

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Pisum sativum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	(R)-DIHYDRO-MALEIMIDE	Shoot		67.0		--
0	(R)-DIHYDRO-MALEIMIDE-BETA-D-GLUCOSIDE	Shoot		62.0		--
0	1-3-(4,5-DIHYDRO-FURANONE)-5-(HYDROXY-METHYL)-PYRROLE-2-CARBOXYALDEHYDE	Cotyledon				--
0	1-O-FERULOYL-BETA-D-GLUCOSE	Petiole				--
0	1-O-P-COUMAROYL-BETA-D-GLUCOSE	Petiole				--
0	1-O-SINAPOYL-BETA-D-GLUCOSE	Petiole				--
0	14-HENTRIACONTANOL	Wax				--
0	15-HENTRIACONTANOL	Wax				--
0	16-HENTRIACONTANOL	Wax				--
0	2,3,9-TRIMETHOXYPTEROCARPAN	Embryo				--
0	2,4-METHYLENE-CHOLESTEROL	Seed				--
0	3-HYDROXY-2,9-DIMETHOXYPTEROCARPAN	Embryo				--
0	4,4'-DIHYDROXY-2'-METHOXY-CHALCONE	Plant				--
0	4-HYDROXY-2,3,9-TRIMETHOXYPTEROCARPAN	Embryo				--
0	5'-O-(6-O-MALONYL-BETA-D-GLUCOPYRANOSYL)-PYRIDOXINE	Sprout Seedling				--
0	5'-O-(6-O-[3-HYDROXY-3-METHYL-4-CARBOXY-BUTANOYL]-BETA-D-GLUCOPYRANOSYL)PYRIDOXINE	Sprout Seedling		39.0		--
0	5'-O-BETA-D-GLUCOPYRANOSYL-PYRIDOXINE	Sprout Seedling				--
15	5-HYDROXYTRYPTAMINE	Leaf				--
0	ABSCISIC-ACID	Seed				--
3	ALANINE	Shoot		313.0	-1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
3	ALANINE	Seed	2400.0	11353.0	0.2544107762277084	--
3	ALANINE	Fruit	580.0	5737.0	0.797650565923243	--
12	ALLANTOIN	Shoot				--
0	ALPHA-AMINO-ADIPIC-ACID	Seed				--
10	ALPHA-AMYRIN	Seed				--
7	ALPHA-CAROTENE	Seed				--
15	ALPHA-LINOLENIC-ACID	Seed	350.0	1656.0	-0.2982217687915832	--
15	ALPHA-LINOLENIC-ACID	Fruit	130.0	1286.0	-0.5700877087410966	--
5	ALUMINUM	Seed	1.0	24.0	-0.32370061974940373	--
0	ARACHIDIC-ACID	Seed				--
14	ARGININE	Seed	4280.0	20246.0	-0.1860747281925731	--
14	ARGININE	Fruit	1340.0	13254.0	2.385763288251394	--
2	ARSENIC	Seed	0.01	0.04	-0.39141950485232585	--
112	ASCORBIC-ACID	Sprout Seedling		1650.0	0.23548384283782145	--
112	ASCORBIC-ACID	Seed	44.0	1892.0	0.7974032949690063	--
112	ASCORBIC-ACID	Fruit	600.0	5935.0	0.08453144637515866	--
0	ASH	Seed	8280.0	43138.0	-0.14263153920305127	--
0	ASH	Plant	60000.0	191000.0	1.2643915113553221	--
0	ASH	Fruit	5600.0	55391.0	-0.032958567674788206	--
3	ASPARTIC-ACID	Shoot		22.0	-1.4122668302255825	--
3	ASPARTIC-ACID	Seed	4950.0	23415.0	0.07333082777691317	--
3	ASPARTIC-ACID	Fruit	2280.0	22552.0	1.6282006074887239	--
9	BETA-AMYRIN	Seed				--
53	BETA-CAROTENE	Fruit	0.8	8.3	-0.13475687867360414	--
53	BETA-CAROTENE	Seed	3.6	18.2	0.708360013813247	--
2	BETA-CRYPTOXANTHIN	Seed				--
