

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Frangula purshiana*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	ZINC	Bark				--
0	WATER	Bark		723000.0	0.24192319620065653	--
4	TIN	Bark	1.4	5.1	-0.9625249451887514	--
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.
0	TANNINS	Bark				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
35	TANNIN	Plant				--
41	TANNIC-ACID	Plant				--
0	SYRINGIN-ACID	Plant				--
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.
0	SUGARS	Bark	13850.0	50000.0	-0.5773502691896257	--
1	SODIUM	Bark	26.0	93.0	-0.408100271312514	--
4	SILICON	Bark				--
60	SELENIUM	Bark	0.3	1.1	-0.4642594780283318	--
15	RIBOFLAVIN	Bark		0.0	-1.033653783963848	--
0	RHAMNUSTOXIN	Plant				--
0	RHAMNOL	Plant				--
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	RESIN	Plant				--
0	QUEBRACHOL	Plant				--
0	PURSHIANIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	PROTEIN	Bark	25207.0	91000.0	0.43752942985999416	--
14	POTASSIUM	Bark	1103.0	3980.0	-0.43722012313816594	--
0	PHYSCION-ANTHRONE	Tissue Culture				--
0	PHYSCION-ANTHRONE	Bark				--
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.
5	PHYSCION	Tissue Culture				--
5	PHYSCION	Bark				--
4	PHOSPHORUS	Bark	158.0	570.0	-0.5349997224798418	--
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	OXANTHRONE	Plant				--
39	NIACIN	Bark	8.0	29.0	-0.5491524863663554	--
6	MYRISTIC-ACID	Plant				--
14	MANGANESE	Bark	0.4	1.4	-0.6672097230657966	--
15	MALIC-ACID	Plant				--
65	MAGNESIUM	Bark	440.0	1590.0	-0.10911131301072557	--
27	LINOLEIC-ACID	Plant				--
0	KILOCALORIES	Bark		2370.0	-0.7511810552670951	Pedersen, M. 1987. Nutritional Herbolology. Pederson Publishing. Bountiful, Utah. 377 pp.

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0	ISOEMODIN	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
6	IRON	Bark	6.4	23.0	-0.8041825931162928	--
1	FRANGULIN	Bark				--
1	FRANGULAEMODIN	Bark				--
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 Herbolgy. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FAT	Bark	8864.0	32000.0	0.9470044614826844	--
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	EMODIN-ANTHRONE	Bark				--
0	EMODIN-ANTHRONE	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.
58	EMODIN	Bl				--
58	EMODIN	Tissue Culture				--
0	DEOXYBARBALOIN	Bark				--
2	COBALT	Bark	3.2	11.6	-0.18574693845267193	--
0	CHRYSOPHANOL-8-O-BETA-D-GLUCOSIDE	Bark				--
10	CHRYSOPHANOL	Bark				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CHRYSOPHANIC-ACID-PHYSCION-DIANTHRONE	Tissue Culture				--
0	CHRYSOPHANIC-ACID-DIMER	Bark		840.0		--
0	CHRYSOPHANIC-ACID-DIANTHRONE	Tissue Culture				--
0	CHRYSOPHANIC-ACID-ANTHRONE	Tissue Culture				--
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.
6	CHRYSOPHANIC-ACID	Plant				--
6	CHRYSOPHANIC-ACID	Bark				--
6	CHRYSOPHANIC-ACID	Tissue Culture				--
0	CHRYSALOIN	Bark				--
24	CHROMIUM	Bark	0.2	0.6	-0.5240392018021011	--
0	CASSIAMIN-C	Bark		120.0		--
0	CASCAROSIDES	Bark	40000.0	65000.0		--
0	CASCAROSIDE-F	Bark				--
0	CASCAROSIDE-E	Bark				--
0	CASCAROSIDE-D	Bark				--
0	CASCAROSIDE-C	Bark				--
0	CASCAROSIDE-B	Bark				--
1	CASCAROSIDE-A	Bark				--
0	CASCARIN	Plant				--
1	CASANTHRANOL	Bark				--
0	CARBOHYDRATES	Bark	224093.0	809000.0	0.33938102144232346	--
28	CALCIUM	Bark	4100.0	14800.0	-0.3701186348289897	--
0	BICASCAROSIDE-DD	Bark				--
0	BICASCAROSIDE-CD	Bark				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BICASCAROSIDE-CC	Bark				--
0	BICASCAROSIDE-BD	Bark				--
0	BICASCAROSIDE-BC	Bark				--
0	BICASCAROSIDE-BB	Bark				--
0	BICASCAROSIDE-AD	Bark				--
0	BICASCAROSIDE-AC	Bark				--
0	BICASCAROSIDE-AB	Bark				--
0	BICASCAROSIDE-AA	Bark				--
53	BETA-CAROTENE	Bark	13.0	46.0	2.1374028017190314	--
6	BARBALOIN	Bark				--
0	ASH	Bark	18559.0	67000.0	-0.3419190329694244	--
112	ASCORBIC-ACID	Bark		0.0	-1.0104899665727316	--
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	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.
5	ALUMINUM	Bark	27.0	99.0	-0.42073897270651045	--
12	ALOIN	Plant				--
0	ALOE-EMODIN-DIMER	Bark		1300.0		--
0	ALOE-EMODIN-8-O-BETA-D-GLUCOSIDE	Bark				--
0	ALOE-EMODIN-8-MONO-BETA-GLUCOSIDE	Bark				--
24	ALOE-EMODIN	Bark				--
24	ALOE-EMODIN	Tissue Culture				--
0	11-DEOXYBARBALOIN	Bark				--
0	10-HYDROXYALOIN-B	Bark				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	10-HYDROXYALOIN-A	Bark				--
0	1,6,8-TRIHYDROXY-3-METHYL-9-GLUCOSYL-ANTHRAQUINONE	Plant				--