0.231	0.03526712239341311	--
3	PROCYANIDIN-B-2-3'-O-GALLATE	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	XYLOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	4-HYDROXYBENZALDEHYDE	Leaf				--
2	CYSTINE	Fruit	110.0	566.0	-0.4853602292193013	USDA's Ag Handbook 8 and sequelae)
2	TARAXEROL	Leaf				--
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	DIETHYL-AMINE	Fruit Juice				--
2	TARAXASTEROL	Leaf				--
2	NEOXANTHIN	Fruit				--
2	NONACOSANE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	MOLYBDENUM	Fruit	0.1	0.539	-0.37721248118680145	--
2	NEO-CHLOROGENIC-ACID	Fruit		20.0		--
2	ZEATIN	Resin, Exudate, Sap				--
2	CRYPTOXANTHIN	Fruit				--
2	PROCYANIDIN-B-3	Pericarp				--
2	CAMPESTEROL	Seed				--
2	VIOLAXANTHIN	Fruit				--
2	PROCYANIDIN-B-3	Leaf				--
2	GAMMA-CAROTENE	Fruit				--
2	PROCYANIDIN-B-3	Seed				--
2	ARSENIC	Fruit	0.001	0.889	0.6023550350459049	--
2	PHYTOSTEROLS	Fruit	40.0	206.0	-0.9525233048912787	USDA's Ag Handbook 8 and sequelae)
2	LEUCINE	Fruit	140.0	720.0	-0.9313808451068529	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	DIMETHYL-AMINE	Fruit Juice				--
2	TARAXASTEROL	Stem				--
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	--
2	TARAXEROL	Stem				--
2	ERUCIC-ACID	Seed				--
1	PROTocatechualdehyde	Leaf				--
1	ANTHERAXANTHIN	Fruit				--
1	QUINIC-ACID	Fruit				Jim Duke's personal files.
1	SERINE	Fruit	320.0	1646.0	-0.7050443362120865	USDA's Ag Handbook 8 and sequelae)
1	CITROSTADIENOL	Stem				--
1	PROCYANIDIN-B-2	Pericarp				--
1	CATALASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	STACHYOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	ASTILBIN	Pericarp				--
1	DELPHINIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
1	PROCYANIDIN-B-2	Leaf				--
1	PROCYANIDIN-B-1	Seed				--
1	DIHYDROZEATIN	Resin, Exudate, Sap				--
1	TRIACONTAN-1-OL	Root				--
1	PROCYANIDIN-B-2	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Stem		156.0	-0.5194124752401025	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	POTASSIUM-BITARTRATE	Leaf				--
1	PROCYANIDIN-B-1	Pericarp				--
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	SODIUM	Fruit	2.0	454.0	-0.1408984763342879	--
1	PYRROLIDINE	Fruit Juice				--
1	EPICATECHIN-3-O-GALLATE	Seed				--
1	PROCYANIDIN-B-1	Leaf				--
1	METHYL-AMINE	Fruit Juice				--
1	PROCYANIDIN-C-2	Seed				--
1	PROTocatechualdehyde	Fruit				--
1	MERCURY	Fruit	0.0	0.011	-0.3194372671514748	--
1	EPICATECHIN-3-O-GALLATE	Fruit				--
1	LEUCOCYANIDIN	Plant				--
1	QUINIC-ACID	Root				--
1	PETUNIDIN-3-O-BETA-D-GLUCOSIDE	Exocarp				--
1	PETUNIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
1	OLEANOLIC-ACID-METHYL-ESTER	Leaf				--
1	PEONIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--
1	CEPHALIN	Seed				--
1	CHOLESTEROL	Fruit				--
1	PEONIDIN-3-O-BETA-D-GLUCOSIDE	Exocarp				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	GALACTOSE	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	PROCYANIDIN-B-6	Seed				--
1	PEONIDIN-3-O-BETA-D-GLUCOSIDE	Tissue Culture				--
1	RAFFINOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	OENIN	Pericarp				Chemical Constituents of Oriental Herbs (3 diff. books)
0	DIHYDROFURAN-I	Fruit Juice				--
0	2-METHOXY-3-ISOBUTYL-PYRAZINE	Stem				--
0	CATECHOL-OXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	WATER	Stem		792000.0	0.21078766023930146	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	3-BETA-HYDROXY-OLEAN-12-EN-28-ALDEHYDE	Pericarp				--
0	OCTAN-1-OL	Stem				--
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	ALPHA-3-OXO-IONONE	Fruit Juice				--
0	LINALOL-BETA-D-GLUCOSIDE	Fruit Juice				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NEROL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	STEARIC-ACID-BUTYL-ESTER	Seed				--
0	NEROL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	PROCYANIDIN-B-5	Seed				--
0	PROANTHOCYANIDIN-B1-3-O-GALLATE	Leaf	0.0	6.0		--
0	PROTEIN	Fruit	6350.0	35236.0	-0.9955216411354211	USDA's Ag Handbook 8 and sequelae)
0	GALLOCATECHIN	Leaf				--
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.
