Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Brassica oleracea var. botrytis l.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
176	QUERCETIN	Flower		6.0	-1.4106513565908647	--
176	QUERCETIN	Leaf				--
112	ASCORBIC-ACID	Flower	660.0	9300.0	2.0283569773652044	--
112	ASCORBIC-ACID	Leaf	911.0	10360.0	0.5173558895778465	--
102	CAFFEIC-ACID	Leaf		8.0	-0.7148173591555008	--
87	RUTIN	Leaf				--
77	ZINC	Flower	3.0	97.0	3.0606347490514247	--
77	ZINC	Leaf	4.0	118.0	0.19739995136190341	--
77	CHLOROGENIC-ACID	Leaf				--
75	KAEMPFEROL	Flower		30.0	-1.0760015465680726	--
75	KAEMPFEROL	Leaf				--
65	MAGNESIUM	Leaf	214.0	3072.0	-0.406886321355332	--
65	MAGNESIUM	Flower	115.0	2250.0	-0.4063280335551449	--
61	FERULIC-ACID	Leaf		13.0	0.08918222301645602	--
60	SELENIUM	Stem		0.015	-0.42886426089167784	--
60	SELENIUM	Leaf		0.024	-0.3807027917986485	--
60	SELENIUM	Flower				--
53	BETA-CAROTENE	Flower		4.0	-0.5606735845287268	--
53	BETA-CAROTENE	Leaf	9.0	138.0	-0.5369565297726103	--
47	BETA-SITOSTEROL	Plant				--
47	BETA-SITOSTEROL	Flower	120.0	1200.0	-0.7745775450534552	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
44	QUERCITRIN	Leaf				--
39	NIACIN	Flower	5.0	85.0	-0.09352864336463278	--
39	NIACIN	Leaf				--
34	SALICYLIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
32	ALPHA-TOCOPHEROL	Flower	0.3	4.0	-1.0	--
32	ALPHA-TOCOPHEROL	Leaf	7.0	439.0	0.35927304562664447	--
32	INDOLE-3-CARBINOL	Leaf				--
31	THIAMIN	Leaf	0.6	8.0	-0.06349209547044472	--
31	THIAMIN	Flower	0.6	12.0	1.9586178131455851	--
29	TRYPTOPHAN	Flower	260.0	3360.0		--
29	TRYPTOPHAN	Leaf	290.0	3115.0	0.10979300838520059	--
28	CALCIUM	Leaf	360.0	54247.0	2.4468006382605774	--
28	CALCIUM	Flower	210.0	4040.0	-0.4787571488570857	--
27	LINOLEIC-ACID	Flower	190.0	2455.0	0.4542076634572454	--
27	LINOLEIC-ACID	Leaf	380.0	4081.0	-0.6928297779549968	--
25	P-COUMARIC-ACID	Flower		35.0		--
25	P-COUMARIC-ACID	Leaf		13.0	-0.3465642412720655	--
24	ETHANOL	Flower				--
24	CHROMIUM	Leaf	0.005	0.18	-0.6314530785674829	--
24	VANILLIC-ACID	Plant				--
24	CHROMIUM	Flower	0.001	0.125	-1.3473800790006203	--
24	ETHANOL	Plant				--
23	CITRIC-ACID	Plant				--
23	CITRIC-ACID	Flower				--
21	CHLOROPHYLL	Leaf				--
18	OLEIC-ACID	Flower	120.0	1550.0	0.47798392866277417	--
18	CINNAMIC-ACID	Leaf				--
18	OLEIC-ACID	Leaf	240.0	2578.0	-0.3066324749217592	--
16	ALLYL-ISOTHIOCYANATE	Leaf				--
15	METHIONINE	Leaf	340.0	3652.0	0.46965125289987986	--
15	METHIONINE	Flower	280.0	3615.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
15	FOLACIN	Leaf	0.64	8.4	-0.15226470429048047	--
15	ALPHA-LINOLENIC-ACID	Leaf	1290.0	13855.0	1.243183883058032	--
15	FIBER	Leaf	10760.0	122866.0	-0.47818554218157117	--
15	RIBOFLAVIN	Leaf	1.1	21.0	-0.07942432526480918	--
15	MALIC-ACID	Plant				--
15	RIBOFLAVIN	Flower	0.3	11.0	1.1243491725579133	--
15	MALIC-ACID	Flower				--