47	BETA-SITOSTEROL	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
14	BETAINE	Shoot		94.0	-0.4196725434161355	--
14	BETAINE	Root		59.0	-0.3636422915694051	--
4	BIOTIN	Seed		82.0	-0.1632857417052996	--
4	BORON	Seed	2.0	23.0	-0.05272056754370379	--
0	BROMINE	Seed	0.2	12.0	-0.024689516867391292	--
2	CADAVERINE	Leaf				--
3	CADMIUM	Seed	0.001	0.3	-0.19554199519514034	--
102	CAFFEIC-ACID	Plant				--
0	CAFFEIC-ACID-4-O-BETA-D-GLUCOSIDE	Fruit				--
28	CALCIUM	Seed	230.0	1700.0	-0.44930422081106247	--
28	CALCIUM	Plant	10200.0	14100.0	0.054617918985525656	--
28	CALCIUM	Fruit	430.0	4253.0	0.09154577661633961	--
4	CALCIUM-OXALATE	Fruit				--
2	CAMPESTEROL	Seed				--
0	CARBOHYDRATES	Plant	296000.0	506000.0	-1.071392630708283	--
0	CARBOHYDRATES	Fruit	75600.0	747774.0	-0.18773879511192948	--
0	CARBOHYDRATES	Seed	144600.0	684000.0	0.6382477569712912	--
1	CELLULOSE	Seed	74000.0	96000.0	-0.17598584759263042	--
1	CEPHALIN	Seed				--
7	CHLORINE	Seed	200.0	590.0	0.47175900178112185	--
1	CHOLESTEROL	Seed				--
20	CHOLINE	Shoot		121.0	-0.6059015450850461	--
20	CHOLINE	Seed	1970.0	2800.0	1.0613369877407708	--
20	CHOLINE	Root		61.0	-0.40634707268231035	--
20	CHOLINE	Fruit		2060.0	-0.17772173433114644	--
24	CHROMIUM	Seed	0.005	0.17	-0.6577469343759534	--
0	CIS-SINAPIC-ACID	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	CITRIC-ACID	Seed				--
2	COBALT	Seed	0.002	0.24	-0.19553484707353413	--
2	COBALT	Plant		0.15	-0.4725134768145522	--
12	COPPER	Seed	2.0	10.0	-0.43669625458362493	--
13	COUMESTROL	Seed		0.6	-0.4921468303167311	--
13	COUMESTROL	Fruit		300.0		--
2	CRYPTOXANTHIN	Seed	0.09	0.9		--
7	CYANIDIN	Flower				--
0	CYANIDIN-3-SAMBUBIOSIDE-5-GLUCOSIDE	Hull Husk				--
0	CYANIDIN-3-SOPHOROSIDE-5-GLUCOSIDE	Leaf				--
7	CYCLOARTENOL	Sprout Seedling				--
2	CYSTINE	Seed	320.0	1514.0	-1.138108991458445	--
2	CYSTINE	Fruit	320.0	3165.0	2.2257983135781227	--
32	DAIDZEIN	Seed		0.4	-0.5497579384483129	Kaufman,PB,Duke,JA,Briellmann,H,Boik,J and Hoyt,JE. 1997. A Comparative Survey of Leguminous Plants as Sources of the Isoflavones Genistein and Daidzein: Implications For Human Nutrition and Health. Journal of Alternative & Complementary Medicine 3(1):7-12
0	DEHYDROASCORBIC-ACID	Seed	1.0	7.0		--
9	DELPHINIDIN	Flower				--
0	DELPHINIDIN-3,5-DIGLUCOSIDE	Flower				--
1	DELPHINIDIN-3-GLUCOSIDE	Flower				--
0	DIHYDROFOLATE-SYNTHESASE	Sprout Seedling				--
0	FAT	Seed	3670.0	20481.0	-1.2900106189553835	--
