

# P Brassica oleracea var. italica

## Common Name(s)

Asparagus Broccoli, Broccoli, Calabrese, Cape Broccoli, Heading Broccoli, Purple Cauliflower, Sprouting Broccoli, Winter Broccoli

## How Used

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Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-METHOXY-GLUCOBASSICIN	Leaf	--	--	Jim Duke's personal files.
0	1-METHOXY-INDOLE-3-CARBALDEHYDE	Plant	--	--	Jim Duke's personal files.
0	1-O-FERULOYL-BETA-D-GLUCOSE	Leaf	--	--	Jim Duke's personal files.
0	1-O-P-COUMAROYL-BETA-D-GLUCOSE	Leaf	--	--	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.
1	4-HYDROXY-GLUCOBASSICIN	Leaf	3	325	
0	4-METHOXY-GLUCOBASSICIN	Leaf	8	580	
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Leaf	--	--	Jim Duke's personal files.

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
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	5-HYDROXY-GLUCOBRASSICIN	Leaf	--	--		Jim Duke's personal files.
0	5-METHOXY-GLUCOBRASSICIN	Leaf	--	--		Jim Duke's personal files.
3	ACETONE	Root	--	800		
3	ACETONE	Leaf	--	500		Jim Duke's personal files.
3	ALANINE	Leaf	1180	12673	0.017867252591863454	USDA's Ag Handbook 8 and sequelae)
16	ALLYL-ISOTHIOCYANATE	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
10	ALPHA-AMYRIN	Bud	5	30		Jim Duke's personal files.
7	ALPHA-CAROTENE	Plant	--	--		Jim Duke's personal files.
15	ALPHA-LINOLENIC-ACID	Leaf	1290	13855	1.243183883058032	USDA's Ag Handbook 8 and sequelae)
1	ALPHA-LIPOIC-ACID	Plant	95	940	-1	
32	ALPHA-TOCOPHEROL	Leaf	7	439	0.35927304562664447	
5	ALUMINUM	Leaf	1	27	-0.7515974845433717	ACTA AGRIC SCAND SUPPL 22: 1980
14	ARGININE	Leaf	1450	15573	-0.25040545078848814	USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Leaf	--	0.01	-0.8114109228193096	ACTA AGRIC SCAND SUPPL 22: 1980
112	ASCORBIC-ACID	Leaf	911	10360	0.5173558895778465	
0	ASH	Leaf	2800	101708	-0.30205081182588317	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
3	ASPARTIC-ACID	Leaf	2130	22876	-0.262328714251028	USDA's Ag Handbook 8 and sequelae)
9	BETA-AMYRIN	Bud	--	--		Jim Duke's personal files.
53	BETA-CAROTENE	Leaf	9	138	-0.5369565297726103	
2	BETA-CRYPTOXANTHIN	Plant	--	--		Jim Duke's personal files.
47	BETA-SITOSTEROL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
4	BORON	Stem	--	21	-0.7419113414039952	
4	BORON	Leaf	1	85	0.6469238451071857	
0	BROMINE	Leaf	--	1	-1.0629549671975995	ACTA AGRIC SCAND SUPPL 22: 1980
3	CADMIUM	Leaf	0.01	0.18	-0.7863999904697607	ACTA AGRIC SCAND SUPPL 22: 1980
102	CAFFEIC-ACID	Leaf	--	8	-0.7148173591555008	
28	CALCIUM	Leaf	360	54247	2.4468006382605774	
0	CARBOHYDRATES	Leaf	52400	562776	-0.3902639822213213	USDA's Ag Handbook 8 and sequelae)
77	CHLOROGENIC-ACID	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
21	CHLOROPHYLL	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
24	CHROMIUM	Leaf	0.005	0.18	-0.6314530785674829	ACTA AGRIC SCAND SUPPL 22: 1980
18	CINNAMIC-ACID	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
23	CITRIC-ACID	Plant	--	--		Jim Duke's personal files.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	COBALT	Leaf	0.02	0.6	-0.29531921745391343	ACTA AGRIC SCAND SUPPL 22: 1980
12	COPPER	Leaf	0.68	52	0.6699011255650867	
2	CYSTINE	Leaf	200	2148	-0.6472110127615397	USDA's Ag Handbook 8 and sequelae)
2	DIMETHYL-DISULFIDE	Plant	--	--		Jim Duke's personal files.
24	ETHANOL	Plant	--	--		Jim Duke's personal files.
0	FAT	Leaf	3160	41242	-0.30328791009066547	USDA's Ag Handbook 8 and sequelae)
61	FERULIC-ACID	Leaf	--	13	0.08918222301645602	
15	FIBER	Leaf	10760	122866	-0.47818554218157117	USDA's Ag Handbook 8 and sequelae)
0	FLUORINE	Leaf	0.03	0.9	-1.2049539311662678	ACTA AGRIC SCAND SUPPL 22: 1980
15	FOLACIN	Leaf	0.64	8.4	-0.15226470429048047	USDA's Ag Handbook 8 and sequelae)
7	FUMARIC-ACID	Plant	--	--		Jim Duke's personal files.
1	GLUCOBRASSICIN	Leaf	30	580		
0	GLUCOERUCIN	Leaf	--	15020		
1	GLUCOIBERIN	Leaf	--	248		
0	GLUCONAPOLEIFERIN	Leaf	9	135		
1	GLUCONASTURTIN	Leaf	--	145		
1	GLUCORAPHANIN	Leaf	255	8990		
0	GLUCOSINOLATES	Leaf	70	2120		
8	GLUTAMIC-ACID	Leaf	3750	40275	0.12712766718145815	USDA's Ag Handbook 8 and sequelae)

