

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Armoracia rusticana*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Root	1800.0	10000.0	5.070471286124204	--
112	ASCORBIC-ACID	Plant	1220.0	18200.0	3.6789306859570874	--
15	RIBOFLAVIN	Root	4.0	20.0	3.485161664486578	--
65	MAGNESIUM	Root	1624.0	9020.0	3.436573672307347	--
14	SULFUR	Root	1800.0	10000.0	2.1484129636070275	ACTA AGRIC SCAND SUPPL 22: 1980
0	PROTEIN	Root	45000.0	250000.0	1.4776556490763388	--
0	ASH	Plant		200000.0	1.4269853561791084	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	BROMINE	Root	5.0	19.0	1.3171281598976525	ACTA AGRIC SCAND SUPPL 22: 1980
0	NITROGEN	Root	8600.0	38461.0	1.3020990395574676	ACTA AGRIC SCAND SUPPL 22: 1980
2	CAMPESTEROL	Root		200.0	1.2834996430471919	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
39	NIACIN	Root	16.0	90.0	1.1523682511680913	--
14	POTASSIUM	Root	5400.0	30000.0	1.0413262881316638	--
4	PHOSPHORUS	Root	1278.0	7100.0	0.6294359439199063	--
53	BETA-CAROTENE	Root	27.0	150.0	0.5227136521125912	--
24	VANILLIC-ACID	Root		45.0	0.4683014551040585	--
7	CHLORINE	Root	185.0	745.0	0.3641382774206427	Wealth of India.
0	FIBER(DIETARY)	Root		430000.0	0.34479309207066455	--
0	WATER	Root		820000.0	0.33220504138805035	--
0	FIBER(CRUDE)	Root		122000.0	0.3171910897303088	--
28	CALCIUM	Root	1800.0	10000.0	0.28443978784453666	--
0	SUGAR	Root		73000.0	0.26745753103716463	Wealth of India.
0	FAT	Root	5040.0	28000.0	0.1707507790690317	--
24	CHROMIUM	Root	0.6	3.5	0.13765284526356406	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	FIBER	Root	14000.0	94000.0	0.130764747590634	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	BORON	Root	6.0	27.0	0.10907004695750487	ACTA AGRIC SCAND SUPPL 22: 1980
1	SODIUM	Root	216.0	1200.0	0.045965512774069996	--
2	PHYTOSTEROLS	Root		910.0	0.014453690337214282	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
112	ASCORBIC-ACID	Leaf	2440.0	4560.0	-0.020810203280628586	--
2	ARSENIC	Root	0.01	0.04	-0.20577574015712302	ACTA AGRIC SCAND SUPPL 22: 1980
0	ASH	Root	10620.0	59000.0	-0.2444004558296572	--
47	BETA-SITOSTEROL	Root		710.0	-0.25867676228885333	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
5	ALUMINUM	Root	4.0	30.0	-0.2963835040806538	ACTA AGRIC SCAND SUPPL 22: 1980
12	COPPER	Root	1.0	9.0	-0.30116857246091955	--
31	THIAMIN	Root	0.0	3.0	-0.32687193108858614	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	SILICON	Root	0.4	2.0	-0.33371737669722845	--
3	CADMIUM	Root	0.08	0.5	-0.36034786075591185	ACTA AGRIC SCAND SUPPL 22: 1980
5	STARCH	Root	39600.0	220000.0	-0.40048460622279153	--
6	IRON	Root	1.4	8.0	-0.4300308811451584	--
14	MANGANESE	Root	1.5	8.2	-0.44795773578567305	--
2	MOLYBDENUM	Root		0.1	-0.46089530570591497	ACTA AGRIC SCAND SUPPL 22: 1980
3	NICKEL	Root	0.2	1.2	-0.495065007546234	ACTA AGRIC SCAND SUPPL 22: 1980
0	EO	Plant	200.0	3050.0	-0.5083339974706322	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	MERCURY	Root		0.001	-0.508569995990937	ACTA AGRIC SCAND SUPPL 22: 1980