0	FAT	Plant	15000.0	54000.0	0.03288582164164804	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FAT	Fruit	2000.0	19782.0	-0.49015876500578576	--
61	FERULIC-ACID	Seed				--
15	FIBER	Seed	22100.0	104541.0	-0.2387630123717088	--
15	FIBER	Plant	168000.0	361000.0	1.021715785633968	--
15	FIBER	Fruit	25000.0	247280.0	0.9965265101923236	--
0	FLUORINE	Seed	0.1	1.0	-0.636311877451655	--
15	FOLACIN	Seed	0.6	3.0	0.16545704351878715	--
22	GABA	Shoot		153.0		--
0	GAMMA-HYDROXY-HOMOARGININE	Sprout Seedling		100.0		--
81	GENISTEIN	Seed		45.8	-0.3031368245654431	Kaufman,PB,Duke,JA,Briemann,H,Boik,J and Hoyt,JE. 1997. A Comparative Survey of Leguminous Plants as Sources of the Isoflavones Genistein and Daidzein: Implications For Human Nutrition and Health. Journal of Alternative & Complementary Medicine 3(1):7-12
81	GENISTEIN	Shoot				--
8	GENTISIC-ACID	Seed				--
0	GIBBERELLINS	Seed				--
8	GLUTAMIC-ACID	Shoot		70.0	-1.3728059371053247	--
8	GLUTAMIC-ACID	Seed	7400.0	35005.0	-0.283025452512528	--
8	GLUTAMIC-ACID	Fruit	4480.0	44313.0	2.4183217884660655	--
12	GLYCINE	Seed	1840.0	8704.0	-0.32504888220047773	--
12	GLYCINE	Fruit	720.0	7122.0	1.360670467766508	--
4	GLYCOLIC-ACID	Seed				--
0	HENTRIACONTANE	Wax		500000.0		--
18	HISTAMINE	Shoot				--
7	HISTIDINE	Seed	1070.0	5061.0	-0.2826181096269255	--
7	HISTIDINE	Fruit	170.0	1682.0	-0.021461109850236294	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
1	HOMOSERINE	Shoot		733.0		--
7	INDOLE-3-ACETIC-ACID	Plant				--
0	INDOLYL-3-ACETALDEHYDE	Plant				--
8	INOSITOL	Seed		1500.0	-0.23480343440109436	--
12	IODINE	Seed		0.009	-0.2775875343678222	--
6	IRON	Seed	14.0	90.0	-0.28246338357132533	--
6	IRON	Plant		400.0	-0.2672486162776693	--
6	IRON	Fruit	21.0	206.0	0.28965829615096483	--
3	ISOLEUCINE	Fruit	1610.0	15925.0	3.6903978218417337	--
3	ISOLEUCINE	Seed	1950.0	9224.0	-0.16174193157312522	--
0	ISOXAZOLIN-5-ONE-2-BETA-D-GLUCOSIDE	Sprout Seedling				--
0	JASMONIC-ACID	Fruit				--
75	KAEMPFEROL	Tissue Culture		500.0		--
0	KAEMPFEROL-3-COUMAROYL-TRIGLUCOSIDE)	Leaf				--
0	KAEMPFEROL-3-FERULOYL-TRIGLUCOSIDE	Leaf				--
0	KAEMPFEROL-3-TRIGLUCOSIDE	Leaf				--
0	KILOCALORIES	Seed	810.0	3832.0	-0.8036030124335913	--
0	KILOCALORIES	Fruit	420.0	4154.0	0.7494622799352699	--
0	L-(+)-2-AMINO-BUTYRIC-ACID	Plant				--
0	L-(+)-ACETYLMOMOSERINE	Plant				--
0	L-(+)-HOMOSERINE	Sprout Seedling				--
0	L-(-)-HOMOSERINE	Plant				--
0	L-THREO-ALPHA-AMINO-BETA-CHLORO-BUTYRIC-ACID	Juice				--