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	GYLCINE	Leaf	950	10203	USDA's Ag Handbook 8 and sequelae)
0	HEX-CIS-3-EN-1-OL	Plant	--	--	Jim Duke's personal files.
0	HEX-CIS-3-ENOL-ACETATE	Plant	--	--	Jim Duke's personal files.
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.
1	HEXYL-ACETATE	Plant	--	--	Jim Duke's personal files.
7	HISTIDINE	Leaf	500	5370	-0.0031655528062669996 USDA's Ag Handbook 8 and sequelae)
3	INDOLE-3-ACETONITRILE	Leaf	--	--	Stitt, Paul. Why George should eat broccoli.
32	INDOLE-3-CARBINOL	Leaf	--	--	Stitt, Paul. Why George should eat broccoli.
0	INDOLE-3-CARBOXYLIC-ACID	Plant	--	--	Jim Duke's personal files.
6	IRON	Leaf	8	109	-0.6442917506016965
3	ISOLEUCINE	Leaf	1090	11707	-0.09196747371544084 USDA's Ag Handbook 8 and sequelae)
0	ISORHAMNETIN-DIGLYCOSIDE	Leaf	--	--	
0	ISORHAMNETIN-MONOGLYCOSIDE	Leaf	--	--	
0	ISORHAMNETIN-TRIGLYCOSIDE	Leaf	--	--	
75	KAEMPFEROL	Leaf	--	--	Stitt, Paul. Why George should eat broccoli.
0	KILOCALORIES	Leaf	280	3007	-0.017863523924990066 USDA's Ag Handbook 8 and sequelae)