15	FIBER	Flower	8000.0	132000.0	0.00499085884442514	--
14	SULFUR	Leaf	1200.0	11800.0	1.6302603378370644	--
14	ARGININE	Leaf	1450.0	15573.0	-0.25040545078848814	--
14	POTASSIUM	Leaf	3178.0	37270.0	0.3058332790917791	--
14	POTASSIUM	Flower	3300.0	49080.0	3.0578856743972493	--
14	MANGANESE	Leaf	2.0	80.0	-0.32688920745367256	--
14	MANGANESE	Flower	1.5	48.0	-0.2230146829051698	--
14	ARGININE	Flower	960.0	12400.0		--
13	PALMITIC-ACID	Flower	240.0	3100.0	0.13966281921675727	--
13	MUFA	Flower	120.0	1550.0	0.46291004988627577	--
13	PALMITIC-ACID	Leaf	470.0	5048.0	-0.2927982427753776	--
13	P-HYDROXY-BENZOIC-ACID	Leaf				--
12	COPPER	Leaf	0.68	52.0	0.6699011255650867	--
12	STIGMASTEROL	Plant				--
12	GLYCINE	Leaf	950.0	10203.0	-0.05657990592554876	--
12	COPPER	Flower	0.3	8.0	-0.9960623124329469	--
12	STIGMASTEROL	Flower	20.0	200.0		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
12	GLYCINE	Flower	640.0	8270.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
11	PANTOTHENIC-ACID	Leaf	5.35	63.0	0.8524389937224381	--
11	PANTOTHENIC-ACID	Flower	1.4	18.0	-1.0	--
10	ALPHA-AMYRIN	Flower				--
10	SQUALENE	Plant				--
10	ALPHA-AMYRIN	Bud				--
9	OXALIC-ACID	Plant		68.0	-0.5351320075910592	--
9	BETA-AMYRIN	Flower				--
9	PHYTIC-ACID	Leaf				--
9	BETA-AMYRIN	Bud				--
9	SINAPIC-ACID	Leaf		40.0	-0.5050096614914733	--
8	GLUTAMIC-ACID	Flower	2650.0	34240.0		--
8	STEARIC-ACID	Leaf	70.0	752.0	-0.13186141525885503	--
8	TYROSINE	Flower	430.0	5555.0		--
8	GLUTAMIC-ACID	Leaf	3750.0	40275.0	0.12712766718145815	--
8	TYROSINE	Leaf	630.0	6766.0	-0.34477094479123366	--
8	STEARIC-ACID	Flower	30.0	390.0	0.6447612226140537	--
7	HISTIDINE	Leaf	500.0	5370.0	-0.0031655528062669996	--
7	SINIGRIN	Flower	0.0	325.0		--
7	SUCCINIC-ACID	Plant				--
7	FUMARIC-ACID	Plant				--
7	ALPHA-CAROTENE	Plant				--
7	PHENYLALANINE	Leaf	840.0	9022.0	-0.32366072893862124	--
7	SINIGRIN	Plant				--
7	PHENYLALANINE	Flower	710.0	9175.0		--
7	FUMARIC-ACID	Flower				--
7	HISTIDINE	Flower	400.0	5165.0		--
7	SUCCINIC-ACID	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
6	IRON	Flower	5.0	122.0	-0.3012855132197258	--
6	IRON	Leaf	8.0	109.0	-0.6442917506016965	--
5	ALUMINUM	Flower	1.0	150.0	0.9080903837793464	--
5	ALUMINUM	Leaf	1.0	27.0	-0.7515974845433717	--
4	BORON	Flower	1.0	76.0	1.2304541664359345	--
4	BORON	Stem		21.0	-0.7419113414039952	--
4	SILICON	Flower	2.0	125.0	2.1795902118292325	--
4	BORON	Leaf	1.0	85.0	0.6469238451071857	--
4	4-VINYL-GUAIACOL	Plant				--
4	PHOSPHORUS	Leaf	644.0	9090.0	0.7577587277969241	--
4	PHOSPHORUS	Flower	385.0	7375.0	1.5411143666705196	--
4	THREONINE	Flower	720.0	9300.0		--
4	LYSINE	Leaf	1410.0	15143.0	0.5181729835111131	--
4	SILICON	Leaf	1.0	90.0	-0.14550202645318341	--
4	LYSINE	Flower	1070.0	13825.0		--
4	THREONINE	Leaf	910.0	9773.0	-0.005488458413534491	--
4	PUFA	Flower	830.0	10725.0	1.333147880984072	--
3	CADMIUM	Flower	0.003	0.25		--
