Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Brassica oleracea var. italica

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	WATER	Leaf	890000.0	910230.0	0.5118312318849885	USDA's Ag Handbook 8 and sequelae)
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)
15	FIBER	Leaf	10760.0	122866.0	-0.47818554218157117	USDA's Ag Handbook 8 and sequelae)
0	ASH	Leaf	2800.0	101708.0	-0.30205081182588317	--
0	NITROGEN	Leaf	7000.0	71800.0	1.400721017239793	ACTA AGRIC SCAND SUPPL 22: 1980
28	CALCIUM	Leaf	360.0	54247.0	2.4468006382605774	--
0	FAT	Leaf	3160.0	41242.0	-0.30328791009066547	USDA's Ag Handbook 8 and sequelae)
8	GLUTAMIC-ACID	Leaf	3750.0	40275.0	0.12712766718145815	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Leaf	3178.0	37270.0	0.3058332790917791	--
3	ASPARTIC-ACID	Leaf	2130.0	22876.0	-0.262328714251028	USDA's Ag Handbook 8 and sequelae)
0	OXALATE	Leaf	1900.0	20406.0	-0.28520935704631206	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Leaf	1450.0	15573.0	-0.25040545078848814	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Leaf	1410.0	15143.0	0.5181729835111131	USDA's Ag Handbook 8 and sequelae)
0	GLUCOERUCIN	Leaf	0.0	15020.0		--
2	LEUCINE	Leaf	1310.0	14069.0	-0.3764770761728601	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)
3	VALINE	Leaf	1280.0	13747.0	0.29552238675671566	USDA's Ag Handbook 8 and sequelae)
3	ALANINE	Leaf	1180.0	12673.0	0.017867252591863454	USDA's Ag Handbook 8 and sequelae)
0	PROLINE	Leaf	1140.0	12244.0	0.14474263630065312	USDA's Ag Handbook 8 and sequelae)
14	SULFUR	Leaf	1200.0	11800.0	1.6302603378370644	ACTA AGRIC SCAND SUPPL 22: 1980
3	ISOLEUCINE	Leaf	1090.0	11707.0	-0.09196747371544084	USDA's Ag Handbook 8 and sequelae)
1	SERINE	Leaf	1000.0	10740.0	-0.003085924608790074	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Leaf	911.0	10360.0	0.5173558895778465	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	GYLCINE	Leaf	950.0	10203.0		USDA's Ag Handbook 8 and sequelae)
4	THREONINE	Leaf	910.0	9773.0	-0.005488458413534491	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Leaf	644.0	9090.0	0.7577587277969241	--
7	PHENYLALANINE	Leaf	840.0	9022.0	-0.32366072893862124	USDA's Ag Handbook 8 and sequelae)
1	GLUCORAPHANIN	Leaf	255.0	8990.0		--
8	TYROSINE	Leaf	630.0	6766.0	-0.34477094479123366	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Leaf	500.0	5370.0	-0.0031655528062669996	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Leaf	470.0	5048.0	-0.2927982427753776	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Leaf	380.0	4081.0	-0.6928297779549968	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Leaf	340.0	3652.0	0.46965125289987986	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Leaf	290.0	3115.0	0.10979300838520059	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Leaf	252.0	3091.0	-0.09830203577402047	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	214.0	3072.0	-0.406886321355332	USDA's Ag Handbook 8 and sequelae)
0	KILOCALORIES	Leaf	280.0	3007.0	-0.017863523924990066	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Leaf	240.0	2578.0	-0.3066324749217592	USDA's Ag Handbook 8 and sequelae)
2	CYSTINE	Leaf	200.0	2148.0	-0.6472110127615397	USDA's Ag Handbook 8 and sequelae)
0	GLUCOSINOLATES	Leaf	70.0	2120.0		--
0	PHYTATE	Leaf	180.0	1640.0		--
1	ALPHA-LIPOIC-ACID	Plant	95.0	940.0	-1.0	--
3	ACETONE	Root		800.0		--
8	STEARIC-ACID	Leaf	70.0	752.0	-0.13186141525885503	USDA's Ag Handbook 8 and sequelae)
0	4-METHOXY-GLUCOBRASSICIN	Leaf	8.0	580.0		--
1	GLUCOBRASSICIN	Leaf	30.0	580.0		--
3	ACETONE	Leaf		500.0		Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
32	ALPHA-TOCOPHEROL	Leaf	7.0	439.0	0.35927304562664447	--
1	4-HYDROXY-GLUCOBRASSICIN	Leaf	3.0	325.0		--
1	GLUCOIBERIN	Leaf	0.0	248.0		--
1	GLUCONASTURTIN	Leaf	0.0	145.0		--
53	BETA-CAROTENE	Leaf	9.0	138.0	-0.5369565297726103	--
0	GLUCONAPOLEIFERIN	Leaf	9.0	135.0		--
77	ZINC	Leaf	4.0	118.0	0.19739995136190341	--
6	IRON	Leaf	8.0	109.0	-0.6442917506016965	--
4	SILICON	Leaf	1.0	90.0	-0.14550202645318341	ACTA AGRIC SCAND SUPPL 22: 1980
4	BORON	Leaf	1.0	85.0	0.6469238451071857	--
39	NIACIN	Leaf	6.4	83.0	-0.17638140110322484	--
14	MANGANESE	Leaf	2.0	80.0	-0.32688920745367256	--
7	SALICYLATES	Leaf	6.0	65.0	-0.435551873962273	--
11	PANTOTHENIC-ACID	Leaf	5.35	63.0	0.8524389937224381	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Leaf	0.68	52.0	0.6699011255650867	--
