

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Crataegus laevigata*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	(+)-CATECHIN	Bud				--
30	(+)-CATECHIN	Tissue Culture				--
30	(+)-CATECHIN	Leaf				--
30	(+)-CATECHIN	Flower				--
30	(+)-CATECHIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
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				--
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.
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-PHENYLCHROMONE	Flower				--
0	5-HYDROXY-INDOLE-ACETIC-ACID	Shoot				--
15	5-HYDROXYTRYPTAMINE	Shoot				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ACANTOLIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
0	ACETYL-VITEXIN-4'-RHAMNOSIDE	Branches				Jim Duke's personal files.
0	ACETYL-VITEXIN-4'-RHAMNOSIDE	Fruit				--
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.
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.
33	AESCULIN	Shoot				--
33	AESCULIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	ALUMINUM	Fruit	8.0	29.0	-0.21508468192276714	--
0	AMINES	Plant				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.

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.
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.
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.
0	APIGETRIN	Bud				--
0	APIGETRIN	Leaf				--
112	ASCORBIC-ACID	Leaf	166.4	1800.0	-0.27690303367535113	--
112	ASCORBIC-ACID	Fruit	24.0	85.0	-0.2792039610917021	--
0	ASH	Fruit	8091.0	29000.0	-0.7163626815965894	--
53	BETA-CAROTENE	Fruit	1.4	5.0	-0.14113571921676207	--
1	BETA-PHENETHYLAMINE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	BETA-PHENETHYLAMINE	Flower				--
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.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	CADMIUM	Flower				--
3	CADMIUM	Fruit				--
102	CAFFEIC-ACID	Leaf				--
102	CAFFEIC-ACID	Bud				--
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				--
28	CALCIUM	Fruit	1554.0	5570.0	0.3954571881842723	--
0	CARBOHYDRATES	Fruit	256122.0	918000.0	0.722547106992137	--
43	CATECHIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CATECHIN-TANNINS	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CERYL-ALCOHOL	Bark				--
77	CHLOROGENIC-ACID	Bark				--
77	CHLOROGENIC-ACID	Leaf				--
77	CHLOROGENIC-ACID	Shoot				--
77	CHLOROGENIC-ACID	Fruit				--
77	CHLOROGENIC-ACID	Flower				--
77	CHLOROGENIC-ACID	Plant				--
77	CHLOROGENIC-ACID	Bud				--
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.
24	CHROMIUM	Fruit	0.5	1.7	-0.26885440473667177	--
23	CITRIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
2	COBALT	Fruit	0.6	2.0	-0.29299669899909336	--
12	COPPER	Fruit				--
12	COPPER	Flower				--
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.
0	CRATAEGUS-BIFLAVANOID-B-2	Fruit				--
0	CRATAEGUS-BIFLAVANOID-B-5	Fruit				--
0	CRATAEGUS-BIFLAVANOID-C-1	Fruit				--
0	CROMIUM	Fruit				--
0	CROMIUM	Flower				--
3	CYNAROSIDE	Leaf				--
3	CYNAROSIDE	Flower				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	DIMETHYL-AMINE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	DOPAMINE	Shoot				--
0	EO	Fruit	279.0	2500.0	-0.7713693690086117	--
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.
11	EPINEPHRINE	Flower				--
11	EPINEPHRINE	Leaf				--
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.
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	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.

