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
0	WATER	Plant	894000.0	926000.0	0.6638590552985428	--
0	WATER	Leaf	890000.0	910230.0	0.5118312318849885	--
0	CARBOHYDRATES	Flower	49200.0	635660.0	-0.14105375622194907	--
0	CARBOHYDRATES	Leaf	52400.0	562776.0	-0.3902639822213213	--
0	PROTEIN	Leaf	28710.0	331159.0	1.1902719416088388	--
0	PROTEIN	Flower	18680.0	300000.0	1.8233202818155771	--
15	FIBER	Flower	8000.0	132000.0	0.00499085884442514	--
15	FIBER	Leaf	10760.0	122866.0	-0.47818554218157117	--
0	ASH	Flower	6600.0	121250.0	1.2014906628657485	--
0	ASH	Leaf	2800.0	101708.0	-0.30205081182588317	--
0	NITROGEN	Leaf	7000.0	71800.0	1.400721017239793	--
28	CALCIUM	Leaf	360.0	54247.0	2.4468006382605774	--
14	POTASSIUM	Flower	3300.0	49080.0	3.0578856743972493	--
0	NITROGEN	Flower	3100.0	47500.0	1.0	--
0	FAT	Leaf	3160.0	41242.0	-0.30328791009066547	--
8	GLUTAMIC-ACID	Leaf	3750.0	40275.0	0.12712766718145815	--
14	POTASSIUM	Leaf	3178.0	37270.0	0.3058332790917791	--
8	GLUTAMIC-ACID	Flower	2650.0	34240.0		--
0	FAT	Flower	1800.0	29400.0	-0.4465051083149715	--
3	ASPARTIC-ACID	Leaf	2130.0	22876.0	-0.262328714251028	--
0	OXALATE	Leaf	1900.0	20406.0	-0.28520935704631206	--
14	ARGININE	Leaf	1450.0	15573.0	-0.25040545078848814	--
4	LYSINE	Leaf	1410.0	15143.0	0.5181729835111131	--
0	GLUCOERUCIN	Leaf	0.0	15020.0		--
2	LEUCINE	Flower	1160.0	15000.0		--
2	LEUCINE	Leaf	1310.0	14069.0	-0.3764770761728601	--
15	ALPHA-LINOLENIC-ACID	Leaf	1290.0	13855.0	1.243183883058032	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
4	LYSINE	Flower	1070.0	13825.0		--
3	VALINE	Leaf	1280.0	13747.0	0.29552238675671566	--
3	ALANINE	Flower	1050.0	13565.0		--
1	SERINE	Flower	1040.0	13440.0		--
3	VALINE	Flower	1000.0	12920.0		--
3	ALANINE	Leaf	1180.0	12673.0	0.017867252591863454	--
14	ARGININE	Flower	960.0	12400.0		--
0	PROLINE	Leaf	1140.0	12244.0	0.14474263630065312	--
14	SULFUR	Leaf	1200.0	11800.0	1.6302603378370644	--
3	ISOLEUCINE	Leaf	1090.0	11707.0	-0.09196747371544084	--
0	PROLINE	Flower	860.0	11110.0		--
1	SERINE	Leaf	1000.0	10740.0	-0.003085924608790074	--
4	PUFA	Flower	830.0	10725.0	1.333147880984072	--
112	ASCORBIC-ACID	Leaf	911.0	10360.0	0.5173558895778465	--
12	GLYCINE	Leaf	950.0	10203.0	-0.05657990592554876	--
3	ISOLEUCINE	Flower	760.0	9820.0		--
4	THREONINE	Leaf	910.0	9773.0	-0.005488458413534491	--
112	ASCORBIC-ACID	Flower	660.0	9300.0	2.0283569773652044	--
4	THREONINE	Flower	720.0	9300.0		--
7	PHENYLALANINE	Flower	710.0	9175.0		--
4	PHOSPHORUS	Leaf	644.0	9090.0	0.7577587277969241	--
7	PHENYLALANINE	Leaf	840.0	9022.0	-0.32366072893862124	--
