

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Triticum aestivum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
32	ALPHA-TOCOPHEROL	Seed		1271.0	3.3059096157345915	--
7	CHLORINE	Seed	300.0	1800.0	2.955282796298206	--
1	SODIUM	Seed	0.0	2200.0	2.7766034662227104	--
32	ALPHA-TOCOPHEROL	Oil	1508.0	2170.0	2.505879260674517	--
9	PHYTIC-ACID	Seed		48500.0	2.352609244150224	--
39	NIACIN	Seed	15.0	117.0	2.21853528696928	--
14	BETAINE	Shoot		1640.0	2.2163529933715633	--
15	RIBOFLAVIN	Plant	11.0	40.0	1.9921986724559189	--
5	STARCH	Seed	542000.0	800000.0	1.9835674339821459	--
0	PROLINE	Seed	17526.0	20447.0	1.789967432682405	--
4	PHOSPHORUS	Plant	400.0	7200.0	1.7353843796110304	--
15	RIBOFLAVIN	Seed	0.7	8.0	1.7153626421987014	--
43	PYRIDOXINE	Seed	2.6	13.0	1.6716297131854394	--
14	POTASSIUM	Plant	1200.0	43500.0	1.5135321977943488	--
15	FIBER	Plant	23300.0	421000.0	1.465317711758174	--
2	LEUCINE	Plant	20000.0	26000.0	1.3392670309011199	--
0	PROTEIN	Seed	80000.0	380000.0	1.3005596951790173	--
31	THIAMIN	Seed	1.1	12.0	1.2921316242321648	--
3	ISOLEUCINE	Plant	10000.0	17000.0	1.2589414192275548	--
0	CAROTENE	Plant	97.0	953.0	1.00271851957358	--
0	GLOBULIN	Seed	60000.0	100000.0	1.0	--
43	PROTocatechuic-acid	Seed	3.0	6.0	1.0	--
4	LYSINE	Plant	15000.0	18000.0	0.9784051590640706	--
65	MAGNESIUM	Plant	300.0	7000.0	0.9107224613712221	--
8	GLUTAMIC-ACID	Seed	39000.0	63000.0	0.8981083746972622	--
7	PHENYLALANINE	Plant	4000.0	11000.0	0.7139215078383787	--
2	CYSTINE	Seed	1242.0	4000.0	0.5913572524115651	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
14	GAMMA-TOCOPHEROL	Oil	39.0	527.0	0.5891692025527122	--
0	PECTINS	Seed		10100.0	0.508000508000762	--
0	WATER	Plant	666000.0	876000.0	0.4498064143367751	--
4	BIOTIN	Seed		216.0	0.4399589824134226	--
11	PANTOTHENIC-ACID	Plant	9.7	37.0	0.42561726367945957	--
14	MANGANESE	Seed	0.0	86.0	0.40457867834037875	--
4	PHOSPHORUS	Seed	800.0	6800.0	0.3822893961890009	--
14	SULFUR	Seed	1200.0	3200.0	0.3762363453639322	--
0	CARBOHYDRATES	Seed		610000.0	0.344156807099292	--
11	PANTOTHENIC-ACID	Seed	6.8	20.0	0.34109708334068634	--
8	TYROSINE	Seed	1000.0	9000.0	0.2916065672022864	--
0	KILOCALORIES	Seed	3400.0	5221.0	0.2834831913774425	--
13	P-HYDROXY-BENZOIC-ACID	Seed	5.0	10.0	0.23512720065394196	--
65	MAGNESIUM	Seed	530.0	3500.0	0.21884071891771384	--
