

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Brassica oleracea var. italica

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Leaf				Stitt, Paul. Why George should eat broccoli.
112	ASCORBIC-ACID	Leaf	911.0	10360.0	0.5173558895778465	--
102	CAFFEIC-ACID	Leaf		8.0	-0.7148173591555008	--
87	RUTIN	Leaf				Stitt, Paul. Why George should eat broccoli.
77	ZINC	Leaf	4.0	118.0	0.19739995136190341	--
77	CHLOROGENIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
75	KAEMPFEROL	Leaf				Stitt, Paul. Why George should eat broccoli.
65	MAGNESIUM	Leaf	214.0	3072.0	-0.406886321355332	USDA's Ag Handbook 8 and sequelae)
61	FERULIC-ACID	Leaf		13.0	0.08918222301645602	--
60	SELENIUM	Stem		0.015	-0.42886426089167784	--
60	SELENIUM	Leaf	0.002	0.024	-0.3807027917986485	--
53	BETA-CAROTENE	Leaf	9.0	138.0	-0.5369565297726103	--
47	BETA-SITOSTEROL	Plant				Stitt, Paul. Why George should eat broccoli.
44	QUERCITRIN	Leaf				Stitt, Paul. Why George should eat broccoli.
39	NIACIN	Leaf	6.4	83.0	-0.17638140110322484	--
34	SALICYLIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
32	INDOLE-3-CARBINOL	Leaf				Stitt, Paul. Why George should eat broccoli.
32	ALPHA-TOCOPHEROL	Leaf	7.0	439.0	0.35927304562664447	--
31	THIAMIN	Leaf	0.6	8.0	-0.06349209547044472	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Leaf	290.0	3115.0	0.10979300838520059	USDA's Ag Handbook 8 and sequelae)
28	CALCIUM	Leaf	360.0	54247.0	2.4468006382605774	--
27	LINOLEIC-ACID	Leaf	380.0	4081.0	-0.6928297779549968	USDA's Ag Handbook 8 and sequelae)
25	P-COUMARIC-ACID	Leaf		13.0	-0.3465642412720655	--
24	ETHANOL	Plant				Jim Duke's personal files.
24	CHROMIUM	Leaf	0.005	0.18	-0.6314530785674829	ACTA AGRIC SCAND SUPPL 22: 1980

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	VANILLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
23	CITRIC-ACID	Plant				Jim Duke's personal files.
21	CHLOROPHYLL	Leaf				Stitt, Paul. Why George should eat broccoli.
18	CINNAMIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
18	OLEIC-ACID	Leaf	240.0	2578.0	-0.3066324749217592	USDA's Ag Handbook 8 and sequelae)
16	ALLYL-ISOTHIOCYANATE	Leaf				Stitt, Paul. Why George should eat broccoli.
15	FIBER	Leaf	10760.0	122866.0	-0.47818554218157117	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Leaf	340.0	3652.0	0.46965125289987986	USDA's Ag Handbook 8 and sequelae)
15	MALIC-ACID	Plant				Jim Duke's personal files.
15	RIBOFLAVIN	Leaf	1.1	21.0	-0.07942432526480918	--
15	FOLACIN	Leaf	0.64	8.4	-0.15226470429048047	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Leaf	1290.0	13855.0	1.243183883058032	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Leaf	1450.0	15573.0	-0.25040545078848814	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Leaf	3178.0	37270.0	0.3058332790917791	--
14	MANGANESE	Leaf	2.0	80.0	-0.32688920745367256	--
14	SULFUR	Leaf	1200.0	11800.0	1.6302603378370644	ACTA AGRIC SCAND SUPPL 22: 1980
13	P-HYDROXY-BENZOIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
13	PALMITIC-ACID	Leaf	470.0	5048.0	-0.2927982427753776	USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Plant				Stitt, Paul. Why George should eat broccoli.
