

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Frangula purshiana*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	CARBOHYDRATES	Bark	224093.0	809000.0	0.33938102144232346	--
0	WATER	Bark		723000.0	0.24192319620065653	--
0	FIBER(DIETARY)	Bark		560000.0	1.1932784648463484	--
0	FIBER(CRUDE)	Bark		310000.0	2.339823678190987	--
15	FIBER	Bark		310000.0	1.4973444643886513	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
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.
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.
0	PROTEIN	Bark	25207.0	91000.0	0.43752942985999416	--
0	ASH	Bark	18559.0	67000.0	-0.3419190329694244	--
0	CASCAROSIDES	Bark	40000.0	65000.0		--
0	SUGARS	Bark	13850.0	50000.0	-0.5773502691896257	--
0	FAT	Bark	8864.0	32000.0	0.9470044614826844	--
28	CALCIUM	Bark	4100.0	14800.0	-0.3701186348289897	--
14	POTASSIUM	Bark	1103.0	3980.0	-0.43722012313816594	--
0	KILOCALORIES	Bark		2370.0	-0.7511810552670951	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
65	MAGNESIUM	Bark	440.0	1590.0	-0.10911131301072557	--
0	ALOE-EMODIN-DIMER	Bark		1300.0		--
0	CHRYSOPHANIC-ACID-DIMER	Bark		840.0		--
4	PHOSPHORUS	Bark	158.0	570.0	-0.5349997224798418	--
0	CASSIAMIN-C	Bark		120.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	ALUMINUM	Bark	27.0	99.0	-0.42073897270651045	--
1	SODIUM	Bark	26.0	93.0	-0.408100271312514	--
53	BETA-CAROTENE	Bark	13.0	46.0	2.1374028017190314	--
39	NIACIN	Bark	8.0	29.0	-0.5491524863663554	--
6	IRON	Bark	6.4	23.0	-0.8041825931162928	--
2	COBALT	Bark	3.2	11.6	-0.18574693845267193	--
4	TIN	Bark	1.4	5.1	-0.9625249451887514	--
14	MANGANESE	Bark	0.4	1.4	-0.6672097230657966	--
60	SELENIUM	Bark	0.3	1.1	-0.4642594780283318	--
24	CHROMIUM	Bark	0.2	0.6	-0.5240392018021011	--
0	THIAMINE	Bark		0.0	-0.7500000000000002	--
31	THIAMIN	Bark		0.0	-0.6585046078685182	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
112	ASCORBIC-ACID	Bark		0.0	-1.0104899665727316	--
15	RIBOFLAVIN	Bark		0.0	-1.033653783963848	--
0	CASCAROSIDE-F	Bark				--
0	RHAMNUSTOXIN	Plant				--
0	10-HYDROXYALOIN-A	Bark				--
24	ALOE-EMODIN	Tissue Culture				--
0	BICASCAROSIDE-BB	Bark				--
6	MYRISTIC-ACID	Plant				--
0	1,6,8-TRIHYDROXY-3-METHYL-9-GLUCOSYL-ANTHRAQUINONE	Plant				--
58	EMODIN	Tissue Culture				--
58	EMODIN	Bl				--
0	CASCAROSIDE-E	Bark				--
0	RHAMNOL	Plant				--

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58	EMODIN	Bark				--
0	DEOXYBARBALOIN	Bark				--
0	CASCAROSIDE-D	Bark				--
0	RESIN	Plant				--
0	PHYSCION-ANTHRONE	Bark				--
15	MALIC-ACID	Plant				--
0	CHRYSOPHANOL-8-O-BETA-D-GLUCOSIDE	Bark				--
0	CASCAROSIDE-C	Bark				--
0	QUEBRACHOL	Plant				--
6	BARBALOIN	Bark				--
0	PHYSCION-ANTHRONE	Tissue Culture				--
0	CHRYSOPHANIC-ACID-PHYSCION-DIANTHRONE	Tissue Culture				--
35	TANNIN	Plant				--
10	CHRYSOPHANOL	Bark				--
0	BICASCAROSIDE-AD	Bark				--
0	CASCAROSIDE-B	Bark				--
0	PURSHIANIN	Plant				--
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.
27	LINOLEIC-ACID	Plant				--
41	TANNIC-ACID	Plant				--
6	CHRYSOPHANIC-ACID	Plant				--
0	BICASCAROSIDE-AC	Bark				--
1	CASCAROSIDE-A	Bark				--
5	PHYSCION	Tissue Culture				--

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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	SYRINGIN-ACID	Plant				--
0	CHRYSALOIDIN	Bark				--
0	CHRYSOPHANIC-ACID-DIANTHRONE	Tissue Culture				--
0	BICASCAROSIDE-AB	Bark				--
0	BICASCAROSIDE-DD	Bark				--
5	PHYSCION	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.
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				--
1	FRANGULAEMODIN	Bark				--
6	CHRYSOPHANIC-ACID	Bark				--
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.
4	SILICON	Bark				--
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.

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0	BICASCAROSIDE-CC	Bark				--
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.
12	ALOIN	Plant				--
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.
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.
1	FRANGULIN	Bark				--
0	CASCARIN	Plant				--
6	CHRYSOPHANIC-ACID	Tissue Culture				--
0	11-DEOXYBARBALOIN	Bark				--
0	BICASCAROSIDE-BD	Bark				--
0	OXANTHRONE	Plant				--
0	ALOE-EMODIN-8-MONO-BETA-GLUCOSIDE	Bark				--
0	EMODIN-ANTHRONE	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.
1	CASANTHRANOL	Bark				--
0	10-HYDROXYALOIN-B	Bark				--
0	ALOE-EMODIN-8-O-BETA-D-GLUCOSIDE	Bark				--

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0	BICASCAROSIDE-BC	Bark				--
24	ALOE-EMODIN	Bark				--
0	EMODIN-ANTHRONE	Tissue Culture				--
77	ZINC	Bark				--