3	ISOLEUCINE	Seed	4000.0	12000.0	0.19247990430740905	--
12	COPPER	Seed	1.1	16.7	0.17102643695499678	--
6	IRON	Plant	70.0	770.0	0.16847651325619398	--
20	CHOLINE	Seed	530.0	1800.0	0.12012739833852928	--
0	PENTOSANS	Seed	63000.0	83000.0	0.09102023237090454	--
2	LEUCINE	Seed	8000.0	18000.0	0.08792249600521725	--
2	ARSENIC	Seed		0.079	0.06166197679180489	--
14	MANGANESE	Plant	0.0	105.0	0.057649608577530674	--
24	VANILLIC-ACID	Seed	13.0	39.0	0.04599325595254022	--
28	CALCIUM	Seed	100.0	4100.0	-0.008525145677961804	--
7	HISTIDINE	Seed	1000.0	6000.0	-0.03298707830764554	--
39	NIACIN	Plant	20.0	73.0	-0.05207057740215993	--
15	METHIONINE	Seed	1000.0	4000.0	-0.0812868777702854	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
29	TRYPTOPHAN	Seed	1000.0	3000.0	-0.1108675145369685	--
1	SODIUM	Plant	200.0	3000.0	-0.13800917525639442	--
6	IRON	Seed	10.0	120.0	-0.14307419258604284	--
2	COBALT	Seed	0.06	0.15	-0.19943827636886935	--
3	CADMIUM	Seed		0.252	-0.2200851817418595	--
0	LEAD	Seed		1.653	-0.22587588911818676	--
0	SUGAR	Seed	14000.0	59000.0	-0.22645334358673802	--
93	TOCOPHEROL	Seed	59.0	1897.0	-0.23451953937325656	--
1	MERCURY	Seed		0.079	-0.25622640385776685	--
0	WATER	Seed	60000.0	159000.0	-0.2632740580330049	--
9	OXALIC-ACID	Fruit		111.0	-0.300228232666312	--
31	THIAMIN	Plant	3.3	4.0	-0.3059929673424499	--
0	FAT	Plant	10000.0	30000.0	-0.3174054722484455	--
7	PHENYLALANINE	Seed	7452.0	8694.0	-0.33991430022999314	--
28	CALCIUM	Plant	900.0	10400.0	-0.34115856607431033	--
14	BETAINE	Root		82.0	-0.36180459789528824	--
3	VALINE	Seed	2000.0	9000.0	-0.3709002053950128	--
4	BORON	Seed	1.0	16.0	-0.3847652731531523	--
61	FERULIC-ACID	Seed	15.0	32.0	-0.3896026955261461	--
14	SULFUR	Plant	1300.0	2900.0	-0.40764191696882207	--
20	CHOLINE	Root		48.0	-0.40788691059374743	--
14	POTASSIUM	Seed	940.0	7900.0	-0.41070098649211106	--
53	BETA-CAROTENE	Seed	0.0	0.22	-0.4155565419518663	--
4	LYSINE	Seed	2000.0	9000.0	-0.4197233983373614	--
3	NICKEL	Seed		2.37	-0.45567128948470903	--
25	P-COUMARIC-ACID	Seed	17.0	25.0	-0.46823244684786025	--
2	COBALT	Plant	0.03	0.15	-0.4725134768145522	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
4	THREONINE	Seed	3000.0	6000.0	-0.4781361791270037	--
14	ARGININE	Seed	4000.0	12000.0	-0.5352406676024523	--
7	GLUCOSE	Seed		900.0	-0.5622496792041035	--
15	FIBER	Seed	3000.0	62000.0	-0.5746740140250292	--