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	EO	Root	500.0	2160.0	-0.5530506754837335	--
0	CARBOHYDRATES	Root	155000.0	783000.0	-0.6037053926433201	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	LEAD	Root	0.02	0.15	-0.6572844818658716	ACTA AGRIC SCAND SUPPL 22: 1980
0	THIAMINE	Root	0.2	1.0	-0.665115009526749	--
7	SALICYLATES	Root	1.0	2.0	-0.6930213679572391	--
12	STIGMASTEROL	Root		0.0	-0.8132428087578462	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
0	FLUORINE	Root		0.1	-0.8144046057224281	ACTA AGRIC SCAND SUPPL 22: 1980
77	ZINC	Root	0.5	2.9	-0.9319328403212439	--
0	RUBIDIUM	Root	0.9	4.6	-1.1478999953405424	ACTA AGRIC SCAND SUPPL 22: 1980
0	PROTEIN	Leaf	21000.0	28000.0	-1.8340320033979245	Wealth of India.
0	KILOCALORIES	Seed	600.0	2370.0	-1.9478218965025125	Wealth of India.
0	HAEMATIN	Root	13.0	16.0		Wealth of India.
0	ISOTHIOCYANATES	Root	12200.0	20400.0		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
7	SINIGRIN	Root		3000.0		--
0	3-O-(2-O-(BETA-D-XYLOPYRANOSYL)-BETA-D-GALACTOPYRANOSYL)-FLAVONE	Leaf	6.0	20.0		--
0	PROTEASE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GLUCOTROPAEOLIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ALLYL-ISOTHIOCYANATE	Root	400.0	2592.0		--
0	HYDROXYCINNAMIC-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	SINAPIN	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	INVERSTASE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2-BUTYL-ISOTHIOCYANATE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MYROSIN	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	BIOSIDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	GLUCONAPIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	ALLOXURBASEN	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GLUCONASTURTIIN	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.
9	SINAPIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	GLUCOSE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PEROXIDASES	Root	350.0	1400.0		--
0	D-2-BUTYLISOTHIOCYANATE	Seed				--
2	ASPARAGINE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GLUCOLEPIDIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	3-O-BETA-D-QUERCETIN-GLUCOSIDE	Leaf				Abstract (See species file)
102	CAFFEIC-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.
7	ALLYL-SULFIDE	Root				Wealth of India.
0	GLUCOPUTRANJIVIN	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	LIMONENE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PHOSPHATASE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GLUCOIBERVERIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
32	AESCULETIN	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	4-PENTENYL-ISOTHIOCYANATE	Root				Wealth of India.
60	SELENIUM	Root				--
0	GLUCOCONRINGIIN	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	3-O-BETA-D-KAEMPFEROL-GLUCOSIDE	Leaf				Abstract (See species file)
1	PHENYLPROPYL-ISOTHIOCYANATE	Root				Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
2	COBALT	Root				--
1	GLUCOIBERIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	3-(METHYLTHIO)-PROPYL-ISOTHIOCYANATE	Root				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	3-O-(BETA-D-GALACTOPYRANOSYL)-QUERCETIN	Leaf				--
4	RUTOSIDE	Leaf				--
0	GLUCOCOCHLEARIN	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	3-O-BETA-D-GLUCOSYL-BETA-D-QUERCETIN-XYLOSIDE	Leaf				Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PHENYLETHYL-ISOTHIOCYANATE	Root	292.0	540.0		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
0	GLUCOCHEIROLIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	3-BENZYLISOTHIOCYANATE	Root				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	3-O-(2-O-(BETA-D-XYLOPYRANOSYL)-BETA-D-GALACTOPYRANOSYL)-QUERCETIN	Leaf	1.0	4.0		--
8	GENTISIC-ACID	Root		15.0		--
0	3-O-BETA-D-GLUCOSYL-BETA-D-KAEMPFEROLXYLOSIDE	Leaf				Abstract (See species file)
0	PEROXIDASE	Root				--
0	LIPASE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MYROSINASE	Root				--
0	GLUCOCAPPARIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	3-BUTENYL-ISOTHIOCYANATE	Root				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	3-O-(BETA-D-GALACTOPYRANOSYL)-KAEMPFEROL	Leaf				--

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8	FRUCTOSE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	PECTIN	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	TRIFOLIN	Shoot				--
1	GLUCOBRASSICANAPIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	UMECYANIN	Plant				--
3	RAPHANIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	P-HYDROXY-BENZOIC-ACID	Root		14.0		--
0	METHYL-ISOTHIOCYANATE	Root				Wealth of India.
35	TANNIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
75	KAEMPFEROL	Leaf				Abstract (See species file)
14	ARGININE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	KAEMPFEROL-3-O-BETA-D-XYLOFURANOSYL(1,2)-GALACTOPYRANOSIDE	Shoot				--
0	GLUCOBERTEROIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
75	KAEMPFEROL	Root		6.0		--
176	QUERCETIN	Leaf				Abstract (See species file)
0	BUTYLISOTHIOCYANATE	Plant	188.0	2867.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	AMYLASE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	KAEMPFEROL-3-O-BETA-D-XYLOFURANOSIDE	Shoot				--
1	ETHYL-ISOTHIOCYANATE	Root				Wealth of India.
0	ISOPROPYLISOTHIOCYANATE	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GLUCOSINOLATES	Root				--