1	GLUCORAPHANIN	Leaf	255.0	8990.0		--
12	GLYCINE	Flower	640.0	8270.0		--
0	LINOLENIC-ACID	Flower	640.0	8270.0	1.0	--
4	PHOSPHORUS	Flower	385.0	7375.0	1.5411143666705196	--
8	TYROSINE	Leaf	630.0	6766.0	-0.34477094479123366	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	AMMONIA(NH3)	Flower		6376.0	-1.2099685441032595	--
8	TYROSINE	Flower	430.0	5555.0		--
7	HISTIDINE	Leaf	500.0	5370.0	-0.0031655528062669996	--
7	HISTIDINE	Flower	400.0	5165.0		--
13	PALMITIC-ACID	Leaf	470.0	5048.0	-0.2927982427753776	--
27	LINOLEIC-ACID	Leaf	380.0	4081.0	-0.6928297779549968	--
28	CALCIUM	Flower	210.0	4040.0	-0.4787571488570857	--
15	METHIONINE	Leaf	340.0	3652.0	0.46965125289987986	--
15	METHIONINE	Flower	280.0	3615.0		--
0	SFA	Flower	270.0	3490.0	-0.423152594485768	--
29	TRYPTOPHAN	Flower	260.0	3360.0		--
29	TRYPTOPHAN	Leaf	290.0	3115.0	0.10979300838520059	--
13	PALMITIC-ACID	Flower	240.0	3100.0	0.13966281921675727	--
0	KILOCALORIES	Plant	240.0	3100.0	-0.18505812231826163	--
1	SODIUM	Leaf	252.0	3091.0	-0.09830203577402047	--
65	MAGNESIUM	Leaf	214.0	3072.0	-0.406886321355332	--
0	KILOCALORIES	Leaf	280.0	3007.0	-0.017863523924990066	--
2	CYSTINE	Flower	230.0	2970.0		--
18	OLEIC-ACID	Leaf	240.0	2578.0	-0.3066324749217592	--
27	LINOLEIC-ACID	Flower	190.0	2455.0	0.4542076634572454	--
1	SODIUM	Flower	120.0	2300.0	0.7325478785988843	--
65	MAGNESIUM	Flower	115.0	2250.0	-0.4063280335551449	--
2	CYSTINE	Leaf	200.0	2148.0	-0.6472110127615397	--
0	GLUCOSINOLATES	Leaf	70.0	2120.0		--
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.)
1	GLUCOBRASSICIN	Flower	60.0	1670.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
1	GLUCOIBERIN	Flower	0.0	1600.0		--
13	MUFA	Flower	120.0	1550.0	0.46291004988627577	--
18	OLEIC-ACID	Flower	120.0	1550.0	0.47798392866277417	--
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.)
0	GLUCOSINOLATES	Flower	20.0	1140.0		--
1	GLUCORAPHANIN	Flower	0.0	990.0		--
1	NEOGLUCOBRASSICIN	Leaf	10.0	900.0		--
8	STEARIC-ACID	Leaf	70.0	752.0	-0.13186141525885503	--
1	GLUCOBRASSICIN	Leaf	30.0	580.0		--
0	4-METHOXY-GLUCOBRASSICIN	Leaf	8.0	580.0		--
1	NEOGLUCOBRASSICIN	Flower	8.0	450.0		--
32	ALPHA-TOCOPHEROL	Leaf	7.0	439.0	0.35927304562664447	--
8	STEARIC-ACID	Flower	30.0	390.0	0.6447612226140537	--
1	4-HYDROXY-GLUCOBRASSICIN	Flower	7.0	390.0		--
0	4-METHOXY-GLUCOBRASSICIN	Flower	15.0	355.0		--
1	4-HYDROXY-GLUCOBRASSICIN	Leaf	3.0	325.0		--
7	SINIGRIN	Flower	0.0	325.0		--
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.)
1	GLUCOIBERIN	Leaf	0.0	248.0		--
0	GLUCOERUCIN	Flower	0.0	210.0		--
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.)