9	SINAPIC-ACID	Leaf		40.0	-0.5050096614914733	--
10	ALPHA-AMYRIN	Bud	5.0	30.0		Jim Duke's personal files.
5	ALUMINUM	Leaf	1.0	27.0	-0.7515974845433717	ACTA AGRIC SCAND SUPPL 22: 1980
0	RUBIDIUM	Leaf	1.0	23.0	-0.6707091074151935	ACTA AGRIC SCAND SUPPL 22: 1980
4	BORON	Stem		21.0	-0.7419113414039952	--
15	RIBOFLAVIN	Leaf	1.1	21.0	-0.07942432526480918	--
0	VIT-B-6	Leaf	1.6	18.0	0.24648148618924984	USDA's Ag Handbook 8 and sequelae)
25	P-COUMARIC-ACID	Leaf		13.0	-0.3465642412720655	--
61	FERULIC-ACID	Leaf		13.0	0.08918222301645602	--
15	FOLACIN	Leaf	0.64	8.4	-0.15226470429048047	USDA's Ag Handbook 8 and sequelae)
102	CAFFEIC-ACID	Leaf		8.0	-0.7148173591555008	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
31	THIAMIN	Leaf	0.6	8.0	-0.06349209547044472	USDA's Ag Handbook 8 and sequelae)
3	NICKEL	Leaf	0.3	7.0	-0.28467312579555515	ACTA AGRIC SCAND SUPPL 22: 1980
2	MOLYBDENUM	Leaf	0.1	3.76	0.6801012829363977	--
5	PHYLLOQUINONE	Leaf		1.79	-1.3371909672181328	--
2	MOLYBDENUM	Stem		1.76	-0.13934558811150258	--
0	N-METHYL-BETA-PHENETHYLAMINE	Plant		1.6		Jim Duke's personal files.
0	BROMINE	Leaf		1.0	-1.0629549671975995	ACTA AGRIC SCAND SUPPL 22: 1980
0	LEAD	Leaf	0.01	1.0	-0.6352496573639428	ACTA AGRIC SCAND SUPPL 22: 1980
0	FLUORINE	Leaf	0.03	0.9	-1.2049539311662678	ACTA AGRIC SCAND SUPPL 22: 1980
2	COBALT	Leaf	0.02	0.6	-0.29531921745391343	ACTA AGRIC SCAND SUPPL 22: 1980
5	PHYLLOQUINONE	Inflorescence		0.31		--
3	CADMIUM	Leaf	0.01	0.18	-0.7863999904697607	ACTA AGRIC SCAND SUPPL 22: 1980
24	CHROMIUM	Leaf	0.005	0.18	-0.6314530785674829	ACTA AGRIC SCAND SUPPL 22: 1980
1	MERCURY	Leaf	0.002	0.09	1.1722789664445759	ACTA AGRIC SCAND SUPPL 22: 1980
60	SELENIUM	Leaf	0.002	0.024	-0.3807027917986485	--
60	SELENIUM	Stem		0.015	-0.42886426089167784	--
2	ARSENIC	Leaf		0.01	-0.8114109228193096	ACTA AGRIC SCAND SUPPL 22: 1980
1	PROGOITRIN	Leaf		0.0		--
176	QUERCETIN	Leaf				Stitt, Paul. Why George should eat broccoli.
32	INDOLE-3-CARBINOL	Leaf				Stitt, Paul. Why George should eat broccoli.
7	SUCCINIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
0	1-O-P-COUMAROYL-BETA-D-GLUCOSE	Leaf				Jim Duke's personal files.
0	ISORHAMNETIN-MONOGLYCOSIDE	Leaf				--
0	1-METHOXY-GLUCOBRASSICIN	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
3	INDOLE-3-ACETONITRILE	Leaf				Stitt, Paul. Why George should eat broccoli.
12	STIGMASTEROL	Plant				Stitt, Paul. Why George should eat broccoli.
3	PHENETHYL-ISOTHIOCYANATE	Leaf				Stitt, Paul. Why George should eat broccoli.
1	NEOGLUCOBRASSICIN	Leaf				Jim Duke's personal files.
0	1-O-FERULOYL-BETA-D-GLUCOSE	Leaf				Jim Duke's personal files.