0	P-COUMAROYL-TRANS-TARTRATE	Fruit				--
0	EPI-CATECHIN-(4-BETA-6)-EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN	Seed				--
0	2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	GALLOYL-PROCYANIDIN	Leaf				--
0	FAT	Fruit	5010.0	33898.0	-0.3823418924511751	USDA's Ag Handbook 8 and sequelae)
0	MALVIDIN-3-GLUCOSIDE	Fruit				--
0	3,7-DIMETHYL-OCTA-1,7-DIEN-3,6-DIOL	Fruit				--
0	NUCLEOTIDE-PYROPHOSPHATASE	Root				--
0	2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-BETA-D-GLUCOPYRANOSIDE	Plant				--
0	WATER	Fruit	761000.0	897000.0	0.5497045312138683	--
0	HYDROXY-CITRONELLOL	Essential Oil				--
0	3-BETA-29-DIHYDROXY-OLEAN-12-EN-28-OIC-ACID	Pericarp				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OBTUSIFOLIOL	Stem				--
0	QUERCETIN-3-GLUCURONIDE	Leaf				--
0	N(6)-ISO-PENTENYL-ADENINE	Resin, Exudate, Sap				--
0	BETA-3-OXO-DAMASCONE	Fruit Juice				--
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	ALPHA-3-OXO-DAMASCONE	Fruit Juice				--
0	LINALOL-6-0-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	TRIACONTAN-1-OL-TRIDECANOATE	Root				--
0	GERMANICOL	Stem				--
0	JASMONIC-ACID	Bud				--
0	QUERCETIN-3-O-GLUCOSIDE	Plant				--
0	PROCYANIDIN-B-4-3'-GALLATE	Seed				--
0	PROANTHOCYANIDIN-B1	Leaf	88.0	333.0		--
0	GALLOCATECHIN	Hr				--
0	P-COUMAROYL-CIS-TARTRATE	Fruit				--
0	EPI-CATECHIN-(4-BETA-6)-EPI-CATECHIN-(4-BETA-8)-CATECHIN	Seed				--
0	2-TRANS-HEPTANAL	Seed				--
0	FERTARIC-ACID	Fruit				--
0	ASH	Stem		88000.0	0.9172643481683129	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ETHYL-AMINE	Fruit Juice				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	3,7-DIMETHYL-OCTA-1,6-DIEN-3,5-DIOL	Fruit				--
0	PROLINE	Fruit	220.0	1132.0	-0.7893812127923229	USDA's Ag Handbook 8 and sequelae)
0	GERANIOL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
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	LUTEOXANTHIN	Fruit				--
0	2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-6-O-ALPHA-D-ARABINOFURANOSYL-BETA-D-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	PHOSPHODIESTERASE	Root				--
0	CARBOHYDRATES	Fruit	177700.0	914095.0	0.7016650651905534	USDA's Ag Handbook 8 and sequelae)
0	VOMIFOLIOL	Fruit				--
0	16-BETA-HYDROXY-3-OXOLEAN-12-EN-28-OIC-ACID	Pericarp				--
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	TRANS-CAFTARIC-ACID	Fruit Juice				--
0	BENZYL-ALCOHOL-BETA-D-RUTINOSIDE	Leaf				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETIN-GLUCURONOSIDE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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	LINALOL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	GERANIOL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	GALLOCATECHIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PHENYLPROPANOIC-ACIDS	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	VITAMIN-B-6	Fruit	1.0	6.0		USDA's Ag Handbook 8 and sequelae)