12	COPPER	Leaf	0.68	52.0	0.6699011255650867	--
11	PANTOTHENIC-ACID	Leaf	5.35	63.0	0.8524389937224381	USDA's Ag Handbook 8 and sequelae)
10	ALPHA-AMYRIN	Bud	5.0	30.0		Jim Duke's personal files.
10	SQUALENE	Plant				Stitt, Paul. Why George should eat broccoli.
9	BETA-AMYRIN	Bud				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	PHYTIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
9	SINAPIC-ACID	Leaf		40.0	-0.5050096614914733	--
8	TYROSINE	Leaf	630.0	6766.0	-0.34477094479123366	USDA's Ag Handbook 8 and sequelae)
8	GLUTAMIC-ACID	Leaf	3750.0	40275.0	0.12712766718145815	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Leaf	70.0	752.0	-0.13186141525885503	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Leaf	840.0	9022.0	-0.32366072893862124	USDA's Ag Handbook 8 and sequelae)
7	SUCCINIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
7	SALICYLATES	Leaf	6.0	65.0	-0.435551873962273	--
7	HISTIDINE	Leaf	500.0	5370.0	-0.0031655528062669996	USDA's Ag Handbook 8 and sequelae)
7	SINIGRIN	Plant				Stitt, Paul. Why George should eat broccoli.
7	FUMARIC-ACID	Plant				Jim Duke's personal files.
7	ALPHA-CAROTENE	Plant				Jim Duke's personal files.
6	IRON	Leaf	8.0	109.0	-0.6442917506016965	--
5	ALUMINUM	Leaf	1.0	27.0	-0.7515974845433717	ACTA AGRIC SCAND SUPPL 22: 1980
5	PHYLLOQUINONE	Leaf		1.79	-1.3371909672181328	--
5	PHYLLOQUINONE	Inflorescence		0.31		--
5	SULFORAPHANE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
4	BORON	Stem		21.0	-0.7419113414039952	--
4	BORON	Leaf	1.0	85.0	0.6469238451071857	--
4	THREONINE	Leaf	910.0	9773.0	-0.005488458413534491	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Leaf	1410.0	15143.0	0.5181729835111131	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Leaf	1.0	90.0	-0.14550202645318341	ACTA AGRIC SCAND SUPPL 22: 1980
4	PHOSPHORUS	Leaf	644.0	9090.0	0.7577587277969241	--

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3	PHENETHYL-ISOTHIOCYANATE	Leaf				Stitt, Paul. Why George should eat broccoli.
3	INDOLE-3-ACETONITRILE	Leaf				Stitt, Paul. Why George should eat broccoli.
3	CADMIUM	Leaf	0.01	0.18	-0.7863999904697607	ACTA AGRIC SCAND SUPPL 22: 1980
3	ALANINE	Leaf	1180.0	12673.0	0.017867252591863454	USDA's Ag Handbook 8 and sequelae)
3	ACETONE	Leaf		500.0		Jim Duke's personal files.
3	ASPARTIC-ACID	Leaf	2130.0	22876.0	-0.262328714251028	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Leaf	1090.0	11707.0	-0.09196747371544084	USDA's Ag Handbook 8 and sequelae)
3	ACETONE	Root		800.0		--
3	VALINE	Leaf	1280.0	13747.0	0.29552238675671566	USDA's Ag Handbook 8 and sequelae)
3	NICKEL	Leaf	0.3	7.0	-0.28467312579555515	ACTA AGRIC SCAND SUPPL 22: 1980
2	ARSENIC	Leaf		0.01	-0.8114109228193096	ACTA AGRIC SCAND SUPPL 22: 1980
2	MOLYBDENUM	Stem		1.76	-0.13934558811150258	--
2	METHANOL	Plant				Jim Duke's personal files.
2	TRANS-FERULIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
2	COBALT	Leaf	0.02	0.6	-0.29531921745391343	ACTA AGRIC SCAND SUPPL 22: 1980
2	MOLYBDENUM	Leaf	0.1	3.76	0.6801012829363977	--
2	LEUCINE	Leaf	1310.0	14069.0	-0.3764770761728601	USDA's Ag Handbook 8 and sequelae)
2	PHYTOSTEROLS	Plant				--
2	DIMETHYL-DISULFIDE	Plant				Jim Duke's personal files.
2	NONACOSANE	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	CYSTINE	Leaf	200.0	2148.0	-0.6472110127615397	USDA's Ag Handbook 8 and sequelae)
2	BETA-CRYPTOXANTHIN	Plant				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	NEOGLUCOBRASSICIN	Leaf				Jim Duke's personal files.
1	GLUCORAPHANIN	Leaf	255.0	8990.0		--
1	PROGOITRIN	Leaf		0.0		--
1	4-HYDROXY-GLUCOBRASSICIN	Leaf	3.0	325.0		--
1	GLUCONASTURTIN	Leaf	0.0	145.0		--
1	MERCURY	Leaf	0.002	0.09	1.1722789664445759	ACTA AGRIC SCAND SUPPL 22: 1980
1	SODIUM	Leaf	252.0	3091.0	-0.09830203577402047	USDA's Ag Handbook 8 and sequelae)
1	TRIACONTAN-1-OL	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
1	GLUCOIBERIN	Leaf	0.0	248.0		--
1	HEXYL-ACETATE	Plant				Jim Duke's personal files.
1	GLUCOBRASSICIN	Leaf	30.0	580.0		--
1	QUINIC-ACID	Leaf				Jim Duke's personal files.
1	ALPHA-LIPOIC-ACID	Plant	95.0	940.0	-1.0	--
1	SERINE	Leaf	1000.0	10740.0	-0.003085924608790074	USDA's Ag Handbook 8 and sequelae)
0	4-METHOXY-GLUCOBRASSICIN	Leaf	8.0	580.0		--
0	FLUORINE	Leaf	0.03	0.9	-1.2049539311662678	ACTA AGRIC SCAND SUPPL 22: 1980
0	1-O-P-COUMAROYL-BETA-D-GLUCOSE	Leaf				Jim Duke's personal files.