5	ALUMINUM	Flower	1.0	150.0	0.9080903837793464	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
1	GLUCONASTURTIN	Leaf	0.0	145.0		--
53	BETA-CAROTENE	Leaf	9.0	138.0	-0.5369565297726103	--
0	GLUCONAPOLEIFERIN	Leaf	9.0	135.0		--
4	SILICON	Flower	2.0	125.0	2.1795902118292325	--
6	IRON	Flower	5.0	122.0	-0.3012855132197258	--
77	ZINC	Leaf	4.0	118.0	0.19739995136190341	--
6	IRON	Leaf	8.0	109.0	-0.6442917506016965	--
77	ZINC	Flower	3.0	97.0	3.0606347490514247	--
4	SILICON	Leaf	1.0	90.0	-0.14550202645318341	--
4	BORON	Leaf	1.0	85.0	0.6469238451071857	--
39	NIACIN	Flower	5.0	85.0	-0.09352864336463278	--
14	MANGANESE	Leaf	2.0	80.0	-0.32688920745367256	--
0	GLUCONAPOLEIFERIN	Flower	0.0	80.0		--
4	BORON	Flower	1.0	76.0	1.2304541664359345	--
9	OXALIC-ACID	Plant		68.0	-0.5351320075910592	--
1	METHYL-AMINE	Flower		65.0	1.0000000000000002	--
11	PANTOTHENIC-ACID	Leaf	5.35	63.0	0.8524389937224381	--
1	PROGOITRIN	Flower	0.0	60.0		--
12	COPPER	Leaf	0.68	52.0	0.6699011255650867	--
14	MANGANESE	Flower	1.5	48.0	-0.2230146829051698	--
9	SINAPIC-ACID	Leaf		40.0	-0.5050096614914733	--
25	P-COUMARIC-ACID	Flower		35.0		--
0	VIT-B-6	Flower	2.0	30.0	1.0	--
75	KAEMPFEROL	Flower		30.0	-1.0760015465680726	--
5	ALUMINUM	Leaf	1.0	27.0	-0.7515974845433717	--
0	RUBIDIUM	Leaf	1.0	23.0	-0.6707091074151935	--
0	ANILINE	Flower		22.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
4	BORON	Stem		21.0	-0.7419113414039952	--
15	RIBOFLAVIN	Leaf	1.1	21.0	-0.07942432526480918	--
11	PANTOTHENIC-ACID	Flower	1.4	18.0	-1.0	--
0	VIT-B-6	Leaf	1.6	18.0	0.24648148618924984	--
2	DIMETHYL-AMINE	Flower		14.0	1.0	--
61	FERULIC-ACID	Leaf		13.0	0.08918222301645602	--
25	P-COUMARIC-ACID	Leaf		13.0	-0.3465642412720655	--
3	NICKEL	Flower	0.03	12.0	1.0	--
31	THIAMIN	Flower	0.6	12.0	1.9586178131455851	--
0	RUBIDIUM	Flower	0.43	11.0		--
15	RIBOFLAVIN	Flower	0.3	11.0	1.1243491725579133	--
15	FOLACIN	Leaf	0.64	8.4	-0.15226470429048047	--
31	THIAMIN	Leaf	0.6	8.0	-0.06349209547044472	--
12	COPPER	Flower	0.3	8.0	-0.9960623124329469	--
102	CAFFEIC-ACID	Leaf		8.0	-0.7148173591555008	--
3	NICKEL	Leaf	0.3	7.0	-0.28467312579555515	--
176	QUERCETIN	Flower		6.0	-1.4106513565908647	--
32	ALPHA-TOCOPHEROL	Flower	0.3	4.0	-1.0	--
53	BETA-CAROTENE	Flower		4.0	-0.5606735845287268	--
2	MOLYBDENUM	Leaf	0.1	3.76	0.6801012829363977	--
0	N-PENTYL-AMINE	Flower		3.3		--
0	FLUORINE	Flower	0.02	2.5		--
3	PHENETHYLAMINE	Flower		1.8		--
2	MOLYBDENUM	Stem		1.76	-0.13934558811150258	--
0	N-METHYL-PHENETHYLAMINE	Flower		1.6		--
0	N-METHYL-BETA-PHENETHYLAMINE	Flower		1.6		--
0	N-METHYL-BETA-PHENETHYLAMINE	Plant		1.6		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	BENZYL-AMINE	Flower		1.4		--
0	LEAD	Leaf	0.01	1.0	-0.6352496573639428	--
0	FLUORINE	Leaf	0.03	0.9	-1.2049539311662678	--
2	COBALT	Leaf	0.02	0.6	-0.29531921745391343	--
3	CADMIUM	Flower	0.003	0.25		--
24	CHROMIUM	Leaf	0.005	0.18	-0.6314530785674829	--
3	CADMIUM	Leaf	0.01	0.18	-0.7863999904697607	--
2	COBALT	Flower	0.001	0.125	-0.5425117041971756	--