0	EPICATECHIN-3-GALLATE	Seed				--
0	JU	Plant				--
0	ENGELETIN	Pericarp				--
0	ASH	Fruit	4290.0	77000.0	0.526613994855476	--
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	3,7-DIMETHYL-OCTA-1,5-DIEN-3,7-DIOL	Fruit				--
0	GERANIOL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	ALPHA-VINIFERIN	Leaf		23400.0		--
0	DELPHINIDIN-3-O-BETA-D-GLUCOSIDE	Fruit				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,6-DIMETHYL-TRANS,TRANS-OCTA-2,6-DIEN-1,8-DIOL	Fruit				--
0	CALCIUM-PECTATE	Leaf		69000.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	VITISPIRANE	Plant				Chemical Constituents of Oriental Herbs (3 diff. books)
0	HIRSUTRIN	Leaf				--
0	16-BETA-HYDROXY-3-OXOLEAN-1-12-DIEN-28-OIC-ACID	Pericarp				--
0	BENZYL-ALCOHOL-BETA-D-GLUCOSIDE	Leaf				--
0	FR	Plant				--
0	ACUMINOSIDE	Fruit Juice				--
0	CYANIDIN-3-GALACTOSIDE	Fruit				--
0	LINALOL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	TRANS-CAFFEIC-ACID	Fruit				Jim Duke's personal files.
0	ZEATIN-RIBOSIDE	Resin, Exudate, Sap				--
0	2,2,6-TRIMETHYL-8-(1-HYDROXY-ETHYL)-7-OXABICYCLO-(4,3,0)-NONA-4,9-DIENE	Fruit				--
0	PHOSPHATIDYL-SERINE	Seed				--
0	ISOVITILAGIN	Leaf		163.0		--
0	CIS-PICEID	Fruit				--
0	PROCYANIDIN-B1,3'-O-GALLATE	Seed				--
0	DIHYDROQUERCETIN-3-RHAMNOSIDE	Pericarp				--
0	ASCORBIC-ACID-OXIDASE	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	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	3,7-DIMETHYL-OCTA-1,5,7-TRIEN-3-OL	Fruit				--
0	EPICATECHIN-3-GALLATE	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	LUTEIN-5-8-EPOXIDE	Fruit				--
0	2,2,6-TRIMETHYL-8-(1-HYDRFOXY-ETHYL)-7-OXA-BICYCLO-(4,3,0)-NONA-4,9-DIENE	Fruit				--
0	VITILAGIN	Leaf		89.0		--
0	HEXOKINASE	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
0	PEONIDIN-3-P-COUMAROYL-GLUCOSIDE	Tissue Culture				--
0	PROCYANIDIN-G	Pericarp				--
0	BENZYL-ALCOHOL-6-O-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Leaf				--
0	PAEONIDIN-3-O-GLUCOSIDE	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	LINALOL	Fruit				--
0	TITANIUM	Fruit	0.11	7.7	-0.5795941269861224	--
0	ENOMELANIN	Plant				--
0	N-PROPYL-AMINE	Fruit Juice				--
0	PALMITIC-ACID-BUTYL-ESTER	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-PHENYLETHAN-2-OL-6-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	PHOSPHATIDYL-INOSITOL	Seed				--
0	MYRICETIN-3-O-BETA-D-GLUCOSIDE	Leaf				--
0	DIHYDROKAEMPFEROL-3-RHAMNOSIDE	Pericarp				--
0	ENOTANNIN	Seed				--
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.
