

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Crataegus laevigata*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	ZINC	Flower				--
77	ZINC	Fruit				--
0	WATER	Fruit		721000.0	-0.2155599430292297	--
0	VITEXIN-RHAMNOSIDE	Leaf				--
0	VITEXIN-RHAMNOSIDE	Flower				--
0	VITEXIN-RHAMNOSIDE	Plant				Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in <i>Crataegus</i> species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. <i>Plant Medica</i> 57: Suppl Issue 2. p.A-133.
0	VITEXIN-4'-RHAMNOSIDE	Fruit				Pedersen, M. 1987. <i>Nutritional Herbology</i> . Pederson Publishing. Bountiful, Utah. 377 pp.
0	VITEXIN-4'-RHAMNOSIDE	Bark				--
0	VITEXIN-4'-RHAMNOSIDE	Leaf				--
0	VITEXIN-4'-RHAMNOSIDE	Branches				--
0	VITEXIN-4'-RHAMNOSIDE	Flower				--
0	VITEXIN-4'-O-ALPHA-L-RHAMNOSIDE	Shoot				--
0	VITEXIN-4'-L-RHAMNOSIDE	Plant				Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	VITEXIN-4',L-RHAMNO-D-GLUCOSIDE	Leaf				List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	VITEXIN-4',L-RHAMNO-D-GLUCOSIDE	Plant				Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VITEXIN-4',7-DI-D-GLUCOSIDE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	VITEXIN-4',7-DI-D-GLUCOSIDE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	VITEXIN-2'-RHAMNOSIDE	Leaf				--
0	VITEXIN-2'-RHAMNOSIDE	Fruit				--
1	VITEXIN-2'-O-RHAMNOSIDE	Flower				--
1	VITEXIN-2''-O-ALPHA-L-RHAMNOSIDE	Plant				--
18	VITEXIN	Bark				--
18	VITEXIN	Leaf				--
18	VITEXIN	Shoot				--
18	VITEXIN	Branches				--
18	VITEXIN	Fruit				--
18	VITEXIN	Flower				--
18	VITEXIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
89	URSOLIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
89	URSOLIC-ACID	Shoot				--
89	URSOLIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	URIC-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
0	URIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
11	TYRAMINE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	TYRAMINE	Flower				--
11	TYRAMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	TRIMETHYLAMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	TRIMETHYLAMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TRANS-CRATAEGOLIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	TIN	Fruit	3.6	13.0	-0.3261703903199725	--
0	THIAMINE	Fruit				--
31	THIAMIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	TARTARIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