0	LEAD	Seed	0.0	0.5	-0.5620906793923894	--
20	LECITHIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	LEGUMIN	Seed				--
0	LEGUMINELIN	Seed				--
2	LEUCINE	Shoot		35.0	-1.166788734812189	--
2	LEUCINE	Seed	3230.0	15279.0	-0.1725284090552955	--
2	LEUCINE	Fruit	2280.0	22552.0	3.709844999790676	--
27	LINOLEIC-ACID	Seed	1520.0	7190.0	-0.8562289818255532	--
27	LINOLEIC-ACID	Fruit	1750.0	7418.0	-0.2507431430528315	--
21	LUPEOL	Sprout Seedling				--
15	LUTEIN	Plant				--
0	LUTEIN-EPOXIDE	Leaf				--
4	LYSINE	Seed	3170.0	14995.0	0.3923313199877778	--
4	LYSINE	Fruit	2020.0	19980.0	4.109071319538206	--
0	M-XYLOHYDROQUINONE	Seed				--
65	MAGNESIUM	Plant	2200.0	3700.0	-0.11370984509318906	--
65	MAGNESIUM	Fruit	218.0	2591.0	0.21359164139236345	--
65	MAGNESIUM	Seed	319.0	1700.0	-0.4923274790188669	--
15	MALIC-ACID	Seed				--
0	MALVIDIN-3-RHAMNOSIDE-5-GLUCOSIDE	Flower				--
14	MANGANESE	Seed	3.0	21.0	-0.40511016640256897	--
14	MANGANESE	Plant		85.0	-0.08569411437442066	--
1	MERCURY	Seed	0.001	0.024	-0.6029041950552372	--
0	MESOXALIC-ACID	Sprout Seedling				--
15	METHIONINE	Seed	820.0	3879.0	-0.11253138368729042	--
15	METHIONINE	Fruit	110.0	1088.0	0.1594456540888285	--
0	METHYL-4-CHLORO-INDOYL-3-ACETATE	Seed				--
0	MEVALONIC-ACID	Plant				Jim Duke's personal files.
2	MOLYBDENUM	Seed	0.1	3.0	-0.2381969130302875	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
13	MUFA	Seed	350.0	1656.0	-0.7796286211770402	--
13	MUFA	Fruit	210.0	2077.0	-0.22376849064884324	--
0	MYO-INOSITOL	Seed		1000.0		--
0	MYO-INOSITOL	Root		100.0	-1.0	--
6	MYRISTIC-ACID	Fruit	20.0	198.0	-0.25980289103011356	--
0	NEO-BETA-CAROTENE-B	Seed				--
0	NEO-BETA-CAROTENE-U	Seed				--
39	NIACIN	Seed	20.0	105.0	1.8593259448427684	--
39	NIACIN	Fruit	6.0	59.0	-0.022700826609939526	--
3	NICKEL	Seed	0.2	3.0	-0.3351700128282021	--
2	NICOTINAMIDE	Sprout Seedling		0.7		--
11	NICOTINIC-ACID	Sprout Seedling		18.0		--
11	NICOTINIC-ACID	Seed		18.0	-1.0	--
0	NITROGEN	Seed	11000.0	50000.0	2.149197451937149	--
0	O-ACETYL-HOMOSERINE	Shoot		433.0		--
4	O-COUMARIC-ACID	Seed				--
0	OBTUSTYRENE	Plant				--
18	OLEIC-ACID	Seed	350.0	1656.0	-0.9654869191066117	--
18	OLEIC-ACID	Fruit	210.0	2077.0	-0.46473702660381894	--
0	ONONITOL	Root		3.23	-1.0000000000000002	--
9	OXALIC-ACID	Fruit		60.0	-0.30304049433217944	--
25	P-COUMARIC-ACID	Seed				--
13	P-HYDROXY-BENZOIC-ACID	Seed				--
13	P-HYDROXY-BENZOIC-ACID	Root				--
0	PAEONIDIN	Flower				--