0	3,7-DIMETHYL-OCT-1-ENE-3,7-DIOL	Fruit				--
0	CIS-CAFFEIC-ACID	Fruit				Jim Duke's personal files.
0	BETA-PHENYLETHANOL-BETA-D-RUTINOSIDE	Fruit Juice				--
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	LUTEIN-5,6-EPOXIDE	Fruit				--
0	(DL)-GALLOCATECHIN	Leaf				--
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	VIT-B-6	Fruit	1.0	6.0	-0.3708031557292606	--
0	HEPTACOSAN-1-OL	Root				--
0	(-)-GALLOCATECHIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PYROPHOSPHATASE-NUCLOETIDE	Root				--
0	NONANAL	Seed				--
0	LINALOL	Leaf Essent. Oil		273000.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	3-OXO-BETA-DAMASCON	Fruit Juice				--
0	VITIS-ARABINOGALACTAN-PROTEIN-AG-P	Fruit				--
0	RUBIDIUM	Fruit	0.4	5.5	-1.0186549557194133	ACTA AGRIC SCAND SUPPL 22: 1980
0	NEROL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	SUGAR	Fruit	30000.0	189000.0	0.005740941518907065	--
0	TRANS-COUTARIC-ACID	Fruit Juice				--
0	PROANTHOCYANIDIN-POLYMER	Fruit				--
0	DEHYDROVOMIFOLIOL	Fruit				--
0	ENOMELANIN	Fruit				--
0	3,7-DIMETHYL-OCT-1-ENE-3,6,7-TRIOL	Fruit				--
0	ZIRCONIUM	Fruit	0.44	1.54	-0.41983235298720856	--
0	MALVIDIN-MONOGLUCOSIDE	Tissue Culture				--
0	BETA-PHENYLETHANOL-BETA-D-GLUCOSIDE	Fruit Juice				--
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.
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	CAFFEYLTARTARIC-ACID	Fruit				--
0	HENTRIACONTANE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LINOLENIC-ACID	Seed Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CIS-CAFTARIC-ACID	Fruit Juice				--
0	PROCYANIDIN-C-1	Leaf				--
0	PROANTHOCYANIDIN-B4	Leaf	7.0	37.0		--
0	FLUORINE	Fruit	0.1	0.6	-0.744462097809404	ACTA AGRIC SCAND SUPPL 22: 1980
0	MELIBIOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CRYPTOCHLOROGENIC-ACID	Fruit				Jim Duke's personal files.
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	MYRICETIN-3-MONOGLUCOSIDE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	VANILLIC-ALDEHYDE	Leaf				--
0	ROSEOSIDE	Fruit				--
0	MONOCAFFEYOYL TARTARIC-ACID	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	NEROL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	BENZYL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	POPULNIN	Leaf				--
0	24-METHYL-CYCLOARTENOL	Stem				--
0	POLYPHENOL-OXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	MALVIDIN-3-O-BETA-D-GLUCOSIDE	Pericarp				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OLEANOLIC-ALDEHYDE	Stem				--
0	BETA-PHENYLETHANOL-6-BETA-D-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	MUTATOXANTHIN	Fruit				--
0	ALPHA-HYDROXY-CAROTENE	Fruit				--
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.
0	CAFFELOYL-TARTRATE	Fruit				Jim Duke's personal files.
0	(-)-EPICATECHIN-3-GALLATE	Leaf				--
0	PROCYANIDIN-C-1	Seed				--
0	PROANTHOCYANIDIN-B3	Leaf	7.0	37.0		--
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.
0	MEGASTIGM-5-EN-7-YNE-3,9-DIOL	Fruit Juice				--
0	A-HEMICELLULOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FERULOYL-SUCCINIC-ACID	Plant				--
0	LEUCOANTHOCYANIDOLE	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	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-3-O-GALLATE-(4-BETA-8)-CATECHIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINOLEIC-ACID-ETHYL-ESTER	Seed				--
0	LINALOOL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	SUCCINDEHYDROGENASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ELEMOL-ACETATE	Leaf Essent. Oil		130200.0		--
0	2-PHENYLETHYL-AMINE	Fruit Juice				--
0	ISOBUTYL-AMINE	Fruit Juice				--
0	MALVIDIN-3-O-BETA-D-GLUCOSIDE	Exocarp				--
0	TRANS-PICEID	Fruit				--
0	DAMASCENONE	Fruit Juice	0.013	0.085		--
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.