3	CADMIUM	Leaf	0.01	0.18	-0.7863999904697607	--
3	VALINE	Flower	1000.0	12920.0		--
3	ALANINE	Flower	1050.0	13565.0		--
3	NICKEL	Flower	0.03	12.0	1.0	--
3	ACETONE	Flower				--
3	ISOLEUCINE	Flower	760.0	9820.0		--
3	ISOLEUCINE	Leaf	1090.0	11707.0	-0.09196747371544084	--
3	VALINE	Leaf	1280.0	13747.0	0.29552238675671566	--
3	NICKEL	Leaf	0.3	7.0	-0.28467312579555515	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
3	PHENETHYL-ISOTHIOCYANATE	Leaf				--
3	ASPARTIC-ACID	Leaf	2130.0	22876.0	-0.262328714251028	--
3	ALANINE	Leaf	1180.0	12673.0	0.017867252591863454	--
3	PHENETHYLAMINE	Flower		1.8		--
3	ACETONE	Leaf				--
3	INDOLE-3-ACETONITRILE	Leaf				--
2	LEUCINE	Leaf	1310.0	14069.0	-0.3764770761728601	--
2	CYSTINE	Leaf	200.0	2148.0	-0.6472110127615397	--
2	CAMPESTEROL	Flower	30.0	300.0		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	ARSENIC	Leaf				--
2	MOLYBDENUM	Stem		1.76	-0.13934558811150258	--
2	MOLYBDENUM	Leaf	0.1	3.76	0.6801012829363977	--
2	MOLYBDENUM	Flower		0.1		--
2	LEUCINE	Flower	1160.0	15000.0		--
2	COBALT	Leaf	0.02	0.6	-0.29531921745391343	--
2	DIMETHYL-AMINE	Flower		14.0	1.0	--
2	METHANOL	Plant				--
2	CYSTINE	Flower	230.0	2970.0		--
2	PHYTOSTEROLS	Plant				--
2	METHANOL	Flower				--
2	BETA-CRYPTOXANTHIN	Plant				--
2	PHYTOSTEROLS	Flower	180.0	1800.0		Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	COBALT	Flower	0.001	0.125	-0.5425117041971756	--
2	ARSENIC	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
2	TRANS-FERULIC-ACID	Leaf				--
2	DIMETHYL-DISULFIDE	Plant				--
1	SODIUM	Flower	120.0	2300.0	0.7325478785988843	--
1	HEXYL-ACETATE	Plant				--
1	GLUCOBRASSICIN	Leaf	30.0	580.0		--
1	PROGOITRIN	Leaf				--
1	GLUCORAPHANIN	Flower	0.0	990.0		--
1	METHYL-AMINE	Flower		65.0	1.0000000000000002	--
1	GLUCONASTURTIN	Flower				--
1	PROGOITRIN	Flower	0.0	60.0		--
1	4-HYDROXY-GLUCOBRASSICIN	Leaf	3.0	325.0		--
1	SERINE	Flower	1040.0	13440.0		--
1	MERCURY	Leaf	0.002	0.09	1.1722789664445759	--
1	GLUCOIBERIN	Flower	0.0	1600.0		--
1	MERCURY	Flower	0.0	0.025	-0.9374693023756843	--
1	SODIUM	Leaf	252.0	3091.0	-0.09830203577402047	--
1	NEOGLUCOBRASSICIN	Tissue Culture				--
1	GLUCORAPHANIN	Leaf	255.0	8990.0		--
1	NEOGLUCOBRASSICIN	Flower	8.0	450.0		--
1	GLUCOBRASSICIN	Flower	60.0	1670.0		--
1	QUINIC-ACID	Leaf				--
1	GLUCONASTURTIN	Leaf	0.0	145.0		--
1	QUINIC-ACID	Flower				--
1	NEOGLUCOBRASSICIN	Leaf	10.0	900.0		--
1	4-HYDROXY-GLUCOBRASSICIN	Flower	7.0	390.0		--
1	GLUCOIBERIN	Leaf	0.0	248.0		--
1	SERINE	Leaf	1000.0	10740.0	-0.003085924608790074	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	LINOLENIC-ACID	Flower	640.0	8270.0	1.0	--
0	3-METHYLTHIOPROPYL-GLUCOSINOLATE	Flower				--
0	5-METHOXY-GLUCOBRASSICIN	Leaf				--
0	PROTEIN	Leaf	28710.0	331159.0	1.1902719416088388	--
0	AMMONIA(NH3)	Flower		6376.0	-1.2099685441032595	--
0	1-METHOXY-GLUCOBRASSICIN	Leaf				--