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	FAT	Fruit	10881.0	39000.0	-0.34337322683955546	--
15	FIBER	Fruit		108000.0	-0.31778652128419577	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Fruit		108000.0	-0.4250705302983724	--
0	FIBER(DIETARY)	Fruit		386000.0	0.11897072890689903	--
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.
7	GLUCOSE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
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				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	IRON	Fruit				--
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.
0	ISOAMYL-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	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	KILOCALORIES	Fruit		2890.0	-1.1703353924398954	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	L-EPICATECHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
7	LAURIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LEAD	Fruit				--
0	LEAD	Flower				--
0	LEUCOANTHOCYANIDIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
27	LINOLEIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LINOLENIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LIPASE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
21	LUPEOL	Bark				--
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				--
78	LUTEOLIN	Leaf				--
0	LUTEOLIN-3',7-DIGLUCOSIDE	Bud				--
0	LUTEOLIN-3',7-DIGLUCOSIDE	Leaf				--
65	MAGNESIUM	Fruit	262.0	940.0	-0.5509172813412117	--
14	MANGANESE	Flower				--
14	MANGANESE	Fruit	0.4	1.4	-0.39430607258501055	--
6	MASLINIC-ACID	Shoot				--
0	NEOATEGOLIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
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.
39	NIACIN	Fruit				--
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.
0	NOREPINEPHRINE	Shoot				--
0	NOREPINEPHRINE	Flower				--
0	NOREPINEPHRINE	Leaf				--
0	O-METHOXY-BETA-PHENETHYLAMINE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	O-METHOXY-BETA-PHENETHYLAMINE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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	OCTACOSANE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
25	OPC	Shoot	10000.0	30000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
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.
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				--
13	PALMITIC-ACID	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
13	PALMITIC-ACID	Bark				--
24	PECTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PHLOBAPHENE	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
4	PHOSPHORUS	Fruit	405.0	1450.0	-0.5364028420241324	--
14	POTASSIUM	Fruit	3069.0	11000.0	-0.6119284601203993	--
34	PROANTHOCYANIDINS	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
11	PROCYANIDIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
11	PROCYANIDIN	Leaf				--
1	PROCYANIDIN-B-2	Fruit				--
1	PROCYANIDIN-B-2	Flower				--
4	PROCYANIDIN-B-4	Flower				--
0	PROCYANIDIN-B-5	Flower				--
0	PROCYANIDIN-C-1	Flower				--
0	PROTEIN	Fruit	3906.0	14000.0	-1.2801994554298393	--
6	PYCNOGENOL	Shoot	10000.0	30000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 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.
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.

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.
44	QUERCITRIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	RHAMNOSE	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	RIBOFLAVIN	Fruit				--
87	RUTIN	Bud				--
87	RUTIN	Flower				--
87	RUTIN	Plant				--
87	RUTIN	Leaf				--
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.
60	SELENIUM	Fruit	0.6	2.0	0.10976555089417979	--
4	SILICON	Fruit				--
1	SODIUM	Fruit	15.0	55.0	-0.17873519822623876	--
11	SORBITOL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	SPIRAEOSIDE	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
5	STARCH	Fruit	41850.0	180000.0	-0.18166262454346976	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	STEARIC-ACID	Bark				--
14	SUCROSE	Bark				--
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.
0	SUGARS	Fruit	33480.0	120000.0	-0.388868598447453	--
0	TANNINS	Flower				--
6	TARTARIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
6	TARTARIC-ACID	Bark				--
31	THIAMIN	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Fruit				--
4	TIN	Fruit	3.6	13.0	-0.3261703903199725	--
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.
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.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	URIC-ACID	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
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.
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.
1	VITEXIN-2"-O-ALPHA-L-RHAMNOSIDE	Plant				--
1	VITEXIN-2'-O-RHAMNOSIDE	Flower				--
0	VITEXIN-2'-RHAMNOSIDE	Leaf				--
0	VITEXIN-2'-RHAMNOSIDE	Fruit				--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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-4',L-RHAMNO-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',L-RHAMNO-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-4'-L-RHAMNOSIDE	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	VITEXIN-4'-O-ALPHA-L-RHAMNOSIDE	Shoot				--
0	VITEXIN-4'-RHAMNOSIDE	Fruit				Pedersen, M. 1987. Nutritional Herbology. 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-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 Crataegus species and Inhibition of 3',5'-Cyclic Adenosine Monophosphate Phosphodiesterase. Plant Medica 57: Suppl Issue 2. p.A-133.
0	WATER	Fruit		721000.0	-0.2155599430292297	--
77	ZINC	Flower				--
77	ZINC	Fruit				--