24	CHROMIUM	Flower	0.001	0.125	-1.3473800790006203	--
2	MOLYBDENUM	Flower		0.1		--
1	MERCURY	Leaf	0.002	0.09	1.1722789664445759	--
1	MERCURY	Flower	0.0	0.025	-0.9374693023756843	--
60	SELENIUM	Leaf		0.024	-0.3807027917986485	--
60	SELENIUM	Stem		0.015	-0.42886426089167784	--
10	SQUALENE	Plant				--
1	HEXYL-ACETATE	Plant				--
0	BROMINE	Leaf				--
0	4-METHYL-THIO-BUTYL-GLUCOSINOLATE	Flower				--
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Leaf				--
0	HEX-CIS-3-ENOL-ACETATE	Plant				--
15	MALIC-ACID	Plant				--
7	FUMARIC-ACID	Plant				--
0	4-METHYL-SULFINYL-BUTYL-GLUCOSINOLATE	Flower				--
23	CITRIC-ACID	Plant				--
7	SINIGRIN	Plant				--
0	HEX-CIS-3-EN-1-OL	Plant				--
0	BROMINE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE	Flower				--
1	QUINIC-ACID	Leaf				--
18	CINNAMIC-ACID	Leaf				--
3	PHENETHYL-ISOTHIOCYANATE	Leaf				--
0	PROP-2-ENYL-GLUCOSINOLATE	Flower				--
39	NIACIN	Leaf				--
24	ETHANOL	Flower				--
47	BETA-SITOSTEROL	Plant				--
44	QUERCITRIN	Leaf				--
0	3,3'-DIINDOYL-METHANE	Leaf				--
2	TRANS-FERULIC-ACID	Leaf				--
0	PENTEN-1-OL	Plant				--
75	KAEMPFEROL	Leaf				--
2	BETA-CRYPTOXANTHIN	Plant				--
0	LEAD	Flower				--
7	ALPHA-CAROTENE	Plant				--
176	QUERCETIN	Leaf				--
21	CHLOROPHYLL	Leaf				--
10	ALPHA-AMYRIN	Flower				--
0	24-METHYLENE-CYCLOARTENOL	Leaf				--
0	PENTAN-3-ONE	Plant				--
1	GLUCONASTURTIN	Flower				--
9	BETA-AMYRIN	Flower				--
10	ALPHA-AMYRIN	Bud				--
0	3-METHYLTHIOPROPYL-GLUCOSINOLATE	Flower				--
77	CHLOROGENIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	1-O-SINAPOYL-BETA-D-GLUCOSE	Leaf				--
2	METHANOL	Flower				--
9	BETA-AMYRIN	Bud				--
16	ALLYL-ISOTHIOCYANATE	Leaf				--
0	3-METHYL-SULFINYL-PROPYL-GLUCOSINOLATE	Flower				--
3	ACETONE	Flower				--
0	1-O-P-COUMAROYL-BETA-D-GLUCOSE	Leaf				--
60	SELENIUM	Flower				--
0	INDOLE-3-CARBOXYLIC-ACID	Plant				--
24	ETHANOL	Plant				--
1	PROGOITRIN	Leaf				--
0	ABSCISIC-ACID	Flower				--
0	1-O-FERULOYL-BETA-D-GLUCOSE	Leaf				--
7	SUCCINIC-ACID	Plant				--
13	P-HYDROXY-BENZOIC-ACID	Leaf				--
1	NEOGLUCOBRASSICIN	Tissue Culture				--
32	INDOLE-3-CARBINOL	Leaf				--
0	SEC-BUTYL-ISOTHIOCYANATE	Seed				--
23	CITRIC-ACID	Flower				--
2	DIMETHYL-DISULFIDE	Plant				--
3	ACETONE	Leaf				--
0	1-METHOXY-INDOLE-3-CARBALDEHYDE	Plant				--
12	STIGMASTEROL	Plant				--
3	INDOLE-3-ACETONITRILE	Leaf				--
0	5-METHOXY-GLUCOBRASSICIN	Tissue Culture				--
34	SALICYLIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
2	METHANOL	Plant				--
15	MALIC-ACID	Flower				--
0	INDOYL-3-METHYL-GLUCOSINOLATE	Flower				--
2	ARSENIC	Flower				--
0	5-METHOXY-GLUCOBRASSICIN	Leaf				--
2	PHYTOSTEROLS	Plant				--
0	1-METHOXY-GLUCOBRASSICIN	Leaf				--
1	QUINIC-ACID	Flower				--
7	FUMARIC-ACID	Flower				--
0	5-HYDROXY-GLUCOBRASSICIN	Tissue Culture				--
87	RUTIN	Leaf				--
2	ARSENIC	Leaf				--
4	4-VINYL-GUAIACOL	Plant				--
0	5-HYDROXY-GLUCOBRASSICIN	Leaf				--
7	SUCCINIC-ACID	Flower				--
24	VANILLIC-ACID	Plant				--
9	PHYTIC-ACID	Leaf				--