0	NEROL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	PROCYANIDIN-B-8	Seed				--
0	PROANTHOCYANIDIN-B2-3'-O-GALLATE	Leaf	3.0	25.0		--
0	9-HYDROXY-MEGASTIGM-4,6,7-TRIEN-3-ONE	Fruit Juice				--
0	PROTOPECTINASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DEHYDROHEXAHYDROXY DIPHENIC-ACID	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EPI-CATECHIN-(4-BETA-8)- EPI-CATECHIN-(4-BETA-8)- CATECHIN	Seed				--
0	LINALOOL-BETA-D- GLUCOSIDE	Fruit Juice				--
0	BARIUM	Fruit	0.66	15.4	-0.5127937102474286	--
0	CIS-COUTARIC-ACID	Fruit Juice				--
0	2-TRANS-DECENAL	Seed				--
0	BROMINE	Fruit		1.0	-0.42563543443835	USDA's Ag Handbook 8 and sequelae)
0	2-PHENYLETHAN-2-OL-6- BETA-D-APIOFURANOSYL- BETA-D-GLUCOSIDE	Fruit				--
0	PHYTOFLUENE	Fruit				--
0	ISOAMYL-AMINE	Fruit Juice				--
0	6-9-DIHYDROXY- MEGASTIGM-7-EN-3-ONE	Fruit				--
0	STRONTIUM	Fruit	1.54	38.5	-0.4672073193158673	--
0	GALACTURONIC-ACID	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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	PEROXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	URSOLIC-ALDEHYDE	Stem				--
0	NEROL-6-O-BETA-D- APIOFURANOSYL-BETA-D- GLUCOSIDE	Fruit Juice				--
0	PROCYANIDIN-B-7	Seed				--
0	PROANTHOCYANIDIN-B2- 3,3'-O-GALLATE	Leaf	0.0	4.0		--
0	30-NOR-LUPAN-3-BETA-OL- 20-ONE	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PROTEIN	Stem		89000.0	-0.7071067811865476	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LEAD	Fruit	0.02	9.0	0.04188042425593692	--
0	PAEONIDIN	Fruit				--
0	TARTARIC-ACID-CAFFEOYL-ESTER	Fruit	15.0	20.0		--
0	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-(4-BETA-6)-EPI-CATECHIN	Seed				--
0	FLAVONOL-GLUCOSIDES	Leaf				Bruneton, J. 1999. Pharmacognosy, Phytochemistry, Medicinal Plants. 2nd Ed. Lavoisier Publishing, Paris. 1119 pp.
0	LINALOOL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit Juice				--
0	B-HEMICELLULOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	2-TRANS-4-CIS-DECADIENAL	Seed				--
0	3-OXO-ALPHA-IONOL	Fruit				--
0	BREVILAGIN-I	Leaf		533.3		--
0	DIHYDROPHASEIC-ACID-4'-BETA-D-GLUCOSIDE	Fruit				--
0	2-PHENYLETHAN-1-OL	Leaf				--
0	PHYTOENE	Fruit				--
0	3-OXO-OLEAN-12-EN-28-OIC-ACID	Pericarp				--
0	OENIN	Petiole				--
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	ALPHA-AMYL-AMINE	Fruit Juice				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GLUCOSE-6-PHOSPHATE-DEHYDROGENASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	GRASSHOPPER-KETONE	Fruit Juice				--
0	NEROL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Fruit				--
0	SFA	Fruit	1890.0	9722.0	-0.16575412818647417	USDA's Ag Handbook 8 and sequelae)
0	PROANTHOCYANIDIN-B2	Leaf	17.0	94.0		--
0	3-HYDROXY-BETA-DAMASCONE	Fruit Juice				--
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	EPI-CATECHIN-(4-BETA-8)-EPI-CATECHIN-(4-BETA-6)-CATECHIN	Seed				--
0	LINALOOL-6-O-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE	Fruit Juice				--
0	PROCYANIDIN-B-2-3'-GALLATE	Leaf				--
0	ASRAGALIN	Flower				--
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	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.