

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Frangula purshiana*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Bark		0.0	-1.0104899665727316	--
77	ZINC	Bark				--
65	MAGNESIUM	Bark	440.0	1590.0	-0.10911131301072557	--
60	SELENIUM	Bark	0.3	1.1	-0.4642594780283318	--
58	EMODIN	Bl				--
58	EMODIN	Tissue Culture				--
58	EMODIN	Bark				--
58	EMODIN	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
53	BETA-CAROTENE	Bark	13.0	46.0	2.1374028017190314	--
41	TANNIC-ACID	Plant				--
39	NIACIN	Bark	8.0	29.0	-0.5491524863663554	--
35	TANNIN	Plant				--
31	THIAMIN	Bark		0.0	-0.6585046078685182	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
28	CALCIUM	Bark	4100.0	14800.0	-0.3701186348289897	--
27	LINOLEIC-ACID	Plant				--
24	ALOE-EMODIN	Tissue Culture				--
24	CHROMIUM	Bark	0.2	0.6	-0.5240392018021011	--
24	ALOE-EMODIN	Bark				--
15	MALIC-ACID	Plant				--
15	FIBER	Bark		310000.0	1.4973444643886513	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	RIBOFLAVIN	Bark		0.0	-1.033653783963848	--
14	MANGANESE	Bark	0.4	1.4	-0.6672097230657966	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	POTASSIUM	Bark	1103.0	3980.0	-0.43722012313816594	--
12	ALOIN	Plant				--
10	CHRYSOPHANOL	Bark				--
6	MYRISTIC-ACID	Plant				--
6	BARBALOIN	Bark				--
6	CHRYSOPHANIC-ACID	Plant				--
6	ANTHRAQUINONES	Bark	60000.0	100000.0	1.0	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	CHRYSOPHANIC-ACID	Bark				--
6	IRON	Bark	6.4	23.0	-0.8041825931162928	--
6	SYRINGIC-ACID	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
6	CHRYSOPHANIC-ACID	Tissue Culture				--
5	PHYSCION	Tissue Culture				--
5	PHYSCION	Bark				--
5	ALUMINUM	Bark	27.0	99.0	-0.42073897270651045	--
4	TIN	Bark	1.4	5.1	-0.9625249451887514	--
4	PHOSPHORUS	Bark	158.0	570.0	-0.5349997224798418	--
4	SILICON	Bark				--
2	COBALT	Bark	3.2	11.6	-0.18574693845267193	--
2	CHRYSOPHANIC-ACID-9-ANTHRONE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	CASCAROSIDE-A	Bark				--
1	SODIUM	Bark	26.0	93.0	-0.408100271312514	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	FRANGULAEMODIN	Bark				--
1	FRANGULIN	Bark				--
1	CASANTHRANOL	Bark				--
0	CASCAROSIDE-F	Bark				--
0	RHAMNUSTOXIN	Plant				--
0	CARBOHYDRATES	Bark	224093.0	809000.0	0.33938102144232346	--
0	1,6,8-TRIHYDROXY-3-METHYL-9-GLUCOSYL-ANTHRAQUINONE	Plant				--
0	10-HYDROXYALOIN-A	Bark				--
0	BICASCAROSIDE-BB	Bark				--
0	WATER	Bark		723000.0	0.24192319620065653	--
0	CASCAROSIDE-E	Bark				--
0	RHAMNOL	Plant				--
0	THIAMINE	Bark		0.0	-0.7500000000000002	--
0	PROTEIN	Seed		250000.0	0.14414237103378544	Earle, F. R., Glass, C. A., Geisinger, G. C., Wolff, I. A., Jones, Q. 1960. Search for New Industrial Oils. IV. J. Amer. Oil Chem. Soc. 37: 440-. Northern Regional Research Lab ARS USDA Peoria, IL, USA.
0	DEOXYBARBALOIN	Bark				--
0	CASCAROSIDE-D	Bark				--
0	RESIN	Plant				--
0	SUGARS	Bark	13850.0	50000.0	-0.5773502691896257	--
0	PHYSCION-ANTHRONE	Bark				--
0	CHRYSOPHANOL-8-O-BETA-D-GLUCOSIDE	Bark				--
0	QUEBRACHOL	Plant				--
0	CASCAROSIDE-C	Bark				--
0	FIBER(DIETARY)	Bark		560000.0	1.1932784648463484	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PHYSCION-ANTHRONE	Tissue Culture				--
0	CHRYSOPHANIC-ACID-PHYSCION-DIANTHRONE	Tissue Culture				--
0	BICASCAROSIDE-AD	Bark				--
0	PURSHIANIN	Plant				--
0	ASH	Bark	18559.0	67000.0	-0.3419190329694244	--
0	CASCAROSIDE-B	Bark				--
0	FIBER(CRUDE)	Bark		310000.0	2.339823678190987	--
0	PHYSCION-8-GLUCOSIDE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	CHRYSOPHANIC-ACID-DIMER	Bark		840.0		--
0	BICASCAROSIDE-AC	Bark				--
0	PROTEIN	Bark	25207.0	91000.0	0.43752942985999416	--
0	TANNINS	Bark				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	KILOCALORIES	Bark		2370.0	-0.7511810552670951	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	CHRYSOPHANIC-ACID-DIANTHRONE	Tissue Culture				--
0	SYRINGIN-ACID	Plant				--
0	CHRYSALOIN	Bark				--
0	BICASCAROSIDE-AB	Bark				--
0	BICASCAROSIDE-DD	Bark				--
0	RESINS	Bark				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	ISOEMODIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	CHRYSOPHANIC-ACID-ANTHRONE	Tissue Culture				--
0	BICASCAROSIDE-AA	Bark				--
0	BICASCAROSIDE-CD	Bark				--
0	CASCAROSIDES	Bark	40000.0	65000.0		--
0	ANTHRANOL	Bark				Mary, N. Y., Christensen, B. V., Beal, J. L. 1956. A Paper Chromatographic Study of Aloe, Aloin and Cascara sagrada. J. Amer. Pharm. Ass. Sci. Ed., 45: 229-232.
0	PALMIDINS	Bark				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
0	BICASCAROSIDE-CC	Bark				--
0	EMOSIN-OXANTHRONE	Plant				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	CASCARIN	Plant				--
0	ALOE-EMODIN-DIMER	Bark		1300.0		--
0	OXANTHRONE	Plant				--
0	ALOE-EMODIN-8-MONO-BETA-GLUCOSIDE	Bark				--
0	11-DEOXYBARBALOIN	Bark				--
0	BICASCAROSIDE-BD	Bark				--
0	EMODIN-ANTHRONE	Bark				--
0	CASSIAMIN-C	Bark		120.0		--
0	ALOE-EMODIN-8-O-BETA-D-GLUCOSIDE	Bark				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	10-HYDROXYALOIN-B	Bark				--
0	BICASCAROSIDE-BC	Bark				--
0	FAT	Bark	8864.0	32000.0	0.9470044614826844	--
0	EMODIN-ANTHRONE	Tissue Culture				--