6	TARTARIC-ACID	Bark				--
0	TANNINS	Flower				--
0	SUGARS	Fruit	33480.0	120000.0	-0.388868598447453	--
0	SUGAR	Fruit		350000.0	1.0965198301112378	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
14	SUCROSE	Bark				--
8	STEARIC-ACID	Bark				--
5	STARCH	Fruit	41850.0	180000.0	-0.18166262454346976	--
4	SPIRAEOSIDE	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
11	SORBITOL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	SODIUM	Fruit	15.0	55.0	-0.17873519822623876	--
4	SILICON	Fruit				--
60	SELENIUM	Fruit	0.6	2.0	0.10976555089417979	--
5	SAPONINS	Fruit				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
87	RUTIN	Bud				--
87	RUTIN	Flower				--
87	RUTIN	Plant				--
87	RUTIN	Leaf				--
15	RIBOFLAVIN	Fruit				--
0	RHAMNOSE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
44	QUERCITRIN	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
0	QUERCETIN-GLYCOSIDE	Plant				Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133.
0	QUERCETIN-3-RHAMNOGALACTOSIDE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	QUERCETIN-3-RHAMNOGALACTOSIDE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
176	QUERCETIN	Shoot				--
176	QUERCETIN	Flower				--
176	QUERCETIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	PYCNOGENOL	Shoot	10000.0	30000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	PROTEIN	Fruit	3906.0	14000.0	-1.2801994554298393	--
0	PROCYANIDIN-C-1	Flower				--
0	PROCYANIDIN-B-5	Flower				--
4	PROCYANIDIN-B-4	Flower				--
1	PROCYANIDIN-B-2	Fruit				--
1	PROCYANIDIN-B-2	Flower				--
11	PROCYANIDIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	PROCYANIDIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
34	PROANTHOCYANIDINS	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
14	POTASSIUM	Fruit	3069.0	11000.0	-0.6119284601203993	--
4	PHOSPHORUS	Fruit	405.0	1450.0	-0.5364028420241324	--
0	PHLOBAPHENE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	PECTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	PALMITIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	PALMITIC-ACID	Bark				--
9	OXALIC-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	Bark				--
0	ORIENTIN-GLYCOSIDES	Fruit				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
25	OPC	Shoot	10000.0	30000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
64	OLEANOLIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	OCTACOSANE	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	O-METHOXY-PHENYLETHYLAMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	O-METHOXY-BETA-PHENETHYLAMINE	Flower				--
0	O-METHOXY-BETA-PHENETHYLAMINE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	NOREPINEPHRINE	Shoot				--
0	NOREPINEPHRINE	Flower				--
0	NOREPINEPHRINE	Leaf				--
0	NONACOSAN-10-OL	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
39	NIACIN	Fruit				--
0	NEOTEGOLIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	NEOATEGOLIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
6	MASLINIC-ACID	Shoot				--
14	MANGANESE	Flower				--
14	MANGANESE	Fruit	0.4	1.4	-0.39430607258501055	--
65	MAGNESIUM	Fruit	262.0	940.0	-0.5509172813412117	--
0	LUTEOLIN-3',7-DIGLUCOSIDE	Bud				--
0	LUTEOLIN-3',7-DIGLUCOSIDE	Leaf				--
78	LUTEOLIN	Fruit				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
78	LUTEOLIN	Bud				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
78	LUTEOLIN	Leaf				--
21	LUPEOL	Bark				--
0	LIPASE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LINOLENIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
27	LINOLEIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LEUCOANTHOCYANIDIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LEAD	Fruit				--
0	LEAD	Flower				--
7	LAURIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	L-EPICATECHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	KILOCALORIES	Fruit		2890.0	-1.1703353924398954	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	ISOBUTYL-AMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ISOBUTYL-AMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ISOAMYL-AMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ISOAMYL-AMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	IRON	Fruit				--
30	HYPEROSIDE	Leaf				--
30	HYPEROSIDE	Shoot				--
30	HYPEROSIDE	Flower				--
30	HYPEROSIDE	Branches				--
30	HYPEROSIDE	Plant		10000.0	-0.707106781186548	--
30	HYPEROSIDE	Fruit				--
30	HYPEROSIDE	Bark				--
1	GUANINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
1	GUANINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	GLUCOSE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FLAVONOIDS	Shoot	10000.0	20000.0	-0.47676335348397514	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	FIBER(DIETARY)	Fruit		386000.0	0.11897072890689903	--
0	FIBER(CRUDE)	Fruit		108000.0	-0.4250705302983724	--
15	FIBER	Fruit		108000.0	-0.31778652128419577	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FAT	Fruit	10881.0	39000.0	-0.34337322683955546	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ETHYL-AMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ETHYL-AMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ETHANOLAMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ETHANOLAMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
29	ESCULIN	Bark				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
29	ESCULIN	Fruit				--
0	ERIDICTOL-GLYCOSIDE	Plant				Schussler, M., Fricke, U., Nikolov, N., and Holzl, J. 1991. Comparison of the Flavonoids Occurring in Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133.