13	PALMITIC-ACID	Seed	640.0	3027.0	-0.6371442177945023	--
13	PALMITIC-ACID	Fruit	330.0	3264.0	-0.3147220329821232	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	PALMITOLEIC-ACID	Fruit				--
11	PANTOTHENIC-ACID	Seed	1.0	5.0	-1.229974436652239	--
11	PANTOTHENIC-ACID	Fruit	7.5	74.0	3.5653748983354596	--
0	PARAGALACTAN	Seed				--
24	PECTIN	Seed		25000.0	-0.2689143247235839	--
7	PELARGONIDIN	Flower				--
3	PETUNIDIN	Flower				--
7	PHENYLALANINE	Seed	2000.0	9460.0	-0.2484402992954854	--
7	PHENYLALANINE	Fruit	900.0	8902.0	1.9338773922831372	--
4	PHOSPHORUS	Seed	1038.0	6250.0	0.23694693665501168	--
4	PHOSPHORUS	Plant	1800.0	6400.0	1.3509547104626125	--
4	PHOSPHORUS	Fruit	530.0	5240.0	0.614770955983272	--
5	PHYLLOQUINONE	Plant		0.2	-0.5290630604221707	Booth, S. L., Suttie, J. W. 1998. Dietary intake and adequacy of vitamin K. J. Nutrition, 128(5): 785-788.
9	PHYTIC-ACID	Seed				--
0	PHYTOHEMAGGLUTININ	Seed				--
0	PHYTOPRECIPTIN	Seed				--
5	PINITOL	Seed		500.0	-1.0	--
0	PIPECOLINIC-ACID	Plant				--
5	PISATIN	Sprout Seedling				--
14	POTASSIUM	Seed	2273.0	15830.0	0.2866909845233655	--
14	POTASSIUM	Plant	12800.0	25200.0	0.23730621951090167	--
14	POTASSIUM	Fruit	1701.0	22737.0	0.426486477952841	--
0	PROLINE	Root		575.0	-0.9177480366608831	--
0	PROLINE	Fruit	630.0	6231.0	0.6104969006522369	--
0	PROLINE	Shoot		23.0	-0.7059620352156295	--
0	PROLINE	Seed	1730.0	8183.0	-0.6194085540962777	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PROTEIN	Seed	52800.0	262042.0	0.2512621973211461	--
0	PROTEIN	Plant	107000.0	284000.0	0.905829903766258	--
0	PROTEIN	Fruit	28000.0	276954.0	2.244813257885967	--
4	PUFA	Seed	1870.0	8846.0	-0.7386215626292532	--
4	PUFA	Fruit	890.0	8803.0	-0.20933783293045571	--
0	PUTRESCINE	Leaf				--
43	PYRIDOXINE	Seed		1.4	-1.059483621033025	--
0	PYRROLINE	Sprout Seedling				--
0	QUERCETIN-3-COUMAROYL-TRIGLUCOSIDE)	Leaf				--
0	QUERCETIN-3-FERULOYL-TRIGLUCOSIDE)	Leaf				--
0	QUERCETIN-3-TRIGLUCOSIDE	Leaf				--
44	QUERCITRIN	Seed				--
1	QUINIC-ACID	Seed				--
1	RAFFINOSE	Seed		6000.0	-0.060500073249426446	--
15	RIBOFLAVIN	Seed	1.2	6.7	1.2171321942909792	--
15	RIBOFLAVIN	Fruit	0.8	8.0	0.6405083179917069	--
0	RUBIDIUM	Seed	0.77	10.0	-0.5228333001064858	--
0	S-4-CHLORO-TRYPTOPHAN	Seed				--
34	SALICYLIC-ACID	Plant				--
60	SELENIUM	Seed	0.001	0.002	-0.26375505985740155	--
1	SERINE	Seed	1810.0	8562.0	-0.3856597778277689	--
1	SERINE	Fruit	1250.0	12364.0	3.0789642744644996	--
0	SFA	Seed	710.0	3350.0	-0.5455215448059059	--