9	BETA-AMYRIN	Bud				Jim Duke's personal files.
0	5-HYDROXY-GLUCOBRASSICIN	Leaf				Jim Duke's personal files.
0	PENTEN-1-OL	Plant				Jim Duke's personal files.
0	SEC-BUTYL-ISOTHIOCYANATE	Seed				Jim Duke's personal files.
2	TRANS-FERULIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
2	METHANOL	Plant				Jim Duke's personal files.
10	SQUALENE	Plant				Stitt, Paul. Why George should eat broccoli.
0	PENTAN-3-ONE	Plant				Jim Duke's personal files.
34	SALICYLIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
13	P-HYDROXY-BENZOIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
23	CITRIC-ACID	Plant				Jim Duke's personal files.
0	1-METHOXY-INDOLE-3-CARBALDEHYDE	Plant				Jim Duke's personal files.
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.
2	PHYTOSTEROLS	Plant				--
16	ALLYL-ISOTHIOCYANATE	Leaf				Stitt, Paul. Why George should eat broccoli.
47	BETA-SITOSTEROL	Plant				Stitt, Paul. Why George should eat broccoli.
18	CINNAMIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
87	RUTIN	Leaf				Stitt, Paul. Why George should eat broccoli.
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.
75	KAEMPFEROL	Leaf				Stitt, Paul. Why George should eat broccoli.
24	ETHANOL	Plant				Jim Duke's personal files.
9	PHYTIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
15	MALIC-ACID	Plant				Jim Duke's personal files.
1	HEXYL-ACETATE	Plant				Jim Duke's personal files.
7	SINIGRIN	Plant				Stitt, Paul. Why George should eat broccoli.
2	DIMETHYL-DISULFIDE	Plant				Jim Duke's personal files.
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.
21	CHLOROPHYLL	Leaf				Stitt, Paul. Why George should eat broccoli.
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.
0	HEX-CIS-3-EN-1-OL	Plant				Jim Duke's personal files.
77	CHLOROGENIC-ACID	Leaf				Stitt, Paul. Why George should eat broccoli.
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.
7	FUMARIC-ACID	Plant				Jim Duke's personal files.
1	QUINIC-ACID	Leaf				Jim Duke's personal files.
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
24	VANILLIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
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.
44	QUERCITRIN	Leaf				Stitt, Paul. Why George should eat broccoli.
0	5-METHOXY-GLUCOBRASSICIN	Leaf				Jim Duke's personal files.
0	INDOLE-3-CARBOXYLIC-ACID	Plant				Jim Duke's personal files.
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.
2	BETA-CRYPTOXANTHIN	Plant				Jim Duke's personal files.
0	ISORHAMNETIN-DIGLYCOSIDE	Leaf				--
7	ALPHA-CAROTENE	Plant				Jim Duke's personal files.