0	ISORHAMNETIN-MONOGLYCOSIDE	Leaf				--
0	CARBOHYDRATES	Leaf	52400.0	562776.0	-0.3902639822213213	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Leaf	28710.0	331159.0	1.1902719416088388	USDA's Ag Handbook 8 and sequelae)
0	1-METHOXY-GLUCOBRASSICIN	Leaf				Jim Duke's personal files.
0	GLUCOSINOLATES	Leaf	70.0	2120.0		--
0	PROLINE	Leaf	1140.0	12244.0	0.14474263630065312	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-O-FERULOYL-BETA-D-GLUCOSE	Leaf				Jim Duke's personal files.
0	PENTEN-1-OL	Plant				Jim Duke's personal files.
0	5-HYDROXY-GLUCOBRASSICIN	Leaf				Jim Duke's personal files.
0	SEC-BUTYL-ISOTHIOCYANATE	Seed				Jim Duke's personal files.
0	PENTAN-3-ONE	Plant				Jim Duke's personal files.
0	GLUCONAPOLEIFERIN	Leaf	9.0	135.0		--
0	BROMINE	Leaf		1.0	-1.0629549671975995	ACTA AGRIC SCAND SUPPL 22: 1980
0	1-METHOXY-INDOLE-3-CARBALDEHYDE	Plant				Jim Duke's personal files.
0	LEAD	Leaf	0.01	1.0	-0.6352496573639428	ACTA AGRIC SCAND SUPPL 22: 1980
0	FAT	Leaf	3160.0	41242.0	-0.30328791009066547	USDA's Ag Handbook 8 and sequelae)
0	4-METHYL-SULFINYL-BUTYL-ISOTHIOCYANATE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	OXALATE	Leaf	1900.0	20406.0	-0.28520935704631206	USDA's Ag Handbook 8 and sequelae)
0	RUBIDIUM	Leaf	1.0	23.0	-0.6707091074151935	ACTA AGRIC SCAND SUPPL 22: 1980
0	N-METHYL-BETA-PHENETHYLAMINE	Plant		1.6		Jim Duke's personal files.
0	GLUCOERUCIN	Leaf	0.0	15020.0		--
0	PHYTATE	Leaf	180.0	1640.0		--
0	KILOCALORIES	Leaf	280.0	3007.0	-0.017863523924990066	USDA's Ag Handbook 8 and sequelae)
0	WATER	Leaf	890000.0	910230.0	0.5118312318849885	USDA's Ag Handbook 8 and sequelae)
0	HEX-CIS-3-ENOL-ACETATE	Plant				Jim Duke's personal files.
0	1-O-SINAPOYL-BETA-D-GLUCOSE	Leaf				Jim Duke's personal files.
0	24-METHYLENE-CYCLOARTENOL	Leaf				Stitt, Paul. Why George should eat broccoli.
0	3,3'-DIINDOYL-METHANE	Leaf				Stitt, Paul. Why George should eat broccoli.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VIT-B-6	Leaf	1.6	18.0	0.24648148618924984	USDA's Ag Handbook 8 and sequelae)
0	HEX-CIS-3-EN-1-OL	Plant				Jim Duke's personal files.
0	ASH	Leaf	2800.0	101708.0	-0.30205081182588317	--
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Leaf				Jim Duke's personal files.
0	ISORHAMNETIN-TRIGLYCOSIDE	Leaf				--
0	HEXACOSAN-1-OL	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	NITROGEN	Leaf	7000.0	71800.0	1.400721017239793	ACTA AGRIC SCAND SUPPL 22: 1980
0	5-METHOXY-GLUCOBRASSICIN	Leaf				Jim Duke's personal files.
0	INDOLE-3-CARBOXYLIC-ACID	Plant				Jim Duke's personal files.
0	ISORHAMNETIN-DIGLYCOSIDE	Leaf				--
0	GYLCINE	Leaf	950.0	10203.0		USDA's Ag Handbook 8 and sequelae)