0	SFA	Fruit	390.0	3857.0	-0.2944739617695142	--
4	SILICON	Seed	2.0	59.0	-1.0632457316005954	--
1	SODIUM	Seed	37.0	297.0	-0.2442532255602012	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
1	SODIUM	Fruit	22.0	578.0	-0.12913969559593724	--
0	SOYASAPONIN-I	Seed				--
1	SPERMIDINE	Leaf				--
1	SPERMINE	Leaf				--
10	SQUALENE	Sprout Seedling				--
1	STACHYOSE	Seed		20000.0	-0.14946118450450904	--
5	STARCH	Seed	329000.0	434000.0	0.5014785791554647	--
8	STEARIC-ACID	Seed	70.0	331.0	-0.5582084642472975	--
8	STEARIC-ACID	Fruit	30.0	297.0	-0.25952499630160275	--
12	STIGMASTEROL	Seed				--
7	SUCCINIC-ACID	Seed				--
14	SUCROSE	Seed	22500.0	280000.0	3.2853494084062884	--
0	SUGAR	Seed	41000.0	59000.0	-0.22645334358673802	--
14	SULFUR	Seed	410.0	2290.0	-0.13848854807527874	--
14	SULFUR	Plant		2300.0	-0.6627768986423143	--
6	SYRINGIC-ACID	Seed				--
6	SYRINGIC-ACID	Root				--
31	THIAMIN	Seed	2.4	13.9	1.7454396788490785	--
31	THIAMIN	Fruit	1.5	15.0	1.237464316955986	--
4	THREONINE	Seed	2030.0	9603.0	0.3278351504659808	--
4	THREONINE	Fruit	990.0	9792.0	2.816024728395267	--
93	TOCOPHEROL	Seed	0.3	22.0	-0.4025134787523802	--
0	TRANS-SINAPIC-ACID	Seed				--
15	TRIGONELLINE	Stem	1.0	24.0	1.0000000000000002	--
15	TRIGONELLINE	Sprout Seedling		91.0		--
15	TRIGONELLINE	Shoot		55.0		--
15	TRIGONELLINE	Seed	128.0	227.0	-0.41378444827540606	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
15	TRIGONELLINE	Root	1.0	75.0	1.395205553099187	--
15	TRIGONELLINE	Leaf	9.0	88.0	1.0000000000000002	--
15	TRIGONELLINE	Fruit	6.0	203.0	0.9999999999999999	--
29	TRYPTOPHAN	Seed	370.0	1750.0	-0.5371596669091734	--
29	TRYPTOPHAN	Fruit	270.0	2671.0	2.5550498364700704	--
11	TYRAMINE	Leaf				--
11	TYRAMINE	Root				--
8	TYROSINE	Seed	1130.0	5345.0	-0.5550826854435684	--
8	TYROSINE	Fruit	990.0	9792.0	3.0552936226712077	--
3	VALINE	Shoot		33.0	-1.3436162958652884	--
3	VALINE	Seed	2350.0	11116.0	-0.11029401770365503	--
3	VALINE	Fruit	2730.0	27003.0	4.652687619445165	--
24	VANILLIC-ACID	Seed				--
24	VANILLIC-ACID	Root				--
1	VERBASCOSE	Seed		31000.0	0.212365765320629	--
0	VICILIN	Seed				--
0	VIT-B-6	Fruit	1.6	16.0	1.3102992342350033	--
0	VIT-B-6	Seed	1.6	8.6	1.547355329658924	--
0	VIT-B12	Seed		0.004		--
0	WATER	Seed	760000.0	793670.0	2.172219473554289	--
0	WATER	Fruit	880000.0	897750.0	0.5529656014166089	--
3	XANTHOPHYLL	Seed				--
0	XENOGNOSIN	Plant				--
77	ZINC	Seed	11.0	60.0	0.42210401309458867	--