9	SINAPIC-ACID	Seed	14.0	15.0	-0.5754007035932776	--
1	SERINE	Seed	1000.0	7567.0	-0.5763520359256158	--
14	SUCROSE	Seed		8400.0	-0.5783893096034138	--
20	CHOLINE	Shoot		121.0	-0.6059015450850461	--
77	CHLOROGENIC-ACID	Seed		5.0	-0.6169861540321878	--
0	PROTEIN	Plant	38000.0	94000.0	-0.6512143609008342	--
6	SYRINGIC-ACID	Seed	3.0	5.0	-0.6645841304292959	--
1	RAFFINOSE	Seed		3300.0	-0.6784148986556187	--
7	CHLORINE	Plant	670.0	3400.0	-0.6968170582792945	--
15	FOLACIN	Seed	0.0	0.9	-0.7031924349548446	--
4	ISOFERULIC-ACID	Seed	1.0	5.0	-0.7041052772322075	--
0	PROLINE	Shoot		12.0	-0.7070727978707761	--
77	ZINC	Seed	12.0	19.0	-0.741894119074501	--
102	CAFFEIC-ACID	Seed	3.0	4.0	-0.7670730483511597	--
12	GLYCINE	Seed	4830.0	5635.0	-0.7687728186799295	--
13	CYSTEINE	Seed	1242.0	1449.0	-0.7725286597119436	--
8	FRUCTOSE	Seed		600.0	-0.8101404467277988	--
34	SALICYLIC-ACID	Seed	3.0	4.0	-1.0	--
4	ISOCHLOROGENIC-ACID	Seed		1.0	-1.0	--
0	PHENOLICS	Seed	831.0	1662.0	-1.0	--
0	ASH	Seed	4000.0	12000.0	-1.0791887810304062	--
12	COPPER	Plant	2.2	4.0	-1.1092588472799756	--
0	PROLINE	Root		173.0	-1.1859432582610887	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	FAT	Seed	8000.0	39000.0	-1.1924644217240554	--
8	GENTISIC-ACID	Seed	2.0	4.0	-1.2675004445952593	--
3	ALANINE	Seed	3036.0	3542.0	-1.406051570297876	--
3	ASPARTIC-ACID	Seed	5106.0	5957.0	-1.4765122180210055	--
0	ASPARAGINE-SYNTHESASE	Seed				--
0	2'-CHLORO-DIAZEPAM	Seed				--
0	HEX-TRANS-2-EN-1-OL	Shoot				--
0	OCHRATOXIN-A	Seed				--
0	PYRIDINE-NUCLEOTIDE-OXIDASE	Seed				--
0	GLYCEROPHOSPHATASE	Seed				--
14	DIAZEPAM	Sprout Seedling				--
0	PHOSPHOENOL-PYRUVATE-CARBOXYLASE	Leaf				--
1	CEPHALIN	Seed				--
0	LICHENASE	Seed				--
2	PALMITOLEIC-ACID	Plant				--
0	6-METHOXY-2(3)1-4(2H)-BENZOXAZOLINONE	Root				--
8	STEARIC-ACID	Plant				--
0	GLUCODIFRUCTOSE	Seed		4100.0		--
0	URIDINE	Seed				--
0	1-O-(6-O-ACYL-BETA-D-GALACTOPYRANOSYL)-2,3-DI-O-ACYL-D-GLY...	Plant				--
1	SCHAFTOSIDE	Sprout Seedling				--
0	HEX-TRANS-2-EN-1-AL	Shoot				--
4	O-COUMARIC-ACID	Seed	5.0	10.0		--
1	GLYCERIN	Seed				--
0	DIAMINO-PROPANE	Sprout Seedling				--
0	PHOSPHODIESTERASE	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	CATALASE	Sprout Seedling				--
0	ALPHA-DIHYDROXYCAROTENE	Seed		1.0		--
0	PUTRESCINE	Sprout Seedling				--
13	PALMITIC-ACID	Plant				--