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	LEAD	Leaf	0.01	1	-0.6352496573639428	ACTA AGRIC SCAND SUPPL 22: 1980
2	LEUCINE	Leaf	1310	14069	-0.3764770761728601	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Leaf	380	4081	-0.6928297779549968	USDA's Ag Handbook 8 and sequelae)
4	LYSINE	Leaf	1410	15143	0.5181729835111131	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	214	3072	-0.406886321355332	USDA's Ag Handbook 8 and sequelae)
15	MALIC-ACID	Plant	--	--		Jim Duke's personal files.
14	MANGANESE	Leaf	2	80	-0.32688920745367256	
1	MERCURY	Leaf	0.002	0.09	1.1722789664445759	ACTA AGRIC SCAND SUPPL 22: 1980
2	METHANOL	Plant	--	--		Jim Duke's personal files.
15	METHIONINE	Leaf	340	3652	0.46965125289987986	USDA's Ag Handbook 8 and sequelae)
2	MOLYBDENUM	Leaf	0.1	3.76	0.6801012829363977	
2	MOLYBDENUM	Stem	--	1.76	-0.13934558811150258	
0	N-METHYL-BETA-PHENETHYLAMINE	Plant	--	1.6		Jim Duke's personal files.
1	NEOGLUCOBRASSICIN	Leaf	--	--		Jim Duke's personal files.
39	NIACIN	Leaf	6.4	83	-0.17638140110322484	
3	NICKEL	Leaf	0.3	7	-0.28467312579555515	ACTA AGRIC SCAND SUPPL 22: 1980
0	NITROGEN	Leaf	7000	71800	1.400721017239793	ACTA AGRIC SCAND SUPPL 22: 1980
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.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
18	OLEIC-ACID	Leaf	240	2578	-0.3066324749217592	USDA's Ag Handbook 8 and sequelae)
0	OXALATE	Leaf	1900	20406	-0.28520935704631206	USDA's Ag Handbook 8 and sequelae)
25	P-COUMARIC-ACID	Leaf	--	13	-0.3465642412720655	
13	P-HYDROXY-BENZOIC-ACID	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
13	PALMITIC-ACID	Leaf	470	5048	-0.2927982427753776	USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Leaf	5.35	63	0.8524389937224381	USDA's Ag Handbook 8 and sequelae)
0	PENTAN-3-ONE	Plant	--	--		Jim Duke's personal files.
0	PENTEN-1-OL	Plant	--	--		Jim Duke's personal files.
3	PHENETHYL-ISOTHIOCYANATE	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
7	PHENYLALANINE	Leaf	840	9022	-0.32366072893862124	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Leaf	644	9090	0.7577587277969241	
5	PHYLLOQUINONE	Inflorescence	--	0.31		
5	PHYLLOQUINONE	Leaf	--	1.79	-1.3371909672181328	
0	PHYTATE	Leaf	180	1640		
9	PHYTIC-ACID	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
2	PHYTOSTEROLS	Plant	--	--		
14	POTASSIUM	Leaf	3178	37270	0.3058332790917791	
1	PROGOITRIN	Leaf	--	--		

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0	PROLINE	Leaf	1140	12244	0.14474263630065312	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Leaf	28710	331159	1.1902719416088388	USDA's Ag Handbook 8 and sequelae)
176	QUERCETIN	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
44	QUERCITRIN	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
1	QUINIC-ACID	Leaf	--	--		Jim Duke's personal files.
15	RIBOFLAVIN	Leaf	1.1	21	-0.07942432526480918	
0	RUBIDIUM	Leaf	1	23	-0.6707091074151935	ACTA AGRIC SCAND SUPPL 22: 1980
87	RUTIN	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
7	SALICYLATES	Leaf	6	65	-0.435551873962273	
34	SALICYLIC-ACID	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
0	SEC-BUTYL-ISOTHIOCYANATE	Seed	--	--		Jim Duke's personal files.
60	SELENIUM	Leaf	0.002	0.024	-0.3807027917986485	
60	SELENIUM	Stem	--	0.015	-0.42886426089167784	
1	SERINE	Leaf	1000	10740	-0.003085924608790074	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Leaf	1	90	-0.14550202645318341	ACTA AGRIC SCAND SUPPL 22: 1980
9	SINAPIC-ACID	Leaf	--	40	-0.5050096614914733	



Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
7	SINIGRIN	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
1	SODIUM	Leaf	252	3091	-0.09830203577402047	USDA's Ag Handbook 8 and sequelae)
10	SQUALENE	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
8	STEARIC-ACID	Leaf	70	752	-0.13186141525885503	USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
7	SUCCINIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
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.
14	SULFUR	Leaf	1200	11800	1.6302603378370644	ACTA AGRIC SCAND SUPPL 22: 1980
31	THIAMIN	Leaf	0.6	8	-0.06349209547044472	USDA's Ag Handbook 8 and sequelae)
4	THREONINE	Leaf	910	9773	-0.005488458413534491	USDA's Ag Handbook 8 and sequelae)
2	TRANS-FERULIC-ACID	Leaf	--	--		Stitt, Paul. Why George should eat broccoli.
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.
29	TRYPTOPHAN	Leaf	290	3115	0.10979300838520059	USDA's Ag Handbook 8 and sequelae)

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8	TYROSINE	Leaf	630	6766	-0.34477094479123366	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Leaf	1280	13747	0.29552238675671566	USDA's Ag Handbook 8 and sequelae)
24	VANILLIC-ACID	Plant	--	--		Stitt, Paul. Why George should eat broccoli.
0	VIT-B-6	Leaf	1.6	18	0.24648148618924984	USDA's Ag Handbook 8 and sequelae)
0	WATER	Leaf	890000	910230	0.5118312318849885	USDA's Ag Handbook 8 and sequelae)
77	ZINC	Leaf	4	118	0.19739995136190341	