11	EPINEPHRINE	Flower				--
11	EPINEPHRINE	Leaf				--
40	EPICATECHIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
40	EPICATECHIN	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
0	EO	Fruit	279.0	2500.0	-0.7713693690086117	--
20	DOPAMINE	Shoot				--
2	DIMETHYL-AMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	DIMETHYL-AMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	CYNAROSIDE	Leaf				--
3	CYNAROSIDE	Flower				--
0	CROMIUM	Fruit				--
0	CROMIUM	Flower				--
0	CRATAEGUS-BIFLAVANOID-C-1	Fruit				--
0	CRATAEGUS-BIFLAVANOID-B-5	Fruit				--
0	CRATAEGUS-BIFLAVANOID-B-2	Fruit				--
0	CRATAEGOLIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	CRATAEGOLIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	COPPER	Fruit				--
12	COPPER	Flower				--
2	COBALT	Fruit	0.6	2.0	-0.29299669899909336	--
23	CITRIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
24	CHROMIUM	Fruit	0.5	1.7	-0.26885440473667177	--
20	CHOLINE	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
20	CHOLINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
20	CHOLINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
77	CHLOROGENIC-ACID	Bark				--
77	CHLOROGENIC-ACID	Shoot				--
77	CHLOROGENIC-ACID	Leaf				--
77	CHLOROGENIC-ACID	Fruit				--
77	CHLOROGENIC-ACID	Flower				--
77	CHLOROGENIC-ACID	Plant				--
77	CHLOROGENIC-ACID	Bud				--
0	CERYL-ALCOHOL	Bark				--
0	CATECHIN-TANNINS	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
43	CATECHIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CARBOHYDRATES	Fruit	256122.0	918000.0	0.722547106992137	--
28	CALCIUM	Fruit	1554.0	5570.0	0.3954571881842723	--
102	CAFFEIC-ACID	Bud				--
102	CAFFEIC-ACID	Leaf				--
102	CAFFEIC-ACID	Shoot				--
102	CAFFEIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
102	CAFFEIC-ACID	Flower				--
3	CADMIUM	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	CADMIUM	Fruit				--
47	BETA-SITOSTEROL	Leaf	5100.0	6200.0	2.2672781336507843	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
47	BETA-SITOSTEROL	Flower	6500.0	7800.0	0.9253646230843826	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	BETA-PHENETHYLAMINE	Flower				--
1	BETA-PHENETHYLAMINE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	BETA-PHENETHYLAMINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
53	BETA-CAROTENE	Fruit	1.4	5.0	-0.14113571921676207	--
0	ASH	Fruit	8091.0	29000.0	-0.7163626815965894	--
112	ASCORBIC-ACID	Leaf	166.4	1800.0	-0.27690303367535113	--
112	ASCORBIC-ACID	Fruit	24.0	85.0	-0.2792039610917021	--
0	APIGETRIN	Bud				--
0	APIGETRIN	Leaf				--
101	APIGENIN	Bud				--
101	APIGENIN	Leaf				--
101	APIGENIN	Fruit				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
8	AMYGDALIN	Leaf		1500.0	-0.7071067811865472	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	AMINOPURINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	AMINES	Plant				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
5	ALUMINUM	Fruit	8.0	29.0	-0.21508468192276714	--
33	AESCULIN	Shoot				--
33	AESCULIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	ADENOSINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
28	ADENOSINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	ADENINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
11	ADENINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ACETYL-VITEXIN-4'-RHAMNOSIDE	Branches				Jim Duke's personal files.
0	ACETYL-VITEXIN-4'-RHAMNOSIDE	Fruit				--
19	ACETYL-CHOLINE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
19	ACETYL-CHOLINE	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
0	ACANTOLIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ACANTOLIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	5-HYDROXYTRYPTAMINE	Shoot				--
0	5-HYDROXY-INDOLE-ACETIC-ACID	Shoot				--
0	2-PHENYLCHROMONE	Flower				--
0	2-ALPHA-HYDROXY-OLEANOLIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	2,,3,3',4,4',5,7-HEPTAHYDROXYFLAVANBIOSIDE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
38	(-)-EPICATECHIN	Bud				--
38	(-)-EPICATECHIN	Shoot				--
38	(-)-EPICATECHIN	Leaf				--
38	(-)-EPICATECHIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
38	(-)-EPICATECHIN	Flower				--
38	(-)-EPICATECHIN	Fruit				--
30	(+)-CATECHIN	Bud				--
30	(+)-CATECHIN	Tissue Culture				--
30	(+)-CATECHIN	Leaf				--
30	(+)-CATECHIN	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	(+)-CATECHIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.