0	5,7,4'-TRIHYDROXY-3',5-DIMETHOXYFLAVONE	Sprout Seedling				--
0	ISOCITRATE-DEHYDROGENASE	Sprout Seedling				--
0	URACIL	Seed				--
0	1,3-DIFERULOYL-GLYCEROL	Root				--
0	HEPTANAL	Shoot				--
0	PHYTOSTERYL-6-O-ACYL-BETA-D-GLUCOPYRANOSIDE	Seed				--
0	NUCLEOTIDASE	Seed				--
2	CITRININ	Seed				--
112	ASCORBIC-ACID	Seed				--
0	GLUTENIN	Seed	300000.0	400000.0		--
1	DHURRIN	Sprout Seedling				--
0	NEOKETOSE	Seed				--
0	ALPHA-CARBOXYLASE	Seed				--
0	PUROTHIONIN-A	Seed				--
1	LYSOLECITHIN	Seed				--
8	INOSITOL	Seed				--
0	4-DECYL-PENTA-TRANS-2,4-DIENAL	Plant				--
1	STACHYOSE	Seed				--
0	GLIADIN	Seed				--
0	1,3-AMINO-PROPYL-PYRROLINIUM	Sprout Seedling				--
0	RIBULOSE-DIPHOSPHATE-CARBOXYLASE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEPTAN-1-OL	Shoot				--
0	PHYTIC-PHOSPHORUS	Seed	2370.0	3760.0		--
0	NONANAL	Shoot				--
0	GLUTATHIONE-REDUCTASE	Seed				--
0	DECHLORO-DIAZEPAM	Seed				--
0	N-DEMETHYL-DIAZEPAM	Seed				--
10	ALPHA-AMYRIN	Seed				--
20	LECITHIN	Seed				--
0	BETA-TRITISTEROL	Sprout Seedling				--
0	3-HYDROXY-2'-CHLORO-DIAZEPAM	Seed				--
0	SP	Plant				--
0	GIBBERELLINS	Seed				--
0	PROTEINASE	Seed				--
2	RIBONUCLEASE	Seed				--
0	HEPT-TRANS-2-EN-1-AL	Shoot				--
0	NONAN-1-OL	Shoot				--
0	DECANAL	Shoot				--
6	MYRISTIC-ACID	Seed				--
0	CAPRINIC-ACID	Seed				--
0	ALPHA-AMYLASE	Seed				--
0	TETRADECA-2,12-DIEN-4,6,8,10-TETRAYN	Sprout Seedling				--
0	GLUTAMIC-DEHYDROGENASE	Seed				--
13	BETA-IONONE	Plant				--
3	XYLOSE	Plant				--
0	2-(2-HYDROXY-7-METHOXY-1,4(2H)-BENZOXAZIN-3(4H)-ON-BETA-D-GLUCOSIDE	Sprout Seedling				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRITIOL	Sprout Seedling				--
0	HEMICELLULOSE-B	Hay				--
0	PHYTASE	Seed				--
0	NONA-TRANS-2,CIS-6-DIEN-1-OL	Shoot				--
0	ARABINOSE	Stem				--
0	DEC-TRANS-2-EN-1-AL	Shoot				--
0	PEPTIDASE	Seed				--
0	MONOGALACTOSYL-DIGLYCERIDE	Seed				--
0	CAMPESTEROL-3-O-BETA-D-GLUCOSIDE	Seed				--
12	ALLANTOIN	Embryo				--
7	LAURIC-ACID	Seed				--
0	GLUTAMIC-ACID-DECARBOXYLASE	Seed				--
15	LUTEIN	Plant				--
0	2-(2-HYDROXY-4,7-DIMETHOXY-1-4(2H)-BENZOXAZIN-3-ONE)-BETA-D-GLUCOSIDE	Leaf				--
0	HYDROXAMIC-ACID	Leaf				--
0	OXALACETIC-CARBOXYLASE	Seed				--
0	GUANOSINE	Petiole				--
0	ETHYL-BETA-D-FRUCTOFURANOSIDE	Seed				--
5	PHYLLOQUINONE	Leaf				--
0	NONA-TRANS-2,CIS-6-DIEN-1-AL	Shoot				--
0	CHLOROPHYLL-B	Plant				--
101	APIGENIN	Seed				--