0	PROTEIN	Flower	18680.0	300000.0	1.8233202818155771	--
0	FAT	Flower	1800.0	29400.0	-0.4465051083149715	--
0	GLUCOERUCIN	Leaf	0.0	15020.0		--
0	LEAD	Leaf	0.01	1.0	-0.6352496573639428	--
0	BROMINE	Flower				--
0	3-METHYL-SULFINYL-PROPYL-GLUCOSINOLATE	Flower				--
0	5-HYDROXY-GLUCOBRASSICIN	Leaf				--
0	PROLINE	Leaf	1140.0	12244.0	0.14474263630065312	--
0	BROMINE	Leaf				--
0	GLUCOSINOLATES	Flower	20.0	1140.0		--
0	PROP-2-ENYL-GLUCOSINOLATE	Flower				--
0	WATER	Plant	894000.0	926000.0	0.6638590552985428	--
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Leaf				--
0	HEX-CIS-3-ENOL-ACETATE	Plant				--
0	PROLINE	Flower	860.0	11110.0		--
0	SEC-BUTYL-ISOTHIOCYANATE	Seed				--
0	LEAD	Flower				--
0	VIT-B-6	Flower	2.0	30.0	1.0	--
0	WATER	Leaf	890000.0	910230.0	0.5118312318849885	--
0	4-METHOXY-GLUCOBRASSICIN	Leaf	8.0	580.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	HEX-CIS-3-EN-1-OL	Plant				--
0	SFA	Flower	270.0	3490.0	-0.423152594485768	--
0	NITROGEN	Flower	3100.0	47500.0	1.0	--
0	KILOCALORIES	Plant	240.0	3100.0	-0.18505812231826163	--
0	KILOCALORIES	Leaf	280.0	3007.0	-0.017863523924990066	--
0	VIT-B-6	Leaf	1.6	18.0	0.24648148618924984	--
0	OXALATE	Leaf	1900.0	20406.0	-0.28520935704631206	--
0	GLUCONAPOLEIFERIN	Flower	0.0	80.0		--
0	FLUORINE	Leaf	0.03	0.9	-1.2049539311662678	--
0	BENZYL-AMINE	Flower		1.4		--
0	3,3'-DIINDOYL-METHANE	Leaf				--
0	RUBIDIUM	Leaf	1.0	23.0	-0.6707091074151935	--
0	4-METHYL-THIO-BUTYL-GLUCOSINOLATE	Flower				--
0	ASH	Flower	6600.0	121250.0	1.2014906628657485	--
0	24-METHYLENE-CYCLOARTENOL	Leaf				--
0	GLUCOSINOLATES	Leaf	70.0	2120.0		--
0	RUBIDIUM	Flower	0.43	11.0		--
0	NITROGEN	Leaf	7000.0	71800.0	1.400721017239793	--
0	GLUCOERUCIN	Flower	0.0	210.0		--
0	ABSCISIC-ACID	Flower				--
0	4-METHYL-SULFINYL-BUTYL-GLUCOSINOLATE	Flower				--
0	1-O-SINAPOYL-BETA-D-GLUCOSE	Leaf				--
0	5-METHOXY-GLUCOBRASSICIN	Tissue Culture				--
0	FAT	Leaf	3160.0	41242.0	-0.30328791009066547	--
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Flower				--
0	INDOYL-3-METHYL-GLUCOSINOLATE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	INDOLE-3-CARBOXYLIC-ACID	Plant				--
0	CARBOHYDRATES	Leaf	52400.0	562776.0	-0.3902639822213213	--
0	1-O-P-COUMAROYL-BETA-D-GLUCOSE	Leaf				--
0	N-PENTYL-AMINE	Flower		3.3		--
0	5-HYDROXY-GLUCOBRASSICIN	Tissue Culture				--
0	CARBOHYDRATES	Flower	49200.0	635660.0	-0.14105375622194907	--
0	4-METHOXY-GLUCOBRASSICIN	Flower	15.0	355.0		--
0	1-O-FERULOYL-BETA-D-GLUCOSE	Leaf				--
0	PENTEN-1-OL	Plant				--
0	GLUCONAPOLEIFERIN	Leaf	9.0	135.0		--
0	ASH	Leaf	2800.0	101708.0	-0.30205081182588317	--
0	N-METHYL-PHENETHYLAMINE	Flower		1.6		--
0	FLUORINE	Flower	0.02	2.5		--
0	ANILINE	Flower		22.0		--
0	1-METHOXY-INDOLE-3-CARBALDEHYDE	Plant				--
0	PENTAN-3-ONE	Plant				--
0	N-METHYL-BETA-PHENETHYLAMINE	Plant		1.6		--
0	N-METHYL-BETA-PHENETHYLAMINE	Flower		1.6		--