0	TRIPHOSPHOPYRIDINE-NUCLEOTIDE-OXIDASE	Seed				--
0	CYTOCHROME-C	Plant				--
0	ALBUMIN	Seed	30000.0	50000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	LAMINARASE	Seed				--
0	LIPOXIDASE	Seed				--
9	BETA-AMYRIN	Seed				--
0	2-(2,4-DIHYDROXY-7-METHOXY-1-4(2H)-BENZOXAZIN-3-(4H)ON)-BETA-D-GLUCOSIDE	Sprout Seedling				--
0	SINAPOYL-VICENIN-1	Plant				--
0	GAMMA-DIHYDROSITOSTEROLFERULIC-ACID-ESTER	Seed				--
0	ORTHOFERULIC-ACID	Seed				--
1	GUANINE	Petiole				--
0	ESTERASE	Sprout Seedling				--
0	NONA-CIS-3,CIS-6-DIEN-1-OL	Shoot				--
0	CHLOROPHYLL-A	Plant				--
0	AMMONIALYASE	Seed				--
15	TRIGONELLINE	Seed				--
0	PENTADECA-TRANS-2,CIS-4-DIENAL	Shoot		2.2		--
0	GLUTAMATE-DEHYDROGENASE	Sprout Seedling				--
0	LIPASE	Seed				--
0	BETA-AMYLASE	Seed				--
0	VIT-E	Sprout Seedling		2700.0		--
0	2-(2,4-DIHYDROXY-1,4(2H)-BENZOXAZIN-3(4H)-ON)-BETA-D-GLUCOSIDE	Plant				--
0	SINAPOYL-ISOSCHAFTOSIDE	Plant				--
0	HEXOSE-DIPHOSPHATASE	Seed				--
0	GADUSEN	Seed				--
18	OLEIC-ACID	Plant				--
176	QUERCETIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
5	GRAMINE	Leaf				--
5	ERGOSTEROL	Seed		12.0		--
0	NON-TRANS-2-EN-1-AL	Shoot				--
0	ALPHA-TRITISTEROL	Sprout Seedling				--
0	TRIDEC-1-EN-3,5,7,9,11-PENTAYN	Sprout Seedling				--
3	MANNOSE	Seed				--
28	ADENOSINE	Petiole				--
0	ISOSCHAFTOSIDE	Plant				--
0	GLUCOSE-6-PHOSPHATE-DEHYDROGENASE	Sprout Seedling				--
0	LINOLENIC-ACID	Plant				--
24	BENZALDEHYDE	Shoot				--
0	VICENIN-1	Plant				--
0	2(3)-BENZOXAZOLINONE	Root				--
0	SINAPOYL-8-D-GALACTOSYL-6-C-ARABINOSYL-APIGENIN	Sprout Seedling				--
0	HEXOKINASE	Seed				--
0	FRUCTOSYLRAFFINOSE	Seed				--
0	OCTAN-1-OL	Shoot				--
0	PYROGALLOL-OXIDASE	Seed				--
0	GLYCOLATE-OXIDASE	Plant				--
0	DIHYDROERGOSTEROL	Seed				--
0	PHOSPHOMONOESTERASE	Seed				--
0	NON-CIS-3-EN-1-OL	Shoot				--
0	ALPHA-TRITICENE	Leaf				--
0	TRIDEC-1,11-DIEN-3,5,7,9-TETRAYN	Sprout Seedling				--
11	ADENINE	Petiole				--
27	LINOLEIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	2'-CHLORO-N-DEMETHYL-DIAZEPAM	Seed				--
0	HEXAN-1-AL	Shoot				--
0	PROLAMINE	Seed				--
0	OCT-TRANS-2-EN-1-AL	Shoot				--
0	DIGALACTOSYL-DIGLYCERIDE	Seed				--
0	PHOSPHOGLUCONIC-DEHYDROGENASE	Plant				--
9	TRICIN	Plant				--
1	LIGNOCERIC-ACID	Sprout Seedling				--
0	8-METHOXYCOUMARIN	Seed				--
0	SUCCINIC-DEHYDROGENASE	Seed				--
0	GLUCOFRUCTANS	Seed		10300.0		--